REVIEW COMMITTEE
ON
EDUCATIONAL STATISTICS

REPORT

VOLUME –I

Ministry of Human Resource Development

Govt. of India

New Delhi

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New Delhi **12 December 08**

PREFACE

1. Importance of statistics is seldom recognised. Inadequacies of statistics, however, are frequently frowned upon. But, infirmities in the system for collection of statistics are neither admitted nor remedied.

2. It was, therefore, heartening to see the Ministry of Human Resource Development order a thoroughgoing review of the 'educational statistics system'. Having worked for long periods both in the Ministry of Education (as it was then called) and in the Ministry of Planning, Programme Implementation and Statistics (as it was then constituted), it was a matter of personal gratification for me. It was as though our long standing contention about statistics being recognised as 'information infrastructure' had come to be accepted.

3. Additionally, personally, it was an honour for me to be invited to chair the Committee and steer its deliberations. I took up the task with joy and humility and tried to make it truly thoroughgoing. It was my good fortune that the Committee gave wholehearted support to prepare a total overhaul of the system.

4. The most heartening feature was that the Committee was ready to be forward-looking and technology savvy in its thinking. Not only did the Committee not hesitate to recommend handsome investments for streamlining and modernising the system but it went several steps ahead to propose a 'norm' for funding this repetitive exercise. Consequently, there is a harmonious blend of Statistical and MIS systems in the package proposed.

5. The Committee spent a lot of time reviewing the earlier studies so as to take advantage of the thinking that has already gone into this subject. Some of their good recommendations, not yet implemented, have been retained by this Committee.

6. The recommendation for supersession of the plurality of exercises by a single unified system will entail extensive multi-sectoral and inter-segmental interactions. Such a cross-sectional flow of data/information can not operate smoothly unless it is backed up by statutory support. Hence the significance of our recommendation about a separate central legislation to cover this exercise.

7. The recommendation for introduction of a Compendium of Best Practices accompanied by institution of a system of Rewards and Penalties is designed to induct a potent motivator in the quality-thrust envisaged.

8. We do hope, the elaborate and extensive recommendations made by us will be received with seriousness, pursued with sincerity and, adopted with alacrity. When implemented, we are confident, these recommendations will abundantly deliver the desired results.

9. On behalf of the Committee, I express our gratitude to the National University of Educational Planning and Administration for generously facilitating our meetings to be held in their premises. I wish also to place on record our appreciation of the hard work put in by the Member-Secretary Shri.

Chander Kant and his staff to help-facilitate organised progress of our work. Equally significant was the secretarial back-up provided by Shri. K. Balasubramanian, my Confidential Assistant, whose methodicity and efficiency were of immense value to us.

Sd/-
(S. Sathyam)
Chairman

Section - 1

Introduction

1. Education in India has been witnessing major changes both academic and administrative. Even on the financial side, expenditure on education has grown rapidly. New courses have multiplied. Besides formal education, other systems like home study, open distance learning, correspondence course, etc., have received wider acceptance. New curricular approaches, especially at the school level, have gained currency. The Sarva Shiksha Abhiyan has introduced new dimensions to enrolment, retention, evaluation and progression. Educational administration at all levels has undergone substantive changes. These and other changes have had substantial implications for educational planning and policy; educational administration; research and studies; and, speedy dissemination of correct information.

2. The need of a sound and reliable statistical database and information base has come to be increasingly stressed. Various efforts made in the past in this regard have been either fragmented or ineffective. The felt-need has been for giving a holistic attention to all the segments in the Human Resource Development sector.

3. In view of the strident growth in other sectors like Medical Education, Agricultural Education and, Legal Studies, it has become important to follow the cohorts in them also.

4. Pressure has been mounting to cover three other areas in a more organised manner – pre-school education, adult literacy and, unrecognised/unregistered institutions.

5. And, most of all, there has been a clamour for adoption of the technological advancements in communications to modernise and revamp the system of collection of educational statistics.

6. In this backdrop, the Ministry of Human Resource Development (MHRD) constituted this Review Committee to go into this matter in detail and make recommendations. The composition of the Committee and its Terms of Reference are set out in the copy of the MHRD's Notification attached as **Annex-1.**

Section - 2

Procedure Adopted

1. The procedure adopted began with a discussion of the Terms of References in full Committee meetings to identify the issues for consideration. Thereafter, the subject was discussed to settle the overall contours within which issues had to be settled.

2. Having taken the basic positions on overall matters, the work done by earlier Committees (and, the action taken on their recommendations) was reviewed so as to avoid issues already adequately covered.

3. It was decided to set up four Segmental Sub-Committees to take up intensive consideration of the relevant issues. Although the opinion was divided on whether there should be 'functional' or 'segmental' Sub-Committees, the Committee was more inclined more towards Segmental Sub-Committees. The Sub-Committees were required to decide on details subject to the major guidelines provided by the main-Committee. Besides inclusion of Members of the main Committee with reference to their 'segmental interests', the composition of the Sub-Committees also provided for inclusion of 'experts' to assist in their deliberations either for selected sessions or for whole periods.

4. Four such Segmental Sub-Committees were set up:

(i). Sub-Committee on School Education.
(ii). Sub-Committee on Higher Education.
(iii). Sub-Committee on Technology and Training.
(iv). Sub-Committee on Legislation and Funding.

5. Recognising the position that 'Education' was a subject listed in the 'Concurrent List' under the Constitution of India and, bearing in mind the fact that educational statistics were compiled primarily for the benefit of State Govts. and other Organisations who operated the education system in the country, it was decided to consult them. In this connection, it was decided to seek written responses to open-ended questions rather than to issue a strictly structured questionnaire. The Committee also divided itself into different groups for holding follow-up interactive sessions with regional groups of States/UTs. The recommendations of these regional meetings (Please see **Annex-4** in **Vol. II**) provided valuable inputs for the final analysis by the Committee.

Section - 3

Presentations Made

1. The system of collection, compilation and publication of Educational Statistics has evolved over a very long period. It may not be appropriate for any Committee to review it on a narrowly dated and narrowly focussed basis. The Committee, therefore, decided to have the benefit of various organisations making presentations on different aspects of the subject. The Presentations were meant not only to elaborate the background-information but equally to promote better appreciation of the various factors involved and the different perspectives governing them.

2. Nine Presentations were made; and, there was a brief interaction with the UNESCO Institute of Statistics (U.I.S.). The details of these presentations have been presented in Section – 4 of this report. The pith and substance of the Presentations are as follows:

(i). By the MHRD

It traced the notable events in the development of the system from 1947. Besides chronologically listing the efforts made by various Committees appointed at different times, the Presentation also identified the weaknesses of the system and the deficiencies in the educational data published.

(ii). By the UGC

Even as it emphasised the concerns of the UGC to improve the system, the presentation highlighted the bottlenecks in the process. Recalcitrance of the unaided colleges to pay heed to the UGC's pleadings was cited as the main hurdle.

(iii). By the AICTE

The Presentation admitted the inadequacies of the system in the Technical Education segment. The weakness was attributed to the position that Institutions were not required to approach the AICTE for registration until they had completed six years of functioning. This clause in the enactment caused avoidable confusion and anomalies.

(iv). By NUEPA

The Presentation described the District Information System of Education (DISE) as an Educational Management Information System and provided meaningful data through District Report Cards/School Report Cards besides publishing analytical reports projecting vital indicators. DISE makes substantial use of the technological advancements. But, its main weakness has been inadequacy of M.I.S. staff.

(v). By the NIC

The Presentation covered information about the network available for data entry and transmission. It also explained the scope for computerised data collection. Facilities available for storage and mining of data were explained. On analysis of data, the features of the Business Intelligence Process were explained. The ready availability of an established network with substantial software support and a well installed GIS platform was highlighted as an attractive feature for modernising and speeding up the work relating to educational statistics.

(vi). By the NCERT

The Presentation described the salient features of the All India School Education Survey (AISES) quinquennially conducted on a census basis by the NCERT. There was also a brief reference to a Pilot Project being taken up by the NCERT to collect educational statistics using IT (Web Technology).

(vii). By the IASRI

The Presentation described the details of the first fully computerised system for educational statistics at the higher education level. Not only has the system been fully installed but it has stood the test of early operations as well. It has been seen to speed up collection and transmission of data. The technological support for data validation has also improved the quality of data.

(viii). By the CSO

The Presentation covered in the main recommendations pertaining to 'Education' in the Report of the Statistical Commission besides referring briefly to the coverage given by the N.S.S.O. in its household surveys. The need to cover in particular the Millennium Development Goals was stressed.

(ix). By the State Govt. of Orissa

The Orissa Project was an initiative, under the Sarva Shiksha Abhiyan, to improve upon the DISE by taking full advantage of the technology available. Its particular features were introduction of a Household Survey and a Child Tracking

System. The project has not been an outstanding success; but, it has been an imaginative initiative; and, it has brought to fore many ideas about possible improvements.

(x). By the State Govt. of U.P.

The U.P. Project, again was an initiative, under the Sarva Shiksha Abhiyan, to improve upon the DISE by taking full advantage of the technology available. The idea was to develop a decision-support-system on a GIS platform. This Project, again, has not been an outstanding success because it failed to eliminate the weaknesses of the DISE. But, the Project has been seen to be basically sound. If the 'weaknesses' can be removed, it can provide many advantages.

(xi). By Dr. A.B.L. Srivastava

The Presentation was of the report given by the Sub-Committee of the Advisory Committee on Educational Statistics approved the the MHRD in 1999. The Report makes 57 recommendations covering separately School Education and Higher Education. Besides identifying the problems and deficiencies of educational statistics, it lays stress on strengthening Statistical Units at all levels and recommends elimination of the manual system of data collection, tabulation and, analysis.

(xii). **Interaction with the UNESCO Institute of Statistics (UIS)**

The interaction was with the Director of U.I.S. who was on a visit to Delhi. He emphasised the need to supply educational statistics on identified international parameters including the items relating to the Millenium Development Goals. He urged the importance of conforming to the ISCED.

Section – 4

Background Materials Scrutinised

Various documents/material presented either before commencement of the review exercise or during the course of the meetings were scrutinised with benefit. All of them were informative; some were also instructive. The salient points contained in these documents/material are set out below seriatim:

1. The background paper circulated by the MHRD.

(Scrutiny of this document is contained in Section – 6 of this Report. The 'review of earlier studies' made therein is based mainly on this document and ATRs given by the MHRD.)

2. The material presented by the NUEPA on DISE.

The presentation was made to cover the system as it encompassed elementary education (i.e., classes 1 to 8). It did not cover any issues pertaining to extension of the system to Secondary and Senior Secondary classes. One set of hard copies of the presentation is attached as **Annex – 2 (iv).** in **Vol. III.**

The following main points emerged from this presentation:

- Too many parallel systems were operating in the name of 'initiatives'. Multiple systems for collection of educational statistics must be eliminated.

- In terms of reduction of time-lags and improvement of quality, the DISE represented a phenomenal stride over all the other (data collection) systems. No doubt there were still weaknesses; but, that should not detract from the merit of the overall system.

- DISE was still being operated in a project mode. There was no sustained motivation.

- As regards data validation/correction, the computer programme employed had a provision for highlighting errors even at the data-input stage.

- The software employed had enough flexibility to accommodate many more parameters of local interest/concern. There was, possibly, a need to propagate this information further so that the State Govts. would start utilising the capacity available more fully.

- Since teachers constitute the mainstay of data collection, they should be compelled to undergo training in methods of data collection.

- Unrecognised private schools must also be covered.

- Upto 2005, DISE covered about 581 districts across 29 States/UTs, also covered 1.04 million institutions and maintained comprehensive profile of about 4.2 million teachers. (Subsequently, however, the DISE has been made operational in all the 624+ districts of the country. During 2007-08, information from 1.25 million institutions imparting elementary education spread over 624 districts was received. The total number of teachers in these institutions is around 5.61 million.) DISE have completely eliminated the time lag in educational statistics so far as Elementary Education is concerned. For the data gaps e.g. age specific enrolment, net enrolment ratio, the percentage of over-age and under-age children, very comprehensive profile of each and every student is available; but, DISE does not have the attendance rate. It has the examination results at grades V and grade VIII separately for boys and girls and SCs and STs. In DISE, the information regarding grade-wise the number of disabled children alongwith their nature of disability is also available. DISE has modified the data captured format to improve the data on minorities. From the next year onwards, data on minorities will be made available. But, that will be restricted only to the enrolment. Data on OBC is already available under the DISE system. On the issue of meeting of requirement of the states under DISE, Dr. Mehta informed that it is not factually true

because under the DISE only those variables are kept which are uniform and applicable to all the 35 States/UTs. But in view of the special requirement of the States, the software adopted by the DISE provides for a lot of flexibility; DISE has plenty of scope for adding a number of supplementary variables. The States according to their own requirement can add a number of supplementary variables.

- In the DISE system 19 districts spread over five Union Territories and one State remained uncovered. Efforts are being made to cover these districts also. It will also be ensured that the data will reach the actual users. The data on DISE is available in the form of publications, CDs and also on internet. It is expected that 'School Report Card' will also be made available through the internet.

The DISE system suffered from some major disadvantages:

- Gives the distance as the crow flies and not the actual distance by road which is required.

- Gives location of villages and not necessarily habitations (which can be addressed by wireless mapping)

- DISE is school based and does not give any information about a habitation without school.

Nevertheless, the DISE system can be seen to have the following advantages:

- Gives spatial information about education facilities
- Highlights gaps and under-served areas.
- Useful planning tool for providing educational facilities and infrastructure as per norms.
- Provides compelling arguments for proper location of schools.
- Effective tool to convince Zila Panchayats which areas need new schools.
- Prevents constituency-wise division of targets.
- Ensures equitable system of utilisation of SSA funds.

3. The information given by the NCERT on AISES.

The NCERT collects school educational statistics through its All India School Education Survey (AISES). The survey is done quinquennially.

Although it is called a 'survey', in content it is actually a census based operation.

In the presentation, the following points were highlighted:

- The survey touches both urban and rural areas and covers all schools from state level to village level.

- It provides habitation-wise data on availability of schooling facility and village-wise data on availability of school in the village.

- The data generated help planners to plan both at micro and macro level.

- The highlights of the latest (i.e., the 7th AISES) survey are as follows:

  ~ Availability of Block-wise/Town-wise School Directories of Recognised Schools on the Website namely 7th survey.ncert.nic.in

  ~ Village-wise(Habitation-wise within the village) and School-wise Data will be made available on Website.

  ~ Query System on the 7th Survey data will be available on the Website to answer specific querries.

~ Enrolment of Educationally Backward Minorities (Muslims) alongwith enrolment of Scheduled Castes & Scheduled Tribes in recognised schools.

~ Enrolment and Teachers in unrecognised schools.

~ Enrolment of Children with disability in recognised schools.

~ Enrolment and Teachers in Alternative Schools and Alternative and Innovative Education Centres.

~ Enrolment, Teachers and Structural facilities in Special Schools.

~ Enrolment and Teachers in Oriental Schools (Maktabs, Madarsas & Sanskrit Pathashalas).

~ Pre-vocational and vocational courses with enrolment in secondary and higher secondary schools.

~ Report on State Policies & Practices in School Education.

- The need of networking between the various agencies like NCERT, NIC, NIEPA, RGI, GOI was emphasised so that efforts need not be multiplied and contradictions can be avoided. A mechanism has to be found where the network is working in proper direction and delays are minimised.

- The NCERT has plans to take up a Pilot Project to collect educational statistics using IT (Web Technology) in the States of Uttarakhand and Andhra Pradesh.

4. The material presented by the State Govt. of Orissa.

Under the Sarva Shiksha Abhiyan (SSA), the Orissa State Govt. had initiated action to improve upon the DISE system. Two features that stood out in this context were the Household Surveys and the Child Tracking System (CTS). The presentation was made in the second meeting of the Committee. One set of the hard copies of the presentation is attached as **Annex – 2 (ix). in Vol. III.**

The salient features of the CTS were shown to be as follows:

- It comprises of 3 sub projects – CTS, GIS & EPIS.
- CTS –covers the children… (Implemented)
- GIS – School Mapping Project to map the infrastructure of all schools apart from latitude/longitude & photographs.
- EPIS – Educational Personnel Information System to map profile of the teachers/personnel

- Databases of Children, schools & teachers will be integrated in project e-shishu.

- EMIS Code of the school is the key to link all the three data bases.

The stated objectives of the CTS were as follows:

- To track every child in 6–14 age group by name/DOB/educational/social status.

- To monitor the achievement of each child (in 6-14 yr. age group) in school.

- To follow every out-of-school child back to school.

- To prepare advance plan for pre-school children.

The make this complex exercise a manageable operation, it was designed be a computer-compatible system and handled totally on an on-line basis. Full advantage was taken of available technology to make this possible. The highlights of the arrangement in this regard were as follows:

- Web based Real time information available through intranet for every child.

- Central database at State HQ.

- Distributed network – independent server in each district for the CTS.

- Updating at District level & synchronization with the central data base server.

- Citizen Centric through www.opepa.in.

Recognising the scope for errors in data collection in an exercise of such magnitude, appropriate provisions, were incorporated for data validation/updating process.

The uniqueness of the CTS was emphasized by spotlighting its differences with the DISE and the VER:

- DISE covers children in numbers……not names/not all schools are covered/no updating-all fresh again.

- Teacher & infrastructure information is sketchy – not a decision support system.

- VER is expected to track the out of school children at village level – that information never comes to district /block level for decision support.

- A cumbersome exercise – not monitored/not validated.

- CTS is based upon VER but goes on to link the schools to each child. Secondly it tracks each child by DOB, not by years – as time passes, the children also grow.

- Updating is required every year to include new born, track out of school, progress & achievements-results at www.opepa.in to public to make all stakeholders responsible & accountable.

  The idea was to enhance the utility of CTS by finding out ways to use the CTS data in other Departments like H & FW, W&CD, SC/ST and, Labour.

5. The material presented by the State Govt. of U.P.

The presentation was made in the second meeting of the Committee. The SSA Bureau of the MHRD recommended it as an imaginative initiative worthy of attention. One set of the hard copies of the presentation is attached as **Annex – 2 (x).** in **Vol. III.**

As in the case of the Orissa State Govt., here again, the endeavour was to take full advantage of the technology available to improve upon DISE. The idea precisely was to develop a decision-support-system on a GIS platform.

The Methodology adopted was as follows:

- Survey of India maps were digitized with the help of Remote Sensing Application Centre, Lucknow.

- Digitized village, block, tehsil and district maps show spatial location of settlements.

- Demographic data of Census 2001 and DISE data linked with GIS.

- Population, enrolment and school infrastructure parameters like number of classrooms, teachers, shiksha mitras, drinking water facility are available for each location.

This GIS linked database was supposed to help in decision making on four issues:

- Location of schools.

- Deployment of Teachers.

- Construction of additional classrooms.

- Ensuring water-supply in schools.

Even as it went ahead with this exercise, the U.P. State Govt. admitted the following weaknesses in the GIS-based model:

- Gives the distance as the crow flies and not the actual distance by road which is required.

- Gives location of villages and not necessarily habitations (which can be addressed by wireless mapping).

- Shortcomings of DISE imported into GIS like

  ~ DISE footprint does not cover private schools, especially at upper primary level.

  ~ Reference date for DISE is 30 September and delay in data collection reflects one year old progress.

  ~ DISE is school based and does not give any information about a habitation without school.

  ~ Useful only for infrastructure-related planning and not for enrolment/dropout/transition rates.

The U.P. State Govt. was convinced about the basic soundness of the model. It visualised that if the 'weaknesses' could be removed, there could be enhancement of the following advantages:

- Gives spatial information about education facilities.

- Highlights gaps and un-served/under-served areas.

- Useful planning tool for providing educational facilities and infrastructure as per norms.

- Provides compelling arguments for proper location of schools.

- Effective tool to convince Zila Panchayats which areas need new schools.

- Prevents constituency-wise division of targets.

- Ensures equitable system of utilisation of SSA funds.

6. The information given by the NIC.

This presentation was made in the second meeting of the Committee. A set of hard-copies of the presentation is attached as **Annex – 2 (v)** in **Vol. III** of the Report. The presentation covered Technological Advancements relating to data collection, compilation, processing and, presentation.

The following main points were made in the presentation:

- A wide range of technological facilities are available. (The NIC was requested to identify the most relevant and less expensive for adoption in our systems.)

- Although all aspects like collection, compilation, processing and, presentation are important, it must be recognised that, for educational statistics, problems lie more in the filed of collection of data. Technological applications (eg – adoption of Palm Top Computers to dispense with manual canvassing of schedules and adoption of Lap Top Computers to decentralise data compilation, correction and, validation)at that level will, therefore, have a tremendous impact on improvement of quality and elimination of delay.

- Many of the technological facilities admittedly are expensive. The cost aspect must be carefully considered to make an optimal choice.

- To get over this cost – tangle, the Committee must look at costing also from an overall perspective to recommend some norms about cost of data collection, may be as a percentage of the HRD budget.

- Several survey tools (both indigenous and international) are available. They must be standardised and adopted in a consolidated manner.

- The facility of analytical on-line planning must be exploited more fully.

- Likewise, the Business Intelligence Process must be better utilised.

- Data Warehousing is important. Attention shall not be confined to annual data collection; 'past data' available in the Warehouse must be retrieved and put to better use.

7. The material and information presented by the IASRI.

The National Information System on Agricultural Education Network in India (NISAGENET). It networks 34 State Agricultural Universities, 4 Deemed Universities of the Indian Council of Agricultural Research (ICAR). 3 Central Universities in Agricultural Education (Aligarh Muslim University, Benares Hindu University and, Imphal) and 1 Agricultural Institute in Allahabad.

The Indian Agricultural Statistics Research Institute (IASRI) functions as the Lead Center and Coordinating Unit.

NISAGENET focusses on,

- Data Collection in Agricultural Education;
- Maintenance of Data Base; and,
- On-line Question-Answer service relating to Agricultural Education in India.

The Information Base covers – Academic Information; Infrastructural Facilities; Budget related information; Manpower Information; Personnel Information; and, R & D Activities.

The Software has been developed using the .NET Framework. Two sets of application software have been developed.

(i). Data Management Application Software.

(ii). Central Server Application Software.

The Website of NISAGENET has the following major facilities:

- Agrikhoj : A Search Engine for agricultural education.
- Directory : Classified information from NISAGENET.
- Discussion Forum : For sharing information.
- Report/ Queries : Dynamic Reports for Users

The Outcomes of NISAGENET have been as follows:

(i). Establishment of an independent information system at the organisation level and will act as a useful tool for the agricultural education data management of the University and its affiliated/constituent colleges.

(ii). Availability of information on Agricultural Education at the country level through the Central Server at IASRI, New Delhi.

(iii). It will act as a decision support system and would be quite useful to academicians, planners, policy makers, scientists and technologists, students pursuing higher education in agriculture.

(iv). Development of the mechanism for periodical collection and updation of data on Agricultural Education.

(v). Feasibility to compile the up-to-date data in the form of Statistical Reports.

(vi). Establishment of Agrikhoj – a Search Engine for agricultural education network in India.

(vii). Publication of annual statistical bulletins on Agricultural Education in India.

8. The information given by the C.S.O.

(i). The need of sound statistics to formulate plans for the short-term and long-term objectives/goals of the new millennium must be properly recognised.

(ii). The importance of both 'Institutions' and 'Households' as origins of educational data must be appreciated.

(iii). Household data on children's attendance/non-attendance needs to be ensured.

(iv). The system must also capture enrolment and other data of unrecognised institutions.

(v). The schedules developed for schools must be reviewed; it should cover data on more variables.

(vi). All schools should be given permanent code numbers**.**

(vii). Data should be collected at regular intervals to estimate the unit cost of education at different levels.

(viii). In collection of data relating to Higher Education, the number of Forms must be reduced and the time-lag must be drastically reduced.

(ix). MHRD should ensure avoidance of duplication of efforts in collection of data by different agencies.

(x). Collection of data should be linked to policy imperatives; and, it should throw up appropriate indicators.

(xi). Adequate attention must be given to availability of time-series data.

(xii). At the State level there should be a Nodal Agency to coordinate between different Directorates.

(xiii). Special attention should be given to coverage of the **5** Millenium Development Goals.

9. The information presented about the Sub-Committee of the Advisory Committee on Educational Statistics by its erstwhile Convener

The MHRD set up an Advisory Committee on Educational Statistics in June 99. The Advisory Committee set up a Sub-Committee to examine the details. This Sub-Committee submitted a compact report in March 01 covering all the segments of HRD.

This report identifies the various sources of educational data and describes the mechanisms of data collection. It also lists the various publications brought out.

The more important part of the report pertains to identification of the major problems and deficiencies of educational statistics produced by the MHRD and the UGC. The identification runs as follows:

(i). Low data reliability

(ii). Time lag in making statistics available to users.

(iii). Non-availability of data on some important items.

(iv). Lack of consistency in the data collected and reported by different agencies.

(v). Inadequate mechanism for collection, checking, processing and dissemination of statistics.

(vi). Insufficient attention given to educational statistics by administrators.

(vii). Incomplete coverage (e.g., unrecognised schools not covered and Alternate Schools including Non-formal Education Centres, schools under Education Guarantee Scheme not covered adequately).

These problems/deficiencies have been elaborated upon in the report.

The report makes 57 recommendations. The more prominent ones are briefly cited below:

Strengthening Statistical Units

Central Level

(i). A separate full-fledged Bureau of Educational–Statistics should be set up in the MHRD.

(ii). The existing and the new staff should be fully trained and, equipped to manage a totally computerised system.

(iii). The Bureau should collect educational data not only of the HRD sector but also of Health/Medical, Agricultural and, other professional areas.

(iv). There should be complete networking with the States.

(v). There should be adequate computer hardware at all levels; and, appropriate software for data entry, verification and analysis.

(vi). The ES 1 and ES 2 forms require simplification and substantial modifications.

(vii). Some annual sample checking of data should be introduced for validation of data.

(viii). Necessary legal provisions should be made to make it mandatory for all types of institutions to supply the required basic statistics.

(ix). The International Standard Classification for Education (ISCED) developed by UNESCO should be used for reporting Educational Statistics.

State Level

(x). Each State should have an Educational Statistics or EMIS Unit.

(xi). The State Units should be manned by adequate number of fully trained staff.

(xii). The State Unit should be provided with infrastructural facilities of computers and other equipment.

(xiii). Manuals for data collection should be prepared for introduction of uniformity in and streamlining of the system.

General

School Level

(xiv). All the schools/institutions should be given unique code numbers.

(xv). Information relating to 'unrocognised schools' should also be collected:

- Location (rural/urban); year of establishment; classes taught.
- Enrolment in each class by gender and SC/ST.
- Teachers-full time/part time – by gender.

All other data on facilities, income, expenditure, etc., should be collected by conducting periodic sample studies.

(xvi). Data on such educational items as literacy, out of school children, school drop-outs, private expenditure on education and beneficiaries of various incentive schemes, should continue to be collected from households by NSSO every five years. Data on literacy, however, may be collected in every round of NSS because of its importance.

(xvii). Registers and forms for record-keeping at the school level should be standardised in each State.

(xviii). A system of independent sample checking of data should be instituted in order to assess the reliability of data.

Higher Education

(xix). The UGC is responsible for collection of all the Statistics pertaining to higher education and not just the Statistics of Universities and their affiliated colleges.

Coordination is needed with other Organisations such as Ministry of Health, Ministry of Agriculture, Ministry of Law, ICAR and AICTE.

(xx). Since problems of delay and non-response in direct collection of data from about 12000 colleges through mailed questionnaires have become acute, the UGC should think of a suitable alternative strategy for collection of data.

(xxi). Like the survey on school education to be conducted by NCERT once in 5 years, UGC should also conduct a comprehensive survey of higher education institutions quinquennially to provide data on facilities (such as lecture rooms, library, laboratories, workshops, equipment), finances, staff, etc. that cannot be easily collected every year.

10. The UGC Act.

The UGC has been in-charge of collection, compilation, analysis and publication of Statistics relating to higher education. This responsibility it has not been able to fulfil satisfactorily. So much was the gap in performance that the MHRD had once to take back the responsibility from the UGC.

The UGC data have been found to be outdated. They have been incomplete; and, they have been inadequate in quality besides lacking in consistency. The reasons for this position have been many like little staff-support, non-utilisation of the technological facilities available, etc. But, the reason primarily advanced by the UGC has been the recalcitrance of Colleges (especially the unaided ones) to furnish data as desired. The UGC stand has been that Colleges (especially the unaided ones) can not be compelled to comply.

The UGC recognises Universities, and the Universities affiliate the Colleges. Why can it not be a condition of such 'recognition' or 'affiliation' that the Universities or Colleges, as may be the case, shall comply in time with the requirements relating to supply of information and data? There has been no satisfactory response to this query. Surprisingly, enforcement of this requirement has not even been attempted through prescription of a conditionality to the grants-in-aid given! But, following this route may not provide a complete solution since many Universities/Colleges do not take grant-in-aid from the UGC.

The better course of action would, therefore, be to amend Section 26 of the UGC Act to introduce a regulation for prescription of timely supply of requisite information as a statutory obligation both of Colleges and Universities.

11. The AICTE Act.

The position relating to supply of statistics by Institutions of Technological Education to the AICTE has been weaker than that in the case of the UGC. The AICTE has not been able to give the UGC (who has been the Coordinating Agency for Higher Education) regular supply of updated information.

Explaining the 'powers of the AICTE', the representative of the AICTE pleaded helplessness. The Institutions of Technical Education are (reportedly) not required to take any action for supply of information or (even) for seeking registration until they complete 6 years of running. Even thereafter, some of them do not bother about AICTE recognition/registration. And, there is no provision in the Statute to compel such recognition/registration.

The most practical course will be to amend Section 23 (2) of the AICTE Act to provide specifically for compulsory registration so that the AICTE can require supply of the requisite data as a condition of registration.

12. The MHRD compilations of uniform concepts and definitions.

One of the long standing weaknesses of the system for collection of educational statistics has been the absence of a compilation of uniform concepts and definitions. The seriousness of this problem is aggravated by the fact that there is a plurality of channels of collection each adopting its own norms and standards. Various Committees reviewing the Educational Statistics System have repeatedly highlighted this infirmity and called for remedial action.

This Review Committee also strongly stressed this need in its deliberations. In fact, it has gone a step ahead to talk in terms of doing away the plurality of channels and introduce one unified system. This issue has been dealt with in greater detail later in this report.

On the subject of introduction of a compilation of unified concepts and definitions, it was heartening to see some meaningful action by the MHRD and the NCERT. But, the problem was still seen to persist because of the separate compilations. The MHRD has done well to take the cue and integrate the compilations.

The MHRD has produced an integrated compilation of uniform concepts and definitions separately for 'school education' and 'higher/tertiary education'. These have been circulated to all concerned. During our Regional Meetings, copies were given again to all the State Govts. (Copies of these compilations are attached as **Annex – 5A** and **Annex – 5B** in **Vol. II** of this Report.)

The compilation relating to 'school education' contains 15 entries; and, the compilation relating to 'higher/tertiary education' contains 19 entries. There can be an opinion that these are incomplete compilations. It must be recognised in this context that the MHRD has, apparently, dealt with only the expressions in dispute. In other words, they have not been prepared as compilations of a complete glossary of concepts and definitions.

Whether it is necessary to so elaborate these compilations may be considered by the MHRD. In our opinion, it will be useful to do so; it will, then, become one handy compilation for all purposes.

In our Regional Meetings, some State Govts. did raise a point about giving an opportunity to the State Govts. to give their inputs. We feel, this is a legitimate request. On a basic issue like settling concepts and definitions, all interested parties must get a say. The MHRD may raise this matter for discussion and settlement in a national conference involving all State Govts. and other educational bodies concerned.

Section – 5

Scope of the Review

1.1. The Notification issued by the MHRD focuses more on issues like systems, procedures, parameters and, financial implications. It does not specifically indicate the sectors/segments to be covered.

1.2. The Term of Reference – 1, which refers to identification of the complete set of parameters on which the MHRD should collect statistics annually, clearly indicates that the 'review' encompasses all the areas now covered.

2. In the first meeting of the Review Committee, when the basic issues were considered, it was clearly specified by the representatives of the MHRD that the Review Committee should cover all the segments of the HRD sector and a few other sectors as well.

3. Accordingly, it was decided to spread the canvas to cover all the segments ordinarily covered by the MHRD viz., Elementary Schools (Primary + Upper Primary), Secondary and Senior Secondary Schools, Higher Education, Technical Education and, Adult Education.

4. The Bureau of Adult Education, strangely, was not particularly enthusiastic about participating in this exercise. They felt they were doing reasonably well on this front and did not require any help. Happily, this attitude changed subsequently; and, the Report incorporates inputs relating to Adult Education also.

5.1. In the first meeting of the Review Committee, it was clarified that the Committee should also collect overall data from three other sectors – Medical Education, Legal Studies and, Agricultural Education. It was stressed that the idea was not to take over the responsibility for collection of educational statistics in the other sectors; the idea was only to collect from them overall cohort data to ascertain the inter-sectoral movements of students. The minimum requirement will, therefore, be to project the annual intake (i.e., Coursewise new admissions) and output (i.e., coursewise annual graduations) of the different courses in these other sectors.

5.2.1. A special mention was also made of Early Childhood Care and Education (ECCE). Since the Ministry of Women and Child Development was operating a massive ICDS programme, which had a prominent component of Pre-School Education, it was decided to liaise with them in this regard.

5.2.2. The Committee felt that attention to Early Childhood Education was important in the context also of the Sarva Shiksha Abhiyan. Since the objective was to ensure 100% enrolment in class I of all children of age 6, attention to ECE would better prepare them for going to a regular school at age 6.

6. In all the areas covered, it will be necessary to identify the major gaps in the existing system and arrange for them to be filled. For example, detailed data on minorities and persons with disabilities ought to be ensured in any new format or system.

7. 'Technology upgradation', as a term of reference, was singled out to play a very significant role because technology upgradation in data collection, compilation, processing, publication, had come to assume greater importance. The NIC, in its role as the repository of knowledge in this area, would have to play a leadership role not only in propagating new models and ideas but also in developing capabilities to operate and absorb them.

Section – 6A

Review of Earlier Studies

1. Since Independence, education in India has witnessed sea changes in terms of content, curriculum, quality and, multiple modes of teaching, emergence of new fields of study like Hotel Management, Catering Technology, Fashion Technology, etc. The concept of multiple entry system has also come into existence. Apart from formal education, correspondence courses, distance education, open education, home study, etc., have found wider acceptance. Educational Administration at all levels has also undergone changes after Independence.

2. Realising that a reliable and sound statistical database on education is a basic requisite for planning to succeed, various efforts have been made by the Govt. to provide a reliable data base on education by formation of various Committees at different levels. The background paper circulated by the MHRD gives a detailed account of these developments. (A copy of this paper is attached as **Annex – 1** in **Vol. III** of this Report.)

3. The details have been culled out and briefly presented hereunder for information and recapitulation. Although there have been many studies, four of them stand out for their contributions:

(i). The 1976-77 study that recommended introduction of the ES series of forms.

(ii). The High Level Committee set up in 1981.

(iii). The Sub-Committee appointed by the Advisory Committee in 2000.

(iv). The National Commission on Statistics set up in January 2000.

4.1. The notable events in the development of the system can be traced as follows –

- Prior to 1947, the Directorate of Commercial Intelligence collected educational statistics. After Independence, this activity was taken over by the Ministry of Education.

- In 1975 an Advisory Committee was appointed to advise on all matters of educational statistics. This did not have much of an impact.

- In 1976-77, to reduce the time lag in annual educational statistics, the forms were revised to introduce ES-I to ES-VI forms.

- In 1979, a Standing Committee on Educational Statistics was set up.

- In 1981, a High Level Committee was set up to review the entire system. Based on its recommendation, the ES Series of forms was recast and bifurcated to cover school education and higher education separately.

  Two other subsequent developments took place. In 1987-88, collection and publication of educational statistics relating to higher education was transferred to the UGC. Two attempts were made to introduce computerisation of the process involved. Both the developments did not succeed.

- In 1996 the Standing Committee was wound up and replaced by a Monitoring Group to advise on all matters.

- In 1999, an Advisory Committee was constituted to advise on educational statistics.

  This Advisory Committee set up a Sub-Committee. The Sub-Committee gave a report in 2001. Its recommendations are attached as **Annex - 6** in **Vol. III**.

  In 2002, two more Sub-Committees – one on data-needs and another on inter-sectoral/segmental coordination – were set up. But, there was no significant impact.

- A National Statistical Commission was set up in January 2000. Its report (2001) contained many recommendations on 'education'. The recommendations are listed in the Statement attached as **Annex** – **7** in **Vol. III**.

- The different reports submitted by various Sub-Committees orchestrated two main points,

  ~ UGC should give better attention to this work and go in for electronic data collection systems;

  ~ The Distance Education Council should be entrusted with the responsibility of collecting data relating to distance education.

- Over the years, educational statistics have come to be available from different sources – AISES (NCERT), Population Census (RGI), NSSO (Statistics Dept.), DISE (NUEPA), IAMR (for Technical Institutions), DAE (for Adult Literacy), NCAER, Directorates of Education in States, State Boards of Secondary Education. But, collection, compilation and, publication of educational statistics have continued to remain as responsibilities of the MHRD. This is particularly so with reference to international requirements of UNESCO.

- The following qualify to be listed as the main publications in the field of educational statistics –

  ~ Selected Educational Statistics

  ~ Education in India Volumes I to IV

  ~ Analysis of budgeted expenditure on education

  ~ Results of High School and Higher Secondary Examinations.

4.2. In 1976-77 a study was commissioned to reduce the time lag in annual educational statistics. Based on its recommendation, the forms were revised to usher in the ES-I to ES-VI forms.

4.3.1. In pursuance of the recommendations made by the Eighth All India Conference on Educational Statistics held in 1980 (which were accepted by the Standing Committee on Educational Statistics on 31 December 80) a High Level Committee was constituted in 1981 for reviewing the entire educational statistics system in the country.

4.3.2. Based on the recommendations of this High Level Committee, steps were taken as set out hereinafter:

(i). ES Series of forms for collection of data were streamlined and were further bifurcated for schools and higher education separately. The following type of forms were introduced w.e.f. 1984-85:

ES-I (S) Numerical data (school education)

ES-II (S) Financial data school education

ES-III(S) & (C) Examination results-school and higher education

ES-IV (S) School educational statistics for SC/ST

ES-I (C) Numerical data in respect of higher education

ES-II (C) Financial data for higher education

ES-IV (C) Numerical data for higher education of SC/ST

EX-V and ES-VI forms were listed.

(ii). Collection and publication of statistics on higher education was transferred to University Grants Commission with effect from 1987-88.

(iii). NCERT continued to conduct quinquennial All India Educational Surveys.

(iv). Two attempts relating to computerisation of educational statistics were made: In the first attempt during 1980 data on enrolment and attendance were to be collected from all

schools having upto upper primary classes for the purpose of quarterly monitoring of UEE. In the second attempt, the MHRD had launched a scheme of computerisation of educational statistics at the state level during the Seventh Five Year Plan in collaboration with NIC. Both the attempts did not succeed.

4.4.1. In June 1999 an Advisory Committee on Educational Statistics under the Chairmanship of Secretary (Education) was constituted to suggest measures on all matters concerning educational statistics from time to time. On 31 August 1999, the Advisory Committee decided to constitute a sub-Committee to look into the present system of collection educational statistics and see for itself the different systems being at present followed in States. The sub-Committee was asked to visit different States and see the system of collection on educational statistics and make its recommendations.

4.4.2. The Sub-Committee submitted its report in March 2001. Its main observations/recommendations were as given below:

(i). Necessary legal provisions should be made to make it mandatory for all types of institutions to supply the required basic statistics.

(ii). There should be a separate full-fledged Bureau for Educational Statistics in MHRD.

(iii). The Bureau should be empowered to collect also data relating to education in Medicine, Health, Agriculture, and other professional areas. In this regard, proper coordination is required with the Ministry of Health, Ministry of Agriculture, Ministry of Law and, AICTE.

(iv). The Bureau should have networking with the States.

(v). It should have adequate computer hardware and software for data entry.

(vi). The existing staff should be trained to switchover to computerisation.

(vii). The ES-1 and ES-2 forms should be extensively modified as recommended.

(viii). There should be some sample checking every year for validation of data.

(ix). - There should be an Educational Statistics or EMIS Unit in each State.

- This unit should have adequate professional staff.

- It should be provided with infrastructural facilities of computers and other equipment.

(x). The International Standard Classification for Education (ISCED) developed by UNESCO should be used for reporting educational statistics.

(xi). Manuals for data collection should be prepared.

(xii). Adequate infrastructural facilities should be developed at the district level also.

(xiii). All the schools/institutions should be given unique code numbers.

(xiv). For unrecognised schools/institutions, data on enrolment in each class by gender/SC/ST and on Teachers as well as information on location, year of establishment and, classes taught, should be collected.

All other data on facilities, income, expenditure, etc., should be collected through periodic sample studies.

(xv). All India Educational Surveys, which are henceforth being designated as All India School Education (AISE) Surveys, should continue to be conducted by NCERT every five years. These surveys provide valuable data on existing facilities for school education and detailed data on teacher qualifications

and on several other items which are not available from other sources. It should not be necessary to providejustification for the survey every time. Necessary budget provision should be made for it in the survey year automatically. In these surveys, while some basic data should be collected on complete enumeration basis, all other data should be collected on a sample basis. In particular, the data on class-wise enrolment by single year age can be collected on a sample basis.

(xvi). Data on such educational items as literacy, out of school children, school dropouts, private expenditure on education and beneficiaries of various incentive schemes, should continue to be collected from households by NSSO every five years. Data on literacy, however, may be collected in every round of NSS because of its importance.

(xvii). Registers and forms for record keeping at the school levels should be standardised in each State.

(xviii). The UGC should be responsible for collection of all the Statistics pertaining to higher education.

(xix). Since problems of delay and non-response in direct collection of data from about 12000 colleges through mailed questionnaires have become acute, UGC should think of a suitable alternative strategy for collection of data from colleges.

(xx). Like the survey on school education to be conducted by NCERT once in 5 years, UGC should also conduct a comprehensive survey of higher education institutions quinquennially to provide data on facilities (such as lecture rooms, library, laboratories, workshops, equipment), finances, staff, etc. that can not be easily collected every year.

(xxi). The Ministry should publish an Educational Statistics Yearbook giving all the important data on education within a year and the detailed statistics along with important indicators, within two years. These should include state-wise statistics and indicators and some district-wise information also.

4.5.1. The National Statistical Commission (NSC) was set up by the Ministry of Statistics & Programme Implementation under the Chairmanship of Dr. C. Rangarajan, with eleven distinguished experts. The Commission examined the statistics system of the country in relation to the principles and practices followed in other countries. The Commission in its report submitted in September, 2001, identified several data gaps and deficiencies in the Statistical system of the Country. One of the primary reasons for each deficiencies has been identified as the absence of an effective co-ordination mechanism for determining statistical priorities, standardisation of concepts and definitions and for ensuring credibility of statistics in the existing decentralised statistics system.

4.5.2. The Commission's recommendations on educational statistics are briefly set out below:

(i). Institutional records should be maintained properly by all institutions.

(ii). All filled-in-forms should be checked at the block level for primary/elementary schools and at the district level for secondary and post secondary institutions.

(iii). A computerised Educational Management Information System should be developed right from the district level to the State and National levels.

(iv). Efforts should be made to provide accurate data on the number of institutions, teachers and students (by sex, grade, SC/ST, rural/urban, etc.) for each level and type of education within a year in the publication Selected Educational Statistics.

(v). The administrators in charge of education and human resource development should give priority to the tasks of data collection. Some incentives and recognition should be given for supplying accurate information on time. Also punitive measures may be taken in case of inordinate delays and carelessness in filling forms.

(vi). The present sets of Educational Statistics (ES) forms are unwieldy and need to be rationalised.

(vii). For collecting and compiling all Educational Statistics, the International Standard Classification of Education (ISCED 1997) developed by United Nations Educational and Scientific Organisation (UNESCO) should be used to ensure standardisation and comparability of data.

(viii). The forms for collecting data annually from schools should be reviewed and new items should be included.

(ix). Data on the age of students, teachers' qualifications and experience, income and expenditure of private schools, incentive schemes, educational facilities and equipment, children with disabilities, should be collected in the All India Educational (AIE) Surveys. The data on age and some other items should be collected on a sample basis.

(x). All India Educational Surveys on school education should be conducted regularly at intervals of five years and the results of the survey should be published within two years of the date of reference. Data on some of the items should be collected only on a sample basis.

(xi). All schools should be given a permanent code number.

(xii). Data on new categories of schools and teachers such as different type of alternative schools or schools under the Education Guarantee Scheme (EGS) and teachers categorised as para-teachers should be collected annually.

(xiii). Certain periodical studies should be conducted by institutions such as NCERT, National Institute for Educational Planning & Administration (NIEPA), Institute of Applied Manpower Research (IAMR) and University Grants Commission (UGC) on the expenditure incurred by educational institutions by level and type of educational programme to estimate the unit cost for each level and type of education.

(xiv). Data on economic aspects such as finances of educational institutions and some other aspects such as average attendance of enrolled students, should be collected on a regular basis in one or more of the following ways:

(a) All India Educational Surveys conducted by NCERT once in five years;

(b) Sample surveys of institutions to be conducted by NCERT or the proposed Educational Statistics Bureau of MHRD once in 3 years or through ad hoc sample surveys.

(xv). Data on literacy, educational level of population, expenditure on education incurred by parents, socio-economic background of students, children attending or not attending school, dropouts, etc. should be collected through household surveys conducted by NSSO.

(xvi). Unrecognised schools and institutions should be covered in sample surveys.

(xvii). University Grants Commission (UGC) should shoulder the main responsibility of collecting and publishing data pertaining all types of institutions of higher education. It should use its regional centres and universities for collection of data instead of collecting data from colleges directly. UGC should reduce the number of data collection forms and simplify the existing forms. UGC should also organise quniquennial surveys of Higher Education Institutions.

(xviii). AICTE should have a full-fledges Statistical Unit to collect and compile data on enrolment, intake, teaching staff, graduates, educational facilities, finances, etc. from all types of technical and vocational education institutions through its regional offices.

(xix). Limited data on education in Medical and Dental colleges, collected by additional items of information on enrolment,

teaching staff, etc. should also be collected by the Central Bureau of Health Intelligence (CBHI) through MCI and DCI or directly from the institutions.

(xx). DARE should collect and publish the data in Agricultural on an annual basis.

(xxi). National Council of Teacher Education (NCTE) should bring out a statistical publication on teacher education institutions annually.

(xxii). A Coordination Committee on Technical and Higher Education comprising representatives of MHRD, UGC, AICTE, CBHI, DATE, NCTE, etc. should be set up under the aegis of MHRD.

(xxiii). The need to build appropriate educational indicators and time series on important parameters and undertaking sample surveys for meeting a variety of data requirements, the Statistical Unit in the Ministry of Human Resource Development must be strengthened and suitably upgraded at the earliest.

(xxiv). There should be a full-fledged Educational Statistics Bureau in the Ministry of Human Resource Development. It should be headed by a Statistical Adviser from Indian Statistical Service, in the rank of Joint Secretary to take care of all statistical activities of the two Departments namely,

(xxv). The Bureau should bring out various indicators derived from the data and make them available to users. It should also undertake special studies based on time series data from time to time and also make educational projections on a regular basis.

(xxvi). At the State level, the Educational Statistics Unit should be preferably located in one of the Directorates instead of there being several small units for statistical work in every Directorate.

(xxvii). The concerned Directorate should be the nodal agency in the State to coordinate the work related to Educational Statistics with other Departments.

(xxviii).The State Educational Statistics Unit should also undertake sample surveys and ad hoc studies on topics of interest to them. It should also be responsible for conducting training programmes for the staff engaged in statistical work.

(xxix). The district level establishment should be well equipped to cater to data collection and processing needs for education upto the higher secondary level and to undertake scrutiny and verification of forms received from the block level.

(xxx). The Educational Statistical Bureau at the Centre and the Educational Statistics Units in the States and districts should be equipped with adequate computer hardware and software for data entry, scrutiny, verification and data analysis.

(xxxi). The Statistical Bureau at the Centre should network with the States for receiving data directly from the districts.

(xxxii). The staff handling statistical work at the Centre and States should be provided with adequate training in statistics and use of computers for statistical work.

5. The educational data published have been seen by almost all the studies to suffer from the following deficiencies –

~ Time lag

~ Statistics presented are also only provisional

~ Data not reliable

~ Lack of consistency of data

~ No provision for checking and validation

~ Lack of data/Data gap on important items

6. The weaknesses in the system responsible for these deficiencies have been identified as follows –

~ Low priority assigned to educational statistics

~ Qualitative and quantitative inadequacy of existing infrastructure

~ Non-response from colleges to UGC's requirements

~ Frequent transfers or redeployment of statistics staff

~ Absence of control over private unaided institutions

~ Non-exploitation of electronic facilities available

~ Lack of training for the staff

~ Lack of legal support to the system

7.1. Although a lot of ground work was done by all these studies, they did not have much of an impact because most of them went mostly by the beaten track. They were mainly concerned about formatting the content of data to be procured for analysis. They failed to address basic issues like structures, systems, procedures, adoption of technological advancements, etc. We have tried to bridge this gap by addressing all such issues also.

7.2. As described earlier in this Section, many Committees have examined this subject in the past. But, the work does not appear to have been seriously pursued. One of them did not meet at all! Some of them did not submit their reports. One of them gave only a Sub-Committee report. Some of them, of course, made very good recommendations. But, there was apparently no serious attempt to take follow-up action. The ATR given merely states, 'accepted and forwarded to States/UTs for implementation'. There is no information on who did what. Many of these good recommendations have, therefore, been reiterated by this Review Committee. But, a system must be developed to ensure that the recommendations of such 'reviews' are effectively followed-up. It is our earnest hope that the recommendations made in this report will be accepted and (faithfully) implemented.

Section – 6B

Present system of data collection*

The Statistics Division of the Department of Higher Education is the nodal agency for collection, compilation, processing and dissemination of educational statistics in the country. A major responsibility of nodal Ministry is to procure, consolidate and provide information on quantitative and qualitative aspects of education to meet the needs of educational planning, policymaking and evaluation. This Division depends on the States to supply all the statistics needed by it.

School level data

There are broadly four stages of school education in India, namely, primary, upper primary, secondary and higher/senior secondary. In pursuance of the National Policy on Education of 1968 and 1986, there have been attempts to evolve a uniform pattern of school education with 12 years of schooling, commonly known as 10+2 pattern. The 'plus two' stage refers to classes XI and XII, which constitute higher/senior secondary stage; secondary stage consists of classes IX and X. The initial

* (This note has been given by the MHRD.)

schooling stage up to class V is called primary stage. Upper primary stage which is also known as middle stage, consist of classes VI to VIII. The schooling stage up to classes VIII is generally called 'elementary stage' or 'upper primary stage'.

In the process of compilation and publication of school educational statistics, a number of processes are involved at the district, State, and Central levels. At the district level, the work of collection of data involves four steps – distribution of primary proformae to educational institutions: collection of institutional returns; scrutiny of returns; and consolidation of data. In the States, the district officers make these proformae available to the high/higher secondary and teachers' training schools, etc., whereas the tehsil or taluka officers supply the proformae to the primary and upper primary schools. An up-to-date list of primary, upper primary and high/higher secondary schools is maintained at the respective taluka/tehsil or the district offices so that basic proformae are sent to all the institutions under their control. The proformae are to be submitted by the target date of 31 October. A set of written instructions is normally sent with the proformae and one of the teachers in the school is required to fill it with the requisite data.

Thereafter, the data collected at the tehsil or the taluka level in respect of the elementary schools are passed on to the district level and the consolidated data are sent to the State headquarters direct or through regional (or divisional) headquarters to be duly consolidated and forwarded to the State headquarters. It is very important from the point of view of accuracy of the data that the returns received at different points should be scrutinised and the discrepancies reconciled before the

data are consolidated. But in some States there is no satisfactory arrangement for the scrutiny of the returns. Discrepancies in such returns often complicate the job of reconciliation of discrepancies at a later stage. Generally an Assistant or a Clerk is made responsible for the statistical work at the district offices and only in a few States have posts of Statistical Assistants or Investigators been created for the district offices. The district office is required to consolidate the data regarding elementary and secondary schools by December 31 but even this time schedule is not adhered to in most of the cases and this in turn results in the usual time-lag. After the completion of the consolidation register, the data are carried in the prescribed form for submission to the State Education Department.

With so many stages for compilation of data, and compilation taking place manually at each stage (except perhaps on computer at the state level in some states), it is not uncommon for the final stage compilation getting considerably delayed due to delays in receiving the compiled figures from all the lower level units.

Higher Education data:

Higher education consist, education after schooling i.e. completion of at least twelve years of school education e.g. diploma after completion of 12 years of schooling, graduate, post graduate diploma and degree, M.Phil/Ph.D. etc. in any stream like Arts, Commerce, Science, Engineering, Architecture, Medicine, Agriculture, Fisheries, Laws, Teaching etc.

The State Education Department directly collects returns from colleges in the area and from non-affiliated institutions for higher education and universities and their teaching department. The State Education Department also collects data for the educational institutions under the control of other State departments such as agriculture health, industry, labour, etc. Before the data from all the different sources are received in the State Headquarters and consolidated, the various discrepancies observed by the State Education Department are reconciled through correspondence, and sometimes special spot reconciliation has also to be resorted to. But due to inadequacy of staff, this method is not used extensively. In some States, specialised statistical units have been created in the education Department to handle statistical work. It has been felt for quite some time that there is need for training of the staff working in the State headquarters so as to enable them to scrutinise the returns received by them from the districts is to be completed by January 31 and the prescribed Form is to be submitted to the Central Department of Education by April 30. But there is a large time-lag in the submission of these forms in the case of a number of States. The prescribed dates for submission of Forms are January 31 at State Headquarter and April 30 at Central Government, which are not generally adhered to. The time-lag in the collection of data in respect of the forms has been a continuing phenomenon because of the delays at the district and State levels due and efforts need to be made to cut short the delays at these points.

For higher education, the University Grants Commission (UGC) also collects data directly from universities for all their faculties and from constituent and affiliated colleges, with the same date of reference, namely, 30 September. To do away with two parallel systems of data collection, in 1987-88 UGC, which has some control over the universities

and colleges, was made the sole agency for collection of data on highereducation. But the UGC has been unable to supply the requisite data to this Ministry. Hence, for the sake of convenience and to minimise time lag, from 1994-95, Ministry again started collecting this data directly from the states on Forms ES-I (C) to ES-IV (C) etc. for reporting the same in its annual publications.

The other major sources of educational statistics are the following:

All India Educational Surveys Conducted by National Council of Educational Research & Training (NCERT) once in 5-8 years - All-India Educational Surveys are another important source of educational statistics in India. These surveys were launched in the beginning essentially with a view to providing critical inputs for the formulation of five-year plans, by providing information on schooling facilities and other related aspects. These surveys give a clear picture of the nature and quantum of educational facilities available in the vicinity of every habitation in the country and help to properly plan and locate primary, middle and high/higher secondary schools in the plan period. The last survey conducted in 2002-03 was 7th in the series of educational surveys.

Population Census: The Population Census is the most comprehensive source of information on some important educational aspects of the population. The Census is based on a national survey of all the households in the country conducted once every ten years and information is available at the village, district and state levels. The Census reports include, distribution of population by age, number of literates and

literacy rates, levels of educational attainment, workforce participation of educated manpower, participation of children in schooling (and other activities), selected data on number schools (and other amenities) by villages, etc.

National Sample Surveys conducted by NSSO – From time to time, NSSO collects data on social consumption which includes educational services. The 55th Round of NSS July 1999 – June 2000 brought out the results pertaining to literacy and educational levels. While collecting detailed information on employment – unemployment in the NSS 61st round (July 2004-June 2005), information on some general particulars of households members such as age, sex, level of general and technical education, current attendance in educational institutions, vocational training received etc. was also collected in the survey. It gives, broadly, estimates at State/UT and all-India level for males and females separately and for both types of residence (i.e. rural and urban). This subject was covered again in the 64th NSS round (July 2007 – June 2008) which collected information on 'employment-unemployment and migration', 'participation and expenditure in education', and 'household consumer expenditure'.

The District Information System for Education (DISE) by National Institute of Educational Planning & Administration (NIEPA): DISE was introduced initially in 42 districts covered under District Primary Education Programme (DPEP) in 1995/96, has now become a major system for collection and compilation of data on elementary education covering almost all districts in all States/UTs. Under DISE, the data on enrolment from all government and private recognised primary schools as well as upper primary schools having primary classes is collected for every district

annually and the statistics derived from the data become available in tabulated form, generally within a year. At present, the data is used primarily for monitoring of progress made under SSA in elementary education and not for meeting the requirements of official statistics.

The Institute of Applied Manpower Research (IAMR) has a major data collection project known as 'National Technical Manpower Information System' under which data from technical institutions is collected annually.

Section – 7

Meetings Held

1. The Committee held in all **8 meetings** to transact its business. All the meetings were held in Delhi and at the Conference/Committee Room kindly provided by the National University of Educational Planning and Administration.

2.1. The 8 meetings were held on dates detailed below:

First Meeting	…	8 May 06
Second Meeting	…	24 May 06
Third Meeting	…	23 June 06
Fourth Meeting	…	24 February 07
Fifth Meeting	…	28 February 07
Sixth Meeting	…	24 July 07
Seventh Meeting	…	6 November 07
Eighth Meeting	…	1 December 08

2.2. The Minutes of these meetings have been attached as **Annexes – 1A to 1H** in **Vol.II of** this Report.

3.1. In the **first 3 meetings**, the Committee discussed various aspects of the subject and decided its stand on different basic issues. (These have been set out in the next Section of the Report.)

3.2. In the **Third Meeting**, the Committee set up 4 Sub-Committees, decided on their composition, prescribed their terms of reference and, indicated the framework within which to settle the segmental details.

3.3. Details relating to the 4 Sub-Committees and the work done by them have been set out in Section – 8 of this Report.

4. In the **Fourth Meeting**, the Committee considered the Report of the Sub-Committee on School Education. The report was found to be comprehensive, elaborate and, covering in detail the Terms of Reference. The Review Committee nevertheless made some observations to further improve the report. The Convener of the Sub-Committee was required to incorporate the points made in the meeting and finalise the Sub-Committee's Report.

5.1. In the **Fifth Meeting**, the Committee considered the Report of the Sub-Committee on Higher Education. Although the Sub-Committee had laboured hard to prepare an elaborate report and raise some good points, many Members of the Review Committee were not satisfied with it. Their dissatisfaction was, in the main, over the following points:

(i). Lack of clarity in the Report.

(ii). Failure to propose computer-compatible formats.

(iii). Absence of emphasis on exploitation of available technology.

5.2. It was decided to authorise the Chairman to get the deficiencies rectified in consultation with a small group of experts.

6. In the **Sixth Meeting**, the Committee considered the Reports of the Sub-Committee on Technology and Training and the Sub-Committee on Legislative Support and Funding Arrangements.

7. As in the case of the Sub-Committee on Higher Education, here again the Reports were found to be inadequate. As explained in the minutes attached as **Annex – 1F** in **Vol. II**, many inadequacies and infirmities were cited. The main points in this regard were as follows:

8.1. Sub-Committee on Technology and Training

(i). The Report is too brief and cryptic. It should spell out the process more elaborately.

(ii). Experience with use of Simputers has not been encouraging. It should not hastily be adopted.

(iii). Manual data collection can not completely be replaced just now. At the school level it has to continue to be manual for some more time.

(iv). Hardware requirements and software availability should be spelt out.

(v). Staff requirements should also be spelt out.

(vi). The advantages of adopting modern technology should be explained in detail to justify the expenditure proposed thereon.

8.2. Sub-Committee on Legislative Support and Funding Arrangements

(i). Legislative support can not be through the Collection of Statistics Act as that may not be conducive for promoting transparency.

(ii). Recommendations relating to amendments and (new) legislative provisions should be precise.

(iii). The Report must develop an 'expenditure norm' to promote adequate budgetary support for the activities governing educational statistics.

9.1. The Reports of both the Committees were not adopted. The Sub-Committees were required to recast the Reports after addressing the issues raised. The Committee made the following observations to guide this exercise:

(i). The process of operations should be clearly set out preferably with the help of a 'flow chart' of activities. This would be essential for settling details relating to hardware, software and, training requirements.

(ii). Hardware requirements should be detailed separately for different levels – National, State, District, Block and, Cluster. This detailing should take into account what was already available with the NIC and what needed to be procured anew.

(iii). With reference to hardware already installed by and available with the NIC, it should be clarified whether their use would involve any additional financial implication.

(iv). Since many States had their own networks, arrangements for inter-connectivity must be spelt out.

(v). Information about availability of spares, maintenance of equipment, etc., must be incorporated.

(vi). With reference to the 'process' indicated, the software requirements should be detailed. This detailing should take into account what was already available with the NIC and what needed to be procured anew.

(vii). Software to be procured anew should distinguish between what could be developed by the NIC and what had to be procured in the market.

(viii). With reference to software already installed by and available with the NIC, it should be clarified whether their use would involve any additional financial implication.

(ix). As in the case of hardware detailing, with reference to the process indicated, the personnel requirements should also be set out separately for different levels – National, State, District, Block and Cluster. In this exercise, besides M.I.S. personnel, requirements of statistical personnel should also be worked out.

(x). With reference to the process, hardware, software and, personnel details worked out, the training needs should be assessed.

(xi). The emphasis on Training was appropriate. But, it had to be recognised that the NIC's capacity (to train) would be limited to training of Key Resource Persons. The NIC could also develop the overall training programme and the necessary software; but, wider adoption of the training programme might have to reckon with outsourcing arrangements. But, the complete process must be clearly set out to facilitate assessment of training needs. That being so, it must be identified what parts of the training needs would be met by the NIC and what would need to be outsourced. In respect

of the latter, it would also be necessary to identify some appropriate agencies.

(xii). The financial implications worked out would need to be recast with reference to the guidelines given above. Here, again, it would be necessary/useful to present the details separately for different levels.

9.2. In the **Seventh Meeting**, discussing the (revised) Sub-Committee Report on Legislation, Funding Norm, Costing, etc., the Committee took the following decisions:

(i). As was stated by the Committee in its earlier meetings and, as was stressed by the Sub-Committee itself in its first meeting, it would be necessary to formulate the precise amendments required in the UGC Act and in the AICTE Act.

(ii).(a).If the Government's intention was to seek refuge under the Collection of Statistics Act, it would be necessary for the Sub-Committee to frame the precise proposals instead of vaguely recommending 'appropriate' provisions.

(b).But, the Sub-Committee and the Review Committee both should feel free to advise the Government on the undesirability of adopting such an approach. The Collection of Statistics Act, administered by the Department of Statistics, was aimed more at collection of commercial data and, therefore, emphasised on confidentiality of the data collected. Such an approach might not suit the purpose of the exercise relating to educational statistics where total transparency would be required and where enforcement of confidentiality would detract from the merits of the exercise. In this context, it would have to be clearly recognised that

the Department of Statistics might not countenance any request for transparency of handling of data collected under the Collection of Statistics Act.

(iii). An important aspect of the Review Committee's work was to estimate the cost of data collection in the education sector. The sub-Committee had just not addressed this issue at all. It should do so now.

(iv). Another important aspect of the Review Committee's work was to develop an 'expenditure norm' to govern adequate budgetary support for collection of educational statistics. Here, again, the Sub-Committee had just not addressed the issue at all. It should do so now.

10. The **Eighth** and final **Meeting** of the Review Committee was held on 1 December 08 to consider the draft report.

Apart from suggesting various minor modifications, the discussion focussed on adoption of technology. Notwithstanding some reservations entertained by some Members, the Review Committee was able to make a unanimous recommendation about modernising the system through adoption of available technology down to the CRC level. Consequently, the idea of outsourcing data entry was given up and the staff requirements and costing were revised with reference to a computerised system of operation.

The Committee also advised that requirements of statistical staff should be detailed.

It was decided to elaborate the logic of proposing establishment of the CBES so that it does not appear to be a value-judgement on the performance of the NUEPA and the NCERT.

Section – 8

Basic Positions Decided Upon

1. In its preliminary meetings, the Committee dwelt on fundamental issues to formulate the framework of an agreed proposition. Based on these discussions, it succeeded in developing its basic thinking as follows:

(i). Presence of a plurality of systems has been seen to cause confusion and delay. Therefore, eliminate the multiplicity of channels and introduce one unified system of data collection (annually on a census basis), processing and, publication by integrating parallel systems into a common matrix.

Within the matrix each sub-system will be required to submit final compilations to its superior system with a National Focal Point being responsible for submission of the final compilation to the MHRD.

In this connection, it is agreed that it will not be appropriate for a national govt. to be directly engaged in collection and publication of data. The ground work should be done by a separate Agency to meet requirements indicated by the Govt. Analysed data with highlighting of appropriate 'indicators' must be made available to the Govt. to facilitate proper policy-making and planning.

Various agencies are doing this work with different periodicities. It will, therefore, be useful to standardise the periodicities, in line with the proposal to unify the systems.

(ii). Time and again it has been represented that ambiguities relating to concepts and definitions have been a major discordant factor in this exercise. Unfortunately, this problem continues to afflict the process.

Based on some of the earlier studies, the MHRD is reported to have a compilation of the terminologies concerned; likewise the National Council of Educational Research and Training has brought out a compilation relevant to 'School Education'. The MHRD has produced an integrated compilation of uniform concepts and definitions separately for 'School Education' and 'Higher/Tertiary Education'. These have been circulated to all concerned. It will be useful if the MHRD can organise a special consultation with States/UTs in this regard.

(iii). Adoption of modern technology will be useful; it will speed up the exercise. It will also eliminate the errors caused by the drudgery of manual operations and improve the quality. But, the initial installation cost, both on hardware and software, as also partly on training, should be borne by the Govt. of India.

The NIC's data warehousing facility offers common multi-system coverage to a multi-segmental compilation of data pertaining to the Education Sector as a whole; this must be fully utilised.

(iv). It will be useful to collect data not only from different segments of the education sector but also some overall data from other allied sectors like Agriculture, Medical Education and, Legal Studies.

It will be necessary to identify (Segmental) 'Focal Points' and appoint (Sectoral) 'Nodal Officers' to ensure proper coordination.

(v). Both raw data and processed data must be available on-line for public access. Computerisation of the whole process will easily facilitate this.

(vi). It will be necessary and useful to introduce legislative support for the data collection exercise. Some States already have enactments to govern School Education that can serve this purpose also. But, for purposes of uniformity, it will be essential to have a common central legislation.

(vii). Installation of hardware/software will not suffice; there will have to be competent staff to operate them. Besides MIS personnel, the system will need statistical personnel qualified

to deal with data collection. The staff deployed (including the school teacher) will need to be trained not only in utilisation of modern technology but equally in data collection.

(viii). Funding of this activity is hopelessly inadequate. There must be a well established 'norm' to ensure adequate budgetary support.

(ix). A Child Tracking System (CTS) will surely be helpful in ensuring universalisation of Elementary Education. But, the financial implications will be substantial; proper budgetary support will be required.

It is also necessary for locating drop outs and non-starters. With a CTS in position, enrolment will definitely increase.

The CTS should be started at the time of birth of the child and a unique ID number should be allotted to each child.

Although CTS is not a statistical item, this observation is made in the interest of ensuring full enrolment under the Sarva Shiksha Abhiyan. It will be for the States/UTs to take appropriate follow-up action.

(x). The financial implications will be assessed alongwith some reasonable indication of an expenditure-norm for data collection.

Section – 9

Sub-Committee Reports

I. Sub-Committee on School Education

1. This Sub-Committee was set up in the third Meeting (23 June 06) of the Review Committee.

2. Its composition was as follows:

- Ms. Vrinda Sarup, Joint Secretary (Elementary Education) … Convener
- Shri. S.C. Khuntia, Joint Secretary (School Education) … Co-Convener
- Dr. Arun Mehta
- Prof. Avtar Singh
- Education Secretary, (Assam)
- Shri. Jhingran, Director (Elementary Education)
- Director of Education (Delhi)
- State Project Director of SSA (Orissa)
- Representative of the Ministry of WCD
- Shri. S.P.Rastogi, Retd. Sr. Tech. Director of NIC
- Chairman of the Review Committee

3. The Sub-Committee was required to decide on the details subject to the major guidelines provided by the Review Committee.

These guidelines emanate from the 'basic positions' set out in Section – 7 of this Report.

4. The scope of the School Education Sub-Committee's work, in the main, comprised the following:

(i). Decide the extent of data to be collected.

(ii). Finalise the parameters to be adopted keeping in mind the 'international core' and 'national core' to be maintained.

(iii). Without circumscribing the discretion of the sub-systems, to indicate the contours of the 'base line (s)' to be developed.

(iv). Following up on the work done by the MHRD and the NCERT to compile glossaries of accepted concepts, definitions and, terminologies, to address the remaining ambiguities and clarify the position.

(v). Review of the current system to decide on what is to be retained and what is to be given up.

(vi). To identify the sources for collection of data.

(vii). To propose appropriate cut-off dates for reporting and to suggest suitable schedules of submissions.

(viii). To review the forms in use at present and rationalise them so as to shed irrelevancies.

(ix). Taking note of the technological facilities available, to recommend appropriate methodologies of data collection.

(x). To fix responsibilities on a decentralised basis for production of data and recommend a suitable system of rewards and penalties for performance.

(xi). To project the financial implications of the recommendations with some indications, if possible, of the funding arrangements.

(xii). To recommend meaningful coverage of unrecognised institutions.

(xiii). To describe the system for assignment of unique code numbers on a uniform basis to Institutions/Individuals for easy identification and tracking.

(xiv). To recommend measures for adoption of transparency in the conduct of the data collection exercise.

5. The Sub-Committee submitted its report on 3 November 06. This report was considered by the Review Committee in its fourth Meeting.

6.1. The salient points made in the report are as follows:

(i). The Sub-Committee is of the unanimous view that DISE must continue and shall be upgraded to cover Secondary and Senior Secondary stages also. (The Committee was subsequently informed that the DISE system had been extended to cover the Secondary and Senior Secondary stages also. But, the Review Committee was concerned to note that the 'extended' part was being overseen by an unit separate from that for the elementary stage. The Review Committee strongly recommends an unified arrangement for purposes of ensuring coordination and promoting efficiency.) DISE has been widely accepted and must become the only system. Parallel systems like the SES should not operate.

(ii). DISE coverage should be expanded to include the mid-day meal scheme, OBCs, Muslim and, unrecognised schools.

DISE is an annual exercise compiling educational statistics. If intermediate variables are required to be incorporated they must be dealt with as programme details.

(iii). 'Unrecognised schools' constitute anywhere from 5% to 25% of the total number of schools. Educational Statistics,

especially of the elementary education stage, cannot afford to ignore this segment. Notwithstanding any difficulties, therefore, the data collection drive must include them also.

It may not be practicable to organise a separate exercise. At the same time, it will be too big a job for the Central Govt. to take on. States should, therefore, be pushed to take up this exercise.

It has to be recognised here that there may not be any dependable baseline on this item as the number of 'unrecognised schools' keeps changing. One way of dealing with this problem can be to insist on inviolable school codes so that wherever they go the unrecognised schools can be tracked. When any unrecognised school folds up, its code must be frozen; it can be revived if the school reopens at the same place or (even) at a different location.

(iv). The Sub-Committee is not in favour of jettisoning any item; there is not much scope for it. Only the 'village education data base' offers some scope; but, even here, the sub-Committee has chosen to retain the format as it is.

(v). Under Head 'financial data', the Sub-committee has been in favour of adding 'fund flow'. The idea is to reinforce the concept of financially self-reliant schools.

(vi). Availability of data relating to Adult Education is inadequate. The NSSO should be required to include 'literacy data' once every two years – both at the national and state levels- to track changes in Adult Literacy.

(vii) 'Child Tracking System' (CTS) will be an essential component of the DISE. But, the Central Govt. cannot take it up; States should be encouraged to do it.

Under the SSA an overall pattern only for 'household survey' has been circulated. But, to improve the system, the GOI can prescribe CTS also. It can also be required to fund it. But formatting of the exercise and its actual implementation have to be left to the States.

(viii). The Sub-Committee found it difficult to work out the funding requirements. As regards costing, the sub-committee can only give a 'unit cost' for a district; further detailing may not be possible.

(ix). As regards net working and school coding, it should be possible to cover down to the Block level in two years; CRCs can be covered later; and, village levels can be covered much later.

(x). Both raw data and analysed data must be available on line for public access. It will be advisable to link it up with the Education Portal.

(xi). Training of MIS personnel will be integral to the SSA. It has to be prescribed as a recurring feature.

(xii). The Champak Chatterji report had laid stress on two main issues - specification of the structural formation and staff requirements at the district level and below and the need to meet international requirements like MDG, EFA, etc. Both these issues were fully reckoned with by the sub-Committee.

6.2.1. The Sub-Committee's report was seen to be comprehensive, detailed and, lucid; and, it extensively covered all the terms of reference. The Review Committee, therefore, had no hesitation in accepting it; but, with the following observations:

(i). 'Unrecognised Schools' have no doubt to be covered. But, it will be more realistic to leave them to be covered by States/UTs. Many States are already doing it.

(ii). Attention to quality of data is important. DISE, for example, insists on 5% (random) sample checking. Even then it is not considered to be adequately validated. Some States appoint independent agencies to take up this sample checking.

(iii). The Coordinator of the CRC in DISE should be made accountable for quality control.

(iv). It has to be recognised that data collection can be speeded up; but, data entry is tricky. We have, therefore, to be very particular about proper data entry arrangements.

(v). Computer facility is not available at many levels in the DISE Project. Data feeding is given on out-sourcing. This affects the quality of data. MIS staff should, therefore, be appointed at all levels. Until the technology can further develop in a compatible way and until appropriate hardware, software and, manpower provisioning can be made, manual operations will have to be maintained at the School and Cluster levels and data entry will have to be oursourced at the Block and District levels.

(vi). The GIS follows the Census Codes, the DISE Codes must, consequently, tally with Census Codes. The DISE Group must examine the steps necessary to achieve this.

(The Review Committee was informed by the Dept. of EMIS in NUEPA that DISE had adopted the Census Codes at the State/District levels. Difficulty was expressed in adopting the Census Codes below the District level at this stage.)

(vii). Training requirements for data collection, compilation, entry and, transmission must be highlighted.

6.2.2. The Sub-Committee was reluctant to drop any variable on the ground that all information collected had been found to be of use at one time or another.

6.2.3. Commenting on the 750 variables proposed by the Sub-Committee on School Education, it was suggested that some could be collected on 'census basis', some on 'sample basis' and, some could be collected on-line. The apprehension was that otherwise States might have mammoth problems of handling the volume. The response was that the Sub-Committee had added only one parameter. In other words, States had been handling this volume for sometime and got used to it!

6.2.4. With reference to this stand, it must be recognised that the load can be reduced by segregating what is required as 'baseline data' to be available on-line and what can be covered through annual surveys. Incidentally, it must be stressed here that the 'baseline data', must be required to be kept in a 'portal' open to public access.

6.2.5. The formats developed by the Sub-Committee for collection of data were found to be in order. They were approved as proposed. One set of these formats is attached as **Annex - 2 to this Volume** of the Report. The idea is that these formats should replace the formats in vogue at present.

6.2.6. The recommendations made by the Sub-Committee were also accepted as such.

7. The Sub-Committee finalised its report accordingly.
(A copy of this report is attached as **Annex – 2A** in **Vol. II** of this Report.)

II. **Sub-Committee on Higher Education**

1. This Sub-Committee was set up in the third Meeting (23 June 06) of the Review Committee. It was advised to cover, in overall terms, Agriculture Education, Medical/Health Education and, Legal Studies also.

2. Its composition was as follows:
   - Representative of the UGC … Convener
   - Representative of the AICTE
   - Representative of the Health Sector (for Medical Studies)
   - Representative of the Law Sector (for Legal Studies)
   - Representative of the Agriculture Sector (for courses in Agriculture)
   - Dr. A.B.L. Srivastava
   - Representative of the AIU
   - Representative of the Karnataka Government
   - Representative of the NIC
   - Chairman of the Review Committee.

3. The Sub-Committee was required to decide on the details subject to the major guidelines provided by the Review Committee. These guidelines emanate from the 'basic positions' set out in Section – 7 of this Report.

4. The scope of the Higher Education Sub-Committee's work, in the main, comprised the following:

(i). Decide the extent of data to be collected.

(ii). Finalise the parameters to be adopted keeping in mind the 'international core' and 'national core' to be maintained.

(iii). Without circumscribing the discretion of the sub-systems, to indicate the contours of the 'base line (s)' to be developed.

(iv). Following up on the work done by the MHRD and the NCERT to compile glossaries of accepted concepts, definitions and, terminologies, to address the remaining ambiguities and clarify the position.

(v). Review of the current system to decide on what is to be retained and what is to be given up.

(vi). To identify the sources for collection of data.

(vii). To propose appropriate cut-off dates for reporting and to suggest suitable schedules of submissions.

(viii). To review the forms in use at present and rationalise them so as to shed irrelevancies.

(ix). Taking note of the technological facilities available, to recommend appropriate methodologies of data collection.

(x). To fix responsibilities on a decentralised basis for production of data and recommend a suitable system of rewards and penalties for performance.

(xi). To project the financial implications of the recommendations with some indications, if possible, of the funding arrangements.

(xii). To recommend meaningful coverage of unrecognised institutions.

(xiii). To describe the system for assignment of unique code numbers on a uniform basis to Institutions/Individuals for easy identification and tracking.

(xiv). To recommend measures for adoption of transparency in the conduct of the data collection exercise.

5.1. The Sub-Committee submitted its report on 31 October 06. This report was considered by the Review Committee in its Fifth Meeting.

5.2. Although the Sub-Committee had laboured hard to prepare an elaborate report and raise some good points, many Members of the Review Committee were not satisfied with it. Their dissatisfaction was, in the main, over the following points:

(i). Lack of clarity in the Report.

(ii). Failure to propose computer-compatible formats.

(iii). Absence of emphasis on exploitation of available technology.

5.3. The following further observations were made on details:

(i). The Report mixes up a lot of information about the growth of higher education with statistics on Higher Education. It is not in accordance with the Terms of Reference of the Sub-Committee on Higher Education. The report does contain a lot of relevant information; but, a good deal of effort will be needed to separate the grain from the chaffe. There is a need to re-cast the report before it can be finally considered by the main Committee.

(ii). The report gives the impression that UGC is pleading inability to get the data. This will be incongruous because UGC is the Statutory Regulatory Authority in the field of higher education. It should not be difficult for it to enforce data collection by making it a condition of recognition (of Universities) and affiliation (of Colleges). The aided/unaided status of colleges need not be a relevant factor in this context at all. There should be a recommendation in the report, if necessary, to amend the UGC Act accordingly to address this problem.

(iii). It will be reasonable to assume that every college in the country is equipped with computers and internet connectivity. There cannot be a college today without computers and internet connectivity. The UGC must ensure it. All data collection can, therefore, be on-line.

(iv). Un-recognised colleges/institutions have also to be covered. If necessary, it can be done through a separate survey. But, subsequently, it should be included as a part of this exercise.

(v). Agriculture Education, Medical Education, Legal Education and Distance Learning, etc., are important segments to be covered in Higher Education. Issues regarding coordination in collection of data from these Departments need to be discussed with the State Governments. It may be left to the State Govt. to nominate the Nodal Agency according to its convenience. The Nodal Agency can collect the data from all the other agencies in the State and give its compilation to the UGC. Apart from this, the UGC may also collect information from all the concerned Ministries like Ministry of Labour, Agriculture, etc.

(vi). Regarding Parameters and Formats, it was noted that while all the relevant items had been reckoned with, the formating had to be amended to suit computerisation. It was felt that they needed to be re-cast.

(vii). Regarding Concepts and Definitions, the Committee was of the view that they should be standardised as was done by the sub-Committee on School Education.

(viii). The Methodology for collection of data and the arrangement for validation of data are not clear in the Sub-Committee report.

(ix). Items like costing of data collection, arrangements for funding the cost, developing norms for budgeting i.e. how much percentage of the budget should go to data collection, etc., have not been specifically reckoned with in the Sub-Committee report.

(x). Assignment of unique code numbers to colleges and students is very important. It needs to be mentioned in the report.

5.4.1. There was an opinion that the data collection process, especially in respect of 'Higher Education', suffers from over-drive; there are too many forms with too many parameters. The Review Committee was urged to recognise the scope for excision of variables. The Sub-Committee on Higher Education did not admit that there was any scope for reduction of variables. But, in the special exercise that followed, due attention was given to this requirement.

5.4.2. But, in fairness to the Sub-Committee on Higher Education, it must be said that the Sub-Committee on School Education was also reluctant to drop any variable on the ground that all information collected have been found to be of use at one time or another.

5.5. It was decided to authorise the Chairman to get the deficiencies rectified in consultation with a small group of experts.

6.1. The matter was taken up with the Chairman of the University Grants Commission (UGC) for further action. The outcome was as follows:

(i). The Chairman of the UGC expressed total commitment of the Commission to revamping and modernisation of the educational-statistics-system.

(ii). Accordingly, he agreed to development of the relevant details by a Group consisting of Dr. Gautam Bose, Dr. A.B.L. Srivastava, a representative of the IASRI, a representative of the AIU, a representative of the MHRD and, a representative of the UGC.

6.2.1. The Group held two meetings to develop the overall contours and criteria for collection and compilation of statistics pertaining to higher education.

6.2.2. The Group gave its recommendations on 6 November 07. The main recommendations of the Group are as follows:

(i). UGC should set up a group of experts and data users to finalise the list of items on which data should be collected from different types of higher educational institutions.
In any case, data on the following items should be collected annually with 30 September as the date of reference:

(a). No. of institutions of different types.

(b). Enrolment in different levels and types of courses by

- Grade (e.g. First year, Second year, etc.) for each course
- Gender and Age
- Social class (SC/ST/OBC/Others); Foreign Students and NRI Students by Country of origin (country-wise)
- Students with special needs by type of Disability.

The course will be broadly of 4 levels (as provided in ISCED)

- Diploma below level of First degree
- First degree (BA, B.Sc., B.Tech., etc.)
- Post-graduate (M.A., M.Sc., M.Com., etc.)
- Research Degree (Doctoral degree, M.Phil., Ph. D.)

(c). No. of graduates from different types of courses by gender, social class, age-group and type of disability, if disabled.

(d). Intake capacity and actual intake in different types of courses.

(e). No. of repeaters in each grade (First year, Second year, etc.) in each course/subject.

(f). No. of teachers by main designation categories (e.g. Professor, Reader, Lecturer, etc.) for different subjects, faculty-wise, by gender, age, social class, qualifications and, disability-wise (if disabled), part-time teachers and visiting/Guest teachers.

(g). Percentage of classes assigned to regular teachers, part-time teachers, Research Scholars/Students, Guest/Visiting Faculty in each course/subject.

(ii). A Directory of Universities, Colleges and other higher educational institutions showing the courses offered by them should be compiled and published by UGC. It should include the following information about each course.

- Duration of the course
- Type of degree/diploma awarded
- Minimum admission requirements
- Full-time, part-time or both
- Regular or self-financing

- Medium of instruction and Medium of Examination
- Selection procedure for admission
- No. of working days, teaching days, examination days and, holidays.

(iii). All the courses should be given codes following the coding system of ISCED developed by UNESCO. This task of preparing an ISCED document for India may be undertaken by UGC and the job may entrusted to a Task Force.

(iv). An on-line system similar to that of IASRI for Agricultural Universities/Colleges should be developed by UGC for all universities and other university level institutions. UGC should either appoint a System Analyst to work on it in consultation with the NUEPA, IASRI and NIC or outsource this job.

(v). The numerical data to be collected from universities and colleges should meet the requirements of MHRD, Planning Commission and international organisations such as UNESCO.

(vi). For collecting and compilation of data on such items as facilities, equipments, library, etc. a base line survey should be conducted and the data should be collected from all universities and colleges. It should

be updated annually. An Electronic Data Management System in universities and colleges should be set up for this purpose which enables the user to retrieve the data as an when required. To begin with, a pilot survey may be conducted in 4 or 5 States.

(vii). Some essential items of income and expenditure pertaining to universities and colleges should be collected annually at the end of the financial year.

(viii). UGC should examine the financial record-keeping of a few universities and colleges across States and then propose a common format for maintaining financial records so that the essential financial data can be supplied easily by them. The system of giving grants under different heads to universities and colleges should be studied.

(ix). Information should be collected on rates of fee charged from students for different purposes.

(x). Affiliated colleges should supply data on a prescribed form similar to that of universities. The data from constituent colleges should be a part of the data to be supplied by the university of which the college is a constituent.

6.3. The representative of the UGC was then to scan the formats of the IASRI, the MHRD and, the UGC itself to determine the variables to be retained/added. Thereafter, the UGC was to engage a couple of programmes to assist in developing computer-compatible formats. The IASRI formats, which had stood the test of time, were to form the basis of this exercise. The NIC agreed to extend all possible technical help.

6.4. Unfortunately, this follow-up action did not take place. When this inaction began to impact unduly on the progress of the Review Committee's work, the Chairman was compelled to take it upon himself to complete the exercise, to the extent possible, with the help of the representative of the MHRD (Shri. Chander Kant) and Dr. H.S. Bhargava of the UGC.

6.5.1. The report presented by the Sub-Committee is attached as **Annex – 2 B(i).** in **Vol. II** of this Report.

6.5.2. The report presented by the Special Group constituted is attached as **Annex – 2B(ii).** in **Vol. II** of this Report.

6.5.3. The recommendations emerging from the deliberations of the Review Committee and the formats finally developed by the Group under the Chairman were found to be in order

and were accepted in toto. One set of the formats developed by the Group is attached as **Annex - 3 in this Volume** of the Report. The idea is that these should replace the formats in vogue at present.

III. Sub-Committee on Technology and Training

1.1. This Sub-Committee was set up in the third Meeting (23 June 06) of the Review Committee.

1.2. It was advised to closely liaise with the NIC to be able to spell out the hardware requirements and software availability.

1.3. With reference to Training, it was advised to identify what parts of the training needs would be met by the NIC and what would need to be out-sourced. In respect of the latter, it would also be necessary to identify some appropriate agencies.

2. Its composition was as follows:

- Shri. Chander Kant, Joint Director (Statistics) … Convener
- DDG, NIC
- Representative of the ISI (Delhi)

- DDG, CSO
- Education Secretary (Maharashtra)
- Representative of the Chhatisgarh Government
- The Software Expert of Oriss's CTS Project
- Dr. Kiran Karnik of NASSCOM or his representative
- Chairman of the Review Committee

3. The Sub-Committee was required to decide on the details subject to the major guidelines provided by the Review Committee. These guidelines emanate from the 'basic positions' set out in Section – 7 of this Report.

4. The scope of this Sub-Committee's work, in the main, comprised the following:

(i). To review and describe the range of technological facilities available.

(ii). Bearing in mind cost considerations, to prioritise choice of the available technologies.

(iii). In the backdrop of installed (hardware and software) capacities available with the NIC, to recommend an appropriate combination of the installed capacities (to be availed of) and new capacities (to be acquired).

(iv). With reference to the various alternatives, to propose an advance programme of training of personnel, both at the centre and in the States, in identified institutions.

(v). Taking into account the emphasis on adoption of one unified system of data collection, to propose a network that will harmonise inter-connectivities and facilitate easy on-line access.

5.1. The Sub-Committee submitted its report on 28 February 07. This report was considered by the Review Committee in its sixth Meeting (24 July 07).

5.2. The Sub-Committee's work had to be done almost exclusively by its Convener. Although he had worked hard to single-handedly complete the task, many Members were not satisfied with the Report. The dissatisfaction was, in the main, over the following points:

(i). The report was very brief.

(ii). The recommendations were cryptic; they should be more detailed.

(iii). The report should spell out the process in greater detail.

(iv). Complete replacement of the existing manual system, as proposed, especially at the school level would be difficult.

(v). Adoption of Simputers without addressing its known technical inadequacies would be ill-advised.

(vi). The report does not explain how data relating to out-of-school.non-enrolled children would be captured.

6. In this backdrop, the Review Committee did not accept the report of the Sub-Committee. It was required to recast the report.

7. In this connection, the Sub-Committee was given the following points to reckon with:

(i). The advantages of adopting modern technology should be clearly spelt out so that its importance would stand out when the Govt. considered the Committee's recommendations. In this connection, it would be useful to single out for specific mention the following advantages-

- timeliness of the operations;
- quality of the statistics produced;
- proper validation of the data collected;
- elimination of redundancies;
- accountability of data suppliers and collectors;
- warehousing of raw data;
- variegated analyses;
- on-line access to all.

(ii). It would be simpler to achieve this in the Higher/Technical Education segments. Because of its massive scale, the

School Education segment might take time to introduce the changes; but bearing in mind the tremendous advantages involved, the process must start without any delay. The School Education segment had already achieved this by introducing the DISE at the Elementary stage. It would only be necessary for the School Education segment to expand the DISE by extending it to Secondary and Senior Secondary stages and (further) streamline the system by addressing observed weaknesses.

(iii). Complete replacement of the existing manual system by the system proposed in the Report would be difficult to achieve. The manual system could not be totally eliminated particularly at the school and cluster levels. Data entry into computers by teachers at the school level might cause complications.

(iv). Manual collection of data could be retained at school level with 'data transfer' being taken up at the Block level. To facilitate this process, Desk Top Computer could be provided at the Block level.

(v). Instead of adopting the Simputers, it would be more appropriate to think in terms of providing a PC at the CRC level or, preferably (even) a Laptop at the CRC level. All the software problems, storage problems and, language problems would at once be solved if this could be done.

(vi). - The proposal to introduce Simputers should be carefully examined. Because of its small size, hard ware limitations and, difficulties of handling in field-conditions, the Simputer might not be able to eliminate manual work at the school level.

- It was also be necessary to recognise problems of recharging, limitations of capacity in respect of variables, constraints of memory size, requirement of (expensive) intermediate data storage facilities at the cluster level, need to translate software into regional languages and, assessment of the total cost implications of all this would have to be addressed.

  Because of lack of flexibility in use of Simputers, it would be difficult to get data-entry in regional languages and in alpha-numeric and long-data-capturing formats. Simputers had limited capacity of 60 MB and data storage in them was temporary; the data stored would be lost as soon the Simputer was discharged. In other words, it would be necessary to transfer the data before the Simputer was discharged.

- It would be of crucial concern to know how many Simputers would be available, what was the installed capacity for their manufacture, how much of data could be captured in a Simputer at one go, etc.

- In this backdrop, it would be necessary to subject the Simputer to 'Field Trials' and organise 'Pilot Projects' before clearing it for wider adoption.

(vii). Under DISE, data collection in different States was done in the regional language concerned. This could pose a problem for software adoption. The NIC would have to advise on feasibility of translation of the software into different regional languages.

(viii). The Sub-Committee should have also detailed the hardware requirements. Here, again, possibly, the NIC could be requested to fill up the gap after the Review Committee decided on the details like whether Simputers should be introduced or not, whether CRCs should be provided with Laptop or Desk Top Computers, etc.

(ix). The Sub-Committee should have listed the software options available. Possibly, the NIC could be requested to fill up this gap at this stage.

(x). The report should also spell out the staff requirements especially at the lower formations. Possibly, NUEPA could draw on its DISE experience to advise the Sub-Committee in this regard.

(xi). Data should be (manually) entered in forms in schools, consolidated at the CRCs and, transferred to computers at the Block level, if necessary through outsourced arrangements.

(xii). The Sub-Committee should draw on the roles of CRC/BRC under DISE and how they captured data relating to non-enrolled children.

(xiii). The report had not reckoned with the requirements of the Adult Education segment. It would be necessary to interact with them separately to cover their requirements for incorporation in the overall assessments.

(xiv). Internet connectivity to Secondary schools would have to be phased out.

(xv). It would be useful for the Report to spotlight what the NIC could offer in terms of hardware, software and, technical advise.

8. The revised report of the Sub-Committee was received on 1 November 07.

(A copy of this report is attached as **Annex – 2-C** in **Vol. II** of this Report.)

IV. The Sub-Committee on Legislation, Funding and, Expenditure Norms

1. This Sub-Committee was set up in the third Meeting (23 June 06) of the Review Committee. It was advised to propose, to the extent possible, necessary inter-segmental rationalisation of parameters also.

2. Its composition was as follows:
   - Joint Secretary, (Statistics) … Convener
   - Education Secretary (UP)
   - Smt. Anshu Vaish, Principal Secretary, (Education), M.P.
   - Shri. Madan Mohan Jha, Education Secretary (Bihar)
   - Dr. Vinod Raina,
   - Dr. Tapas Mazumdar
   - Representative of the NIC
   - Chairman of the Review Committee

3. The Sub-Committee was required to decide on the details subject to the major guidelines provided by the Review Committee. These guidelines emanate from the 'basic positions' set out in Section–7 of this Report.

4. The scope of this Sub-Committee's work, in the main, comprised the following:

(i). To propose a legislative back-up for the data collection exercise in general.

(ii). To propose specific amendments to the UGC Act and the AICTE Act to provide legislative support for the data collection exercise in "Higher Education' and 'Technical Education'.

(iii). To comment on the desirability of introducing and propose a system of rewards and penalties for discharging the statutory responsibilities.

(iv). Taking account of the financial implications emerging and the existing levels of expenditure, to suggest possible funding arrangements.

(v). With reference to any available international standards, to recommend appropriate expenditure-norms for data collection, compilation, processing and, publication.

(vi). In the context of the single unified system envisaged, and bearing in mind the requirements to maintain an 'international core' and a 'national core' of data, to propose necessary inter–segmental rationalisation of parameters.

5.1. Although this Sub-Committee had a separate Convener, effectively the burden of completing the task fell on the Convener of the Sub-Committee on Technology and Training. He worked hard to single-handedly discharge the responsibility.

5.2. The Sub-Committee submitted its report on 28 February 07. The report was considered by the Review Committee in its sixth Meeting (24 July 07).

6.1. The report of the Sub-Committee was subjected to critical scrutiny and the following observations were made:

(i). As was stated by the Committee in its earlier meetings and, as was stressed by the Sub-Committee itself in its first meeting, it would be necessary to formulate the precise amendments required in the UGC Act and in the AICTE Act.

(ii).(a).If the Government's intention was to seek refuge under the Collection of Statistics Act, it would be necessary for the Sub-Committee to frame the precise proposals instead of vaguely recommending 'appropriate' provisions.

(b).But, the Sub-Committee and the Review Committee both should feel free to advise the Government on

the desirability of adopting such an approach. The Collection of Statistics Act, administered by the Department of Statistics, was aimed more at collection of commercial data and, therefore, emphasised on confidentiality of the data collected. Such an approach might not suit the purpose of the exercise relating to educational statistics where total transparency would be required and where enforcement of confidentiality would detract from the merits of the exercise. In this context, it would have to be clearly recognised that the Department of Statistics might not countenance any request for transparency of handling of data collected under the Collection of Statistics Act.

(iii). An important aspect of the Review Committee's work was to estimate the cost of data collection in the education sector. The sub-Committee had just not addressed this issue at all. It will be necessary to have an assessment of the Statewise expenditure on data collection at different levels – State/District/Block. This will not only help in checking conformity with the funding 'norm' proposed but also reflect the importance attached to this activity.

(iv). Another important aspect of the Review Committee's work was to develop an 'expenditure norm' to govern adequate budgetary support for collection of educational statistics. Here, again, the Sub-Committee had just not addressed the issue at all.

(v). Data in the education sector could not be confidential at all. Data would have to be regularly updated and put on Website for public scrutiny. Where it related to recognition/affiliation of institutions this would have be a mandatory requirement. In the absence of such transparency, recognition/affiliation would even have to be withdrawn. Such being the case, data collection for the education sector could not be envisaged to be under the Collection of Statistics Act which emphasised confidentiality of information.

(vi). In this connection the problem faced by the AICTE, as distinguished from other organisations, had to be specially recognised. The AICTE collected data only at the time of according recognition to institutions. And, the data so collected was quite often found to be bogus. If this problem had to be effectively tackled, the data collection system must insist upon total transparency in publication of data so that there could be an incidental advantage of social audit of the data furnished.

(vii). It would undoubtedly be preferable to opt for a central legislation. Incorporation of a few sections in the Collection of Statistics Act would not at all serve the purpose.

(viii). Dr. Talukdar of Ed Cil had collected useful information about costing, funding norms etc. He could be asked to share the information with the Sub-Committee for the benefit of the Review Committee.

6.2. In the backdrop of the comments listed above, the Review Committee did not accept the Report. The Sub-Committee was required to recast it on the lines indicated in the discussion.

7.1. The revised report of the Sub-Committee on Legislation, Funding and, Expenditure Norm was considered by the Review Committee in its seventh Meeting (6 November 07).

7.2. Accepting the revised report, the Review Committee took the following decisions:

(i). Recommend a separate Central legislative support.

(ii). Amend the UGC Act and the AICTE Act to make it a condition of recognition (of Universities/Institutions) and affiliation (of Colleges) to supply all the information/data as required in time.

(iii). Based on the information provided by the Karnataka Govt., and the NIC, propose a funding norm of 0.5.% of the education budget.

(iv). Even though exact costing details were not available, it was evident that the staff-support available and facilities provided were hopelessly inadequate; propose a separate complement of staff for educational statistics to be funded out of the 0.5.% provision.

(v). Propose a small unit in each State/UT, under a State Nodal Officer, to be centrally funded.

8. The Sub-Committee's report was finalised accordingly.

(A copy of this report is attached as **Annex – 2D** in **Vol. II** of this Report.)

Section – 10

Consultation with States/UTs

1. The subject of 'Education' falls in the Concurrent List of Subjects under the Constitution of India. That being so, primarily, State Govts. are more concerned with administering the sector. The Govt. of India no doubt has a coordinating role to play with an overriding legislative power of intervention. But, in the normal course, such intervention is not warranted. Even in matters of coordination, therefore, consultation with the States/UTs becomes essential.

2. Such interaction with States/UTs is even more essential in the context of collection of educational statistics. Educational Statistics are compiled primarily for the benefit of States/UTs and other organizations who operate the educational system in the country. Ironically, these beneficiaries do not appear to own this exercise as theirs and the entire responsibility falls on the Central Govt. alongwith the attendant blame for any gaps in performance. It was, therefore, considered necessary for the Committee to interact with States/UTs.

3.1.1. One way of interacting with them was through correspondence. Accordingly, as earlier stated in Section - 2 of this Report, an open-ended 'List of Issues' was sent to all the States/UTs for response. (A copy of this communication is attached as **Annex – 3A** in **Vol**. **II** of the Report.)

3.1.2. The list comprised the following issues:

(i). Adoption of an unified system to avoid multiplicity of efforts.

(ii). Standardisation of concepts and definitions.

(iii). Need of a legislative support for the data collection exercise.

(iv). Adoption of modern technology to increase speed and improve quality.

(v). Identification of Focal Points and appointment of Nodal Officers.

(vi). Child Tracking System (CTS).

(vii). Staffing and Training of staff.

(viii). Funding Norms and costing.

3.1.3. Out of the 28 States and 7 UTs addressed, only 13 States and 1 UT responded. Except in one or two cases, even these responses were cryptic and/or incomplete. (A compilation of these responses is attached as **Annex** – **3B** in **Vol. II** of the Report.)

3.2. Another way of interacting with them was to convene meetings for personal exchanges of views. Bearing in mind the numbers involved and the cost implications, it was decided to organise regional meetings with groups of States/UTs.

4.1. Accordingly, 5 regional meetings were organised as follows:

-	Bhopal (31 August 07)	…	Goa, Maharashtra, Gujarat, M.P., Chattisgarh, Daman & Diu and, Dadra – Nagar Haveli.
-	Shillong (7 September 07)	…	Assam, Meghalaya, Arunachal Pradesh, Nagaland, Manipur, Mizoram, Tripura and, Sikkim.
-	Delhi (12 September 07)	…	J & K, Punjab, Haryana, H.P., U.P., Uttarakhand, Rajasthan, Delhi and, Chandigarh.
-	Bhubaneswar (17 September 07)	…	West Bengal, Orissa, Jharkhand, Bihar and, Andaman & Nicobar Islands.
-	Mysore (25 September 07)	…	Kerala, Karnataka, Tamil Nadu, Andhra Pradesh, Puducherry and, Lakshadweep.

4.2. These meetings were held at the Regional Institutes of Education with infrastructural support kindly provided by the National Council of Educational Research and Training.

(The minutes of these meetings are attached as **Annexes 9A to 9E** in **Vol.III** of the Report.)

5. The discussions in these meetings were generally built around the open-ended 'List of Issues' circulated. The 13 States and 1 UT that had sent written responses had also the opportunity to elaborate on their replies. The States/UTs were also requested to comment on any additional issue considered by them to be relevant and important.

6.1. These deliberations proved to be very interesting and informative. They helped to project the issues in proper perspective and paved the way for a better understanding of the line of action to be pursued.

6.2. The following main points emerged from the discussions in the regional meetings:

(1). (i). Presence of a plurality of systems has been seen to cause confusion and delay. Therefore, eliminate the multiplicity of channels and introduce one unified system of data collection (annually on a census basis), processing and, publication by integrating parallel systems into a common matrix.

Within the matrix each sub-system will be required to submit final compilations to its superior system with a National Focal Point being responsible for submission of the final compilation to the MHRD.

In this connection, it is agreed that it will not be appropriate for a national govt. to be directly engaged in collection and publication of data. The ground work should be done by a separate Agency to meet requirements indicated by the Govt. Analysed data with highlighting of appropriate 'indicators' must be made available to the Govt. to facilitate proper policy-making and planning.

Various agencies are doing this work with different periodicities. It will, therefore, be useful to standardise the periodicities, in line with the proposal to unify the systems.

(ii). Time and again it has been represented that ambiguities relating to concepts and definitions have been a major discordant factor in this exercise. Unfortunately, this problem continues to afflict the process.

Based on some of the earlier studies, the MHRD is reported to have a compilation of the terminologies

concerned; likewise the National Council of Educational Research and Training has brought out a compilation relevant to 'School Education'. The MHRD has produced an integrated compilation of uniform concepts and definitions separately for 'School Education' and 'Higher/Tertiary Education'. One set each of these compilations is attached as **Annexes 5A and 5B in Vol. II** of the Report. These have been circulated to all concerned. It will be useful if the MHRD can organise a special consultation with States/UTs in this regard.

(iii). Adoption of modern technology will be useful; it will speed up the exercise. It will also eliminate the errors caused by the drudgery of manual operations and improve the quality. But, the initial installation cost, both on hardware and software, as also partly on training, should be borne by the Govt. of India.

The NIC's data warehousing facility to offer common multi-system coverage to a multi-segmental compilation of data pertaining to the Education Sector as a whole must be fully utilised.

(iv). It will be useful to collect data not only from different segments of the education sector but also some overall data from other allied sectors like Agriculture, Medical Education and, Legal Studies.

It will be necessary to identify (Segmental) 'Focal Points' and appoint (Sectoral) 'Nodal Officers' to ensure proper coordination.

(v). Both raw data and processed data must be available on-line for public access. Computerisation of the whole process will easily facilitate this.

(vi). It will be necessary and useful to introduce legislative support for the data collection exercise. Some States already have enactments to govern School Education that can serve this purpose also. But, for purposes of uniformity, it will be essential to have a common central legislation.

(vii). Installation of hardware/software will not suffice; there will have to be competent staff to operate them. Besides MIS personnel, the system will need statistical personnel qualified to deal with data collection. The staff deployed (including the school teacher) will need to be trained not only in utilisation of modern technology but equally in data collection.

(viii). Funding of this activity is hopelessly inadequate. There must be a well established 'norm' to ensure adequate budgetary support.

(ix). A Child Tracking System (CTS) will surely be helpful in ensuring universalisation of Elementary Education. But, the financial implications will be substantial; proper budgetary support will be required.

It is also necessary for locating drop outs and non-starters. With a CTS in position, enrolment will definitely increase. The CTS should be started at the time of birth of the child and a unique ID number should be allotted to each child.

Although CTS is not a statistical item, this observation is made in the interest of ensuring full enrolment under the Sarva Shiksha Abhiyan. It will be for the States/UTs to take appropriate follow-up action.

(x). The financial implications will be assessed alongwith some reasonable indication of an expenditure-norm for data collection.

(2). The data collection system must incorporate enough checks to introduce simultaneous data validation so as to eliminate back validation so as to eliminate back-referencing later on.

(3). States/UTs do not have full-time staff for this work in the Education Sector. It will be advisable to develop a permanent 'cell' for giving continuous attention to this work.

(4). The software adopted must,

- incorporate provisions for extensive validation;
- project the 'indicators' relevant for analysis and planning; and,
- throw up 'data alerts' to facilitate immediate corrective attention/action.

(5). (i). Adoption of modern technology is desirable and practicable. DISE has demonstrated the utility of adopting technology. It is important to recognise that 'satellite network' has come to be the backbone of Information Transmission and Communication. The NIC network is readily available to support such an initiative. The network is available at present down to the district level. The NIC has planned to take it, within three years, down to all Blocks; and, thereafter, to Panchayats.

(ii). The NIC has vast experience in the field of Information Technology. It has appointed Informatics Officers at the district level to help users of the network.

(iii). ICT penetration is essential to capitalise or to have the potential to meet specific information requirements.

(iv). Various packages of programmes (eg. GIS, MIS, etc.) are available for immediate adoption. Use of these for analytical purposes duly facilitate identification of strong and weak points and project the areas of concerns graphically and thereby enable decision makers to initiate necessary measures.

(v). In association with the Department of Information Technology, NIC is instrumental in developing State Wide Area Networks in all States/UTs. The LAN and WAN connectivities at State, district and block levels can be usefully availed of.

(vi). For statistical analysis and modeling for time series analysis of the data compiled, NIC's Analytical Modeling Division has already suggested the methodologies and software tools and utilities required for data warehousing, data mining and GIS based projections for proper understanding and analysis and interpretation of data. The Division's potential and expertise can be used to devise and develop the software applications as desired.

(vii). The NIC has helped the Judiciary, North Eastern States, Rural Development/Health/Labour Sectors, Mandi Administration (Agriculture) and, Census Operations to develop and maintain on-line availability

of information. With the expertise it has developed in this regard over the years, the NIC can revolutionise transparency of operations thereby (incidentally) helping to meet completely the RTI requirements.

(viii). In the context especially of the strides made by the 'Education Portal', there is an urgent need to modernise Educational Statistics.

The framework and potential of the 'Education Portal' should be widely publicised so that more and more people can begin to take advantage of its facilities.

In this context, it has also to be appreciated that Portals can be used to conduct periodic surveys to assess the impact of schemes/projects.

(ix). Adoption of modern technology will speedily facilitate web-based applications.

All institutions must be required to have websites wherein they must be required to post (and regularly update) all relevant information/data.

(x). The NIC has gained particular experience in organising on-line availability of data for public

access. The AGMARK system that has been established throughout the country and being operated at 'Mandi' level is a good example of beneficial exploitation of the potential available. The Karnataka project of experimenting with some sort of 'mobile phone' connectivity with servers to get data on profitable rates in wholesale/retail markets is another exciting development.

(6). (i). The proposal to collect educational statistics in a campaign mode, like the system adopted for collecting Income Tax returns, is desirable and practicable. The DISE project observes 'DISE fortnight' which has become popular. Launching a campaign will certainly help to improve data collection.

(ii). Whatever system is developed should be uniformally adopted by all concerned. There is a lesson to be learnt in this regard from the DISE experience. Orissa, for example, has introduced data bases of their own as distinguished from what is developed for the DISE project. To meet DISE requirements, they divert data from the other bases developed. This causes multiplicity of data bases and creates confusion.

(iii). DISE has completely eliminated time lags and data gaps.

DISE has ensured better dissemination of data leading to better utilisation of data.

(iv). In DISE both raw data and processed data are available to all users. This promotes transparency and endorses fuller utilisation of data especially by researchers.

Although the data are available for ready use, their reliability and quality are still being questioned. In this connection, State Coordinators have been assigned the responsibility of ensuring quality/reliability of data.

(v). The software adopted in DISE has the flexibility to accommodate supplementary variables. All States/UTs have been found to use the supplementary variables to generate reports.

(vi). Some States have introduced computers at the block-level. The DISE software-support is available even at the cluster level. Giving PCs or Laptops to CRC Coordinators on experimental basis may, therefore, be considered.

(vii). Data entry/transmission should start only at the BRC level. Karnataka introduced ICR at the block-level; encountered problems in operating it; and, reportedly, have gone back to manual operations. We must make a case-study of it to benefit from their experience.

(viii). DISE has been a welcome leap ahead in collection of Educational Statistics. Over the years it has been improved; and, it has also introduced flexibilities to accommodate differing requirements. It is now amenable for use at the State/District/BRC/CRC levels.

DISE can be said to have emerged as a time-tested 'model' to serve Educational Statistics.

(ix). Once DISE expands and stabilises there should be no need of NCERT's Educational Surveys and MHRD's SES; they can both be safely discontinued.

(7). (i). In the data collection exercise, not just numbers but quality of data should be emphasised. In this context, it will be useful to think in terms of incorporating a system of penalties and rewards.

Penalty should be individual-oriented whereas reward should be institution-oriented.

The reward need not be monetary; it should be something symbolic – some recognition or citation.

(ii). Collection of erroneous data should be severely dealt with. The schools concerned should be warned in the first instance and penalised for repetition.

(8). The personnel collecting data tend to loose interest in their work because of not being able to appreciate the significance of the data collected. 'Flow Back of data' must, therefore, be emphasised. The data must flow back to schools after processing so that the teachers who collected the data can appreciate the usefulness of their work.

(9). (i). In Karnataka, Schedules with pre-printed data of previous years have been introduced. This compels headmasters/teachers to properly verify the data for consistency and thereby eliminate wide fluctuations of figures.

(ii). Karnataka is progressing fast in adoption of Technology; web-based data entry at block-level has been introduced. Even CRCs have come to be provided with PCs. But, care is required in adopting technology for data collection. Other States/UTs may like to benefit from our experience to steer clear of avoidable mistakes.

(iii). Karnataka does not have any funding norms for data collection. But, in Planning, they have a norm that 1% of project funds can be used for evaluation of projects. May be, this can be of some help to develop a norm.

It will also be useful if some norm could be developed for funding this activity. Unfortunately, no such norm is readily available. Even the UNESCO Institute of Statistics has not been able to give any guidance in this regard. The IT sector has a guideline about providing 3% of the expenditure on 'Plan' items for data collection purposes. States/UTs may give some thought to this item and indicate their views.

(10). The GOI should formulate a Centrally Sponsored Scheme for funding data collection in the States/UTs.

6.3. As can be seen from these, the States by and large endorsed the Committee's stand on the 'Issues (raised) for consideration' in the Regional Meetings. Some of the more perceptive representatives of State govts. had raised additional specific issues as detailed above.

Section - 11

RECOMMENDATIONS

Based on the Review Committee's deliberations, recommendations of the four Sub-Committees, recommendations of the States/UTs, presentations made by different parties and, the review of earlier studies final recommendations of the Review Committee have been compiled. These are presented below in three parts:

Part - A	…	General
Part - B	…	School Education, Adult Education and, Literacy
Part - C	…	Higher Education

PART – A

GENERAL

I. Introduction of an unified system

1. Presence of a plurality of systems has been seen to cause confusion and delay. This has been so because of differences in approach -

   - Discordant definitions and concepts
   - Variations in periodicities
   - Differential cut-off dates
   - Multiplicity of formats

2. It will, therefore, be necessary to **eliminate the multiplicity of channels and introduce one unified system of data collection (annually on a census basis),** processing and, publication by integrating parallel systems into a common matrix.

3.1. The problem of discordant definitions and concepts has been substantially resolved by the compilation of a unified set of concepts and definitions. Once it is discussed with all the States/UTs (as recommended elsewhere), this problem will be eliminated by the total consensus.

3.2. The problem of variations in periodicity will be overcome if a unified system of data collection (annually on a census basis) is introduced.

3.3. The problem of differential cut-off dates will be resolved if the unified system adopts 30 September (for academic/administrative data) and 31 March (for financial data) as the accepted cut-off dates.

3.4. Similarly, the problem of multiplicity of formats will automatically be overcome by the introduction of a unified system. And, if the new system is fully computerised, as envisaged, the formats will per force have to undergo total transformation to become computer-compatible. And, the computerisation will ensure elimination of redundancies.

4.1. The school education segment is plagued more by the plurality of systems. The SES system operated by the MHRD; the DISE system operated by the NUEPA (for the SSA); the AISES conducted quinquennially by the NCERT; sporadic exercises conducted by the CBSE/COBSE; and, localised 'initiatives' by States/UTs.

The higher education segment is no exception, subject as it is to different approaches by the MHRD, the UGC/AICTE/Council of Architecture; the AIU; and, 'initiatives' of States/UTs.

This problem will be automatically resolved in the unified arrangement integrating parallel systems into a common matrix.

Within the matrix each sub-system will be required to submit final compilations to its superior system with a National Focal Point being responsible for submission of the final compilation to the MHRD.

II. Unified Concepts and Definitions

5. Time and again it has been represented that ambiguities relating to concepts and definitions have been a major discordant factor in this exercise. Unfortunately, this problem continues to afflict the process.

Based on some of the earlier studies, the MHRD is reported to have a compilation of the terminologies concerned; likewise the National Council of Educational Research and Training has brought out a compilation relevant to 'School Education'. **The MHRD has produced an integrated compilation of uniform concepts and definitions separately for 'School Education' and 'Higher/Tertiary Education'.**

(Please see **Annexes 5A and 5B in Vol. II**.) These have been circulated to all concerned. As suggested earlier in Section – 8 of this Report, **it will be useful if the MHRD can organise a special consultation with States/UTs in this regard to develop a national consensus.**

III. National Focal Point – Central Bureau of Educational Statistics

6. In line with our opinion that **it is not appropriate for a Ministry to be directly involved in data collection, compilation, analyses and, publication, we recommend this work to be entrusted to a National Focal Point to be established outside the Ministry.**

7.1. The possible locations for this office have been examined in Recommendation – 2 earlier. As has been suggested therein, **we are in favour of creating an attached office for this work with the title of Central Bureau of Educational Statistics (CBES).**

7.2. Plus and minus, the Committee was in favour of setting up the CBES as an 'attached office' instead of as a 'subordinate office'. Since the PMS Division is proposed to be moved out of the MHRD into the CBES, there will be no unit left in the

Ministry to handle references from the CBES. If, however, the CBES were to function as an attached office, then, there can be free movement of files between the CBES and the MHRD under a common file system.

8.1. This Bureau will be constituted essentially by transferring the Statistics Division of the PMS Bureau from the MHRD. Since, in the unified system, the DISE system will also be merged, it will only be logical to propose that the DISE Unit in the NUEPA should move into the CBES. There should be no particular difficulty in this happening because, as represented by the Head (GMIS) in NUEPA, this Unit is still only in a project mode. The SSA Bureau in the MHRD will have to decide about the future of this Unit. If it is not to be continued under the SSA, then, new posts will have to be created to maintain the set-up. An Organogram of the CBES, as envisaged by the Review Committee is attached as **Annex – 4.**

8.2. A word of caution is, however, necessary here too. **Total replacement of the existing system(s) will be adviseable only after the new unified system stabilizes and is seen to be working as envisaged.** Any hasty dismantling of the existing arrangements may result in an avoidable data vacuum.

In other words, the National Focal Point in NUEPA must continue until the CBES fully comes into being.

9. The CBES will receive data/information from

- the States for School Education
- the UGC for Higher Education (including AICTE and the Council of Architecture)
- the Directorate of Adult Education for Adult Education and Literacy
- the Ministry of Women and Child Development for ECCE
- the Ministry of Health and Family Welfare for Medical/ Health Education
- the Ministry of Agriculture for Agricultural Education
- the Ministry of Law for any courses on Legal Studies not covered by the University system.

10. **The CBES will be the apex point of the unified educational-statistics system. It will be responsible for administering the proposed Educational Statistics (Collection, Compilation, Processing and Publication) Act and, for monitoring supply of data/information by the various sub-systems.** Based on such monitoring, it will propose for rewards or penalties as per the statutory provisions.

11. **The CBES will in the initial phase be responsible for installation, maintenance and, smooth operation of the system**. Subsequently, its role will be restricted to ensuring smooth operation of the system and monitoring performance of the sub-systems.

12.1. **The Bureau will be enjoined with the responsibility of compiling and analysing the data to produce markers on indicators specified by the MHRD. In cases of significant deviations, it will be required to issue 'alerts' to the MHRD and/or the State(s)/UT(s) concerned. In addition, the CBES must also develop new indicators of significance and analyse data accordingly.**

12.2. The **CBES** will **also** be **responsible** for mining old data to produce **time-series analyses.**

12.3. The CBES will also be expected to take initiatives for improvements in the system and for introducing new innovative practices.

12.4. It will also be responsible for identifying and adopting advancements in hardware and software on the technology front.

12.5. The **CBES** must keep track of developments in different States/UTs/Institutions **to identify 'best practices' and promote their adoption elsewhere.**

12.6. The **CBES** will be **responsible also for** bringing out **publications as per schedule.**

12.7. One of its more important responsibilities will be to **plan for and organise training facilities and training programmes both for the Statistical and MIS staff in the whole system.**

IV. Legislative Support

13. Educational statistics are compiled primarily for the benefit of State Govts. and other organisations who operate the educational system in the country. Ironically, these beneficiaries do not appear to own this exercise as theirs and the entire responsibility falls on the Central Govt. alongwith the attendant blame for any gaps in performance. Besides correcting this anomaly, more for ensuring proper collection, collation, compilation, validation, printing, publishing, etc., it will be necessary to closely involve with this exercise all concerned offices, assign specific responsibilities and, fix disaggregated accountability.

14. In this connection, an idea was floated about legislative support for the exercise relating to compilation/publication of educational statistics.

15. Almost all earlier Reports of Commissions and Committees have lamented the slip-shod attention given to Educational Statistics by different participants in the process. In the absence of a legislative back up assigning specific decentralised responsibilities with enforcement of accountability to produce the statistics, this malady might continue.

16.1. Since 'Education' features in the Concurrent List of subjects under the Constitution of India, it may not be difficult for the Govt. of India so to do.

16.2. The penal provisions of the Statute may be very sparingly applied. But, the very existence of such a potential may galvanise the system. Other specific statutes relating to different organisations can be suitably amended to incorporate similar appropriate provisions.

16.3. **While this Review Committee recommends a legislation to support the general exercise relating to Educational Statistics, with reference to the UGC Act and the AICTE Act, it proposes specific amendments thereto for improving performance particularly in respect of the 'Higher Education' and 'Technical Education' segments.**

16.4. Organisations like the UGC and the AICTE can be required to examine the feasibility of amending their statutes to prescribe responsibilities for data collection. Such statutes usually have provisions like "such other functions as the central govt. may assign". Such open-ended provisions can be made use of for this purpose. Even if such residuary provisions are not available, appropriate amendments can be introduced to facilitate easier data collection.

16.5. The Report of the Sub-Committee on Higher Education gives the impression that UGC/AICTE are pleading inability to get data. This will be incongruous because they are the Statutory Regulatory Authorities in the field of Higher Education. It should not be difficult for them to **enforce data collection by making it a condition of 'recognition' (of Universities) and of 'affiliation (of Colleges/Institutions)'.**

The aided/unaided status of Colleges/Institutions need not be a relevant factor in this context at all. **The UGC Act and the AICTE Act may have to be amended to incorporate such a provision.**

17.1. There was an opinion that we should not unnecessarily stress the need of a separate (central) legislation; it would be advisable to take advantage of the 'Collection of Statistics Bill' by making suitable changes in it to cover 'educational institutions'.

As pointed out in Section – 8 of this Report, the Committee had discussed this issue at length and decided in favour of a separate legislation. **Some States already have enactments to govern School Education that can serve this purpose also. But, for purposes of uniformity, it will be essential to have a common central legislation.**

17.2. It was then noted that the Bill in reference was an attempt by the Ministry of Statistics and Programme Implementation to amend the existing 'Collection of Statistics Act' and make it more effective. It was further noted that the Statistics Department's exercise related more to commercial items and accordingly emphasised confidentiality of information collected. For Educational Statistics, the stress would be more on total transparency extending to easy availability of on-line public access. That being so, there would be a clash of objectives in the arrangement proposed.

17.3. **Data in the education sector could not be confidential at all. Data would have to be regularly updated and put on Website for public scrutiny. Where it related to recognition/affiliation of institutions this would have to be a mandatory requirement. In the absence of such transparency, recognition/affiliation would even have to be withdrawn. Such being the case, data collection for the education sector could not be envisaged to be under the Collection of Statistics Act which emphasised confidentiality of information.**

V. Adoption of Technology

18. Bearing in mind the tremendous strides made in Information/Communication Technology, **it will be essential to think seriously in terms of adopting the available technology to modernise the system of data collection, compilation, transmission, storage, mining, analysis and, on-line presentation.**

19. To enable a proper appreciation of the inevitability (and not just the desirability) of this proposition, it will be useful to recognise the following advantages involved:

- timeliness of the operations;
- quality of the statistics produced;
- proper validation of the data collected;
- elimination of redundancies;
- accountability of data suppliers and collectors;
- warehousing of raw data;
- variegated analyses;
- on-line access to all.

In the Regional Meetings, the States/UTs have also been of the opinion that **adoption of modern technology will be useful; it will speed up the exercise. It will also eliminate the errors caused by the drudgery of manual operations and improve the quality.**

20. It will be simpler to achieve this in the Higher/Technical Education segments.

It will be reasonable to assume that every College/Institution of Technology in the country is equipped with computers and internet connectivity. **There cannot be a College/Institution of Technology today without computers and internet connectivity. The UGC/AICTE must ensure it. All data collection can, therefore, be on-line.**

21. **Because of its massive scale, the School Education segment may take time to introduce the changes; but bearing in mind the tremendous advantages involved, the process must start without any delay**. The School Education segment has already achieved this substantially by introducing the DISE at the Elementary stage. It will only be necessary for the School Education segment to expand the DISE by extending it to Secondary and Senior Secondary stages and (further) streamline the system by addressing observed weaknesses.

22.1. Complete replacement of the existing manual system by a computerised system will be difficult to achieve. **The manual system can not be totally eliminated particularly at the school level. Data entry into computers by teachers at the school level may cause complications.**

22.2. In the context of total modernisation, the possibility of adopting hand-held devices like Simputers was considered.

- **The proposal to introduce Simputers will need to be carefully examined. Because of its small size, hard ware limitations and, difficulties of handling in field-conditions, the Simputer may not be able to eliminate manual work at the school level.**

- It is also necessary to recognise problems of recharging, limitations of capacity in respect of variables, constraints of memory size, requirement of (expensive) intermediate data storage facilities at the cluster level, need to translate software into regional languages and, assessment of the total cost implications of all this will have to be addressed.

- Because of lack of flexibility in use of Simputers, it will be difficult to get data-entry in regional languages and in alpha-numeric and long-data-capturing formats. Simputers have limited capacity of 60 MB and data storage in them is temporary; the data stored will be lost as soon the Simputer was discharged. In other words, it will be necessary to transfer the data before the Simputer was discharged.

- It will also be of crucial concern to know how many Simputers will be available, what is the installed capacity for their manufacture, how much of data can be captured in a Simputer at one go, etc.

- In this backdrop, **it will be necessary to subject the Simputer to 'Field Trials' and organise 'Pilot Projects' before clearing it for wider adoption.**

22.3.1. Instead of adopting the Simputers, it will, therefore, be **more appropriate to think in terms of providing a PC at the CRC level or, preferably (even) a Laptop at the CRC level. All the software problems, storage problems and, language problems will at once be solved if this can be done.**

22.3.2.1. In other words, while 'data collection' can be done manually at the school level, 'data consolidation' can be done at the CRC level. In the DISE, at present, this is being done manually; transfer of data to computers takes place at the BRC; and, data transmission starts at the District level.

22.3.2.2. **In the backdrop of our proposal to give appropriate hardware to the CRCs, data consolidation at the CRC can itself be computerised.**

22.3.2.3. And, **data transmission can be brought down from the District to the Block level.**

22.3.3. The Review Committee makes this recommendation with the knowledge that the NIC network is available everywhere down to the District level; some States have already taken it (further) down to the Block level; and, the NIC advises that in the next 2-3 years its network will be extended to the Block level everywhere.

23.1. With reference to many States having their own networks also, a mention has been made elsewhere about providing for inter-connectivity between the NIC network and theirs.

This can happen at the district level because that is where the first provision for bifurcation of data transmission is envisaged. It has also to be recognised here that, as was indicated in the Regional Meetings, the NIC has appointed Informatics Officers at the district level to help users of the network.

23.2. Since statutory prescription of accountability at different levels has been proposed, it will be necessary for data to formally flow through the State Govt. But, to meet interim/emergent requirements, data can (informally) also flow directly from the District to the Central Govt. This bifurcation will be relevant only for the 'international core' and 'national core' of data.

24.1. The **NIC has abundant warehousing** (i.e. storage) **facilities**. As earlier stated (in Section – 8), the NIC's data warehousing facility offers common multi-system coverage to a multi-segmental compilation of data pertaining to the Education Sector as a whole. **This facility must be fully utilised.**

24.2. Data Warehousing is important. **Attention shall not be confined to annual data collection; 'past data' available in the Warehouse must be retrieved and put to better use.**

This will facilitate the kind of attention to 'time series' analyses envisaged by the Sub-Committee of the Advisory Committee on Educational Statistics.

25. **Secondary and Senior Secondary Schools** may have to be differently considered. Many of them (if not most of them) have computers. Some of them have even internet connectivity. In their case, therefore, **'data collection' can be computerised at the school level itself. 'Data Compilation' can take place at the Block level. The schools that have internet connectivity can 'transmit' data directly to the District level.**

26.1. Adoption of modern technology, as recognised by the States/UTs in the Regional Meetings, is both desirable and practicable. The States/UTs have found many advantages in adopting modern technology for collection and compilation of educational statistics. Their observations are so clear and concise that the Review Committee has chosen to repeat them in toto hereunder as its recommendations:

(i). The software adopted must,

- incorporate provisions for extensive validation;
- project the 'indicators' relevant for analysis and planning; and,
- throw up 'data alerts' to facilitate immediate corrective attention/action.

(ii). Adoption of modern technology is desirable and practicable. **DISE has demonstrated the utility of adopting technology**. It is important to recognise that 'satellite network' has come to be the backbone of Information Transmission and Communication. **The NIC network is readily available to support such an initiative. The network is available at present down to the district level. The NIC has planned to take it, within three years, down to all Blocks; and, thereafter, to Panchayats.**

(iii). The NIC has vast experience in the field of Information Technology. It has appointed Informatics Officers at the district level to help users of the network.

(iv). ICT penetration is essential to capitalise or to have the potential to meet specific information requirements.

(v). **Various packages of programmes (eg. GIS, MIS, etc.) are available for immediate adoption. Use of these for analytical purposes duly facilitate identification of strong and weak points** and project the areas of concerns graphically and thereby enable decision makers to initiate necessary measures.

(vi). In association with the Department of Information Technology, NIC is instrumental in developing State Wide Area Networks in all States/UTs. **The LAN and WAN connectivities at State, district and block levels can be usefully availed of.**

(vii). For statistical analysis and modeling for time series analysis of the data compiled, **NIC's Analytical Modeling** Division has already suggested the methodologies and software tools and utilities required for data warehousing, data mining and GIS based projections for proper understanding and analysis and interpretation of data. The **Division's potential and expertise can be used to devise and develop the software applications as desired.**

(viii). The NIC has helped the Judiciary, North Eastern States, Rural Development/Health/Labour Sectors, Mandi Administration (Agriculture) and, Census Operations to develop and maintain on-line availability of information. With the expertise it has developed in this regard over the years, the NIC can revolutionise transparency of operations thereby (incidentally) helping to meet completely the RTI requirements.

(ix). In the context especially of the strides made by the 'Education Portal', there is an urgent need to modernise Educational Statistics.

The framework and potential of the 'Education Portal' should be widely publicised so that more and more people can begin to take advantage of its facilities.

While the significance and utility of the Education Portal ('Sakshat') can not be ignored, it must be recognised that we will require a separate Portal exclusively for educational statistics. There can always be useful interface with the Education Portal.

In this context, it has also to be appreciated that **Portals can be used to conduct periodic surveys to assess the impact of schemes/projects.**

(x). Adoption of modern technology will speedily facilitate web-based applications.

All institutions must be required to have websites wherein they must be required to post (and regularly update) all relevant information/data.

(xi). The NIC has gained particular experience in organising on-line availability of data for public access. The AGMARK system that has been established throughout the country and being operated at 'Mandi' level is a good example of beneficial exploitation of the potential available. The Karnataka project of experimenting with some sort of 'mobile phone' connectivity with servers to get data

on profitable rates in wholesale/retail markets is another exciting development.

(xii). The proposal to collect educational statistics in a campaign mode, like the system adopted for collecting Income Tax returns, is desirable and practicable. The DISE project observes 'DISE fortnight' which has become popular.

Launching a campaign will certainly help to improve data collection.

(xiii). Whatever system is developed should be uniformally adopted by all concerned. There is a lesson to be learnt in this regard from the DISE experience. Orissa, for example, has introduced data bases of their own as distinguished from what is developed for the DISE project. To meet DISE requirements, they divert data from the other bases developed. This causes multiplicity of data bases and creates confusion.

26.2.1. In the foregoing passages we have acclaimed several attainments of **the NIC** in this field. That being so, it will be a natural corollary to recognise them as **the fittest agency to help in implementing the new system recommended by us.** But, we must clarify that the basic considerations prompting us to propose the NIC as the torch-bearer were these:

(i). They are the only such agency in the governmental system.

(ii). They have the largest and well established IT network.

(iii). In any case, the Govt. of India has recognised them as the Technical Adviser in IT for all the Ministries.

26.2.2. We are nevertheless aware of the position that the **NIC has** taken on many projects and **fully committed its available capacities.** In this case, therefore, it will not be realistic to expect them to implement the (new) system. **They have willy nilly to outsource the work.** They can only provide technical support in identifying the configurations, specify the hardware and software requirements, supervise installation/implementation and, monitor progress.

This will mean that while the facilities and expertise of the NIC will be available free of cost for governmental use, the cost of outsourcing will have to be separately reckoned with.

27. Although the benefits to accrue in the long run will far outweigh the costs involved, the initial investment is likely to be very heavy. Besides the cost of hardware and software, the massive training requirements of personnel have also to be provided for. It may not be possible for individual States/UTs to bear this burden. That being so, **the initial installation cost, both on hardware and software, as**

also on training, should be borne by the Govt. of India. Since we are almost half way through the XI Plan, States/UTs may not have the manoeuvrability even to accommodate the recurring (operating) cost. It may, therefore, become necessary for the MHRD to bear that (financial) burden also during the XI Plan period.

28. One of the advantages of adoption of technology can be easy transparency. This will be possible through launching a Website. All information/data can be posted therein for on-line public access. Only, it must be ensured that the Website is regularly updated.

In this context, it will be worthwhile to stress the point that **not only the Apex Body (the National Focal Point) but all the sub-systems in the matrix, including the higher education Institutions, should be (statutorily) required to maintain and regularly update their own Websites.**

29.1. To facilitate better appreciation of our recommendation for adoption of modern technology, we wish to give some details about the hardware and software requirements as also about the non-recurring and recurring estimates for development, hosting and, operationalisation of the Educational Statistics Portal.

29.2.1. These details have been worked out on the advice of the NIC and in the backdrop of the 'basic positions' decided upon by the Review Committee.

29.2.2. The details have been worked out for all the levels involved in the system – Central Level, State Level (28 States/7 UTs), District Level (624 districts), Block Level (7000 Blocks), Cluster Level (about 70,000 clusters). The costing has been worked out for one geographic unit at each level and set out in a tabular format hereunder.

29.2.3. Five tabular Statements are attached as follows:

(i). Statement – 1 giving details of recurring expenses per annum.

(ii). Statement – 2 giving details of non-recurring expenses.

(iii). Statement – 3 giving a summary of the estimated costs.

(iv). Statement – 4 giving a five-year projection of the expenses.

(v). Statement – 5 giving the requirements of Statistical Personnel.

Statement - 1

Cost Estimates for Operationalization of Educational Statistics Portal (Recurring Expenses per annum)				
Sl No	**Components/Services**	**Estimated Cost in Rs.**	**No. of Units**	**Total Cost in Rs.**
Central Level Requirements				
1	Computer H/W upkeep, system software updates	5,000,000		
2	Manpower -2 Systems Analysts, 2 Programmers and 4 Data Entry Operators	3,000,000		
3	Software application enhancements	2,000,000		
4	Backup facilities, Misc. expenses & consumables	2,000,000		
5	Refresher Training Sessions	2,000,000		
	Total Requirement at Central Level	14,000,000	1	14000000
State Level Requirements (35 States)				
1	Manpower -1 Systems Analyst, 6 Programmers & 6 Data Entry Operators	5000000		
2	Consumables & Misc. Expenses	500,000		
3	Internet Connectivity	90,000		
	Total Requirement per State	5,590,000	35	195650000
District Level Requirements (624 Districts)				
1	1 Programmer + 3 Data Entry Operators	900,000		
2	Internet Connectivity	15,000		
3	Consumables & Misc. Expenses	15,000		
	Total Requirement per District	930,000	624	580320000
Block level Requirements (7000 Blocks)				
1	2 Data Entry Operators	400,000		
2	Internet Connectivity	15,000		
3	Consumables & Misc. Expenses	10,000		
	Total Requirement per Block	425,000	7000	2975000000
Cluster level Requirements (70000 Clusters)				
1	1 Data Entry Operator	200,000		
2	Internet Connectivity	15,000		
3	Consumables & Misc. Expenses	10,000		
	Total Requirement per Cluster	225,000	70000	15750000000
	Total cost			**19514970000**
$ Replacement @ 5% of the total H/W procured				139072500
Total Recurring requirement				**19,654,042,500**
$5% of total equipment per annum may require to be replaced at all levels (Actual Cost to be worked out as per actual order value)				

Note:

1. Estimation of MIS staff requirements has been made with reference to maximum levels. For smaller States/UTs, having lesser load of work, the requirements will need to be scaled down.
2. Supporting Secretarial Staff requirements have not been incorporated
3. Requirements of statistical staff have not been incorporated since they are not dependent upon adoption of technology

Statement -2

Cost Estimates for Development, Hosting and Operationalization of Educational Statistics Portal (Non-Recurring)				
Sl No	**Components/Services**	**Estimated Cost in Rs.**	**No. of Units**	**Total Cost in Rs.**
Central Level Requirements				
1	Computer Servers & System Software packages(includes utilities like datawarehousing, Data Mining and GIS facilities required for central operations)	50,000,000		
2	Software Application Development covering Univerisity, College, School level Institutional, faculty, Student data interfaces with specifc user-id and passwords alongwith necessary support on online queries and reports by system	20,000,000		
3	Prepration of e-training material (computer based Tutor) and provision of two day training for 50 Master Trainers per State - from 35 States/UTs	20,000,000		
	Total Requirement at Central Level	90,000,000	1	**90,000,000**
State Level Requirements (35 States)				
1	6 PCs with 5 year warranty (SPD(1), Elementary (1), Higher Secondary & Secondary(1), Higher(1), Technical(1) Education Directorates and State Education deptt (1))	120,000		
2	Office Management Software one for each computer @ Rs. 10,000	60,000		
3	6 Laser Printers	90,000		
4	LAN, Site preparation including 0.5 KVA UPS(6), Internet Connectivity, etc	200,000		
	Total Requirement per State	470,000	35	**16,450,000**
District Level Requirements (624 Districts)				
1	2 PCs with 5 year warranty (one each for Elementary and Secondary Education Divisions)	40,000		
2	Office suite one for each computer @ Rs. 10,000/-	20,000		
3	2 Laser Printers	30,000		
4	Local Site preparation, UPS & Internet Connectivity	100,000		
	Total Requirement per District	190,000	624	**118,560,000**
Block level Requirements (7000 Blocks)				
1	1 PC with 5 year warranty	20,000		
2	Office suite one for each computer @ Rs. 10,000/-	10,000		
3	1 Deskjet Printer	6,000		
4	UPS & Internet Connectivity	15,000		
	Total Requirement per District	51,000	7000	**357,000,000**
Cluster level Requirements (70000 Blocks)				
1	1 PC with 5 year warranty	20,000		
2	Office suite one for each computer @ Rs. 10,000/-	10,000		
3	1 Deskjet Printer	6,000		
4	UPS & Internet Connectivity	15,000		
	Total Requirement per District	51,000	70000	**3,570,000,000**
	Total Estimated Expenditure			**4,152,010,000**
Note: All the equipment should be bought with 5 year warranty at site with proper SLA				

Statement – 3

Summary of Estimated Costs		
Sl No	**Component**	**Est. Cost in Rs.**
	Non-Recurring	
1	Central Servers, Desktops, System Software tools and Utilities	2,887,610,000
2	Software Application Development	20,000,000
3	Training Sessions	20,000,000
4	Site Preparation	1,224,400,000
	Total Non-Recurring Cost	**4,152,010,000**
	Recurring	
1	Manpower	17539600000
2	Consumables & Misc. Expenses	798860000
3	Internet Connectivity	1167510000
4	Computer H/w and System s/w upgr.	5000000
5	S/W application enhancements	2000000
6	Refresher Training Sessions	2000000
	Replacement of 5% Hardware	139072500
	Total Recurring Cost	**19,654,042,500**

Statement - 4

Cost Estimates for Development, Hosting and Operationalization of Educational Statistics Portal - Five Year Projection

Sl No.	Component	Estimated cost in Rs. Ist year	2nd year	3rd year	4th year	5th year
I. Computer Hardware & System Software						
1	Central Servers, Desktops, System Software tools and Utilities	2,887,610,000				
2	Computer H/w and System s/w upgr.		5000000	5000000	5000000	5000000
3	Replacement of 5% Hardware		139072500	139072500	139072500	139072500
II. Software Application Development						
1	Core application design and development	20,000,000				
2	S/W application enhancements		2000000	2000000	2000000	2000000
III. Site Preparation						
1	UPS, Internet connecitvity estt., LAN, etc.	1,224,400,000				
2	Internet connectivity charges		1167510000	1167510000	1167510000	1167510000
IV. Training & Handholding Sessions						
1	Deveopment of Computer Based Tutor and Conduct of Training and Handholding sessions	20,000,000				
2	Refresher Training Sessions		2000000	2000000	2000000	2000000
V. MIS Personnel						
1	Computer Professionals	17539600000	17714996000	17892145960	18071067420	18251778094
VI. Consumables and Misc. Expenses						
1	Consumables & Misc. Expenses	798860000	798860000	798860000	798860000	798860000
	Total Estimated cost	**22,490,470,000**	**19,829,438,500**	**20,006,588,460**	**20,185,509,920**	**20,366,220,594**

Note: This statement indicates the actual incidence of expenditure from year-1, whereas the earlier statements estimate the annual cost-implication when the system is fully functional.

Statement - 5

Staffing Pattern of Statistical Personnel for Educational Statistics

Sl No.	Type of Post	Unit Cost in Rs.	No. of Posts	No of Units	Estimated cost in Rs. Ist year	2nd year	3rd year	4th year	5th year
I. Central level - Central Bureau of Educational Statistics									
1	Director	874992	1		874,992	883742	892579	901505	910520
2	Joint Director	451008	3		1,353,024	1366554	1380220	1394022	1407962
3	Deputy Director	433488	5		2,167,440	2189114	2211005	2233115	2255446
4	Assistant Director	412464	9		3,712,176	3749298	3786791	3824659	3862906
5	Statistical Investigator	258792	18		4,658,256	4704839	4751887	4799406	4847400
	Total at Central Level				**12,765,888**	**12893547**	**13022482**	**13152707**	**13284234**
II. State Level (35)									
1	Joint Director	451008	1	35	15,785,280	15943133	16102564	16263590	16426226
2	Deputy Director	433488	3	35	45,516,240	45971402	46431116	46895427	47364381
3	Assistant Director	412464	6	35	86,617,440	87483614	88358450	89242035	90134455
4	Statistical Investigator	258792	9	35	81,519,480	82334675	83158022	83989602	84829498
	Total at State Level				**229,438,440**	**231732824**	**234050152**	**236390654**	**238754561**
III. District Level (624)									
1	Assistant Director	412464	1	624	257,377,536	259951311	262550824	265176332	267828095
2	Statistical Investigator	258792	2	624	322,972,416	326202140	329464161	332758803	336086391
	Total at District Level				**580,349,952**	**586,153,451**	**592,014,985**	**597,935,135**	**603,914,486**
IV. Block Level (7000)									
1	Statistical Investigator	258792	1	7000	1,811,544,000	1829659440	1847956034	1866435594	1885099950
	Total at Block Level				**1,811,544,000**	**1,829,659,440**	**1,847,956,034**	**1,866,435,594**	**1,885,099,950**
	Total Estimated cost				**2,634,098,280**	**2,660,439,262**	**2,687,043,653**	**2,713,914,090**	**2,741,053,231**

Note:
1. Most of these posts already exist in the existing formations. The Review Committee has only made some minor corrections to rationalize the set-ups. To the extent of the existing formations fall short of this model, there may have to be some additionality.
2. An annual incrementation of 10% (including HRA, DA, etc.) has been assumed.

29.3. The following points require to be clarified or elaborated upon in this context:

(i). We have elsewhere referred to introduction of Simputers or GPRS devices at the cluster level after field-trials and pilot projects. We are not sure whether it can happen during the XI Plan period. Technology must advance more to remove the hardware inadequacies and to bring down the cost further. Until then, it may not be meaningful to think in terms of electronic data-collection at the school level.

It has, accordingly, been proposed to maintain manual operations at the school level and, plan for adoption of technology from the cluster level upwards.

(ii). As has been discussed later in Part-B of this Section, differing views have been expressed on outsourcing of data-entry. The stand was that data collection and data verification would definitely have to be departmental; outsourcing of data-entry could be an option.

One strong argument in favour of outsourcing was that the hardware installed and the personnel employed in the system would be hopelessly underutilised. Since the educational statistics exercise is more of an annual occurrence, there will be too

much of idling of the investments made. The contrary view was that, as it happened in the case of the NIC where an underutilised network gradually came to be (more than) fully utilised, here again, 'supply' would in due course create the 'demand'.

The Review Committee recognised that the dynamic developments taking place in the country would call for support from a modernised information infrastrucuture. In the HRD Sector, especially, what with the emphases on items like Right to Education, Sarva Shiksha Abhiyan, etc., the need of a strong statistical system would be accentuated. Also, an investment of about Rs.2,000 crores (Rs. 1,600 crores on manpower and Rs.400 crores on installations) on adoption of modern technology can not be said to be extravagant in the backdrop of a Rs.50,000 crore sectoral budget. It was also forcefully urged that such thoroughgoing reviews touching all substantive aspects could not be expected to happen too often. Further, there may be other repetitive items like attendance data, data relating to Mid Day Meal Project, etc. These can be handled in-house so that the staff and the structures can continue to be utilised. Plus and minus, therefore, the balance of convenience (and, even of economics) was seen to be in favour of opting for modernisation at all levels.

(iii). In the set up envisaged, **the central system will have several separate servers, separate for different applications - financial/Examinations/ Enrolment/etc.**

The expectation is that there will be tens of thousands of contacts at the same time. **The server-capacity will measure up to quick response requirements. Based on experience, the server capacity can also be upgraded in a month's time.**

Significantly, as stated in Section - 10, the NIC system includes GIS facilities. For no extra cost, therefore, the educational statistics can be superimposed to get additional benefits.

(iv). The NIC system has provision for getting responses to on-line queries; necessary software has been built-in for the system to respond. This facility will be available at all levels.

(v). **Warehousing facilities will be available separately for the Central Govt., State Govts., UGC, AICTE, Universities, etc. Each sub-system can alter/update its entries independently.** The changes will be allowed entry only to the Warehouse of the State Govt./University concerned. **Alteration/updating of the Central Warehouse**

will be possible only with the clearance of the CBES. The system will, however, project alerts to the CBES whenever any sub-system makes an alteration/updating.

(vi). To minimise expenditure, Laser Printer has been provided only at the District level and above; Blocks have been given only Desk Jet Printers.

(vii). No provision has been shown for Annual Maintenance Contracts (AMC) because all the installations will have an initial warranty for 5 years.

However, 5% of the initial cost has been shown as the requirement for 'replacements'.

(viii). Manpower requirement has been assessed as shown under.

M.I.S. Personnel

	Systems Analyst	**Programmer**	**Computer Operator or Data Entry Operator**
Central Level	(Separately given under CBES)		
State Level	1	6	6
District Level	0	1	1-3 (w.r.t. size of district)

BRC Level	0	0	2
CRC Level	0	0	1

Statistical Personnel

	Jt. Dir.	Dy. Dir.	Asst. Dir. or Stat. Officer	Stat. Asst. or Investigator
Central Level	(Separately given under CBES)			
State Level	1	3	6	6-9
District Level	0	0	1	1-2 (w.r.t. size of district)
BRC Level	0	0	0	1
CRC Level	0	0	0	0

UGC/AICTE

(They are reported to have developed their own comprehensive proposals for modernisation.)

Universities/Colleges

(They are expected to have the minimal facilities required.)

29.4.1. **Training of personnel has been incorporated as an integral part of the plan. In fact, as recommended by us elsewhere, the training activity should progress in advance so that hardware installations are not kept idle for want of competent personnel.**

29.4.2. The NIC will not be able to take on the entire training load. They can train only the Key Resource Persons who can take up the multiplier training. The assessment on average is that each State will need about 50 KRPs:

State Education Dept. and Directorates	…	5
Universities	…	10
Secondary/Senior Secondary Schools	…	10
DIETs	…	25

29.4.3. A rough estimate of the training cost works out to Rs. 2 lakhs per State/UT. For 28 States + 7 UTs, a total provision of Rs. 70 lakhs has been shown.

29.5. On this reckoning, **the total cost of technology adoption works out as follows:**

-	**Initial installation (non-recurring)**	…	**Rs. 415.20 crores <u>(Pl. see Statement-3 at page 161.</u>**
-	**Operating expenditure** (recurring)	…	**Rs.1965.40 crores** Pl. see Statement-3 at page 161.

~ **Staff Cost** … **Rs.1,754 crores**

~ **Other Cost** … **Rs. 211.40 crores**

VI. GIS Based Educational Information System

30.1. The Review Committee is inclined to **view with favour the advocacy for adoption of a GIS based educational information system. The technological feasibility of the proposition has been confirmed by the NIC. The practicability of the combination has been demonstrated by the U.P. Govt.**

30.2. As has been stressed by the U.P. Govt. in their presentation before us, the system helps to promote logic and equity in matters like location of schools, transfers of teachers, coverage of unrecognised schools and, tracking of teachers down to the school level.

31. **The Dept. of Science and Technology has developed the GIS mapping of the whole country in all the sectors. And, it has already been loaded onto the NIC network.** For very little or no cost, therefore, this facility can be availed of by users of the NIC network. **The MHRD can add-on sectoral information pertaining to 'Education' and get value-added service.**

32.1. As earlier stated in Paragraph V-9 of this Section, the NIC also has a GIS package of programme for immediate adoption. Use of this for analytical purposes duly facilitates identification of strong and weak points and projects the areas of concerns graphically and thereby enables decision-makers to initiate necessary measures.

32.2. **The NIC's Analytical Modelling Division has methodologies for GIS based projections for proper understanding, analysis and, interpretation of data. This potential can be used to devise and develop the software applications as desired.**

33. The NIC has given a significant alert in this connection. Since the GIS follows the Census Codes, **the Codes adopted by the educational statistics system** (especially in the DISE project) **must be altered to tally with the Census Codes.** The DISE Group and the others concerned must take note of this requirement. The Committee has been advised that the DISE is already using State and District codes as have been provided in the census operations; below the District level, it will not be possible now to change the codes.

VII. Campaign Mode of Collection

34. **One striking feature of the proposed system will be its mode of collection. Since much of the system will be computerised, it should be possible to complete the exercise within a limited time-frame**.

35.1. **With reference to the cut-off date of 30 September** (for academic and administrative items) **and 31 March** (for financial items), **it will be useful to prescribe 31 December and 30 April respectively as the last dates for filing the schedules**. (This will provide enough time to complete the sample checks proposed.) **Modelling on the system adopted for filing of Income Tax Returns, here too a campaign mode should be adopted to collect the data.**

35.1.1. **It will be useful in this connection, to prescribe indicative target dates for different levels to submit the Schedules.** The State Govts./Universities may be given the discretion to alter the intermediate target-dates to suit their convenience. The indicative target dates can be as follows:

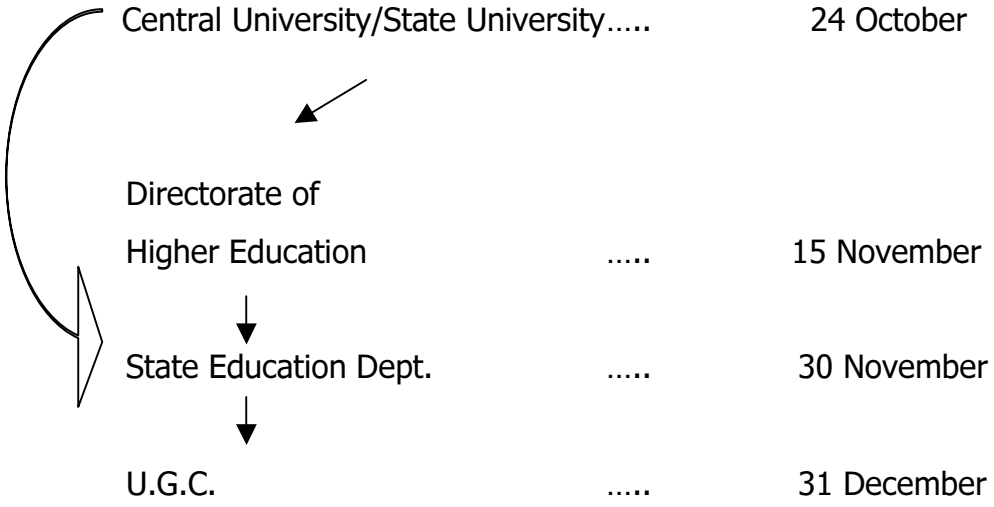
School Education

School	…..	3 October
Cluster	…..	24 October
Block	…..	15 November
District	…..]	
Division	…..]	30 November
Directorate	…..	10 December
State Education Department	…..	20 December

35.1.2. **Likewise, it will be useful for the Higher Education segment also to have indicative intermediary target dates so as to enable adherence to the datelines statutorily (to be) prescribed:**

College/Institution ….. 3 October

↓



35.2. Such an approach will infuse the system with the seriousness and sense of urgency necessary for meaningful completion of the exercise. Also, supervisory officers can plan their engagements accordingly so as to be able to give concentrated attention to overseeing the operations.

35.3.1. It must, however, be realised in this context that **supply of printed schedules must also conform to datelines.** It must be ensured that the printed schedules are distributed latest by 31 July.

35.3.2. As stated earlier in Section – 10, in Karnataka schedules with pre-printed data of previous years have been introduced. This compels all data suppliers (particularly headmasters and teachers) to properly verify the data for consistency and thereby eliminate wide fluctuations of figures. (The Review

Committee was informed that the DISE software provided for this facility; in fact, Karnataka and many other States used it beneficially.) The Committee recommends that this facility should be utilised by all. Accordingly, **schedules can be supplied with pre-printed constant indicators of previous years.**

36. In other words, the proposal to collect educational statistics in a campaign mode is desirable and practicable. The DISE project observes a 'DISE fortnight' which has become popular. Launching a campaign, in our opinion, will certainly improve data collection.

37. Almost all the Members of the Review Committee and most of the States/UTs in the Regional Meetings had expressed anguish at the inordinate delays involved at present and emphasised the significance of timeliness of publication of data. Adoption of a campaign mode for collection of data will help in overcoming the problem of delays. This will be further reinforced if the system can incorporate provisions for rewards (for good performance) and penalties (for poor performance) at State, District and other identified levels.

VIII-A. Basic considerations relating to parameters

38. Collection of Statistics is considered to be a basic responsibility of all governments. And, national govts. have

certain international commitments for sharing of data on selected parameters. These relate in the main to the requirements indicated by the UNESCO and requirements relating to the Millenium Development Goals (MDG), and the Education For All (EFA) Programme and, others.

39.1. **In appreciation of the Government's need to meet international requirements, the system recommended may have to provide for an 'international core'**. To facilitate easy and full compliance of the Govt's commitments in this regard, we list hereunder the relevant items (as provided to us by the MHRD) as a ready-reckoner:

A. Numerical Data

(i). Age specific classwise & genderwise enrolment data from pre-primary to post-secondary classes in Govt. as well as Private recognised and unrecognised schools.

(ii). Age specific classwise & genderwise repeaters data from pre-primary to post-secondary classes.

(iii). Age specific classwise & genderwise new entrants data from pre-primary to post-secondary classes.

(iv). Age specific classwise & genderwise graduates data from pre-primary to post-secondary classes.

(v). Age specific stagewise and genderwise number of students in Adult Education Programme.

(vi). Number of Foreign students by level studying in India.

(vii). Age specific classrooms, teachers genderwise from pre-primary to post-secondary classes for general programmes, vocational programmes, school and work based in Government and Private schools.

(viii). School level management personnel and teacher aides genderwise from pre-primary to upper-secondary in public and private schools.

(ix). Teaching personnel by level of education, programme orientation, type of institutions and their level of education from pre-primary to post-secondary classes.

(x). Average class size by level and type of institutions.

(xi). Number of classroom sessions per year by curriculum and students' age groups.

(xii). Duration of full time teachers by level of education, type of programme and type of institutions.

(xiii). Annual teacher compensation by level of education, type of educational programme, type of institution and, amount of teaching experience.

(xiv). Years to grow from minimum to maximum salary.

(xv). Criteria for salary increment (additional bonuses) in Public Institutions.

B. Financial Data

Central Government

(xvi). Central Govt. expenditure by level of education, i.e., preprimary, primary, upper-primary, secondary and, senior secondary.

(xvii). Inter-governmental transfer of education, i.e., transfer to regional government and local government.

(xviii). Transfers and payments for education to private entities.

Regional Government

(xix). Direct expenditure for independent private institutions.

Local Bodies

(xx). Direct expenditure for independent private institutions.

(xxi). Funds from International Agencies and other foreign sources.

Private Expenditure (Households)

(xxii). Payments to independent private institutions (expenditure of households).

(xxiii). Payments for educational services and goods purchases other than be educational institutions.

(xxiv). Financial aids to students (scholarships and other grants to students/households).

Current expenditure

(xxv). Expenditure for retirement (pensions).

(xxvi). Adjustments for changes in fund balances.

(xxvii). Expenditure for ancillary services in government dependent private institutions (public and private sources).

(xxviii). Expenditure for R&D activities in government dependent private institutions (public and private sources).

(xxix). Expenditure in independent private institutions (public and private sources).

39.2. It must, however, be recognised that the bulk of the system must retain the flexibility to accommodate national and local requirements in terms of parameters and formatting.

39.3. In other words, while the system can incorporate an 'International Core' and a 'National Core', there must be scope available for the sub-systems in the matrix to add their own requirements.

39.4. Since the emphasis has been on installing an on-line system, the focus must be on providing adequate baseline data to be available on-line.

VIII-B. International Commitments

40. **UNESCO has developed the International Standard Classification for Education (ISCED) for reporting educational statistics to facilitate international comparisons and to fulfil the requirements of international agencies.** The Sub-Committee of the

Advisory Committee on Educational Statistics had urged for adoption of the ISCED. **This has** also **been** taken into account and **duly recommended for adoption**.

41.1. The MHRD has repeatedly stressed the point about international commitments. While developing the formats, therefore, adequate attention was given to covering the 'international core'.

41.2. The UNESCO itself has been laying stress on data relating to the EFA Programme. These are fully covered by the 'international core'.

41.3. The C.S.O. has been emphasising the significance of MDGs. The five parameters identified by the National Statistical Commission in this regard have been duly reckoned with.

IX. Overall integration of inter-sectoral cohort data

42. **The educational statistics system of the HRD sector does not cover any of the other sectors**. Initially, it did not incorporate even the overall enrolment data. Consequently, all the movements of students from Higher Educational Institutions to other sectoral courses were presumed to be cases of discontinuation of studies! To

rectify this anomaly, the practice of tracing inter-sectoral movements of students was started.

43. This practice has apparently not been working well. The delays in publication of our data could have been a problem. Reluctance of others to part with information could have been another. Apprehensions about the reasons for such inter-sectoral intrusions could have been a major reason for the reluctance.

44.1. The MHRD has been keen to streamline the arrangement **so as to be able to capture correct and complete data. We** were specifically advised that the Review Committee **should consider collection of overall data from three other sectors – Medical Education, Legal Studies and, Agricultural Education.**

44.2. Bearing in mind the sensitivities of the other sectors, it was stressed that the idea was not to take over the responsibility for collection of educational statistics in the other sectors; the idea was only to **collect from them overall cohort data to ascertain the inter-sectoral movements of students.**

45. These requirements have been duly reckoned with while preparing the formats for the Higher Education segment.

X. Coverage of 'unrecognised' institutions

46. The educational statistics system does not recognise the existence of unregistered/unrecognised institutions either in the School Education segment or in the Higher Education segment. What with the tremendous growth of such institutions and what with their ready acceptance by the public, it will no longer be justifiable to ignore them. The strident growth and forceful performance of such institutions in sectors like I.T. and Fashion Technology for example have completely deflated the conventional disdain for them.

47. The presence of 'unrecognised institutions' has been more in the School Education segment. The position relating to this situation has been pithily summed up by the Sub-Committee on School Education. The Review Committee has no hesitation in quoting it:

'Unrecognised schools' constitute anywhere from 5% to 25% of the total number of schools. Educational Statistics, especially of the elementary education stage, cannot afford to ignore this segment. Notwithstanding any difficulties, therefore, the data collection drive must include them also.

It may not be practicable to organise a separate exercise. At the same time, it will be too big a job for the Central Govt. to take on. **States should**, therefore, **be pushed to take up this exercise.'**

48. The Report on Higher Education too expresses the opinion that unrecognised Colleges/Institutions have also to be covered. But, their proposal for action follows a somewhat different line. Their recommendation is – " If necessary, it can be done through a separate survey. But, subsequently, it should be included as a part of this exercise."

49. The National Statistical Commission recommended that 'unrecognised schools and institutions should be covered in sample surveys to be conducted by the MHRD and in AIE Surveys of NCERT'.

50. The Sub-Committee of the Advisory Committee on Educational Statistics had also addressed this issue. But, its recommendation was rather vague and loose ended:

'Special efforts should be made to enumerate unrecognised schools by the local authorities at block and cluster levels and to collect some basic data on number of students and number of teachers from such schools'.

51.1. The Review Committee has also deliberated on this issue. We agree with the assessment that 'unrecognised institutions' constitute too large a chunk of the pie to be ignored.

51.2. **But, because of their dispersed locations and the attendant difficulties in tracking them, we find it difficult to accept the proposition that they may be covered by the regular data collection exercise straightaway. Such a course of action may unnecessarily delay the main exercise.**

51.3. As recommended by the Report on Higher Education, **it will be more realistic to commission a separate survey to identify and cover the unrecognised institutions.** These institutions have a penchant for shifting locations. **It will**, therefore, **be necessary to give them unique permanent codes, under a well designed coding system, so that they can be tracked without difficulty**. Incidentally, this will be an advantage of getting them to be covered by a separate survey to start with. Subsequently, if possible, as recommended by the Report on Higher Education, the coverage can be handed over to the regular exercise.

51.4. States/UTs by themselves may or may not be able to handle this task. **It will be advisable for the Central Govt. to take the initiative and plan the exercise. Execution of the plan, as in the case of the AISES (of the NCERT), can be by the States/UTs.**

XI. Coverage of Open and Distance Learning Institutions

52. In recent times, conventional barriers in education have been broken to admit or recognise newer systems. **Distance Learning systems** have of course been in existence for sometime now. But, **Open Learning systems** have gained rapid currency lately. **The Review Committee appreciates the inevitability of recognising them and reckoning with their data for completion of coverage in the exercise to collect educational statistics.**

53.1. Such institutions have come up both at school level and at higher education level.

53.2. Institutions like the NIOS are prominent at the school level. While the NIOS is prominent at the national level, similar institutions at the State level have also come up. **For purposes of this exercise, the NIOS can conveniently be recognised as the National Nodal Agency for collecting educational statistics relating to open schooling and distance learning at the school level.**

53.3. **At the higher education level**, many Universities have since long been running correspondence courses. In recent times, many States have followed the Indira Gandhi National Open University model to establish their own Open Universities.

As stated earlier in Section 6-A, **the Distance Education Council had been recognised as the Nodal Agency for all such institutions to be covered under this exercise.** The Review Committee has no hesitation in endorsing this view and recommending continuation of the arrangement.

54. In the Flow Chart attached at page 286, arrangements accordingly have been incorporated for covering open and distance learning institutions.

XI. Analyses of educational statistics

55. In the Regional Meetings, some of the more perceptive representatives of States/UTs observed that educational statistics should be viewed not just as collection of data but more as a tool for taking managerial decisions. They demanded that data on important indicators e.g., Gross Enrolment Ration (GER), Drop-out rates and, Gender Parity Index (GPI), etc., of the recent past must be available to the planners and policy-makers. The Review Committee totally endorses this view-point.

56.1. Statistics are collected to serve various purposes. It may not be possible to think of all the options and cater to them. That is why the Review Committee has been in favour of providing on-line public access to raw data so that users can suit their requirements.

56.2. But, for purposes of policy-making, planning, programming and, monitoring it should be possible to anticipate the requirements and analyse the data accordingly to provide 'data alerts' or 'indicators'.

56.3. Nevertheless, it should be carefully noted in this context that for this service to be effective, the analyzer will have to be advised specifically about the points on which 'alerts'/'indicators' are required; also, the utility and reliability of such alerts/indicators will have to be properly assessed.

56.4. **Data will need to be screened stagewise with focus on critical parameters. Time series data on critical parameters may have to be generated.** As was recommended in some Regional Meetings, the system to be adopted for this purpose should have built-in validation checks; and, it should throw up 'data alerts' to facilitate quick corrective attention/action.

57. It is in appreciation of such requirements that the Review Committee has opted for total adoption of the technological advancements. We have been authoritatively advised by the NIC that they have the necessary capabilities to cater to all such requirements:

(i). ICT penetration is essential to capitalise or to have the potential to meet specific information requirements.

(ii). The NIC has vast experience in the field of Information Technology. It has appointed Informatics Officers at the district level to help users of the network.

(iii). For statistical analysis and modeling for time series analysis of the data compiled, NIC's Analytical Modeling Division has already suggested the methodologies and software tools and utilities required for data warehousing, data mining and GIS based projections for proper understanding and analysis and interpretation of data. The Division's potential and expertise can be used to devise and develop the software applications as desired.

(iv). Various packages of programmes (eg. GIS, MIS, etc.) are available for immediate adoption. Use of these for analytical purposes duly facilitate identification of strong and weak points and project the areas of concerns graphically and thereby enable decision makers to initiate necessary measures.

(v). In association with the Department of Information Technology, NIC is instrumental in developing State Wide Area Networks in all States/UTs. The LAN and WAN connectivities at State, district and block levels can be usefully availed of.

(vi). The NIC has helped the Judiciary, North Eastern States, Rural Development/Health/Labour Sectors, Mandi Administration (Agriculture) and, Census Operations to develop and maintain on-line availability of information. With the expertise it has developed in this regard over the years, the NIC can revolutionise transparency of operations thereby (incidentally) helping to meet completely the RTI requirements.

(viii). In the context especially of the strides made by the 'Education Portal', there is an urgent need to modernise Educational Statistics.

The framework and potential of the 'Education Portal' should be widely publicised so that more and more people can begin to take advantage of its facilities.

In this context, it has also to be appreciated that Portals can be used to conduct periodic surveys to assess the impact of schemes/projects.

XIII. On-line availability of data

58. **The basic thrust** of the Review Committee's thinking on the subject **has been about timeliness of data-collection and reliability of the data collected.**

59.1. Measures like introduction of a legislative support for the educational Statistics System, adoption of the modern technological developments available, prescription of a campaign mode for collection of data, incorporating provisions for a system of rewards (for good performance) and penalties (for bad performance) and, introduction of an unified system of data collection will help to streamline the set-up and speed up data-collection.

59.2. Reliability of the data collected is bound to improve with measures like data validation checks built-into the computerised programme for data collection, prescription of (sample) validation checks at the cluster-level and block levels and, the Karnataka initiative of printing the schedules with the previous year's data.

60. The Review Committee is firmly of the opinion that **transparency of the process will automatically reinforce both the timeliness and the reliability factors. Accordingly, it recommends that both raw data and processed data must be available on-line for public access. Computerisation of the whole process will easily facilitate this.**

61.1. There is an opinion that some sensitivities may militate against unrestricted availability for access on-line of raw data. The Review Committee finds it difficult to accept this contention. As earlier stated, our emphasis on introduction of a legislative support for the educational statistics system is predicated on the conviction that, for educational statistics, the stress will have to be on total transparency extending to easy availability of on-line public access. Any dilution of this conviction can be seen to be antithetical to the philosophy underlying the RTI system laid down by the Govt.

61.2. It is noteworthy that the NIC has gained particular experience in organising on-line availability of data for public access. The AGMARK system that has been established throughout the country and being operated at 'Mandi' level is a good example of beneficial exploitation of the potential available. The Karnataka project of experimenting with some sort of 'mobile phone' connectivity with servers to get data on profitable rates in wholesale/retail markets is another exciting development.

62.1. **There is another opinion that processed data should be available for access on-line only for a 'fee'. The Review Committee appreciates the cost-consideration involved in this opinion. Once the raw-data is released on-line for public access, there should really be no objection to paying for the**

cost of processing by the CBES. There can be no justification in any claim for free-supply of processed data.

62.2. **We** wish to **commend** here **the 'RGI model' for release of processed data:** upon receipt of requests for processed data or specific tables, the RGI prepares the CDs for sale at a fixed price. This helps the RGI to recover its cost of processing. It also helps to eliminate frivolous requests for processed data.

XIV. Funding Norm and Costing

63. The Review Committee recognises the importance of being more realistic than idealistic in making recommendations. Only what is practicable must be recommended. From this point of view, 'costing' is found to be of crucial concern.

64. We are, however, shocked to know that **not only is there no funding norm but, even the costs actually incurred can not be worked out with any reasonable degree of certitude.**

65. The infrastructural and staff support facilities provided to the Educational Statistics system are ad hoc. Even these ad hoc facilities are not always fully available. Resources are diverted without compunction to other activities.

Consequently, it does become impossible to quantify the costing.

66.1. The Sub-Committee on School Education, therefore, could not adequately cover the 'term of reference' on this subject. The Sub-Committee found it difficult to work out the funding requirements. As regards costing, it could only give a 'unit cost' for a District; further detailing it could not do.

66.2. The Sub-Committee on Funding and Expenditure Norms could do no better. All that it can say is –

" Even though exact costing details were not available, it was evident that the staff-support available and facilities provided were hopelessly inadequate; the Review Committee must propose a separate complement of staff for educational statistics to be funded out of the 0.5.% provision."

67.1. Even States/UTs (other than Karnataka) could not be of any help in this regard. Even the UNESCO Institute for Statistics has not been able to give any guidance on this subject.

67.2. The only sources of relevant information have been the Karnataka Education Dept. and the NIC. The former has given a lead by stating that, it does not have any funding norms for data collection; but, in planning, it has a norm that 1% of project funds can be used for evaluation of projects.

67.3. The NIC has indicated that the IT sector has a guideline about providing 3% of the expenditure on 'Plan' items for data collection purposes.

68.1. It would have been excellent if more information had been available to address this issue of basic concern.

Nevertheless, **because of the fundamental significance of this issue, based on the limited information available** through the observations of the Karnataka Education Dept. and the NIC, **the Review Committee proposes a funding norm of 0.5% of the education budget.**

68.2. The infrastructural facilities created and the staff-support provided should be exclusively for educational statistics. It will, therefore, be appropriate if they are funded out of this provision and detailed exclusively for the educational statistics system.

69. **Recognising the fact that the recommendation is based on scanty data, the Review Committee wishes to urge the Government to conduct some case studies for assessing the cost of data collection at different levels so as to develop a reasonable data base for finally fixing the funding norm.**

XV. Compendium of 'best practices'

70. **In any system of inter-sectoral, multi-segmental operatioins, it is always good to provide for cross-fertilisation of ideas/practices.** The Educational Statistics system can equally benefit by such arrangements.

71. **Even though the National Focal Point will have the prime focus in operations** and will remain the core of the system by enforcing the (statutorily) prescribed norms, standards and, responsibilities, **the sub-systems in the matrix will retain their scope for initiatives. It will be necessary to foster their enthusiasm for such initiatives and promote their replication elsewhere. It is this purpose that a compendium of best practices will serve.**

72.1.1. The developments under DISE can be cited as a 'best practice' in the school education segment. Its propagation as such will help others in other segments or (even) in other sectors to gain knowledge about the improvements and consider their adoption/adaptation.

72.1.2. The improvement in the DISE system introduced by the States of Orissa and U.P. (Please see the details in Section – 4) are excellent examples of enterprising intra-segmental initiatives. In a big country like ours, other States/UTs may

not easily come to know of such developments in the absence of an organised arrangement to publicise them. If the DISE Website can have a page on 'best practices', it will facilitate in an authentic manner quicker cross-fertilisation of ideas/practices.

72.2. The imaginative initiative of the Karnataka Govt. to introduce Schedules with pre-printed data of previous years can be cited as another 'best practice'. This initiative compelled headmasters/teachers to properly verify the data for consistency and thereby eliminate wide fluctuations of figures.

72.3. The NISAGENET initiative of the IASRI (Please see Section – 4 for details) is another good example of 'best practice'. We have been impressed by their enterprise. We have kept it as a model while making our recommendations in the Higher Education segment. If the NISAGENET had been reported as a 'best practice' in the Website of the ICAR or the UGC or the AIU, others could have benefitted by the information much earlier.

73.1. A compendium of best practices serves not only an information-purpose; because of the 'recognition' implied in the process, it has a potent motivation-potential for the innovators.

73.2. But, care must be taken to ensure proper 'certification' before according such recognition. This safeguard will be particularly significant at the National Focal Point level**. All and sundry developments should not be allowed to be bandied about as 'best practices'. To build up the credibility of the system and to maintain the authenticity of 'recognition', each sectoral and segmental compendium should have its own objective certification process.**

73.3. **Subject to such validity checks, the persons/institutions responsible for the 'best practice' can even be considered for a reward besides an appreciative mention in the Annual Character Rolls (ACRs) of the persons concerned.**

PART – B

School Education, Adult Education and, Literacy

74. **DISE system developed for Elementary Education should become the national statistics for the sector. DISE be upgraded in all States to include secondary and higher secondary stages of education.** Modifications have been suggested in the DISE format, both for elementary and secondary stages. (Please see **Annexes – 2-A and 2-B in this Volume.**

75. A national core set of items has been identified that takes into account the requirements at the national level as well as international core data requirements.

76. **Separate DCFs should be introduced for (i). Primary/Upper Primary and, (ii). Secondary/Post-Secondary. Information need of Secondary/Post-Secondary would be much more elaborate** for which additional data should be collected on laboratory, subject-wise teachers, subject streams, etc.

77. **For unrecognised schools it will be important to collect the number of schools and total enrolment**. In case of non-response, this should be clearly recorded. The

use of the DCF for unrecognised schools will be an option for States to consider.

78. For XI and XII classes attached to Degree colleges, information related to enrolment, medium of instruction and examination results should be collected.

79. For pre-primary stage, information on enrolment may be collected for pre-primary sections attached to schools for which DCF is being filled up. In addition information should be collected about the availability of a pre-primary education facility within 1.5 km. of the school being surveyed. Information for ICDS (Anganwadi centres) may be included directly at the district level. For unrecognised pre-primary schools, the option may be left to States/UTs to decide on collection of information.

80. Suitable coding procedure will have to be introduced to capture information of schools located in specific urban centres/cities/municipal corporations, etc.

81. **To ensure time series analysis of data, ideally, presently allocated school codes should not be changed. But, bearing in mind the need for conformity with the Census Codes for purposes of linkages with the GIS base, it will be necessary to introduce some bridge codes to facilitate adoption of the Census Codes.**

82. Financial information to be collected at school level should include only headwise total income/receipts and expenditures for the previous financial year. No further details need be included.

However, collection of overall expenditure figures stagewise at different levels must be emphasised and clearly provided for.

83. The present DCF of DISE captures schoolwise data on the building blocks and conditions of the classrooms. Experience suggests that such information is not free from errors. Such data is best captured by a specific school infrastructure survey.

84. **For all new admission cases, it must be ascertained if the children have come from the alternative education (EGS & AIE) system. If the unique coding system can cover the EGs and AIE systems also, this can very easily be done.**

85. As most of the incentives are presently limited to upper primary classes only, the same should be collected upto that stage. Data relating to Post-Matric Scholarships for SC/ST students may be reported separately.

86. **Data on examination results should be for the exit classes** of

- Primary
- Upper Primary
- Secondary and,
- Higher Secondary

87. Data showing

- New admissions and transfer cases should be limited upto class VIII.

- Grade-wise enrolment including the CWSN and age-grade matrix should be upto XII standard. While seeking enrolment data, the same should be available with respect to various social groups as follows:

  (i). General
  (ii). SC
  (iii). ST
  (iv). OBC
  (v). Total
  (vi). Also, separately for educationally backward minority community (Muslims).

  (The Review Committee will like to reiterate the DISE instruction that the idea here is not to cover

minorities in general but only the educationally backward minorities. We have been advised that the Government has recognised only the Muslims in this regard. Accordingly, all concerned have been advised, under DISE, not to include 'Muslims' in any other category so as to avoid double-counting. We recommend retention/continued adoption of this practice.)

88. There is no need to include the name of every teacher in a national database. The DCF may include the names of teachers to ensure accuracy which need not be entered on the computer. Similarly, for training only total number of days of in-service training need to be included.

89. Information of repeaters and re-admissions should be limited upto Class X only. The causes of repetition need not be captured.

90. Data on repeaters and promotees should include the breakdown in the same categories as enrolment list in 14 above.

91. Enrolment by medium of instruction should be upto XII standard, stage-wise, following AISES (NCERT) data format (SIF – 2) Page 8, Item 8.

92. The following additional data requirements may be included in the revised DCF for Secondary and Higher Secondary school:

(i). Some details about library facilities for which an additional form C(5) may be added.
(ii). Availability of separate toilets for girls, boys and, staff.
(iii). Availability of playgrounds and specific facilities for games like football, hockey, volleyball, basketball, badminton, tennis, etc.
(iv). Availability of disabled friendly facilities like special toilets, classroom furnitures, etc. (information on ramps is already included in the DCF).

93. States and UTs may consider adding additional fields wherever indicated in the DCFs. In addition there can be requirements of separate databases for Education Department Employees Information System or a Teacher Information System that can be designed separately. If need be, more detailed databases on the condition of school buildings and availability of facilities can also be added. Some States and UTs are collecting information on a regular basis on children's performance. The compilation and analysis of the achievement scores data can be made more systematic.

94. **Information relating to Anganwadi Centres (AWC) and the coverage of children in the 3-6 years age group and any other available information for pre-school education (at AWC) will have to be provided by the district level office responsible for implementation of ICDS.** This will get included in the district report on Educational Statistics. Necessary instructions may have to be issued by the Ministry of Women & Child Development.

95. **Adult Education**

The sources for literacy data in India are the decennial census, the quinquennial surveys conducted by the NSSO and the periodical National Family Health Surveys (NFHS), conducted by the Ministry of Health and Family Welfare. While the census enumeration covers the entire population, the NSSO and NFHS surveys are based on a sample of households in the different States/UTs.

However, the main source of data on literacy rate is the census estimates. The Registrar General of India, collects every ten years data on literacy besides other demographic features. The Census definition of a *literate* is a person who can read and write a simple sentence with understanding in any language, based on the response to the query 'Are you literate'? or 'Can you read and write'?

The National Sample Survey Organisation (NSSO) collects data on literacy and educational status of the population every five years. It adopts the census definition of literacy and also the census approach of seeking information on literacy. Unlike the census which is based on household survey, the NSSO takes a sample as the basis of estimation. The size of the sample covering all states has progressively increased from 3 to 6 lakhs over the years.

The National Family Health Survey (NFHS) also collects data and makes projections on literacy along with a host of health related indicators. The NFHS, like the NSSO, adopts a sample household survey approach for data collection.

The *Selected Educational Statistics* (SES) published annually by MHRD contains statistical data on important educational indicators on different parameters of education at all levels. SES covers all stages and sectors of formal education from primary to university levels and also provides data relating to quantity, quality, financial dimensions, as well as along social, gender, spatial, ethnic lines. The statistical data on education are those received from State/UT Administrations, especially Education, Statistics, Boards of Examinations, UGC, etc. The data on literacy and demographic features used in the SES are based on the Census and NSSO data. Using these data, SES provides adult literacy rates and also on literacy disparities in respect of rural-urban, SC/ST, women, etc. Thus, both in respect of education as well as in respect of literacy, the SES provides analysis and estimates based on data received from other agencies and sources.

Based on the different sources of literacy data like the Census, the NSSO and NFH Surveys, it would be essential for MHRD to make projections on literacy levels. The projections should be based on a composite index relating to birth, death and infant mortality rates, as also progress and achievement at the elementary and secondary level for each district/block/gram panchayat within States/UTs. Such projections in respect of women, SC/STs, religious minorities as well as in respect of persistent illiteracy areas in panchayat clusters, blocks and districts would be invaluable for mounting special programmatic interventions both for literacy and school education.

Although data originates from village and institution levels, the present system of data collection across different agencies such as the Census, NSSO, NHFS, and MHRD tends to be maintained centrally. The authorities in charge of implementing Adult Literacy programmes feel that, if a system for maintenance is established at the level of village panchayat, it would ensure better ownership as also utilization for planning interventions to improve access, adequacy in respect of provision and also quality of education and literacy. The Review Committee's recommendation about on-line availability of raw-data to everyone should more than meet this requirement. If, however, some more facilities for decentralised availability are found necessary, then, the MHRD should work towards instituting such a system.

It may be recalled that for the purpose of determining the size of the target of non-literates, generally in the 15-35 age group taken up in the Total Literacy Campaigns in the early 1990s, a household survey on literacy was conducted in every district. This was a one-time effort, and like all other data collection systems, this also tended to get centralized: although collected at village levels, it was rarely maintained and updated at the village level although the subsequent stages of Post-Literacy and Continuing Education also required similar household surveys. **The availability of relevant statistical data relating to education, literacy and other social indices through a functional system for collection and maintenance at the village and block panchayat levels would be the single most important and critical input for carrying the process of literacy development forward, since it would facilitate estimation of literacy disparity not only in respect of women and social groups, but also in respect of disaggregated levels like panchayat clusters, Blocks and Districts.**

Process of data collection, personnel to be involved, use of technology (computers) and issues relating to quality of data

96. **The District Information System of Education (DISE)**

(i). It must be conceded that the DISE does represent a significant advancement over the earlier systems of data collection, compilation, analyses and, publication. In terms of reduction of time-lags and improvement of quality, it represents a phenomenal stride over all the other systems. No doubt, there are still weaknesses; but, that should not detract from the merit of the overall system.

(ii). The DISE, which is still being operated on a project mode, is not able to generate sustained motivation because of lack of permanency**. Since the DISE has been widely accepted, it must become the only system.** Parallel systems like the SES should not operate. In fact, **it must become the only and the regular system and shall be upgraded to cover Secondary and Senior Secondary stages also.**

(iii). **There has been a misconception that DISE represents an 'additionality'.** This has led to avoidable duplication of effort. Some State Govts.

have even talked of merging the DISE with the 'old system' to avoid duplication of effort!

(iv). The Review Committee has been informally advised that the DISE system has been extended to cover the Secondary and Senior Secondary stages also. But, we are concerned to note that the 'extended' part is being overseen by an unit separate from that for the elementary stage. We strongly recommend an unified arrangement for purposes of ensuring coordination and promoting efficiency.

(v). The dichotomy cited earlier is born out of inadequate appreciation of details. **The DISE is (and, has been) a complete data system for the elementary stage. It was never meant only for adding special Central Govt. requirements. That was why the software employed provided for enough flexibility to accommodate many more parameters of local interest/concern. There is, possibly, a need to propagate this information further so that the State Govts. will start utilising the capacity available more fully and realise the needlessness (and, wastefulness) of parallel systems.**

(vi). **Attention to quality of data is recognised to be very important. DISE, therefore, prescribes a 5% (random) sample checking in 10% of the districts.**

Unless this sample checking report is given, the data supplied by States are not accepted. Some States have even appointed independent agencies to take up this sample checking. **This must be maintained and improved upon.**

(vii). The Officer at the CRC can play a vital role in quality control. In fact, **the Coordinator of the CRC should be made accountable for quality control.**

(viii). As regards data validation/correction, it must be recognised that the computer programme employed has a provision for highlighting errors even at the data-input stage. This, together with the sample checks proposed for the BRC/CRC levels should take adequate care of the quality aspect.

(ix). In this context, attention to 'validation' is very important for any quality control exercise. Since the AISES is envisaged to be maintained until the new system stabilises, **the DISE data can, possibly, be cross-checked by the AISES.**

(x). **Computer facility and MIS staff are not available everywhere (even) under the DISE. 'Data feeding' at many places is, therefore, out-sourced.** There is an opinion that even 'data collection' should be out-sourced. Based on the information given by the DISE

Project Office about their experience in Rajasthan, Maharashtra and, Karnataka, the Review Committee is not in favour of such outsourcing. It has been seen to affect the quality of data. In an outsourced arrangement, the safeguard of the CRC Coordinator being accountable for quality check will not be available.

(xi). One way of surmounting this problem will be to distinguish between 'data collection', 'data entry' and, 'quality check'. While data entry can be outsourced, data collection and quality checks can be retained for departmental attention.

(xii). **In our opinion, the best** solution **will be to augment the hardware facilities and to provide adequate MIS staff wherever they are not there.** Until this happens, if required, as already stated, 'data entry' can be outsourced.

(xiii). We will, however, record a word of caution in this connection. Experience of the AISES shows that while 'data collection' can be speeded up, 'data entry' is tricky. Data entry arrangements must, therefore, be made with great caution and circumspection.

(xiv). The Govt. has been initiating various measures/incentives to motivate children to start

going to school. The DISE should start covering these to remove an identified infirmity in the system. The DISE can start covering the mid-day-meal scheme, Muslims, and unrecognised schools.

97-A. **Child Tracking System (CTS)**

(i). **Since education for children in the 6-14 age group is now a fundamental right, it is important to track each child's educational status on a continuing basis.**

Therefore, a child tacking system with a unique ID for each child will be an ideal strategy. The CTS has special significance for the SSA. In fact, it was designed only to ensure its success.

(ii). The CTS is meant to track every child in the 6-14 age group by name/DOB/educational status/social status. To be able to track children, household surveys and school based databases will need to be linked. No doubt there have been substantial lack of concordance between 'house hold' data and 'institutional' data. But, it must be recognised that it will not be impossible to surmount the difficulty and; 'house hold' data will undeniably provide a more reliable basis for developing 'baseline data'.

(iii). The CTS is expected to monitor the achievement of every child (in the 6-14 age group) in school.

(iv). The CTS is meant to follow every out-of-school child back to school.

(v). The CTS is also envisaged to prepare advance plan for pre-school children.

(vi). This complex exercise has been tried out only by the State Govt. of Orissa. This complex exercise was made into a manageable operation by designing it as a computer-compatible system and handling it totally on an on-line basis.

(vii). Undoubtedly this is a complex, costly and, time-consuming exercise. But, the uniqueness of the CTS has been emphasised by the State Govt. of Orissa by spotlighting its differences with the DISE and the VER:

- DISE covers children in numbers, not names; /not all schools are covered; there is no updating of data, all are collected afresh all over again.

- Teacher & infrastructure information is sketchy – not a decision support system.

- VER is expected to track the out of school children at village level – that information never comes to district /block level for decision support.

- A cumbersome exercise – not monitored/not validated.

- CTS is based upon VER but goes on to link the schools to each child. Secondly it tracks each child by DOB, not by years – as time passes, the children also grow.

- Updating is required every year to include new born, track out of school, progress & achievements-results at www.opepa.in to public to make all stakeholders responsible & accountable.

(viii). The idea is to enhance the utility of CTS by finding out ways to use the CTS data in other Departments like H & FW, W&CD, SC/ST and, Labour.

(ix). Notwithstanding the elaborate preparations made and the care taken to organise the CTS, the sheer complex nature and the vast magnitude of the exercise gave scope for infirmities. As a result, other States/UTs have been chary of taking it up. The State Govt. of Orissa itself has also not pursued it with vigour.

The Sub-Committee on School Education has admitted that the 'Child Tracking System' will be an essential component of the DISE. But, it does not want the Central Govt. to take it up; it wants the State Govts. to be encouraged to do it.

Under the SSA an overall pattern only for 'household survey' has been circulated. But, according to the Sub-Committee, to improve the system, the GOI can prescribe CTS also; it can also be required to fund it; but, formatting of the exercise and its actual implementation have to be left to the States.

States that feel they are ready can begin with pilot projects for tracking of children. Based on their experience, a review can be carried out after 3 years to decide on future course of action. Looking at the preparedness of States and UTs and the feasibility of maintaining the huge databases, we should hasten slowly on this dimension. The Review Committee is inclined to agree with the Sub-Committee's assessment.

A Child Tracking System will surely be helpful in ensuring universalisation of elementary education. The system has been seen to help promote logic and equity in matters like location of schools, transfer of

teachers, coverage of unrecognised schools and, tracking of teachers down to the school level. But, the financial implications will be substantial; proper budgetary support will be required.

Although CTS is not a statistical item, this observation is made in the interest of ensuring full enrolment under the Sarva Shiksha Abhiyan. It will be for the States/UTs to take appropriate follow-up action.

97-B**.** **Household Surveys**

The importance of household surveys needs to be reiterated irrespective of whether States/UTs go in for the CTS. As earlier stated, the SSA has recognised its importance and circulated an overall pattern for 'household survey'. But, the Review Committee wishes to set out the relevant details and make a few specific recommendations for improving the system.

While the data collected from educational institutions is the main source educational statistics, there are some important educational indicators for which the required data have to be collected from households. The population census conducted every ten years does provide very important data on literacy and level of education for the population in different age groups by gender, social class, religion, etc. on

the basis of data collected from households but such data are not available for the intervening years between two censuses. The National Sample Survey Organisation does fill the gap by providing data on these items for other years. Some of these surveys which focus on education, provide a lot more data on education such as private expenditure on education, school attendance (that is, whether the person attends any school or educational institution or not), reasons of not attending school or dropping out from school. The latest in the series of such surveys is the 64th round of NSS conducted in 2007-08. it has focused on "Participation in Education and Consumer Expenditure". In other rounds also, data on literacy and level of education of the population are collected although the focus may be on some other issues.

Apart from the NSS surveys, lately, a need has been felt for organizing independent sample surveys of households by the Ministry of Human Resource Development for the specific purpose of assessing the number and percentage of children in the 6-14 age group who are out of school in the context of the Sarva Shiksha Abhiyan. Such a survey covering all the States and Union Territories was organised in 2005 and again in 2008. Such surveys help in monitoring the progress made towards achievement of the goal of universalisation of elementary education.

The need for periodic household surveys with focus on education will always remain but such surveys cannot be

conducted frequently on complete emuneration basis covering all the households of the country due to enormous resources required for conducting it. It will be like conducting a population census in which each and every household is emunerated. In such a survey, only a few important items on education can be canvassed, since the survey schedule cannot be very long due to practical problems in data collection. Also, the quality of data suffers due to creeping in of non-sampling errors which generally get controlled to a large extent in sample surveys.

In view of the importance of household level data on items relating to education, it is necessary that household surveys focusing on education are conducted periodically but not necessarily every year. Such sample surveys of households should be need based to be conducted for some specific purpose as and when the need is felt.

Accordingly, the following recommendations are made:

(i). **The NSSO should conduct household surveys with focus on Education quinquennially. In every survey, some items such as participation in education, dropouts, expenditure on education should be covered** but some new items may also covered in each survey depending on the need felt at the time of planning the survey. In all the surveys, analysis of data should be done to meet the requirements of data users.

(ii). The Ministry of Human Resource Development should have a close liaison with the NSSO for identification of items on which data relating to education should be collected in each round and specifically in the rounds that would have special focus on Education. Also the analysis plan should be developed in consultation with the Ministry of Human Resource Development and other main users of educational data.

(iii). **Ad hoc household surveys may be conducted from time to time to meet some specific requirements of data.** Such surveys could be for assessing the number of out-of-school children in a particular age group, school dropouts, the type of school that children attend (specially unrecognized schools that are left out in school statistics), persons enrolled in distance education programmes, expenditure incurred on education, home background of school going and non-school going children, etc. There should be provision for commissioning of such surveys at all India level or in selected regions of the country as and when the need is felt.

(iv). **In the context of universalisation of elementary education (and, now of secondary education also), it will be necessary to collect household data annually to monitor the progress of universalisation. For that,**

the government or implementing agency should have a mechanism for collecting the required data through routine household surveys conducted by schools themselves or Village or Ward Education Committee for monitoring the progress at the local level. Such mechanism for data collection is a part of the administrative set up responsible for implementation of the programme. **It should be ensured that such data are reliable and are compiled to provide district, state and national level estimates and do not remain confined for use at the local level.** In such situations, guidelines should be issued from a central agency to be followed uniformly across States so that the indicators derived from the data are comparable. However, such data generally are not very reliable due to the concern of the officers involved in implementation to achieve given targets. It, therefore, becomes necessary to organise independent household surveys through a monitoring mechanism to check veracity of the data obtained and also to provide more acceptable estimates.

98. **Flow of data and data entry**

At present data entry of data from school-wise DCFs takes place (for DISE) at the district level. In a few States, some data entry is being done at the block level, where

computer infrastructure is available. The Sub-Committee on School Education has recommended that during the first 2 years of the 11th Plan the aim should be to ensure that all block level education offices have computers and data scrutiny and entry/validation can be done at the block level; in the remaining 3 years of the 11th Plan, the country can move towards a cluster (CRC) or school level data entry using inexpensive and simple computers or hand held devices. Here again, a national level review of the experience of a few States/UTs that implement projects can set the tone for more large scale implementation.

Notwithstanding reservations entertained by some Members, the Review Committee has been able to make a unanimous recommendation about adoption of modern technology down to the cluster level. In other words, **while data collection at the elementary school level (and, in some of the ill-equipped secondary/sr. secondary schools) may have to continue to be manual, data compilation can be computerised from the cluster level upwards; data transmission can start at the BRC level and go down to the cluster level when the GPRS facility/internet connectivity stabilises there.**

99. **Quality of data and accountability**

(i). **The present system of check by CRC and sample check by BRCs/School Sub-Inspectors/ADIs should be implemented more**

rigorously. The stipulation of 5% sample check in 10% of the districts by an external agency should become mandatory. In the absence of this check, data from a State/UT should not be accepted.

(ii). More validation checks can be introduced at the time of data entry. These should include checks to be done manually and through the software. These checks should be carried out at the cluster and block levels. Those visiting schools for inspection should also check important entries.

(iii). The Headmaster/Principal of the school should be made fully accountable for the data submitted by school. His/Her photograph can be included in the digitised school record to facilitate fixing of responsibility.

(iv). The Enrolment data can be crosschecked with the data on the number of students who appear for annual examination.

(v). Basic school data, especially that relating to enrolment and attendance should be displayed on the school notice board.

(vi). There must be a general instruction that at the national level current year data shall be compared with the previous year data by the National Focal Point.

100**. Administrative arrangements for data collection, scrutiny, compilation, etc.**

Schools affiliated to State Boards of Education

(i). Ideally, there should be a common administrative arrangement for collection and processing of data for all the school stages. This can be achieved very quickly where the administrative structures (District Education Officer/Chief Education Officer at the district level and Director/Commissioner School Education at the State level) cover the entire school education stage (from class I to class XII). The computerization of annual education statistics can then be undertaken by pooling resources from SSA (computers/personnel/funds) and the mainstream education department's personnel resources both at district level and State level. States like AP and Assam have experimented with a common MIS set up for this purpose. It is important to place all personnel in one facility under one command at district and State levels.

(ii). Where structures for elementary education and secondary/higher secondary are separate (DEEO/DI of school for elementary stage and Inspector of schools/CI for secondary stage) at district and State level, it may be pragmatic to, for the present, continue with data collection and processing separately for the 2 stages. The data for primary and upper primary sections in Secondary/Higher Secondary schools would be collected through the channel of the Secondary Education Structures. Often for secondary education, block level structures/offices may not exist.

(iii). Even in this case, **for the elementary stage, it is imperative that the mainstream education system of BEO/DEEO and Directorate of Elementary Education take full responsibility for data collection and its accuracy. In several States, DISE data collected through the SSA machinery is often not accepted by the Directorate of Elementary Education or the Education Department. Henceforth the data should be owned by the Education Department. SSA can help strengthen the Directorate of Education by placing personnel, computers and capacity building of functionaries for this purpose, so that in due course the mainstream system can take on this responsibility.**

Schools affiliated to the Central Board of Secondary Education

(i). It will be necessary to identify (segmental) 'Focal Points' and appoint (sectoral) **'Nodal Officers'** to ensure proper coordination.

(ii). Data collection in the proposed system will be as indicated in the 'Flow Chart' attached as **Annex-5 to this Volume** of the Report.

(iii). As can be seen, for schools the flow will be from the State Govt. to the CBES. This channel may, however, pose some problems in respect of CBSE/CISCE–affiliated schools. In the Regional Meetings, many States expressed serious reservations about collection of data from such schools. There will no doubt be a statutory back-up in position. But, even so, this part of the exercise is likely to remain tension-ridden and friction-fraught. **It will,** therefore, **be advisable to take a clear stand that States/UTs need not be required to cover the CBSE/CISCE affiliated schools.**

(iv). It will, therefore, be necessary and desirable to think of an, alternative arrangement for such cases. The schools in reference will be the KVs, NVs, Defence

Sector Schools and, other schools affiliated to the CBSE and all the schools affiliated to the CISCE. **If they can not conveniently be covered by the 'State Channel', the only other viable arrangement can be to require them to be routed through the CBSE.**

(v). Since most of these schools are affiliated to the CBSE, it will be most logical to think in terms of the CBSE as the Focal Point. Only, there may be some discrepant factors. The CBSE may be concerned only with the Secondary and Senior Secondary classes of these schools many of which may have primary and upper primary classes also. Furthermore, the CBSE may not be interested in the vast canvas of information/data required to be collected.

(vi). **The Chairman of the CBSE, with whom this subject was discussed**, however, **envisaged no difficulty in implementing this arrangement**: The CBSE has a concept of 'composite schools'. It should not, therefore, be difficult to cover even the primary and upper primary classes. The CBSE does collect examination details annually from all the schools. Collection of the additional information can be coordinated with that. With some imagination, it should be possible for the CBSE itself also to use the data collected.

(vii). **The KVs. NVs and, Defence Sector Schools, which have a sizeable number of schools as organised groups, can be required to collect the data through their field-offices and send only the consolidated data to the CBSE**. For the others, the Regional Offices of the CBSE can be required to collect from individual schools and forward consolidated data to the CBSE.

(viii). **For the schools affiliated to the CISCE, that Council can be required to give consolidated information in respect of all its schools.**

(ix). As we have advocated in Part-A with reference to setting up of the CBES, a word of caution is, however, necessary here too. Total replacement of the existing system(s) will be adviseable only after the new unified system stabilizes and is seen to be working as envisaged. Any hasty dismantling of the existing arrangements may result in an avoidable data vacuum.

(x). The AISES in particular may have to be retained as it is for sometime because of its comprehensiveness. There was even a suggestion that the AISES should be retained on a long term basis as a back-up exercise for data validation.

(xi). The recommendation to eliminate the multiplicity of channels and introduce one unified system of data collection (annually on a census basis) logically should lead to the conclusion that all other parallel systems would stand eliminated. This assumption caused some discussion about the status of the AISES.

The general feeling was that the **AISES** was **not exactly an overlapping exercise**; and, it **need not,** therefore, **be recommended for abolition**. The AISES as a quinquennial exercise was introduced to provide the government with a comprehensive review of the (school) education segment prior to every Five Year Plan. On this reckoning, **it is to the HRD Sector what the Annual Economic Survey is to the (Annual Budget in the) Finance Sector.**

The AISES is conducted in a thoroughgoing manner with reference to very comprehensive guidelines. Because of the massiveness of operations, publication of its reports often get badly delayed. But, that by itself should not detract from the merits of its design and outputs.

It will be relevant in this context to recognise that **AISES is the only exercise that incorporates 'distance-mapping' of schools; no other exercise does it. It may be useful to think in terms of increasing its utility by adding, if necessary, some other special items, other items not required to be covered frequently and, any other item as may become necessary.**

In line with this reasoning, however, it will be logical to conclude that the AISES must shed much of what is already covered by the regular annual data collection exercise. In this sense, **it can be trimmed and continued with a reduced number of variables**.

In its reduced form, the AISES can even be considered to become a triennial exercise. Since the comprehensive quinquennuial AISES has been plagued by extraordinary time-overruns to be of much use to the (five-year) planners, in any case, there may not be any serious objection to its conversion as a Triennial exercise to selectively 'survey' the HRD Sector before (and, half-way through) a Five Year Plan.

One **incidental advantage** that **can be** derived from such an approach is **that the AISES can also serve to validate the data otherwise collected.**

The Review Committee will like to veer slightly away from its main course to comment on **the process of sanctioning such annual, triennial or, quinquennial exercises.** Experience shows that it takes an incredibly long time for them to be sanctioned. The Review Committee recommends that **sanction of such exercises should be automatic so long as there is no major departures from the approved patterns.**

(xii). In this context, we must **distinguish between 'institutional data' and 'household data'. Multiplicity of channels should be eliminated in the former but not the latter. On this reckoning, the N.S.S.O. coverage of 'education' should continue.** In this connection, it must be clarified that the proposed 'unification of systems' covers only governmental channels; it does not encompass NGOs.

(xiii). In this connection, it is agreed that **it will not be appropriate for a Ministry to be directly engaged in collection and publication of data. The ground work should be done by a separate**

Agency to meet requirements indicated by the Govt. Analysed data with highlighting of appropriate 'indicators' must be made available to the Govt. to facilitate proper policy-making and planning.

(xiv). This proposition has been incorporated in the 'Flow Chart' shown. The Review Committee did attempt to identify the location of this National Focal Point.

(xv). The obvious choices were the NUEPA operating the DISE (and, now the extended DISE also); NCERT operating the AISES through a well established Dept. of Educational Surveys and Data Processing; and, the UGC having a separate, full-fledged Statistical Division.

(xvi). But discussion did not favour any of them. The UGC was ruled out because its set up, designed to cover about 350 Universities and about 18,000 Colleges, will not be able to cope with the load coming from the School side. Besides, its track-record has not also been very good.

(xvii). The NCERT was not considered appropriate because its unit was designed for a quinquennial exercise. In any case, **the Committee is firmly of the view that collection, compilation, analyses and, publication of educational statistics should**

have the stamp of governmental authority and not left to be handled by autonomous organisations or NGOs.

(xviii). The NIEPA's candidature was considered to be strong because of DISE's performance. But, conversion of NIEPA into National University of Educational Planning and Administration – a Deemed University – has altered the situation. The Review Committee does not consider it appropriate to locate the National Focal Point there.

(xix). In the result, **the Review Committee is inclined to recommend establishment of a Central Bureau of Educational Statistics (CBES), as a subordinate office of the MHRD, to play the role of the 'National Focal Point'.**

(xx). **The Statistics and Monitoring Bureau of the MHRD may be moved out of the Ministry to constitute the core of the CBES.** With reference to the workload likely to be generated, a tentative Organogram has been, suggested assuming that the common matrix envisaged will be adopted.

101. **Data Analysis and Utilisation:**

(i). The analysis of DISE/ES data at district and State level has remained limited. This will require a change in mindset about data analysis and its utilisation.

Apart from capacity building in the use of data, the culture of utilization of data for evidence based planning and decision making will need to be nurtured. SSA should continue to provide data analysis and use for elementary education.

(ii). **Government of India can stipulate that timely availability of analysed school data will be a precondition for approval of Annual Work Plans for SSA/Mid Day Meal Scheme and any programme for Secondary Education that may be formulated. Timeliness of data collection and analysis will need to be insisted upon.**

102. **Data in public domain:**

(i). **States/UTs should put school-wise data in the public domain (on the Internet) in a form that it can be easily accessed by citizens. The software should provide for easy public interface. Similarly compiled data should be put in the public domain at the national level.**

(The Review Committee was informed that schoolwise data in case of all schools had already been made available on-line to users and was very much available in the public domain (www.schoolreportcards.in).

(ii). **By making the data available in public domain, its accuracy will improve with time.**

103. **Requirements of staff and their training**

(i). Installation of hardware/software by itself will not modernise the system. There will have to be competent staff to operate them. **It will be necessary to ensure that adequate, dedicated and trained staff is available at block, district and State level for the collection, computerisation and analysis of the annual educational statistics.**

(ii). **Besides MIS personnel, the system will need statistical personnel** qualified to deal with data collection and compilation. And, the staff deployed (including the school teacher) will need **to be trained not only in utilisation of modern technology but equally in data handling.**

(iii). It has not been easy for us to estimate the **staff requirements** because the structures and systems widely vary between States/UTs and **there are no uniformly accepted norms. But, based on the DISE experience, and with reference to the hardware/software installations as also the workload likely to be generated in a unified system, some requirements have been worked out.**

The following staffing pattern (that can conveniently be provided from existing staff of education department/SSA) **is suggested**:

M.I.S. Personnel

	Systems Analyst	Programmer	Computer Operator or Data Entry Operator
Central Level	(Separately given under CBES)		
State Level	1	6	6
District Level	0	1	1-3 (w.r.t. size of district)
BRC Level	0	0	2
CRC Level	0	0	1

Statistical Personnel

	Jt. Dir.	Dy. Dir.	Asst. Dir. or Stat. Officer	Stat. Asst. or Investigator
Central Level	(Separately given under CBES)			
State Level	1	3	6	6-9
District Level	0	0	1	1-2 (w.r.t. size of district)
BRC Level	0	0	0	1
CRC Level	0	0	0	0

102. **Training**

(i). **Training of these personnel must be recognised as an integral part of the programme.** While there has to be a **well thought out Training Plan with a long-term perspective with reference to the conditions obtaining in each State/UT or Institution**, it should not be difficult to arrive at some general conclusions:

(a). **All the existing staff**, denied as they have been of any exposure to training, **will require to be trained.**

(b). **Training has to be by outside professionals.** Half-baked internal exercises are not likely to be meaningful.

(c). While it will be appropriate to emphasise on 'Training', it must be recognised that the **NIC's capacity (to train) will be limited to training of Key Resource Persons. The NIC may also be able and willing to develop the overall training programme and the necessary software; but, wider adoption of the training programme will have to reckon with outsourcing arrangements.**

(d). **What the NIC can offer must be identified specifically in advance both in terms of variety and quantity.**

Thereafter, in consultation with the NIC (for MIS staff) and with the ISI (for Statistical staff), Statewise lists of training institutions of acceptable standards should be drawn up for selecting appropriate agencies.

(e). **Training of personnel must commence in advance without waiting for commencement of the new system** so as to enable quick utilisation of installed capacity.

(f). Besides the **initial induction/foundation training**, there ought to be refresher training and **orientation courses**. The approach must be to **expose personnel to** some **training** opportunity **at least once in three years**. The idea will be to facilitate updating of knowledge and upgrading of skills.

(g). **Visits to other offices, either within the State/UT or even outside, and especially to offices that have initiated 'best practices', should be considered to be an effective component of a training plan/package.**

(h). **Holding regular quarterly/half-yearly/ annual meetings of the personnel at different levels should also be seen to be an essential feature of the Training Programme.** In this connection, the **Review Committee strongly recommends strict adherence to the practice of holding Annual National Meetings** to review implementation of the exercise relating to educational statistics.

(i). **The 0.5% funding norm proposed should suffice to accommodate the training requirements set out above.**

PART– C

HIGHER EDUCATION

105. **The UGC is the Statutory Regulatory Authority in the field of higher education. It should not be difficult for it to enforce data collection by making it a condition of recognition (of Universities) and affiliation (of Colleges).** The aided/unaided status of colleges need not be a relevant factor in this context at all. Our recommendation is to **amend the UGC Act accordingly** to address this problem.

106. It will be reasonable to assume that every college in the country is equipped with computers and internet connectivity. **There cannot be a college today without computers and internet connectivity. The UGC must ensure it. All data collection can, therefore, be on-line.**

107. **Un-recognised colleges/institutions have also to be covered. Initially, it can be done through a separate survey. But, subsequently, it should be included as a part of this exercise.**

108. **Agriculture Education, Medical Education, Legal Education and Distance Learning, etc., are important segments to be covered in Higher Education. Data relating to Universities/Institutions under the State**

Govt. may be routed through the Focal Points and Nodal Agency appointed by the State Govt. Central Universities/Institutions can be required to submit their data to the UGC for compilation and onward transmission. It may be left to the State Govt. to nominate the Nodal Agency according to its convenience. The Nodal Agency can collect the data from all the other agencies in the State and give its compilation to the UGC. Apart from this, **the UGC may also collect information from all the concerned Ministries like Ministry of Labour, Agriculture, Law, Health, etc., as well as from the Distance Education Council and the Council of Architecture.**

109. **Data on the following items should be collected annually with 30 September as the date of reference:**

(a). No. of institutions of different types.

(b). Enrolment in different levels and types of courses by

- Grade (e.g. First year, Second year, etc.) for each course
- Gender and Age
- Social class (SC/ST/OBC/Others); Foreign Students and NRI Students by Country of origin (country-wise)
- Students with special needs by type of Disability.

The course will be broadly of 4 levels (as provided in ISCED)

- Diploma below level of First degree

- First degree (BA, B.Sc., B.Tech., etc.)
- Post-graduate (M.A., M.Sc., M.Com., etc.)
- Research Degree (Doctoral degree, M.Phil., Ph. D.)

(c). No. of graduates from different types of courses by gender, social class, age-group and type of disability, if disabled.

(d). Intake capacity and actual intake in different types of courses.

(e). No. of repeaters in each grade (First year, Second year, etc.) in each course/subject.

(f). No. of teachers by main designation categories (e.g. Professor, Reader, Lecturer, etc.) for different subjects, faculty-wise, by gender, age, social class, qualifications and, disability-wise (if disabled), part-time teachers and visiting/Guest teachers.

(g). Percentage of classes assigned to regular teachers, part-time teachers, Research Scholars/Students, Guest/Visiting Faculty in each course/subject.

110. **A Directory of Universities, Colleges and other higher educational institutions showing the courses offered by them should be compiled and published by UGC.** It should include the following information about each course.

- Duration of the course
- Type of degree/diploma awarded
- Minimum admission requirements
- Full-time, part-time or both
- Regular or self-financing
- Medium of instruction and Medium of Examination
- Selection procedure for admission
- No. of working days, teaching days, examination days and, holidays.

111. **All the courses should be given codes following the coding system of ISCED developed by UNESCO**. This task of preparing an ISCED document for India may be undertaken by UGC and the job may entrusted to a Task Force.

112. **An on-line system similar to that of IASRI for Agricultural Universities/Colleges should be developed by UGC for all universities and other university level institutions.** UGC should either appoint a System Analyst to work on it in consultation with the NUEPA, IASRI and NIC or outsource this job.

113. The numerical data to be collected from universities and colleges should meet the requirements of MHRD, Planning Commission and international organisations such as UNESCO.

114. For collecting and compilation of data **on such items as facilities, equipments, library, etc. a base line survey should be conducted and the data should be collected from all universities and colleges.** It should be **updated annually. An Electronic Data Management System in universities and colleges should be set up** for this purpose which enables the user to retrieve the data as an when required. To begin with, **a pilot survey may be conducted in 4 or 5 States.**

115. Some essential items of income and expenditure pertaining to universities and colleges should be collected annually at the end of the financial year.

116. **UGC should examine the financial record-keeping of a few universities and colleges across States and then propose a common format for maintaining financial records so that the essential financial data can be supplied easily by them.** The system of giving grants under different heads to universities and colleges should be studied.

117. **Information should be collected on rates of fee charged from students for different purposes.**

118. **Affiliated colleges should supply data on a prescribed form similar to that of universities. The data from constituent colleges should be a part of the data to be supplied by the university of which the college is a constituent.**

119. **One set of the formats developed** by the Group **is attached** as **Annexes– 3A – 3E in this Volume** of the Report. The idea is that **these should replace the formats in vogue at present.**

120. In view of the fact that the formats in this Section have not been tried out for computerised processing, and recognising the fact that there has been no involvement of computer-programmers during the process of development of these formats, the Review Committee recommends that **these formats may be subjected to some field-trials before wider adoption.**