Educational Statistics in India

Resume of the Seminar

**National Institute of Educational
Planning and Administration**
New Delhi

Resume of the Proceedings of the
Seminar on
EDUCATIONAL STATISTICS
with emphasis on
FINANCIAL STATISTICS IN INDIA
(1-2 February, 1993)

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1.1 Introduction

Statistical information system is not a glamorous activity. This is partly because statistical divisions and statistical officers are marginalised. But for proper planning and policy making very reliable elaborate statistical base is a critical need. Statistics on education are not an exception. In fact, they are more marginalised, as education is viewed as 'social consumption', not as 'investment'. But given the increasing awareness of the role of education in socio-economic planning, educational statistics assume significance. But the present status of educational statistics in India needs substantial improvement on a variety of fronts. It is true that we have a large elaborate data base, compared to many other developing countries. And we should be proud of it. But at the same time we should note that the situation with respect to educational statistics is not all that satisfactory. Time lag in publication of the statistics is one of the most important problem. Some of the latest statistics we have today are 7-8 years old. Such out-dated statistics will be of limited use in planning particularly in a rapidly changing economy. The quality and reliability of some of the data are also questionable. The cost of making accurate planning based on inaccurate data base may be very high for the whole society.

With this in mind, a two-day Seminar on 'Educational Statistics with an Emphasis on Financial Statistics' was organized on 1-2 February 1993 by the National Institute of Educational Planning and Administration, in collaboration with the Department of Education, Ministry of Human Resource Development, Government of India. The Seminar has three important objectives: (a) to review the status of educational statistics, (b) to identify and discuss problems relating to educational statistics including data gaps, comparability of data collected by various institutions, etc., and the bottlenecks in their timely processing and publication, and (c) to evolve strategies for streamlining and improving the whole system.

A group of about 40 eminent experts drawn from academics — universities and research institutions, and administrators working in the Department(s) of Education in central and various state governments have participated in the Seminar. The participants include experts from Jawaharlal Nehru University, M.S. University of Baroda, Jamia Millia Islamia, National Institute of Public Finance and Policy, National Council of Educational Research and Training, Institute of Applied Manpower Research, National Institute of Adult Education, Association of Indian Universities, Education Secretaries from Central and State Governments, senior officers from the

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Statistics Division in the Department of Education, Ministry of Human Resource Development, Government of India, the Education Division, Planning Commission, Central Statistical Organisation, University Grants Commission (a participant who was until recently associated with the UGC), Departments of Education in various State Governments, National Informatics Centre, etc. Thus they include a select group of producers and users of educational statistics. A list of participants is given in the Annexure, along with the Discussion Schedule. Some of the participants have prepared specially for this Seminar some papers/notes on various issues relating to the theme of the Seminar. These papers along with some background material which was drawn from earlier research, seminars, reports of the Committees, etc., formed the basis for discussions. A list of the material used in the Seminar is also given in the Annexure.

During the two days of the Seminar, four long technical sessions were organized, besides the inaugural session. The sessions were organized around four major themes: status of educational statistics — financial and non-financial, techniques and procedures adopted in collection, processing and dissemination of educational statistics by different organisations, requirements of researchers, planners, and policy makers and gaps in educational statistics, and measures for improvement in the collection, processing, publication, and dissemination of the statistics, including some institutional arrangements. Detailed proceedings of the Seminar are presented in Part II.

The Seminar has generated not only many valuable ideas on improving the status of educational statistics in India, but also produced consensus on several issues. The Synthesis that is presented here in Section 1.3 lists some of the points on which there seems to be consensus amongst the participants of the Seminar.

1.2 Critical Issues

During the two days several critical issues relating to educational statistics were discussed in depth.

The Department of Education in the Ministry of Human Resource Development publishes a large set of numerical and financial statistics on education in a number of annual publications, like the *Education in India, Budget Analysis of Educational Expenditure,* etc. The annual publication entitled *Education in India* contains these statistics by levels and by states every year. However, there is long time lag in its publication. The latest years for which the data on expenditure/finances are available now is 1983-84, and partly 1984-85. Data relating to institutions, enrollments, etc., are available for 1986-87 or so. The Department of Education also publishes quite a few other important statistical volumes. For example, it publishes

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Selected Educational Statistics every year which gives state-wise information on enrollments of total, scheduled caste and scheduled tribe population. It also gives one-page information by states on plan and non-plan budgeted expenditure on education (totals). 1991-92 is the latest year for which this volume is available. A *Handbook of Education and Allied Statistics* is another publication brought out by the Ministry of Education. Third issue in this series was published in 1987, [the first publication in this series was brought out in 1980]; covering statistics on All-India up to 1981-82 and state-wise data up to 1980-81. Some data are however available for a few later years. This is a very useful publication but it is a *handbook* giving information in nutshell. The *Budget Analysis of Educational Expenditure* published by the Department is for a three-year period, and gives several details on budget expenditure on education by levels and states. This publication provides information on actual, revised and budget proposed estimates on various categories. The latest year for which this publication is available refers to 1984-85 — 1986-87. Data given in this volume and those in *Education in India,* are not strictly comparable, but they are somewhat complementary.

The publications of the University Grants Commission provide data on enrollments and other related statistics in higher education in India. They do not publish statistics on expenditure/income on higher education, except the UGC grants. Planning Commission's publications are mostly confined understandably to the plan expenditure on education, by levels and states. The *National Accounts Statistics* of the Central Statistical Organisation provides some useful information on educational expenditure, particularly 'private final consumption expenditure', besides government expenditure on education. Rarely it provides any details on educational expenditure, except total private/government expenditure. The National Sample Survey Organisation's reports occasionally provide very valuable information on education. In one of the recent Rounds (42nd), The National Sample Survey Organisation collected statistics on participation in education and private/household expenditure on education. These data are very valuable, and such data are not available on national/sample basis at frequent time intervals. The 42nd Round refers to 1986-87. The 39th Round that refers to 1984 gives some details on participation in education. The *All-India Educational Survey* of the National Council of Educational Research and Training gives a lot information of non-financial nature on school education in India. The latest, the fifth, *All-India Educational Survey* published in 1992 refers to 1986. Institute of Applied Manpower Research used to publish some selected information on education in their *Factbook on Manpower*. The information on any recent *Factbook on Manpower* is not available. The Institute of Applied Manpower

Research now plans to bring out *National Manpower Accounts*. Other sources of statistics include Census publications.

Researchers and planners feel proud of the fact that very valuable detailed and reliable data on education are available in India. Though there are some major gaps, compared to many developing countries, very detailed data on various aspects of education are not available in India . With some adjustments, it should be possible to construct complete data sets for a long time series, from 1946-47 to at least upto 1984-85 (until now) and later, on a large number of individual indicators and their sub-components. Such time series data would be an immense wealth for the educational researchers and planners.

But there are also some important areas where the data are totally missing. For instance, very little data are available on socio-economic background of the students, students'/households' expenditure on education, etc. The National Sample Survey Organisation occasionally, but not frequently, collects and publishes such information. Also no data are available on the expenditure on private schools. There are many other areas both with respect to finances, and non-financial details, on which data need to be collected. By integrating the efforts of the machinery of the Departments of Education with the National Sample Survey Organisation and the Central Statistical Organisation and other organisations like the National Informatics Centre, perhaps many gaps could be systematically filled in.

One important problem, however, is with respect to the time-lag in the collection, processing, and final publication of these statistics. This aspect particularly refers to financial statistics. The most up-to-date detailed statistics on education, particularly financial statistics are rarely available. Such a long time gap reduces its utility in the planning and policy formulation. There is need to improve the whole system: quality and quantity of data, methods and procedure of collection of data, processing, and publication in time. Now that computer facilities are extensively available, one can expect the time lag to be reduced substantially, if proper coordination is made between institutions like the National Informatics Centre-DISNIC and the Central/State and District Departments of Education.

Further, many of these detailed data are available in published form at best at the state level only. In view of the importance being given to decentralized planning and planning in education in particular, such data may have to be made available at sub- national level. After all, these data are collected, and aggregated at the state level, and some times they are not available even in unpublished form at the state headquarters, quite surprisingly. Again with the help of computer facilities, it may be possible to get a volume like the *Education in India* for each state, giving data by districts every year.

There has been considerable thinking in the past with respect to the question: how to improve the situation with respect to educational statistics. And a lot of improvements have taken place. Even a cursory look at the volumes of *Education in India* during the last 35 years reveals that constantly certain efforts have been made towards improvement. This is very clearly reflected in increase in size, and in the number of volumes of each year's data. But some times these improvements have also caused a few problems. To reduce the time lag in production, and to make the statistics concise, some of the important details have been sacrificed, which was realized only later. For example, dropouts, age-specific enrolment ratios, statistics on private aided schools, etc., are some such statistics. Some more problems also arose relating to time series comparisons. Certain data are available in the earlier years but not for later years. Details on private schools, for example, were available for earlier, but not for later years. Some of the concepts have also changed: terms like 'direct' and 'indirect' expenditure were replaced by more meaningful terms like 'recurring' and 'non- recurring' expenditure, though they do not conform with standard terminology in Economics like 'fixed' and 'variable' costs. With frequent changes in terminology, exact time-series comparisons also become difficult. Whenever there has been a change in the definition and scope of terms, an attempt may be made to reconstruct the whole series for the earlier years, to the extent they are available in records, according to the changed definitions, just as the Central Statistical Organisation does with respect to national economic indicators, whenever the base year of the price index is changed.

While improving the whole system with respect to collection, processing and publication of the educational statistics, we may note that there is some less useful information, which can be sacrificed in favour of collecting some new and more useful information. Thus some pruning may be necessary, and at the same time some additions have to be made. While attempting at reducing the time gap, and while pruning, care should be taken that crucial information is not to be traded off.

Thus the main issue is: to collect and publish the statistics as quickly as possible, at the same time as comprehensively as necessary, covering as many details as the planners and researchers feel crucial. The needs of the researchers and planners have to be met. And the methods involved should be scientifically perfect, less time consuming, and should yield highly reliable data. How to do it? This was the main concern of the participants of the Seminar.

During the two days of the Seminar, four long technical sessions were organized, apart from the inaugural session. The Seminar was inaugurated by Dr (Mrs) R. Thamarajakshi, Secretary, Department of Statistics, Ministry of Planning, Government of India on 1 February at 10 am, which was followed by a discussion

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on the present status of educational statistics. Several institutions are collecting the educational statistics. Though there is not much duplication, one may feel that there is some need for coordination between them. The role of the various agencies in collection, processing and publication of the educational statistics, like the Central Statistical Organisation, National Sample Survey Organisation, the National Informatics Centre, the National Council of Educational Research and Training, the University Grants Commission, Institute of Applied Manpower Research, etc., was also extensively discussed. There are several gaps in educational statistics. The requirements of educational planners and researchers are varied and huge. Discussions were also held on the identification of requirements and gaps in educational statistics, and how to meet the demands of the planners and researchers. The Seminar came to an end with Shri S.V. Giri and Dr. R.V. Vaidyanatha Ayyar expressing their commitment to initiate actions for speedy improvement of the data base system in education.

1.3 Synthesis of Main Recommendations

Following are some of the main points on which some kind of consensus emerged amongst the participants of the Seminar:

1 To view that the requirements of the researchers and policy makers/planners are totally different is erroneous. The needs of the planners and researchers are not altogether mutually exclusive; they converge. There are lot of statistics that are commonly demanded by both the groups. In fact, it is difficult to imagine a set of statistics which would be exclusively useful to either the researchers or the planners, and not useful to the others.

2 There are several agencies collecting the educational statistics, the most important among them being, apart from the Department of Education in the Ministry of Human Resource Development (Government of India), the National Council of Educational Research and Training, the University Grants Commission, the National Sample Survey Organisation, the Census Organisation, the National Informatics Centre, the Institute of Applied Manpower Research, etc. There is need for co-ordination between several agencies that collect educational statistics. The co-ordination should be made with the government (the Department of Education) being the *nodal* agency, and with active involvement of the National Informatics Centre at all levels, so that the whole data could be processed and computerized fast.

3 As the experience so far reveals that the efficacy of the government in collecting, processing and publishing the statistics has not been very satisfactory, it is necessary to examine the factors responsible for this, and

improvements needed. The main responsibility of collecting the statistics should lie with the Government, but the responsibility of collating the available (once published) information, and constructing the time-series information, etc., could be given to research institutions.

4 When statistics are being collected by different agencies, it is necessary that (a) uniformly defined terminology and common classifications of various items, are adopted, so that discrepancies between the data collected by different agencies are minimized, and they are made comparable; (b) there is not much duplication in the data collected; (c) quality and reliability of data are of high order and comparable in nature; and (d) to the extent possible, they become additive. Uniform formats of the several forms being used need to be developed for various state governments, and other agencies.

5 A 'core information framework' should be developed, on which there cannot be any compromise in the quality, reliability, and timely publication. The core information is, however, not the minimum, not, of course, the maximum. We should not end up with just the 'basic' statistics. The core framework should include almost all details that are essential for efficient planning and for good policy relevant research. [This might mean to include all the information presently given in *Education in India, Budget Analysis of Educational Expenditure,* and a little bit more.] It should provide micro level specificities, along with macro level aggregate picture.

6 Such core information may consist of two parts: one kind of information may have to be collected every year, and from every institution on a census basis. Such core information should be collected by institution, though if such information is available, it can be collected from the Block/District/State offices. The second kind of information (e.g., g and h in point No.10 below) may have to be collected on a regular basis, not necessarily every year, may be on a sample basis, and the source of information may be households.

7 It is also stated that the government should take the responsibility of collecting, processing and publishing at least the statistics relating to the core information framework efficiently in time.

8 One can adopt a somewhat flexible approach with respect to 'non- core' information, which is also crucial for planning, but which can be collected not every year, but at regular intervals, which can be collected on a sample basis and not necessarily on a census basis, and all of which need not necessarily be published, but should be available for the planners and researchers as

well. Some of the non-core information can also be 'aggregate' information, and not necessarily institution-wise information.

9 In view of the importance being given to decentralized planning in development, it is also necessary that detailed data should be made available at block/district and state levels for the planners as well as researchers.

10 The most important gaps identified in the present educational statistics, that may fall into the 'core information framework' are: (a) statistics on age-specific enrollments to estimate 'net' enrollment ratios, (b) drop outs, (c) stagnation, (d) attendance of the students, (e) expenditure and related information on private unaided schools, and (f) statistics on utilization of financial and physical resources in education, (g) socio-economic background of the students, (h) students'/ households' expenditure on education.

11 When collection of statistics from certain institutions (e.g., unaided but recognised institutions) becomes difficult and time consuming and the statistics collected become incomplete and unreliable, such statistics may be brought out as a separate publication, rather than delaying the publication of all the statistics. This would also protect the quality of statistics collected from other institutions.

12 The National Sample Survey Organisation may be requested to collect statistics on socio-economic background of the students, household expenditure on education etc., as it does now, but on a more regular basis, at regular intervals, and in more details.

13 One of the important items on which information needs to be collected, though it may form a part of the 'non-core' category is information on 'formal' unrecognized schools/institutions for higher education, as after all, they also impart education, and the data base on the 'total' education system in the country will not be complete without such information. Other items refer to non-formal and adult education, open schools, etc., on which systematic data are not collected. However, care should be taken to see that mere collection of information on such schools does not automatically bestow recognition on them, nor does it lead to any legal complications.

14 Another important set of indicators on which data need to be collected refers to quality in schooling, such as availability of text books to the students, including the time of availability, number of text books available in each class, availability of teacher-guides, etc. Such information may however be collected by the National Council of Educational Research and Training in their *All-India Educational Survey(s)*.

15 Care should be taken so that data collected by different agencies, if they are incomparable in nature, quality, and reliability, are not aggregated together to arrive at the 'totals.' Otherwise, the overall quality and reliability of data may be subject to question.

16 To reduce the gap in collection of statistics, system level improvements have to be made. First institutions may be required to maintain records giving detailed statistics (as they maintain statistics on enrolment of Scheduled Castes/Tribes), for the latest 2-3 years. This will help prompt provision of statistics as and when required, and also help institutional planning. Other measures of system level improvement include provision of incentives, in cash and kind, to the institutions and individuals for prompt supply of data (and dis-incentives for inordinate delays in the same), provision training to the machinery at the grassroots levels, etc., besides ensuring timely supply of forms, timely release of funds for printing the forms, etc. The Central Government may take necessary initiatives in this regard, including increased financial assistance for the same.

17 To reduce the gap in processing the statistics, (a) DISNIC should be exploited to the maximum, and (b) computer facilities should be made available to the block/district/state level statistical offices in the Departments of Education. Effective coordination between the National Informatics Centre and the National Council of Educational Research and Training may reduce the time gap in the publication of the *All-India Educational Survey(s)*.

18 A crash programme may be launched to clear the huge backlog in the collection, processing and publication of the educational statistics within a period of 2-3 years; and a long time series data are built up for perspective planning. The processing and storage systems should also allow easy retrieval of the old data sets.

19 With respect to publication and dissemination, it may be necessary that hard (paper) copies are made available, and supply of computer floppies can be made optional, like the *National Accounts Statistics* of the Central Statistical Organisation, and the *World Development Indicators* of the World Bank. The latter, viz., floppies, cannot replace the former, viz., the hard copies, as the latter requires the users — both researchers and planners — to have easy access to computers.

20 It is also important that along with distribution of the statistical publications on a complementary basis, some copies are priced moderately, as the distribution of unpriced publications does not necessarily ensure fair access to

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all the interested researchers and planners. Basic information should also be fairly well spread regarding the statistical publications.

21 All the collected/processed (and not necessarily published) statistics need to be made accessible to the researchers and planners. Researchers may, in fact, be encouraged to use the collected statistics, say for example, the data collected by the National Sample Survey Organisation, by providing easy access to the data tapes.

22 To view the computerization as a solution to all the problems may not be correct. The limits of computerization should also be noted. Further, computerization may require higher levels of manual efficiency, and unless that is guaranteed, computerization may not solve the problem significantly.

23 One should not have a myopic view of the needs relating to educational statistics. After all, statistics are important for short term, medium term, and perspective planning. Short term considerations including resource constraints, urgency, reduction in time gap, etc., should give place for long term considerations. It should be noted that it may be impossible to collect certain statistics relating to the past. Hence while pruning the information formats, care should be taken to see that crucial information is not traded off.

24 All principal agencies involved in collecting/processing/publishing/disseminating educational statistics need to be represented in the high power Standing Committee on Educational Statistics.

25 It has been recommended that a Group of Experts may be identified by NIEPA that would look into the whole ambit of collection of educational statistics and would advise and assist in the development of 'Core Information Framework'.

26 Lastly, until the new measures are effectively started, it is necessary to see that the prevailing methodologies and practices are not abruptly stopped.

Above all, the general approach to statistics needs to be changed. Statistics are not just numbers; they speak volumes. They are numbers, but meaningful statistics provide valuable analytical insights, besides being critical inputs into planning. If they are just numbers, they ceases to be of any great value. Hence due importance needs to be accorded to statistics. Further, the importance of statistics gets enhanced if they are actually used for decision making.

Part II
Day-to-Day Proceedings

Day-to-Day Proceedings

2.0 Educational Statistics in India: Inaugural Session

The Seminar opened with Shri Baldev Mahajan, Joint Director, NIEPA extending a warm welcome to Dr Mrs. R. Thamarajakshi, Secretary, Department of Statistics, Ministry of Planning, Government of India, and all other participants to NIEPA and to the Seminar, the theme of which is very important, given the increasing importance being attached to education in development.

Introduction to the Seminar

Dr Jandhyala Tilak, the Convenor of the Seminar, while introducing the theme of the Seminar presented an overview of the Seminar. Dr Tilak highlighted the importance of the statistics in planning. For proper planning and policy making very reliable and elaborate statistical base is a critical need. Given that educational planning has been recognized as an integral part of socio-economic planning, reliable and detailed statistical base in education is necessary. The present status of educational statistics in India needs significant improvement.

As Dr Tilak pointed out, the Department of Education in the Ministry of Human Resource Development publishes a large set of statistics on education in a number of annual publications, like the *Education in India, Budget Analysis of Educational Expenditure,* etc. As researchers we might feel proud that we have very valuable detailed and reliable data on education in India, Dr Tilak added. Though there are some major gaps, it is important to note that compared to many developing countries, India has very detailed data on various aspects of education. With some adjustments, it should be possible to construct complete data sets for a long time series, from 1946-47 to at least upto 1984-85 (until now) and later on a large number of individual indicators and their sub-components. Such time series data would be an immense wealth for the educational researchers and planners.

Dr. Tilak also brought to the attention of the participants the problems in educational statistics. There are also some important areas where the data are totally missing. For instance, very little data are available on students and private expenditure on education. The National Sample Survey Organisation occasionally, but not frequently, collects and publishes such information. Also no data are available on the expenditure on private schools. There are many other areas both with respect to finances, and non-financial details, on which data need to be collected. By integrating the efforts of the machinery of the Education Departments with the National

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Sample Survey Organisation and the Central Statistical Organisation and other organisations, perhaps many gaps could be systematically filled in.

One important problem, however, is with respect to the time lag in the collection, processing, and final publication of these statistics. This aspect particularly refers to financial statistics. The latest year for which detailed data on expenditure and related aspects available now is about seven years old, if not more. Now that computer facilities are rather extensively available, one can expect the time-lag to be reduced substantially, if proper coordination is made between institutions like the National Informatics Centre-DISNIC and the Central/State and District Departments of Education.

Further, many of these detailed data are available in published form at best at the state level only. In view of the importance being given to decentralized planning and planning in education in particular, Dr Tilak also highlighted the need for such data to be made available at sub-national level. After all, these data are collected, and aggregated at the state level, and some times they are not available even in unpublished form at the state headquarters. Again with the help of computer facilities, it may be possible to get a volume like the *Education in India* for each state, giving data by districts every year.

Dr Tilak reminded the participants that there has been considerable thinking in the past with respect to the question: how to improve the situation with respect to educational statistics. Several seminars were held earlier on social statistics, particularly by the Central Statistical Organisation, wherein educational statistics were discussed. Dr Tilak also referred to the earlier research, and the reports of earlier committees on the theme, some of which were circulated among the participants. As a result of earlier efforts, a lot of improvements have taken place. Even a cursory look at the *Education in India* volumes during the last 35 years reveals that constantly certain efforts have been made towards improvement. This is very clearly reflected in increase in sheer size, and in the number of volumes of each year's data.

Some times these improvements have also caused a few problems. To reduce the time lag in production, and to make the statistics concise, some of the important details have been sacrificed, which was realised only later. For example, dropouts, age- specific enrolment ratios, etc., are some such statistics. Some more problems also arose relating to time series comparisons. Certain data are available in the earlier years but not for later years. Details on private schools, for example, were available for earlier, but not for later years. Some of the concepts have also changed; e.g., the concepts like 'direct' and 'indirect' expenditure were replaced by 'recurring' and 'non-recurring' expenditure, etc., though the new classification does not conform to the standard terminology in Economics like 'variable' and 'fixed costs'. But exact

time series comparisons become difficult. Dr Tilak felt that whenever there has been a change in the definition and scope of terms, an attempt may have to be made to reconstruct the whole series for the earlier years according to the changed definition, to the extent they are available in records, just as the Central Statistical Organisation does with respect to national economic indicators, whenever the base year of the price index is changed.

While improving the whole system with respect to collection, processing and publication of the educational statistics, one may note that there is some less useful information, which can be sacrificed in favour of collecting some new and more useful information. Thus some pruning may be necessary, and at the same time some additions have to be made. While attempting at reducing the time gap, and while pruning, care should be taken that crucial information is not to be traded off. The main issue is: to collect and publish the statistics as quickly as possible, at the same time as comprehensively as necessary, covering as many details as the researchers and planners feel crucial. The needs of the researchers and planners have to be met. And the methods involved should be scientifically perfect, less time consuming, and should yield highly reliable data. How to do it? This was the specific task of this two-day Seminar, Dr Tilak added.

Dr. Tilak also presented a brief outline of the programme, that consists of four technical sessions, besides the inaugural session, covering (a) the present status of educational statistics, (b) the role of the various agencies in collection, processing and publication of the educational statistics like the Central Statistical Organisation, National Sample Survey Organisation, the National Informatics Centre, the National Council of Educational Research and Training, the University Grants Commission, the Institute of Applied Manpower Research, etc., (c) identification of requirements of researchers and planners and gaps in educational statistics, and (d) methods for improvement.

Dr. Tilak extended a warm welcome to the rare blend of academics and administrators from various government departments at the centre and the states, who assembled for the Seminar, and stated that this blend was deliberately planned so that academically sound and at the same time practically feasible and pragmatic methods of improvement are evolved out of this Seminar.

Dr. Tilak expressed happiness that fortunately the Department of Education in the Ministry of Human Resource Development is very keen on improving the situation, to reduce the time lag in publication, in making the publications more useful by evolving methods to fill up the gaps in information and thereby fulfilling the needs of the researchers and planners in education, and that the Seminar was being or-

ganized at the instance of the Department of Education, Ministry of Human Resource Development.

Then Dr Tilak invited the chief guest Dr (Mrs.) Thamarajakshi, Secretary to the Government of India in the Ministry of Planning, Department of Statistics, to deliver the inaugural address.

Inaugural Address

In her inaugural address, Dr. Thamarajakshi highlighted the importance of the seminar theme, elaborated on the dominant role played by education in overall economic and social development and thereby the need for development of indicators and collection of vital educational statistics. She has also outlined certain issues which could be taken up for discussion during the course of the Seminar.

The theme of the seminar assumes importance because of the crucial role of education in economic development, because of the basic thrust being laid in the Five Year Plans on the education sector, and the overall goal of Education for All by 2000 A.D. and because of the critical importance of the availability of very timely, relevant and reliable information at all levels (national, state, district) for effective educational planning, management, monitoring and evaluation and development. Education plays a significant role in development because it influences other factors of production and the final output of the economy. Its influence on fertility, longevity, quality of human capital and therefore on labour productivity is well researched. Dr. Thamarajakshi referred to the *World Development Report 1991* in this context, which highlights the importance of education in developing countries. She also referred to some of the empirical studies conducted on the contribution of education to agricultural productivity, returns to investment in education in general and in rural areas in particular. The rate of return studies showed that returns were higher in developing than in advanced countries and were an average much above 10 per cent.

The distributional aspects of education need to consider the household expenditure on education and public subsidies in education. The household or the consumer purchases educational services for a price (fee), which reflects a direct and positive relationship between education and income levels. The subsidised education adds to the real income of the people, and the 'social consumption levels' and thus has substantial impact on well being and income distribution of the people. In the social consumption aspects of income distribution, education is an important item, as Professor P.C. Mahalanobis rightly stressed about three and a half decades ago.

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The relationship between education and economy in general, and between education and manpower in particular, makes it necessary to have an integrated system of manpower statistics and educational statistics. A number of organisations such as the Institute of Applied Manpower, Directorate General of Employment and Training, and the Council for Scientific and Industrial Research etc., are engaged in generating statistics. What is required now is a formal proper institutionalization, so that comprehensive educational statistics could be brought out. ·

Dr. Thamarajakshi also referred to the limitations of educational statistics available at present such as absence of information on certain major areas where socio-economic background of students, costs of education and rates of return on investments. Even though some information on socio-economic background of the students, and private expenditure on education are available from National Sample Survey Organisation, as she rightly stated, they are not regularly collected. Such valuable information needs to be collected regularly, say every five years. Adequate data are also not available to estimate private and social costs of education comprehensively.

Dr. Thamarajakshi referred to some important research studies in this context to highlight the problems researchers might face in such contexts. Detailed financial statistics on education are very important, because without such statistics rates of return cannot be estimated, and rates of return are an important tool in planning, including educational planning.

Another important aspect Dr. Thamarajakshi has referred to, on which systematic data need to be collected, is relating to education and manpower linkages. Without elaborate data base on manpower systems, labour markets, and education, meaningful employment planning becomes impossible.

Dr. Thamarajakshi has also argued that it is necessary to identify and develop 'a core information framework in education'. This core information should include all the important details necessary for research and planning at micro and macro levels. And every effort should be made to collect the core information, process it, and publish it at the earliest.

Another important argument, Dr Thamarajakshi made refers to the responsibility of the government. When there are several agencies collecting statistics in education, the government, the Department of Education in particular, should be the nodal agency for coordination of all the efforts. It should see that there is not much duplication, the data collected by several agencies are comparable, the terminology used are uniform, and the definitions adopted are common.

Dr. Thamarajakshi also wondered that despite several committees and reports, and seminars in the past, some of the problems with respect to educational statistics persisted, and it might be useful to examine the factors that are responsible for the persistence of the problems, and how to tackle them.

She has also emphasized that statistics are useful for not only short term planning; they will also be extremely useful for perspective planning, and hence long term considerations should be borne in mind in deciding about reforming the system, sacrificing some information for other kind of information, etc.

The session came to an end with Shri K. Dakshina Murty proposing a vote of thanks to the chief guest, the Chairman, and all the participants.

2.1 Status of Educational Statistics

The Chairman of the session, Professor D.N. Rao, of the Centre for Economic Studies, Jawaharlal Nehru University, observed that educational statistics have assumed greater significance today than earlier, in view of the structural and systematic changes that have been taking place in the educational and economic sectors. Both numerical as well as financial data on education are extremely important for the purposes of planning, monitoring and evaluation of educational programme. Despite the fact that Statistics Division in the Department of Education, Ministry of Human Resource Development is the oldest activity, educational statistics in India have remained largely confined to basic statistics, while there is an urgent need to analyse and relate these statistics with labour market, manpower and employment statistics.

Shri R.N. Khera, Shri S.C. Sahai and Shri Jai Ram Singh described briefly the present status of educational statistics. The different sources of educational statistics in India include: (a) *Regular Educational Statistics* such as the ones published by the Department of Education, Ministry of Human Resource Development, University Grants Commission, and Census of India Organisation; (b) *Ad-hoc Educational Statistics*, published by the National Council of Educational Research and Training, National Institute of Educational Planning and Administration, National Sample Survey Organisation, Institute of Applied Manpower Research, Planning Commission, Directorate General of Employment & Training; and (c) other minor sources of educational statistics, such as Indian Council of Medical Research (for information on medical education in India), Indian Council of Agricultural Research (for information on agricultural education in India), and Indian Council of Social Science Research (for information on social sciences).

The existing system of collection of educational statistics was introduced with effect from 1976-77 on the basis of the recommendations of the Sixth All India Con-

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ference on Educational Statistics held in 1975. Under this system it was decided to collect the basic minimum statistics on education from State Governments with a staggering time schedule in different types of forms, namely, ES-I, ES-II, ES-III and ES-IV. Further, it was also decided that detailed data on education would be collected on quinquennial basis to fill up the gaps under the annual system. In addition, it was also proposed that sample surveys would be conducted on regular basis to fill up other data gaps. Shri Sahai also described several forms that are being used:

a) Form ES-I (Numerical Data): Under this form information is collected on the number of institutions, enrolment, and teachers by sex and type of institutions, enrolment by stages/courses and enrolment by classes (Grades) with sexwise break-up also.

b) Form ES-II (Financial Data): Under this form important statistics relating to income of different Educational Institutions by source and expenditure incurred by items and type of expenditure break- up in the recurring and non-recurring is also collected.

c) Form ES-III (Examination Data): Under this Form, information is collected on the examination results (Matriculation and above standards) of different courses run by the Universities and Boards. Information is collected in respect of number of students, appeared and number of students passed.

d) Form ES-IV (Numerical Data in respect of Scheduled Castes and Scheduled Tribes): This Form is similar to Form ES-I, the only difference being that this form is meant for Scheduled Castes and Scheduled Tribe students only. Information is collected in respect of student enrolments and teachers belonging to Schedule Caste and Scheduled Tribe.

All the Forms are canvassed annually to collect the statistics at state level only. In addition, it was also decided to collect certain important and basic statistics (only numerical data) quinquinnially at District level to highlight the regional disparities in education.

Collection and consolidation of statistics in respect of primary and middle schools is done at the block level, whereas at the district level it is concerned with the consolidation of block wise returns giving aggregated data for the primary and middle schools. In some states, the required data in respect of secondary/higher secondary schools is also collected and compiled by the District Education Offices. At the state headquarter, the collection is done in respect of all the institutions of higher education as well as high/higher secondary schools where the collection is not done by the District Education Offices. Finally, the data received at the state headquarter directly from the higher education institutions as well as District Educa-

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tion Offices is consolidated for the whole state and submitted to the Ministry of Human Resource Development in prescribed Forms viz,, ES-I to ES-IV etc. In most of the States/Union Territories the compilation of the data received from different type of institutions and other units is done manually using Facit/Electronic calculators only.

It has been noted that under the existing educational statistics system, only the minimum data is being collected. Information is missing on: (a) un-recognised institutions; (b) non-formal centres for school dropouts; (c) recognised non-formal courses (Higher/Technical Education); (d) wastage and stagnation; (e) socio-economic background of student; (f) attrition rate of teachers; (g) data on school attendance; and (h) expenditure by levels/courses of education.

Shri Jai Ram Singh observed that there has been long time-lag in the collection of educational statistics, which is 3-4 years in the case of some of the states in respect of numerical statistics and the time-lag is more in case of financial statistics. The major reasons for time-lag are reported to be: the magnitude of the number of institutions from which the data is to be collected, number being above 8 lakhs; delay in the printing and consequential supply of institutional proforma by the States; lack of sufficient and trained statistical staff, particularly at the District and Block levels; and low priority given to furnishing of data. Shri Jai Ram Singh also identified the points where delay is taking place.

In the discussion several suggestions have been made, some of which are as follows. Barring data on unaided and unrecognised educational institutions, the access to educational statistics -- both numerical and financial — can be accelerated amply.

Considering the role and scope of unaided and unrecognised institutions, and the problems involved in collecting data from the same, data pertaining to the same may be collected, processed and desseminated on quinquinnial basis.

Though the aggregate financial statistics disseminated in the form of *Analysis of Budgeted Expenditure on Education* is useful, data on resource-utilisation by the item and type of educational institutions are even more important for the purposes of planning and research. Hence these data will have to be compiled at the grass root level.

Presently there are a number of agencies collecting and processing educational data. With a view to avoid duplication of efforts and resources, a close coordination mechanism needs to be worked out.

With a view to expediating data collection from the institutions a crash programme may be launched. Those to be involved in the process need to be suitably trained.

It is important that the data needs in education are carefully identified, and concerted efforts are made to compile relevant statistics. This would entail pruning of certain data, while adding a few other variables. However, while doing so, the quality, relevance and timeliness of data must not be compromised.

There is immense possibility of data networking in education considering the fact that most educational institutions and District Institute of Educational Training possess computers. As most of the computers are lying unused, office of the District Education Officer should be given opportunities to use these computers for developing management information systems and possibilities be explored to implement Computerised Planning for Education Project. District Education Officers should be motivated to use National Informatic Centre terminals available at the district head quarters.

The session came to an end with a vote of thanks to the Chair.

2.2   Techniques and Procedures adopted in Collection, Processing and Dissemination of Educational Statistics by Various Organisations

Initiating the discussion the Chairman Professor K.R. Shah of the M.S. University of Baroda, posed questions about the questionnaires in which data are being collected, responsibility for data collection, the cost of data, delays in printing in Government of India Press and the role of private agencies in data collection, and printing.

Dr. C.L. Kaul of National Council of Educational Research and Training described briefly about the *All India Educational Surveys,* their scope, difficulties in data collection and reasons for delay in bringing out the reports. All India Educational Surveys which were conducted by National Council of Educational Research and Training with the help of State Governments in 1965, 1973, 1978 and 1986 covered all types of institutions of school education. *All India Educational Surveys* give a clear picture of educational facilities available in the vicinity of habitations and help to properly plan and locate primary, middle, high/higher secondary schools in the plan period. The *All India Educational Survey,* gives information on (i) rural habitations with population slabs served by primary, upper-primary, secondary and higher secondary schools with distance from the nearby habitations, (ii) villages according to the facilities for non- formal education, (iii) villages according to the facilities for adult education and functional literacy, (iv) primary, middle, secondary and higher secondary schools with various types of facilities available, (v) class-wise

and sex-wise enrolment of children by age in urban and rural areas, (vi) number of teachers by sex and by qualifications of science and mathematics, (vii) attrition rate of teachers in primary, middle, secondary and higher secondary schools (viii) schools offering vocational courses, enrolment in vocational classes, availability of workshop facilities and qualifications of teachers etc. It does not collect any data on finances and related aspects. The surveys though proposed to be conducted every five years were not conducted with this periodicity. The decision for conducting the surveys and the sanction was received very late causing difficulties and delay in starting the survey work.

Dr. Kaul stated that two per cent of the data was verified at the block level and one per cent at the district level. In order to make the *All India Education Surveys* a regular feature, he suggested that some in-built budgetary provision be made for this purpose.

Shri Shashi Kumar, Joint Chief, Institute of Applied Manpower Research described the work of Institute of Applied Manpower Research relating to educational statistics. The Institute is collecting data on manpower accounts from secondary sources like the publications of University Grants Commission, Ministry of Human Resource Development etc. With the help of their 21 nodal centres, the Institute of Applied Manpower Research is developing technical manpower information system for technical degree/diploma holders, which includes information such as their employment pattern, salary, waiting period for job, etc. The information from 1961 to 1981 has been published.

Dr. P.B. Tripathi of Association of Indian Universities and formerly with University Grants Commission, explained that the publication of University Grants Commission contain numerical data but financial data are not being collected properly even from Central Universities, though they are totally funded by the University Grants Commission, not to speak of data from state universities. The enrolment data in respect of open universities were also available whereas data on examination results were not available. Reacting to certain queries, he stated that higher education did not include +2 stage level. He also informed that information on Scheduled Caste and Scheduled Tribe was not available. It was suggested that as background information for rationalizing fee structure at higher education level, it was necessary to work out the cost per student for various courses, and necessary data have to be collected.

Dr. R.N. Pandey of Central Statistical Organisation said that National Sample Survey Organisation collected data on education in the 35th and 42nd rounds through its Social Consumption Surveys based on household sample. The data collected in the 35th round could not be finally made available due to technical problems. The

report giving all India figures for the 42nd round has been published in Sarvekshana. The statewise reports have also become available now. The report contains information on number of children attending schools in classes I-V and VI-VIII in various age groups, children who never attended schools, data on working children, reasons for drop-out etc. With respect to a suggestion that National Sample Survey Organisation may help in the collection of educational data on a regular basis, Dr. Pandey stated that this can be considered, provided the responsibilities of processing the data and report writing are shared by some other organisations.

Dr. V.V. Rao of National Informatics Centre emphasised the role of computers in data processing and in bringing out the reports expeditiously. National Informatics Centre had developed proformas for collecting educational data and software for data processing, including in education. These were discussed with the state governments for implementation. But only the Govt. of Karnataka used National Informatics Centre facilities and computerised their educational data for 2 years, while other states are yet to avail of NICNET facilities. Further the National Informatics Centre has offered its services to National Council of Educational Research and Training for the programme on the Sixth All India Educational Survey, so that data could be processed and disseminated quickly. He also felt the need to put school wise data on computers, which can be updated periodically for use at the district and block levels.

Professor D.N. Rao of Jawaharlal Nehru University mentioned about the difficulties faced by the common users in getting educational data from the National Informatics Centre and the NICNET Systems. He also disapproved the tendency of dissemination of data through floppies and tapes because of non-availability of computer systems to common users. He suggested that the data should be published as being done now in paper copies; and that floppies can be made optional. He was critical of the policy of unpriced publications and said that the publications be priced moderately, so that these are available easily in the market for common users, because unpriced publications are distributed only to limited persons who are on the mailing list. Professor Rao also added that the common users do not get information about the occasional publications on educational statistics and that is why they are not able to use it. He suggested that these occasional publications should be published alongwith annual publications.

Detailed discussions were made on the presentations made by various speakers, in which Dr. Ayyar, Dr. Azad, Dr. Srivastava, Dr. Mahender Premi, Dr. Varghese, Shri P.P. Singh, Dr. Mahapatra, Dr. Qamar, Dr. Mehta and others took part. The following important points emerged from these discussions:

The delay in publications of *All India Educational Survey Reports* should be reduced significantly to increase their utility in planning. The discrepancies in data reported by *All India Educational Surveys, Census* data and those in the Ministry's publications may have to be sorted out. All infrastructure including the computer facilities available in District Institute of Educational Training be used to process the data quickly. Various organisations are collecting data through their own structured questionnaires. But because of lack of coordination amongst them much of the information collected may be common. Duplication should be avoided, not only to reduce work load on the teacher who supplies the data but to avoid the problem of discrepancy in data released by different agencies.

Data on certain items which are important for planning and administration of education are not available on regular basis. These include data on unrecognised institutions, expenditure data on education, socio-economic background of students and teachers, availability of text books in various schools, etc. In order to cover unrecognised institutions, the resources of National Council of Educational Research and Training and National Sample Survey Organisation be utilised. Efforts be made to converge the institution-based, habitation-based and household-based data for better planning of education. Due importance be given to data collecting agencies and staff.

With Dr. Tilak presenting a brief summary of the main points discussed during the day, the session came to an end with thanks to the Chair.

2.3 Requirements of Researchers and Planners and Gaps in Educational Statistics

Professor Tapas Majumdar, Chairman of the session in his opening remarks pointed out that the past experience has showed that the governmental agencies have not been very efficient in collecting, processing and publishing the educational statistics in time. It is necessary to look into the factors responsible for this, and the improvements needed. One has also to look for alternative institutional arrangements to collect, collate and publish the data in time. Perhaps, research organisations may be more reliable to undertake some responsibilities atleast partly. Professor Majumdar also referred to the discontinuation of the time series statistics in education and non-availability to the users. Shri R.N. Khera and Shri Jai Ram Singh on behalf of the Department of Education clarified that all the data upto 1989-90 would be available in on year to year basis. These data will be stored on floppies and floppies will be made available to the users at any time.

Initiating the discussion, Dr. Arun Mehta identified the following gaps in the present system of educational data: (i) age specific enrolment data are not collected

at present. Even though various committees have recommended to collect this information, serious efforts in this direction are yet to be initiated. In fact, all our planning efforts at present are mostly based on gross enrolment ratios. In a recently completed NIEPA-UNESCO, study it was shown that over and under aged children are to the tune of 25-30 per cent in some states like Rajasthan. This shows the limitation of using gross enrolment ratios in planning education. Therefore there is a need to estimate net enrolment ratios for which age specific enrolment data are to be collected; (ii) *Selected Educational Statistics* provides budgeted expenditure; but this information is not available by levels of education; (iii) it is not possible to estimate entry ratio -- new entrants divided by children aged six. This poses a difficulty to assess the extent of uncovered population of the school entry age-group; (iv) Similarly, data on socio-economic background and attendance of children, teacher attrition rates etc., are also not available from the publications of the Ministry.

Dr. A.B.L. Srivastava pointed out that financial data are available by type of institutions and are not available by the levels of education. This puts a serious contraint in estimating per student expenditure at different levels of education accurately. He further added that the present system of data presentation does not permit any scope for assessing the contributions by different levels of government. Another area of weakness in the financial data pertains to private expenditure on education. He also pointed out that the way accounts are maintained at district level are different from the format (ES- II), in which data are required to be collected for the Ministry of Human Resource Development. This not only creates confusion for those who are actually collecting the data but also results in avoidable delays. Therefore, there is a need to further look into the compatability of ES-II forms and the existing accounting procedures in the States.

Shri Kapool pointed to the incompatability of the ES-II form and the format in which data are available at the accounts departments of the State/Districts. He underscored the need for simplification of the format. In response to this Dr. Srivastava pointed out that simplification was attempted at various points of time but it has not helped in reducing the delay. He pointed out that with each successive simplification of forms the actual time-lag in collection and publication of data has increased. He suggested that for primary and middle level the financial data can be collected from the district level especially for those schools which are controlled by the government. In case of aided schools questionnaires can be administered for those items on which data are not available at the district level. Similarly, for unaided schools instead of collecting the data from all institutions, sample surveys may be sufficient.

Dr. Srivastava also referred to the absence of data on some important items, like non-formal education, flow of students in formal school system for counting repeaters, students opting different streams of courses, data on average daily attendance, data on unrecognised institutions, etc. Such data would be useful for assessing internal efficiency of the system. He also felt that Grade-Transition Ratios (GTR) need to be computed.

Professor K.N. Reddy underlined the need to avoid double counting , while collecting financial data at different levels of government. Since the governmental expenditure at sub-national levels is predominantly transfers, there is a need to ensure that double counting is avoided. He also pointed out that expenditure by levels of education are not avialable. Citing a few recent studies, Dr. Tilak pointed out that the data given by *Eduction in India* and *State Budgets and Budget Analysis of Expenditure on Education* are not comparable.

Dr. Mahapatra focussed on some administrative inefficiencies built-in the system which derails the data collection procedure. In his view, the funds available are too limited. This delays printing of the forms and getting them sent to all the concerned persons. The staff at the grass root level are not trained to collect data and hence there is need for training them. Since statistics divisions have no control on the transfer of trained personnel, the training should be on a regular basis. At present there is no incentive for the functionaries at the grass root level to collect data. There is no provision for their travelling expences even. In his opinion, a provision of monetary incentives may tremendously improve the pace and efficiency of educational data collection.

Shri Abhimanyu Singh, Education Secretary of Rajasthan, drew the attention of the house to some of the inherent problems of statistics divisions at the state level. In his opinion, statistics divisions and statistical officers are not given due importance. Frequent changes are made in the format for data collection without consulting the actual functionaries involved in the data collection process, especially those who are at the district, block and institutional levels. He advocated a sensitisation process to the heads of institutions regarding data requirements and its uses. The currently available data are of limited use for planning and monitoring of universalisation of elementary education. There is a need to strengthen the data collection machinery at state level and also the computer facilities. He lamented that there is not even a single computer provided at the state level statistics division of the Department of Education in Rajasthan. The Computerised Planning for Education project and National Informatics Centre facilities should be extended to all states and districts, he added.

Mrs. Kumud Bansal, Education Secretary, Government of Maharashtra, felt that there is a need to integrate planning and data collection. Unless data collection is made an integral part of planning process, the procedure for collection may not improve. The complexity of the format for data collection and the existence of weak machinery for data collection at the state level delay the flow of information. Provisions for training on a regular basis can improve the collection of educational statistics. In this context, she also pointed out the need to extend the services of COPE and National Informatics Centre. She also explained the problems of staff and administration and inadequacy of funds at state level for collection and processing of statistics. She pleaded for financial support from the Central Government for meeting such expenditures. Further at present, the quality dimension of education are totally left out, while collecting data on education. The emphasis still continues to be on quantitative expansion of the system. Given the recent emphasis on minimum levels of learning, the format for data collection has to be redesigned to incorporate the learner achievements too. In her opinion collection of data from unrecognised institutions paves the way for legitimising such institutions which are mushrooming in Maharashtra. And hence data should not be collected from unrecognised institutions.

Professor Majumdar strongly and convincingly argued that even though, it creates problems for administration, collection of statistics on unrecognised institutions is beyond doubt necessary, and that every effort should be made to collect the same. He also pointed to the fact that the data on unaided and unrecognised institutions are qualitatively different and hence they may not be added to the data on other institutions. Dr. Ayyar pointed out at this juncture that unrecognised institutions are becoming a reality in the rural areas too. Therefore, there is a need to keep track with the growth of such institutions. However, he agreed with the earlier suggestion that such information should be kept separately, and that measures be taken to see that collection of statistics does not mean giving recognition.

Shri Prem Chand intervened in the discussion to suggest that since the time-lag is too much there is a need for a crash programme of data collection for all the past years so as to faster the process and reduce the time-lag.

In Tamil Nadu, Shri Murugeshan, Assistant Dirctor of State Education, Government of Tamil Nadu, observed that the situation was relatively better. Computer facilities are easily available and the grant, with the help of World Bank is in the process of developing a Management Information System for education. At the Directorate of Education there is also a specific cell dealing with educational statistics in the state.

According to Shri I.P. Aggarwal, from Delhi Administration, the experience in the Union Territory of Delhi is also very encouraging. For example, Delhi Administration has already collected and transmitted information pertaining to the year 1990-91. It was also pointed out that the format provided by the COPE project does not include financial statistics. In Delhi, unaided and unrecognised institutions are numerous and this creates problems for data collection. To facilitate faster data collection for these types of institutions, the Delhi administration is planning to modify the Act, so as to make it mandatory for all unrecognised educational institutions to register with the Education Department.

Professor K.N. Reddy pointed out the need for updating data and providing quick estimates, as in the case of national income statistics. He also especially mentioned about the importance of data on *non-budgeted expenditure*. He recommended that vertical and horizontal studies must be conducted on the public sector expenditure at national, state and institutional levels.

Dr. J.L. Azad elaborated on the newly constituted committee by the University Grants Commission (Purniah Committee) on non plan expenditure in Central Universities. He also explained the content of the data expected to be collected by the University Grants Commission.

Dr. Varghese drew the attention of the house to a different type of data gaps. In the eighties, it was decided that the ES-II forms are to be separated for higher education and school education. Consequently the University Grants Commission was entrusted with the responsibility of collecting financial statistics regarding affiliated colleges. However, University Grants Commission has not been able to publish data on this count until now. This may create a total gap in financial data in the field of higher education. Secondly, the unit of data collection needs to be clearly specified. The Ministry of Human Resource Development collects data from educational institutions; the National Sample Survey Organisation collects information from household levels. These two sets of units provide different aspects of the information. Further, in higher education financial data are available at the state level; however university-wise break up is not available.

The chairman pointed out that the University Grants Commission is not in a position to collect information even from the central universities, where the possibility of University Grants Commission to influence these individual institutions to provide data is very high. In fact, data on some of the central universities is collected and is lying unattended at the University Grants Commission Dr. Tripathi clarified that data are available but due to lack of infrastructure facilities they had not been processed and published so far. It was also suggested by the participants that the University Grants Commission officers and the Accounts Officers of the

state universities should sit together for devicing uniform pattern, as there are different patterns of maintaining accounts, which creates problems.

Shri Suresh Kumar pointed out that data on school administrative process especially those pertaining to inspection and supervision are not available at present. Mr. R.N. Khera responded that since its publication is institution-based rather than budget- based, information on inspection and supervision cannot be collected in the coming years. Intervening in the discussion, Dr. Qamar pointed out that no data to estimate the optimal size of an institution is available at present. He regretted that even when new formats are designed many state governments do not follow the same format, and that in data are not provided in time. Drawing parallel with the corporate sector, he argued to make it mandatory for the state government to supply data. In his view there is a huge data gap in the area of utilisation of resources.

The long discussions in the session came to an end with a vote of thanks to the Chair.

2.4 Measures for Improvement and Policy Concerns

Shri Baldev Mahajan, Joint Director, NIEPA welcomed the Secretary, Department of Education. Dr. Tilak in his initial remarks summarised the salient points that emerged from the discussions. Some of the important points he highlighted were as follows:

(i) At present there is mutual interest and areas of convergence between educational administrators and researchers with regard to the type of data that are to be collected.

(ii) There is need to ensure comparability of data collected by different agencies for the same reference period and also between the data collected by the same agency. A case in point is the data provided by the Ministry of Human Resource Development based on the budgets and that is given in *Education in India.*

(iii) There is need to co-ordinate different agencies involved in data collection, and perhaps it is preferable that the government takes the nodal coordinating responsibility, in active collaboration with the computer network of the National Informatics Centre.

(iv) The data need to be collected and published by the government, whereas collation of the available information can be left to some research organisations on a selective basis.

(v) At present the computer facilities are almost centralised. There is a need to decentralise this facility by extending this to the district level.

(vi) Provision of incentives to those involved in data collection may fasten the process and may be rewarding in terms of efficiency, accuracy and timeliness of the data.

(vii) If provision of grants to the institution can be made conditional to the supply of data, greater efficiency can be achieved in the pace of data collection and their timely publication.

(viii) Core-data framework need to be identified and developed. The format for this purpose can be uniform and its publication has to be regular. On the other hand, the data which is not core can be collected based on sample surveys.

(ix) All the core-data collected should be published to ensure wider availability. It may be also equally useful to provide floppy diskettees to those individuals or agencies which ask for data. However, the dissemination through floppy diskettees has to be complementary and not a substitute to the publication of paper copies of the publication.

(x) To ensure accessability to researchers, it is better to price the publications. However, the pricing can be moderate.

(xi) Collection of data on unrecognised institutions need not be on a regular basis, if it delays the whole collection process.

(xii) At times the format for data collection are not available and this unnecessarily delays the data collection process.

(xiii) There is an urgent need for regular training of the functionaries collecting data.

The Chairman Shri S.V. Giri, Education Secretary, Ministry of Human Resource Development, in his remarks elaborated on the immediate provocation for the seminar. In his address, he said that the cost estimates for the *Sixth All India Educational Survey* were around Rs. 7-8 crores. This necessitated a re-look into the efficiency of data collection procedures. A time-frame may be drawn well in advance for the release of data. It should be kept in mind that data may be made available with possible minimum cost, of course without sacrificing the quality of the data. And use of NICNET/DISNET be made extensively in analysing the data and release of results relating to Sixth All India Educational Survey. The second compulsion was the social safety network project which attempts to atleast maintain the same level of expenditure on social sectors. This in turn needs planning at the district level. And we do not have adequate data to make realistic plans at the district level.

He elaborated on the immediate concerns of the Department of Education in this regard:

Timeliness of the Data: At present the available data are outdated and are of limited use in planning. He believes that by tightening the existing system of data collection the time-lag in collection and ultimate dissemination can be considerably reduced. This necessitates active intervention at the stages of data collection, and processing.

Utility of the Data: There is a need to identify the core information needed for planning and data pertaining to this aspect need to be made available in time. One suggestion in this regard is that the data pertaining to the latest year be processed first and that pertaining to the previous years be processed subsequently. This will improve the utility of data.

Sample Survey: Once the core information is identified and regularised in collection procedures, this can be supplemented with sample surveys.

Prioritisation: Another area which needs emphasis is to identify priorities in educational investment. The limited resources are to be strictly prioritised for investment. And investments are to follow the economic logic of returns to investment. This requires a different set of information which is not readily avialable from the existing sources.

The Need to Extend the NIC Network: At present the National Informatics Centre network is available at the district level in many states. However, he regretted that even when National Informatics Centre network is accessible, the flow of information is not fast enough. In this context, he made two suggestions. To maintain the same software for processing the core data in all states to facilitate faster processing and easy retrieval. Information required by the states and districts can be added on to this core information, and the software used for this purpose can be different. Secondly, inter-agency cooperation is important. This can be improved by clearly identifying the responsibilities of each agency without over lapping functions.

Funding: Funding is an area which requires attention. However, in his view considerable efficiency can be achieved with the available level of funding, if the collection procedures are rationalised.

Dr. Seshagiri elaborated on the National Informatics Centre support service to the Ministry of Human Resource Development and various state governments in processing educational data. Taking examples from the election analysis and recently conducted census, he convincingly showed the capability of National Informatics Centre to handle huge amount of data. However, he felt that the major economic sectors like agriculture and industry are treated as wealth generating sectors and sectors

like education and health are treated as consumers of wealth. Such an attitude leads to providing lower priority to the processing of educational data in the National Informatics Centre network. Taking the example of Bellary experiment in Karnataka, he elaborated how National Informatics Centre can faster the process of data processing in the educational sector. Once the data is collected from the institutions, it would not take much time for National Informatics Centre to analyse the data.

Dependence on governmental agencies alone for data collection may not be always realistic. In this connection Dr. Seshagiri pointed out that the National Informatics Centre has already identified 200 voluntary agencies who could be entrusted with the responsibility of data collection. Dr. Seshagiri informed that collection of information is a very costly affair. Therefore, it should be planned well in advance. Dr. Seshagiri agreed with Shri Giri with regard to the categorisation of information into (i) core information to be collected in a standardised format which can be retrieved quickly; and (ii) non-core information, collection of which can be in varying formats and need to be collected only when required. A standardised format to have core information may be developed before embarking upon collection of huge information.

At present under the DISNIC programme, information are collected for district planning which includes data on education also. This covers data on each and every village and is done in 14 Indian languages. All the villags of Madhya Pradesh are covered under this programme. One of the aspects to be taken up on a priority basis is the creation of an inventory of efforts that are done in the past. The available data, if closely summarised, may help in generating a new set of information which can be directly used for planning purposes.

Shri Giri, intervened to show how the Department of Women and Development succeeded in getting information for all centres under Integrated Child Development Scheme on a monthly basis to monitor the scheme. The latest available information is for October 1992. If this is possible in another department, the chances of it replicated in the Department of Education are high.

Shri J. Veera Raghavan, former Secretary, Ministry of Human Resource Development, provided a historical perspective to the efforts to improve educational data in India. In 1969 a committee on educational statistics was set up under the Chairmanship of Late Shri J.P. Naik to identify the core data and subsequntly the ES forms were revised. Even though computerisation of data processing was suggested, there was considerable resistence to it in the seventies.

In his view the basic delay is that of collection and reconciliation at the grass root level. This consumes a lot of time which delays the entire process. From his personal experience, he informed the house that the main problem lies at the collec-

tion stage. Forms are not printed and distributed well in time; the school teacher who is to fill up the forms is over burdened with many-fold activities, with the result that he takes lot of time to furnish the data. Then there are many stages of reconciliation. The forms once filled up travel to and fro from one level to another for reconciliation. The National Informatics Centre network can be a helpful tool not only for initial processing but also for timely updating of the data. The data based on budgets can be brought out in time without any problem. However, this is not the case with institution-based data. In his view, if data on institutions are collected through sampling procedures, a considerable amount of delay may be eliminated.

Quoting the Report of the Education Commission (1964-66), Shri Veeraraghavan argued that statistics cannot be improved unless it is used. And he hoped that in the changed circumstances, statistics may be increasingly used for planning purposes which will definitely improve the status of educational statistics in India.

Professor D.N. Rao underlined the need for regular training of the functionaries associated with collection and processing of educational statistics. Education is an investment in human beings. Therefore, some detailed data about the unit cost of education have to be made available. Professor Srivastava emphasised the need to identify the core information and suggested that a group can be formed for the same purpose. He also wanted that the administrative problems like under-staffing of statistical officers at the lower levels, i.e., block and district, etc., should be looked into. Dr. P.C. Mahapatra suggested that staff be strengthened and equipment, like personal computer, photo-copier machines, etc., may be made available at the Office of the District Education Officer. Dr. Varghese while agreeing with the need for a group to closely look into the educational data to identify the core information, felt that considerable improvement can be made to reduce time lag by (i) not collecting information on unaided schools regularly, and (ii) by collecting institution-wise financial data from the point of flow, viz., block or district. He also raised the question pertaining to the data gap arising out of the inability of the University Grants Commission to publish financial data on higher education. Shri Prem Chand of National Institute of Adult Education suggested that a crash programme be launched for collection and compilation of back-log of statistics.

Dr. R.N. Pandey from National Sample Survey Organisation pointed out that the basic delay is in the collection where computers are of no help and hence computerisation need not necessary reduce the delay in the publication of data.

Shri Baldev Mahajan stressed the need to reduce the burden of the school teachers because of collection of information by various agencies on different items. He pointed out that a typical school teacher has to complete several forms from dif-

ferent agencies which creates practical difficulties. Shri Sahai underlined the need to ensure the quality of data collected, while Dr. Qamar urged the need to look into the avilable data more closely to make further suggestions.

Dr. Ayyar felt that we have to translate the reflections into concrete action. First, a closer look at the present forms used for data collection is necessary to make further refinements. He desired that a small Committee may be set up which can go through the format of core data requirements and restructuring of earlier series of forms in which data is being collected. Such an effort may help in further rationalisation of data collection. He felt that a distinction needs to be made on what can be done in the short run and what needs to be done in the long run. The responsibilities of the various agencies involved in collection of statistics in education, with respect to (i) collection of data on a census basis; (ii) collection of data on survey basis; and (iii) collection of data as occasional studies etc., is to be clearly defined and specified. He laid emphasis on collection of educational data for the latest year through S1, S2 and S3 forms at district level on priority basis in the first instance. The states may move backward in collection and supply of pending data for the earlier years. Efforts should be made to move from data base to a reliable Management Information System.

While concluding, Dr. Tilak cautioned that the existing procedures and system should continue until the new measures are effectively started. Often the existing system gets stopped, and the new systems does not take off for several years. Secondly, Dr. Tilak also observed that computerisation cannot be a panecea for all the problems. Computerisation itself requires more efforts and higher levels of efficiency, and in the initial periods, it might take more time, but it is worth. And lastly, care should be taken in deciding what is to be traded-off for what.

Shri S.V. Giri thanked Shri Baldev Mahajan and Dr. Tilak and other functionaries of National Institute of Educational Planning and Administration for conducting the Seminar and hoped that a detailed report would be available outlining the findings of the Seminar. The Seminar came to an end with a vote of thanks to the Chair and all the participants.

Part III

Selected Seminar Papers

Status Paper on Educational Statistics

Department of Education
Ministry of Human Resource Development
Government of India
New Delhi

1. Introduction

1.1   Planning including educational planning is in the concurrent list and as such is the joint responsibility of the Centre and the States.

1.2   Besides, the Constitution provide for two onerous responsibilities on the State, viz., provision of universalisation of elementary education and promotion of educational and economic development of the weaker sections of the society.

2. Need for Educational Statistics

2.1   A reliable and sound statistical data base is a basic requisite for planning to succeed. Broadly speaking, there are four important areas in which the educational statistics are required. These are: (a) educational planning and policy; (b) for taking administrative decisions; (c) research and studies; and (d) dissemination of information for use by various national and international agencies such as UNESCO, UNICEF, Planning Commission, etc.

2.2   The National Policy on Education, 1986, has laid great emphasis on developing a national system of education, the elimination of disparities in the educational system and provision of more facilities through qualitative interventions. The NPE, 1986, and its POA gave unqualified priority to UEE and introduced many innovations. The emphasis has shifted from enrolment *per se* to enrolment as well as retention.

2.3   Education is now funded by various sources-Central and State Governments, local bodies and private contributions. There is an increasing trend in the expenditure on education both by the Central and State Governments during the various Plan and Non- plan incurred from 1985-86 to 1990-91. Year-wise expenditure and B.E. for 1990-91 is indicated below:

Year	Expenditure (Rs. in crores)
1985-86	7456.98
1986-87	8450.32
1987-88	10430.19
1988-89	12408.72
1989-90(RE)	15247.00
1990-91(BE)	16362.22

3. Structure of Education

3.1   The Kothari Commission (1964-66) and the National Policy on Education adopted in 1968 had *inter-alia* recommended the introduction of a uniform structure of education in the country. The system generally known as 10+2+3 consists of 10 years of general education at the school stage, followed by 2 years of higher secondary education and 3 years of university education to the first degree. However, this pattern is yet to be introduced in a few States. For purposes of reporting statistics on enrolments at the national level, the following structure is used

Primary level - Grades I-V

Middle level - Grades VI-VIII

Secondary education - Grades IX-X

Higher secondary education - Grades XIII onwards

4. Reference Date

4.1   Information relating to the numerical data is collected as on 30th September, while that of the financial data relates to the period ending 31st March of the financial year.

5. Source of Educational Statistics in India

5.1   The different sources of educational statistics in India can be grouped under the following two heads

(a) Regular Educational Statistics

   i) Ministry of Human Resource Development, Department of Education for Annual Statistics

   ii) University Grants Commission (data of Universities and colleges);

   iii) Census of India (for literacy and educational levels of population)

(b) Ad-hoc Educational Statistics

    i) National Council of Educational Research & Training (NCERT) for educational surveys and sample studies

    ii) National Institute of Planning & Administration (NIEPA) (for educational administration surveys)

    iii) National Sample Survey Organisation (for socio-economic aspects of population as well as data on unrecognised institutions)

    iv) Institute of Applied Manpower Research (for area manpower surveys, vocational & technical educational surveys)

    v) Planning Commission (for data on annual and five year plan)

    vi) Directorate of Employment & Training (for data on ITIs and employment exchanges)

(c) Other minor sources of educational statistics are

    i) Indian Council of Medical Research (for information on medical education in India)

    ii) Indian Council of Agricultural Research (for information on agricultural education in India)

    iii) Indian Council of Social Science Research (for information on social sciences).

6. Present System of Collection of Educational Statistics

6.1   The existing system of collection of educational statistics was introduced with effect from 1976-77 on the basis of the recommendations of the Sixth All India Conference on Educational Statistics held in 1975. Under this system it was decided to collect the basic minimum statistics on education from State Government with a staggering time schedule in different types of forms, namely, ES-I, ES-II, ES-III and ES-IV. Further, it was also decided that detailed data on education would be collected on quinquennial basis to fill up the gaps under the annual system. In addition, it was also proposed that sample surveys would be conducted on regular basis to fill up other data gaps. The various types of data collected in different types of forms under the existing system could be summarised as under

    a) *Form ES-1 (Numerical Data)* : Under this form information is collected on the number of institutions, enrolment, and teachers by sex and type of institutions, enrolment by stages/courses and enrolment by classes (Grades) with sexwise breakup also.

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b) *Form ES-II (Financial Data)* : Under this Form important statistics relating to income of different Educational Institutions by source and expenditure incurred by items and type of expenditure break-up in the recurring and non-recurring is also collected.

c) *Form ES-III (Examination Data)* : Under this Form, Information is collected on the examination results (Matriculation and above standards) of different courses run by the Universities and Boards. Information is collected in respect of number of students, appeared and number of students passed.

d) Form ES-IV (Numerical data) in respect of Scheduled Castes and Scheduled Tribes: This Form is similar to Form ES-I, the only difference being that this form is meant for Scheduled Caste and Scheduled Tribe students only. Information is collected in respect of enrolment of Scheduled Caste and Scheduled Tribe and SC/ST Teachers.

6.2   Forms ES.I-IV are canvassed annually to collect the Statistics mentioned above at state level only. In addition, it was also decided to collect certain important and basic Statistics (only Numerical Data) quinquinnially at District level to highlight the regional disparities in education.

7.   Machinery for Collection of Educational Statistics

7.1   *At Centre* : At the Centre, Department of Education, has got a Planning, Monitoring and Statistics Division. Statistics Unit of the division is headed by a Deputy Director who is assisted in his work by three Assistant Directors, two Assistant Education Officers and other supporting staff.

7.2   *In the States* : Nearly all the State Education Departments have Statistical Cells under the charge of a Statistical Officer or Deputy/Assistant Director with a few Statistical Assistants and computers or clerks. At the district level, there is one or more Statistical Assistants doing the work of collection of statistics. However, at the Block/Taluka level, there is no separate staff.

8.   Organisational set up at Centre

8.1   The Department of Education collects annual statistics on its prescribed Forms ES-I, ES-II, ES-III and ES-IV from all the States/UTs. These forms cover the entire educational system in the States right from pre-primary to the Post-Graduate/Doctorate level.

8.2   The Department of Education supplies the printed copies of blank Forms ES-I to ES-IV to all the States/UTs as per their requirements. Model Institutional proforma which form the basis for filling up of these forms by the State Governments are also designed by the Ministry and supplied to the States who may include certain

other items also for their own use. These proformae are got printed by the State Governments for supplying to institutions through their district and block level machinery.

8.3 To ensure accuracy in the collection of educational statistics, the Ministry has prepared, a Manual of Instructions explaining various concepts and definitions for use by the State Governments, both at the State Head Quarter and District Offices for proper compilation of data at these levels.

8.4 The Department of Education organises training courses for the statistical staff engaged at the State Head-quarter to explain them the concepts and definitions given in the manual of instruction and various points in scrutinising the data received from the field. Besides, the Ministry also deputes resource personnel to the State Governments in helping them to conduct training course at lower levels, i.e., at District level and at Block level.

8.5 The Ministry scrutinizes the filled in forms (ES-I to ES-IV) received from the states and UTs. The various points of discrepancies are reconciled through correspondence. In case of complicated discrepancies, on the spot reconcilisation is done by deputing the Ministry's officials to the concerned states and vice-versa. After scrutinising and reconcilisation of data received from the States, under ES series of forms, the same is entered on magnetic diskettes and validated for computerised processing. After checking the final computer output, the manuscript of Education in India is finalized.

9. Organisational Set up in States

9.1 Generally, there are three levels viz. (i) State (ii) District (iii) Block/Tehsil/Taluka which are involved in the collection and consolidation of educational statistics.

9.2 Collection and consolidation of statistics in respect of primary and middle schools is done at the Block level whereas the District level is concerned with the consolidation of Block-wise returns giving aggregated data for the primary and middle schools. In some states, the required data in respect of secondary/higher secondary schools is also collected and compiled by the District Education Offices.

9.3 At the State Headquarter, the collection is done in respect of all the institutions of higher education as well as high/higher secondary schools where the collection is not done by the District Education Offices.

9.4 Finally, the data received at the state head-quarter directly from the higher education institutions as well as District Education Offices is consolidated for the whole state and submitted to the Ministry in prescribed Forms viz., ES-I to ES-IV

etc. In most of the States/UTs, the compilisation of the data received from different type of institutions and other units is done manually using Facit/Electronic calculators only.

10. Selected Educational Statistics

10.1 Since the annual data collected in Forms ES-I to ES-IV is not available well in time, the Department of Education collects data on certain selected items relating to the number of institutions of certain selected categories, the enrolment in selected courses by level and stage and number of teachers in schools of general education. The information so collected is only provisional and published by the Department of Education well in advance of the availability of the detailed and finalised statistics.

11. Important Publications on Educational Statistics

    i) Education in India Vol. I, II & III

    ii) Selected Educational Statistics

    iii) Analysis of Budgeted Expenditure on Education

    iv) Progress of Education of Scheduled Castes and Scheduled Tribes

    v) Selected Information on School Education in India

    vi) Indian Students/Trainees going abroad

    vii) Examination Results of State Boards of Secondary/Higher Secondary Education, all are published by Department of Education, Ministry of Human Resource Development

    viii) University Developments in India — Facts and Figures, published by U.G.C.

    ix) Educational Survey Reports, published by N.C.E.R.T.

12. Major Data Gaps

12.1 Under the existing educational statistics system, only the minimum data is being collected. However, one need not emphasize the importance of detailed data required for effective plan formulation. The High Level Committee on Educational Statistics has identified the following major data gaps in the existing system to meet the requirements of various user organisations

    (i) *Un-recognised Institutions* : This type of institutions are mostly located in urban areas are not being covered under the existing system. This is because of the fact that even the list of unrecognised institutions is not available with the State Education Departments, due to lack of any administrative control

or legislation to control the activities of such institutions by the State Education Departments. A limited attempt was however, made during the 34th round of NSS to collect the statistics of unrecognised institutions on sample basis.

(ii) *Non-formal Centres for School Dropouts* : A large number of non- formal centres for children mostly dropouts and in the age-group 9-14 have been opened during the last 9-10 years. Statistics of these centres are however, not being collected under the ES series of forms. Efforts are being made to ·collect this data by the EE Division.

(iii) *Recognised Non-formal Courses (Higher/Technical Education)* : Under this category the various professional courses, like, Chartered Accountancy, Cost Accountancy, AMIE, Company Secretariat and Correspondence Courses run by universities and other institutions, etc., are not covered. However, recently the Department of Education has collected Statistics in the field of Non-Formal (Higher Education) from certain selected institutions in India.

(iv) *Wastage and Stagnation* : Very little data is available at present on the extent of wastage and stagnation in Education. In view of the fact that the dropout rates are very high especially at the primary stage, there is an urgent need to fill up this gap, detailed information on dropouts and repeaters in class-wise, sex-wise and for SC/ST groups etc is required. A limited attempt to collect the statistics of repeaters in classes I-XII has been taken by the Department of Education with effect from 1984-85 as per recommendations of the High Level Committee on Educational Statistics.

(v) *Socio-economic Background of Students* : Under the existing system the only item under this category for which statistics are being collected relates to educational status of SC/ST. However, detailed statistics are required to measure the benefit of different types of educational programmes to the students coming from different types of socio-economic background. It is a general feeling that the benefit of most of the educational programmes run by the Government goes to the students coming from upper and middle class families only. The High Level Committee on Educational Statistics has recommended that such data may be collected by NSSO on a periodical basis in their annual rounds once in 5 years.

(vi) *Attrition Rate of Teachers* : The data on attrition rate of teachers are required for estimating the teacher requirements while preparing an educational plan. At present there are no data on attrition rate of teachers, which on arbitrary

basis is assumed to vary between 2% to 4%. Under the existing system, adequate information in regard to availability of qualified teachers, particularly, in the science subjects and their turn- over is not available in most of the States. The High Level Committee observed that the data on attrition rate of teachers at various levels and subjectwise should be collected from administrative records maintained by the State Departments/Local Board but in respect of Government aided and Private schools such data should be collected from such institutions. Fifth All India Education Survey, for the first time had collected some data in this regard.

(vii) *Data on School Attendance* : At present practically no information is available on this item. In fact instances have been reported where the attendance in school is even less than 25% of the reported enrolment for many schools. In 1978, an attempt was made by NCERT to moniter school attendance in collaboration with NIC but it did not succeed because of very poor response from most of States.

(viii) *Expenditure by Levels/courses of Education*: Under the existing system data on expenditure is collected by type of education institution only. Since an educational institution may run different types of educational courses of different levels, the analysis made is not very fruitful. This is primarily because of the fact that accounts of an educational institution are not maintained according to different courses and a lot of exercises are necessary to estimate the expenditure by levels/courses for which educational facilities are available in the institution. Limited studies have, however, been made in the past by some agencies, viz., IAMR and AIU to estimate the unit cost for students, for selected courses only.

(ix) *Extra Curricular Activities* : Although some information was collected on the facilities available for extra curricular activities during the 3rd and 4th All India Educational Surveys, additional information relating to other activities such as games (out-door/in-door) NCC/SCOUTS/NSS/DEBATES/MUSIC & DANCE/SCIENCE CLUBS, etc. also desire to be collected so as to have an idea about such activities.

13. Time-Lag in Educational Statistics

13.1   There has been time-lag in the collection of educational statistics, which is 3 to 4 years in the case of some of the States in respect of numerical statistics and the time lag is more than that in case of financial statistics. Without reducing the time-lag, no proper use of educational statistics can be made in the field of educational planning. The major reasons for time-lag are as under:

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a) Magnitude of the number of institutions from which the data is to be collected, number being above 8 lakhs

b) Delay in the printing and consequential supply of institutional proforma by the States

c) Lack of sufficient and trained statistical staff, particularly at the District and Block levels

d) Low priority given to furnishing of data.

14. Some Developments in the Field of Educational Statistics

14.1   A major development in the field of educational statistics took place in the year 1981 when a High Level Committee was set up under the Chairmanship of Joint Secretary (Planning) of the Department of Education to review the entire educational statistics system in the country. This Committee was in fact set up in pursuance of the recommendations of the Seventh All India Conference on Educational Statistics held in 1980 at Udaipur. This Committee submitted its report to the Government in 1983 and since then some improvements have taken place in the field of educational statistics. Some of the important recommendations of this Committee which have already been implemented by the Department of Education are as under

(i) *Strengthening of Statistical Machinery at the Centre :* Based on the recommendation of the High Level Committee, a proposal for creation of additional posts of Director, Joint Director and other supporting staff was made.

(ii) *Modification of Forms :* Based on the recommendations of the High Level Committee, Form ES-I has been bifurcated into two forms, namely, ES-I(S) for schools and ES-I(C) for colleges. Similarly. Form ES-II has also been bifurcated into two separate forms for schools and colleges. The bifuraction has been done in view of the fact that State Governments used to find it difficult to collect the statistics from higher education institutions and thus causing delay in submission of required data to the Ministry.

(iii) *Rationalisation of Data Collection on Higher Education :* To avoid the duplication of work in the field of collection and compilation of data on higher education, the Ministry took up the matter with the U.G.C. and it was decided to completely transfer the work to them with effect from 1987-88. This issue was also discussed in Ninth All India Conference wherein it was found to be acceptable both to the State Education Departments and U.G.C. Accordingly, the U.G.C. will take full responsibility to collect and publish all types of data on Higher Education excluding Non- University courses

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which would continue to be covered by the Department of Education w.e.f. 1987-88.

(iv) *Filling up of Data Gaps* : Based on the recommendations of the High Level Committee, the Department of Education has started collecting information about class-wise repeaters upto class XII from all types of schools. This will help considerably in developing different types of indicators on wastage and stagnation in education at different stages namely primary, middle, secondary and higher secondary. An attempt was made to collect data on attrition rate of teachers and extra-curricular facilities in School in the 5th All India Education Survey being conducted by NCERT. To fill up data gap on Non-formal Education, the Ministry has brought out two theme oriented studies "Correspondence Courses in India" and "Non-formal Higher Education Institutions".

(v) *Computerisation*: A pilot project on Computerisation of educational Statistics in U.P. was taken up and under this project school level data for the year 1985-86 was available with timelag of only one year. In addition to solving the problem of time lag, the computerisation has also helped in strengthening the existing data base as it has been possible for the Ministry to obtain detailed cross tabulation of data based on the primary data collected from the different types of educational institutions and other units.

14.2   Encouraged by the success of the above mentioned pilot project, the Ministry had formulated a Central Plan Scheme to introduce computerisation of Educational statistics in all states during the Seven/Eighth Five Year Plans. A Note on "Computerisation of Educational Statistics" is enclosed as Annexure I.

15. All India Educational Surveys

15.1.   All India Educational Surveys are conducted on periodical basis with a view to collect detailed information for strengthening the process of planning. So far five All India Educational Surveys have been conducted, the last being conducted with reference year as 1986-87. Except for the Third All India Survey wherein all sectors of education, i.e. school, higher education and technical education were covered; all other surveys including the fifth one covered school education only. The Fifth All India Survey report contains State-wise demographic information, information on educational facilities in rural areas, number of institutions at the primary, upper primary, secondary and higher secondary stages, number of children enrolled in schools in different classes, quality of school buildings, number of teachers and availability of certain other facilities in schools. Information on the students belonging to scheduled Castes and Scheduled Tribes has also been reported separately. This
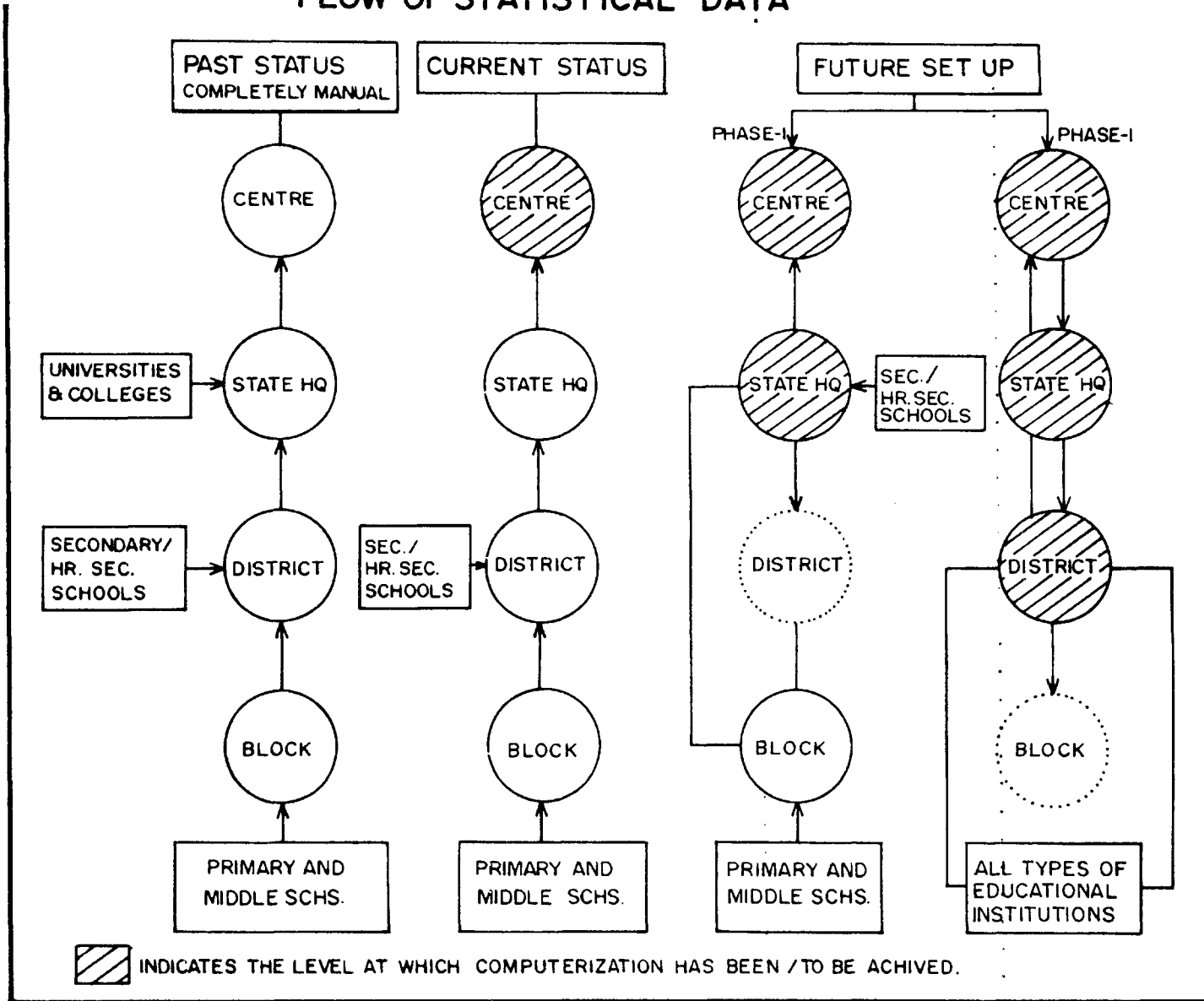
FLOW OF STATISTICAL DATA

Fig. 3.1

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survey provided the data base for implementation of various programmes for improvement of the quality of education such as Operation Blackboard, etc.

16. Comparison of Data Collected by the Department of Education, NCERT and NSSO

16.1 Data on School Education is collected by the Department of Education annually under the "Education in India Series -Vol. I(S)". This data covers not only general education at school level but the entire educational system including professional education, vocational education, special education, social education, etc.

16.2 But the data collected quinquennially by the NCERT through its educational surveys provide comprehensive and detailed information on schools imparting general education and the schooling facilities available in rural areas.

16.3 The only common parameters between the data collected by this Department and the NCERT are (i) total enrolment (ii) total number of institutions; (iii) total number of teachers. The NSSO collects data on education quinquennially as part of its socio- economic surveys. The latest survey relates to the year 1986-87 in its 42nd round.

16.4 While the Department and the NCERT collect data on census basis from all the recognised educational institutions, NSSO data is based on sample basis. The approach followed by NSSO is household whereas the approach in case of this Department and NCERT is institutional. Thus, there is no commonality in approach to data collection.

17. Computerisation of Educational Statistics in States

17.1 The scheme of Computerisation of Educational Statistics was started in collaboration with NIC during the year 1989-90 in nine educationally backward States, namely, Andhra Pradesh, Assam, Bihar, Jammu & Kashmir, Madhya Pradesh, Orissa, Rajasthan, Uttar Pradesh and West Bengal. From the year 1990-91, the scheme has been extended to all States/UTs. The scheme covers numerical data only. The objectives of the scheme are

i) To reduce time-lag in the collection/processing of educational statistics for timely publication and thereby enhancing the utility for planning and monitoring of different educational programmes

ii) To develop comprehensive data base at the Central and State levels with a view to make the planning process effective

17.2. In the first instance, statistics relating to school education is being computerised which was earlier done manually by different State Education Departments through ES-I(S) and ES-IV(S) series of forms. Under this Scheme, the data is col-

lected on computerised formats — S1, S2 and S3. Data from Primary and Upper-primary Schools are collected in S1 and S2 formats. Data from Secondary/Senior secondary Institutions is collected in Form S- 3. Data is computerised at district level by NIC State Centres. NIC Centre is supposed to generate tables of the data and return back to State Education Department for validation. After validation by the State Education Department, these validated tables have to be returned to NIC Centre for generating final tables. These tables from States are to be sent to the Statistical Division of the Department of Education, Ministry of Human Resource Development who would generate National Data with the help of these State Tables.

18. COPE (Computerised Planning for Education)

18.1. In 1986, the Ministry initiated another project called COPE (Computerised Planning for Education) for collection of data through a computerised system necessary for planning and implementation of UEE. It was considered expedient to merge the COPE system with the system for collection of educational statistics so that duplication is avoided. After a detailed examination of the existing forms S-1, S-2 and S-3 as well as COPE form, a composite form has been evolved. The composite form incorporates the essential features of both the system.

18.2. The data-base based on the composite form is larger than that of S-1, S-2 and S-3 forms used so far for the collection of educational statistics all over the country. The composite forms can now provide age-wise and class-wise enrolment statistics as well as data required for the management of various levels such as administrative details regarding teachers. The data base developed with the composite form will be helpful in providing district level data necessary for the planning of UEE as well as management of institutions on a more rational basis.

18.3. The convergence of COPE and Computerisation of Educational Statistics was discussed in the Meeting of State/UT Secretaries and Directors of Education held on 4th May, 1992 vide Agenda Item XI. The Secretaries and Directors were requested to offer their comments on

    i) The appropriateness of the composite form

    ii) The system of collection and compilation proposed

    iii) Any alternatives and suggestions.

18.4. Comments from some of the States on the convergence of COPE and Computerisation of Educational Statistics are still awaited. A final view would be taken as soon as comments from all the States/UTs are received.

Educational Statistics in India

Department of Education
Ministry of Human Resource Development
Government of India
New Delhi

Educational statistics are required for a variety of purposes but broadly speaking they are needed for the following:

    i) For planning and monitoring of educational programmes,

    ii) For management of educational system,

    iii) For educational research, and

    iv) For supply of information to legislatures, international organisations and other inquiries.

According to experts the following data is considered essential for educational planning and other purposes.

    i) Demographic data — age, and sex composition of the population, geographical, rural/urban distribution of population groups, habitations etc.

    ii) Labour force statistics — economically active population by sex, age, occupation, educational level and unemployment composition.

    iii) Economic data — GNP, Government revenues for expenditure on education, other sources of finance for education with details of expenditure under various itmes. Expenditure on education incurred by parents other than fees.

    iv) Educational institutions — by levels, management and types in various regions, unrecognised educational institutions and institutions giving non-formal education.

    v) Teachers by sex, qualifications, age, field of specialisation, experience, nature of employment, attrition rate.

    vi) Information on non-teaching staff, inspectors, administrators, clerical staff etc.

    vii) Classes — number of classes by grade or size.

    viii) Students — by sex, age, grade/class, new admissions, repeaters, by branch of study, average daily attendnace — stock and flow statistics, examination results.

ix) School buildings and equipment — type of construction, size, availability of laboratory and workshop facilities etc.

x) Other facilities — hostels, school transportation services, health services etc.

xi) Incentives and scholarships — specially for students from the weaker sections of the society.

xii) Non-formal education — facilities by type and organisation, students availing facilities by sex and age, results.

xiii) Cost of education, recurring and non-recurring expenditure, private expenditure on education.

Systematic collection of data on education started in India in 1881-82 with the report of the Indian Education Commission, 1882. The data mainly related to the growth of education in terms of number of schools, colleges and universities with corresponding enrolment together with expenditure on education at various stages. These data were collected in the areas under British rule as well as in other Indian States. This system of data collection continued till 1947. After independence the whole process was reviewed and Form A was introduced in the year 1949-50 for collection of data from States. With the advent of planning era in 1951-52, the need for additional information necessary for formulation of development plans on education, was felt. In 1964- 65 the data collection forms were once again reviewed and a set of forms including revised Form A on statistics of education in States, Form A1 (for sheduled castes/scheduled tribes), Form A2 (supplementary data on selected topics) and Form A4 were introduced. Besides the Forms in A series, Forms in B series were also introduced for collecting data on higher education. Under Form A information in 8 tables were required to be furnished by the States by urban and rural breakup. These tables furnished information on:

i) Number of recognised institutions, managementwise with number of hostels and teachers.

ii) Enrolment of boys and girls by class and age.

iii) Enrolment of students in collegiate education under general, and professional education giving information by courses.

iv) Number of teachers by sex and by qualifications indicating whether trained or untrained.

v) Information on scholarships, stipend, freeships and other concessions.

vi) Direct expenditure on institutions by management and by sources of revenue.

vii) Examination results in respect of annual and supplementary examinations.

In seventies, it was observed that there was considerable delay in collection of information from States which had resulted in time lag in bringing out publications. The State Governments could not submit complete information in Form A as collection of financial information was generally delayed. On the recommendations of the Standing Committee on Educational Statistics of the Ministry, it was decided to split Form A into ES.I and ES.II. ES.I contained data on institutions, enrolment etc. and ES.II regarding financial data. To streamline the educational statistical system in the country a Committee was set up under Joint Secretary, Planning Commission in February, 1981 with the objective of a thorough review and to recommend measures for improvement in coverage and quality of data and reducing time lag. The Committee gave its report in September, 1982. As per the recommendations of the Committee the Forms were modified and the modified Forms ES.1, ES.2, ES.3, ES.4, ES.5 and ES.6 were to be convassed with the State Governments. Forms ES.1 to ES.4 are to be convassed on annual basis where as Form 5 and Form 6 on quinquinal basis.

The sources of educational statistics in India could be broadly listed as follows:

i) Population census.

ii) Annual publications of the Central and State Governments and UGC.

iii) All India Educational Surveys conducted periodically by NCERT.

iv) NSSO Survey Reports on Education.

v) Reports of other educational organisations and institutions like UGC, NIEPA, NCERT, Universities and Research Institutions etc.

vi) Other surveys conducted by Government and other agencies and by research workers.

Population Census
Population census are conducted every 10 years which collect information on number of literate and illiterate persons. For literate population, data on level of education by age are collected for males and females separately. At higher education level course wise information about level of education is also collected.

All India Education Surveys
The first survey was conducted in the year 1957 by the Ministry of Education in collaboration with the NCERT with main aim of identifying rural habitations without

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schooling facilities. The subsequent four All India Educational Surveys which were conducted by NCERT with the help of State Governments in the years 1965, 1973, 1978 and 1986 covered all types of institutions of school education. All India Educational Surveys gave a clear picture of educational facilities available in the vicinity of habitations and helped to properly plan and locate primary, middle, high/higher secondary schools in the Plans immediately following these surveys. In the 3rd Survey, besides the normal information on habitations, schools, teachers and enrolment, information on age of children enrolled, agewise distribution of enrolment at primary, upper primary and secondary levels and in classes from I to VIII was also collected. This gave an estimate of under age and over age children in primary and upper primary stage in formal schools. Information on coaching institutions, non-formal education programmes and information on educational finance was also collected. The Fifth All India Educational Survey, with reference date of 30th September, 1986, gives information on (i) rural habitations with population slabs served by primary, upper primary, secondary and higher secondary schools with distance from the nearby habitations (ii) villages according to facilities for non-formal education (iii) villages according to the facilities for adult education and functional literacy (iv) primary, middle secondary and higher secondary schools with various types of facilities available (v) classwise and sexwise enrolment of children by age in urban and rural areas (vi) number of teachers by sex and by qualifications of science and mathematics teachers (vii) attrition rate of teachers in primary, middle, secondary and higher secondary schools (viii) schools offering vocational courses, enrolment in vocational classes, availability of workshop facilities and qualification of teachers etc.

Ministry Data

Ministry's publication, Education in India Vol-I which is based on ES.1(s) and ES-1(c) gives numerical data for schools upto class XII and for non affiliated institutions of higher education. In this publication number of institutions by management in rural and urban areas, number of teachers by sex and training, enrolment by sex in various types of schools classwise from I to VIII with number of children repeating in each class is given. Coursewise enrolment is given for higher education. The computerised forms S-1, S-2 and S-3 for data collection from States replace the manual Form ES-1. Form S-1 contain numerical data on primary, S-2 on upper primary and S-3 on high/higher secondary education. The computerised forms are being further revised into composite forms of COPE Scheme and will also include age specific enrolment together with school level data base of administrative record of teachers. Education in India Vol-II is based on the information collected through ES-II(s) and ES-II(c) and contains data on income by source and expenditure (recur-

ring and non-recurring) by items for primary, upper-primary, secondary/higher secondary schools and institutions of higher education by various courses. Information on institutions of higher education affiliated to UGC is collected and published by UGC.

Forms Under Manual Processing

ES-I(s):	Numerical data on Schools	⎧ 1. Institutions
ES-I(c):	Numerical data on Non-affiliated Higher Educational Institutions	⎨ 2. Enrolment ⎩ 3. Teachers
ES-II(s)	Financial data on schools	⎧ - Income by Sources
ES-II(c)	Financial data on Non-affiliated Higher Educational Institutions	⎨ - Expenditure by Items

Forms Under Computerised Processing

S-1:   Primary

S-2:   Upper Primary

S-3:   Higher Secondary/Higher Education

Deficiencies in Educational Statistics

A variety of data are collected on education by the Ministry and other organisations which are used by the Ministry itself, Departments of the Government of India and State Governments and other organisations. A large number of deficiencies have been pointed out in the data collection system on account of which these data can not be optimally utilised. The major deficiencies can be listed as under:

i) Time Lag

There is a considerable time lag in the availability of educational data. The latest publication of Education in India Vol. I relates to the year 1986-87 and Vol. II to the year 1983- 84. Similarly the statistics on higher education which is brought out by the UGC has also a time lag of several years. The main reason for time lag is non-availability of complete data from the State Governments. As the State Governments depend on district and block levels for data collection, the delays at the lower level result in consequent delay in submission of consolidated information from the State to the Centre. Major problems have been reported in collection of data from non aided and private institutions specially for financial data.

ii) Reliability of Data

Many questions have been raised on reliability of educational statistics. The enrolment figures at primary stage are reported to be highly exaggerated. There are many reasons for reporting higher enrolment one of them being that grants in aid, and num-

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ber of teachers in a school are linked with higher enrolment. Similarly the enrolment in non formal education and adult education centres where higher enrolment is linked with grant of financial assistance from the Central and State Governments also tend to be reported on a higher side. The statistics on age of children are notoriously incorrect because there is no system of producing a birth certificate at the time of admission specially in rural areas where the system of issuing birth certificates does not exist.

iii) Data Gaps
Educational statistics are at present being collected only in respect of recognised institutions. A large number of unrecognised institutions are functioning all over the country which are catering to the educational needs of a sizeable number of children. These data means unreported. Similarly a large number of coaching institutions have come up not only in metropolitan cities but even in small cities and towns which prepare students for various educational courses and competitive examinations. These institutions and their enrolment is left out of the data collection system. Recently under the distance education programmes, education is imparted through radio and television network. No estimate of the number of beneficieries of distance education programme is available.

iv) Data on Attendance
Many States do not remove the name of child from enrolment register even if he/she remains absent for long periods of time or has even left the school. This results in higher enrolment figures. It is, therefore, necessary that alongwith enrolment figures averge per day attendance data is also collected. An effort was made to collect this information in early seventies but had to be given up due to various administrative problems. This needs to be revised.

v) Expenditure on Education
Information on budgeted expenditure on education is published by the Department of Education, Ministry of HRD in their annual publication "Analysis of budgeted expenditure on Education." The data are compiled from the budget books of Central and State Governments. Income from Government and other sources together with itemwise expenditure incurred for various categories of institutions is published in Education in India Vol II. But there is hardly any data on private expenditure on education incurred by parents on purchase of text books, exercise books, dresses etc. for their children. NSSO in their 42nd round (July 1986 - June 1987 on Participation in Education conducted a house hold survey and estimated the average amount of annual expenditure per student on general and technical education.

Cost of Education

Many secondary schools have upper primary and primary sections and likewise many upper primary schools have primary sections. The teaching facilities available in schools are shared by students belonging to the various stages of education. Instead of giving expenditure on each stage of education, the total expenditure of the school is reported with the result that correct and classified data for various stages of education are not available. The average cost on education per student at various stages, therefore, can not be correctly worked out in the absence of gradewise total cost of education.

One of the main reasons for non-reliable and inconsistent data on education is lack of proper checking of primary data at the grass root level. Inaccurate data if not corrected at that level affect the estimates worked out at various levels. This can be seen in the data published by NCERT and the Ministry for the year 1986-87. The Fifth All India Education Survey and the Ministry's data has the same reference date i.e. 31st September, 1986 but the enrolment data for the two sources are different.

The NSSO Survey (July 1986 to June 1987) reports that enrolment for boys and girls is 309.69 lakhs and 190.50 lakhs in primary and 130.41 lakhs for boys and 55.78 lakhs for girls in the upper primary sections. The information for the three sources is given in the table below:

TABLE SHOWING ENROLMENT REPORTED BY VARIOUS AGENCIES

(In lakhs)

Agency	Classes I-V			Classes VI-VIII		
	Boys	Girls	Total	Boys	Girls	Total
Ministry's Data	516.83	354.46	871.29	178.70	96.21	274.91
Fifth All India Educational Survey	508.54	350.59	859.13	176.40	96.32	272.72
NSSO 42nd Round (No. of Children attending Schools)	309.69	190.50	500.29	130.41	55.78	186.19

There is bound to be some difference in data collected by the various agencies but divergence to the extent observed in the enrolment figures particularly given by the Ministry and the All India Educational Survey needs to be looked into and measures taken that only one set of reliable data are brought out.

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Measures Required for Bringing out Up to Date and Reliable Data on Education

One of the main reasons for non-availability of data of incorrect data is lack of adequate and trained manpower to scrutinise the data at district and block levels. Manual compilation is also responsible for inaccurate data and delay. With the introduction of computers and setting up of district units of National Informatic Centres with data processing support systems, the work of compilation and processing of data at the district level can be greatly speeded up. Ministry of HRD is making payment to NIC for data entry and these facilities would be fully availed of. Instead of manual compilation at the block level, it would be better if data entry takes place at the district level and floppies are sent to the State level and the Centre.

As educational statistics cover a very broad spectrum, collection and processing of data, preparation and printing of reports take a lot of time. This results in time lag. It is felt that the entire data on education need not be collected by annual census. As an alternative, every five years, before the formulation of five year plans, an exhaustive census may be conducted to collect the various types of information required for planning, management and administrative needs of the country. These data may form the bench mark data for the next five years. In the intervening years, the basic parameters be estimated each year through sample surveys.

On the recommendations of UNESCO and with their financial support, a pilot project was taken up in the yar 1980-81 to estimate the basic educational parameters in the States of Bihar, Haryana, Maharashtra and Tamilnadu. The study was a joint project of the Ministry and the NCERT. The data were processed on NIC computer. It was observed that the sampling design with P.P.S. could have given better estimates.

Another pilot project to collect data for monitoring the enrolment, retention and completion of 5 years of schooling through sample survey have been undertaken by NIEPA with financial support by the Ministry. In the survey each State has been divided into rural and urban domains and sampling was done at area and institutional levels, with proportion of sampling varying with the size of the stratum. The survey is found to give satisfactory results and the experience gained can be useful in conducting sample surveys for annual statistics.

Data on Financial Education

Data on expenditure on education are published in the Ministry's Annual publications *Education in India - Vol. II* and *Analysis of Budgeted Expenditure*. Education in India Vol. II gives source wise income and itemwise expenditure both recurring and non- recurring by type of institution in each State. Analysis of Budgeted Expenditure is a compilation from the budget documents of Central and State Governments

and furnishes statewise expenditure on education by Education Departments and by other departments. Expenditure (Revenue and Capital) incurred by educational departments on various sub-sectors of education is also furnished. No data on private expenditure on education is collected by the Ministry. NSSO 42nd round (July 86 - June 87) "Participation in Education" has collected this information alongwith other data on education through household sample surveys. But this is an occasional study.

Time-Lag

Collection of financial data is a difficult task specially collection from priate unaided institutions which are particularly reluctant to furnish financial details. Whatever information is furnished is mostly inconsistent and incomplete. Reconciling the data and collection of missing information results in time-lag. Due to this and other factors the latest available publication *Education in India - Vol. II* relates to the year 1983-84.

Methodology

Before discussing the improvement in methodology of data collection on educational finance, it may be necessary to understand the present financial system prevailing in institutions under various types of management.

According to Education in India— 1986-87, there were 8,80,942 recognised schools from pre-primary to senior secondary level out of which 76174 were aided private schools and 39507 were unaided private schoools. The proportion of government schools, private aided schools and private unaided schools was 86.67 per cent, 8.65 per cent and 4.48 per cent.

All the expenses of government institutions are fully met out of budgetary resources of the state. The income from schools, by way of realisation of tuition fee, examination fee etc. are credited to the consolidated funds of the state.

Data on source wise contribution of finances to education in India as published in *Education in India* (Vol. II, 1983-84) shows that in 1983-84, 89.19 per cent of the total funds came either directly from Central/State Governments or through its agencies like UGC, local governments etc. Of the balance 10.81 per cent, 7.87 per cent was contribution from fees and 2.94 per cent from endowments, public donations etc. It is seen that 89.19 per cent of the funds are fully reflected in the budget documents.

The fees component include fees collected in government institutions and in private aided and unaided institutions. Fees collection in Government schools which are 86.87 per cent of the total number of schools in the country are reflected on the receipt side of the budget document. Regarding the fees collected by private aided and un-

aided institutions, the same will have to be collected from the individual institutions. Similarly, for the endowments and public donations which have a component of 2.94 per cent of total income for education, information will have to collected from the institutional level.

On the expenditure side the expenditure on government institutions which account for 86.87 per cent of the total number of institutions, full details of recurring and non-recurring expenditure on items of expenditure like salary of teahing and non-teaching staff, construction of buildings, maintenance expenditure etc. are available in budgetary details. This information can also be collected at the district/block levels. Collection of this data from individual institutions is, therefore, not necessary. In so far as 13.13 per cent private aided and unaided institutions are concerned, it may be necessary to collect the information from individual institutions.

In summing up the whole process of data collection on educational finance can be divided into two segments. The major segment being government institutions and government funds for which data could be collected from the budget books and district/block level information without going to individual institutions. The second segment which comprises of 13.13 per cent institutions, the data may be collected from institutions either on census basis or through a suitable sampling procedure.

Refernces

Department of Education, Ministry of HRD, *Education in India* Vol. I(s) - 1986-87, New Delhi.

National Council of Educational Research and Training, *Fifth All India Educational Survey*, (1986-87), New Delhi.

National Sample Survey Organisation, Department of Statistics, Ministry of Planning - 42nd Round (Report No. 365).

Status of Educational Statistics in India with Special Reference to Financial Data

D.R. Kapool

There is no gainsaying of the fact that India needs a well balanced educational system to sustain its economic and social growth. For moving towards this goal, educational planning based on sound data-base can hardly be over emphasised. Briefly, the following types of statistics are needed for educational planning and decision-making.

Types of Statistics Needed for Educational Planning

Demographic Statistics
One of the basic essential factors required for educational planning is the quantitative framework within which the educational development has to be planned and for this adequate statistical information about the composition of population by sex and school going age group corresponding to the pattern of education as for example 0-5, 6-10, 11-13 etc. have to be collected. For preparation of perspective educational planning, projections concerning future changes in the population structure are necessary.

Labour Force Statistics
One of the major objectives of educational planning is to link educational development of the country. For this it is essential to have data about the present structure of labour force, this data is required both according to the branch of economic activity in which they are at present engaged. This is important for evaluation of the effect of the future changes in industrial structure of the labour force in terms of educational needs. This stock statistics can further be analysed in consideration of the future demands of these industries for the skilled manpower for which the objective and policy of various branches of economic activity are to be kept in view, because it is not essential that the present situation of economic activity, as reflected in the stock statistics, is going to remain in the future also.

Statistics on Educational Institutions
Statistics are required by all types of educational institutions at each level of education i.e. pre-primary, primary, middle, secondary and higher education. A further

breakup of this category of institutions should be available relating to general education, professional education, vocational education and other special types of education. It will also be useful to have the data with regard to institutions separately meant for women.

Enrolment

The potent factor in the educational planning is the student. In order to plan for the future requirements of students, we must have with us the latest available data about the number of pupils enrolled by sex, age and grade. By relating such data to the available statistics of population of various school going age groups, enrolment ratios can be worked out which indicate the relative coverage of the various kinds of education and it may be used as a basis for further enrolment projections required for the annual plans, five year plans or longer term plans of the perspective planner.

Classes

Class is an important factor in the process of educational planning, because it forms the basis of calculating the number of teachers and number of students for which we have to plan educational development. This data is required by various levels of education, by each grade of study with all the details about the single-teacher schools, double teacher schools and multiple shools.

Teachers and other Educational Personnel

For any educational planning the requisite data about the number of teachers employed in various educational institutions, both by type and level, is essential. It is also essential to have the age-wise breakup of the teaching staff to help in working out retirement-cum-death rate for replacement purposes. The composition of teachers by sex is also important and its distribution by urban and rural areas is also essential for future planning and deployment and employment of teachers in various types of educational institutions and in various regions of the country. The data of teachers by qualifications is also necessary for working out the future requirements of various categories of teachers for teaching various subjects particularly at the higher secondary level. Besides collecting data in respect of teaching staff, the data in respect of inspectors, supervisors and other administrative staff is essential for the development of educational system of the country.

Financial Statistics

In order to determine the size of the outlay required for an educational plan it is essential to have complete data on the budgeted expenditure of the Government — Central and State and other public bodies on various sectors of development.

Agencies for Collection of Educational Statistics

A number of organisations collect and publish educational statistics which are used, in one form or the other, in educational planning. The organisations are broadly of two categories.

    (a) Those which are directly involved in educational decision making and collect the facts and figures as part of their regular function.

    (b) Those organisations which although not directly involved in any educational function nevertheless collect information which is utilised in educational planning.

Some of the agencies falling in the first category are the Ministry of Human Resource Development (Department of Education), the University Grants Commission, the Education Division of Planning Commission, NCERT and NIEPA. Those that fall into the second category are the office of the Registrar General of India, the Directorate General of Employment and Training, National Sample Survey Organisation and so on.

Educational Statistics Collected by Ministry of Human Resource Development, Department of Education

Ministry of Human Resource Development, Department of Education is one such organisation which is directly involved in decision making and as a part of its regular function, collects, compiles and publishes educational statistics in India. The Statistics collected are varied and voluminous which includes, *inter-alia,* institutions, financial data, etc. These statistics are brought out by the the Department in its main publications like "Education in India, Vol.I", "Education in India, Vol. II" and "Education in India, Vol. III" pertaining to numerical data, financial data and examination results respectively. Since firm statistical data become available after considerable lapse of time, the department brings out provisional statistics entitled 'Selected Educational Statistics' within a gap of one year. Besides these, some of the ad-hoc publications like 'Handbook of Education' and those on special studies are also brought out. At present, the latest years for which numerical data are available is 1986-87 and that for financial data is 1983-84 reflecting the time-lag of six years and nine years respectively. Why so much time-lag and why is it more for financial than for numerical data? For knowing this the prevailing data flow system need to be studied.

System of Data Flow from Institutions to Ministry of Human Resource Development, Department of Education

Educational institutions remain to be the primary suppliers of information. Normally the system of collection and consolidation of educational statistics is supposed to

SYSTEM OF COLLECTION OF EDUCATIONAL STATISTICS PRIOR TO TRANSFER OF UNIV. EDUCATION TO UGC

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            ┌──────────────┐          ┌──────────────────────────────┐
            │              │ ◄─────── │ · UNIVERSITIES, INSTTS. OF    │
            │ STATE GOVTS  │          │   NATIONAL IMPORTANCE         │
            │              │ ◄─┐      │   INSTTS. OF HIGHER EDN.      │
            └──────────────┘   ┊      │   (Affiliated and Non-affiliated) │
                   ▲           ┊      │   GENERAL AS WELL AS          │
                   │           ┊      │   PROFESSIONAL EDN.           │
                   │           ┊      └──────────────────────────────┘
                   │           ┊
            ┌──────────────┐  ┌┘      ┌──────────────────────┐
  ┌ ─ ─ ─ ► │              │ ─┘       │  HR. SECONDARY        │
  ┊         │ DISTT OFFICE │ ──────── │    (10 + 2)           │
  ┊         │              │          │  HIGH SCHOOLS         │
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  ┊                ▲
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  ┊     ┌─► │   BLOCK      │ ◄─┐
  ┊     │   │   OFFICE     │   │
  ┊     │   └──────────────┘   │
┌────────┐                 ┌──────────────┐
│ MIDDLE │                 │  PRIMARY     │
│ SCHOOLS│                 │  PRE-PRIMARY │
└────────┘                 │  SCHOOLS     │
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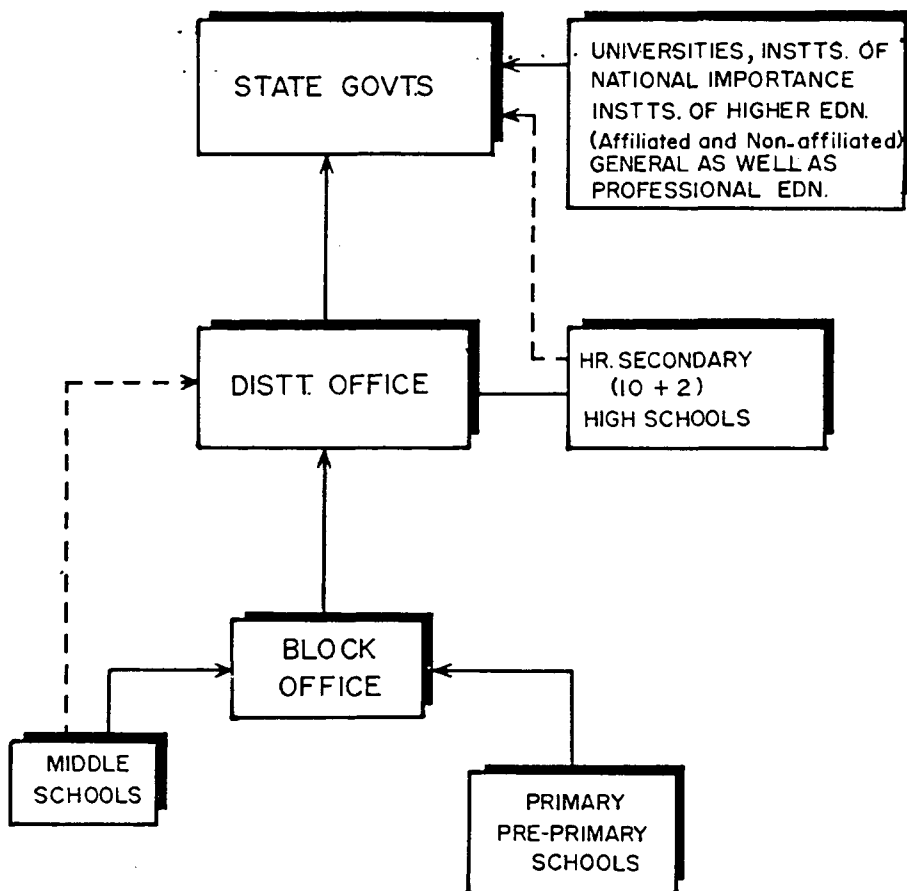
NOTE: Dotted Lines Indicate that in same of small states data felow directly.

Fig. 3.2

have three levels viz., (i) State, (ii) District, and (iii) Block/taluka/tehsil. The block level is concerned mainly with the collection of educational statistics in respect of primary schools and middle schools. The district level is concerned with the consolidation of the returns in respect of primary and middle schools received from the block level besides collection of statistics in respect of vocational schools, special education schools and other education schools. In some States like UP, even the statistics of high and higher secondary schools are also collected by the district education offices. At the State headquarters, the collection is done in respect of institutions of higher education as well as high and higher secondary schools where this collection is not done by the district education offices. Besides this collection, the State headquarters office is also concerned with the consolidation of statistics received from the district education offices.

In certain States, there are divisional offices in between state and district offices who are also concerned either with collection or consolidation of the statistics. Also in certain states, there are district sub-divisional offices in between district offices and block/tehsil/taluka offices.

These sub-divisional offices collect and consolidate statistics in respect of primary schools and in certain cases middle schools also.

On the basis of information collected by the Statistical Unit from the states on the data-flow; the position regarding the number of levels in various States is as under:

(a) *States Having Four Levels*: These four levels are: State, Divisional, District Sub-divisional/Block. (1) Haryana (2) Tamil Nadu.

(b) *States Having Three Levels*: These are State headquarters, District and District Sub-divisional or block level. (1) Andhra Pradesh (2) Assam (3) Bihar (4) Gujarat (5) Jammu & Kashmir (6) Karnataka (7) Kerala (8) Meghalaya (9) Maharashtra (10) Madhya Pradesh (11) Mizoram (12) Orissa (13) Punjab (14) Rajasthan (15) Uttar Pradesh (16) Tripura. Of these Assam, Kerala, Meghalaya and Orissa have district sub-divisional level instead of block level.

(c) *States/Union Territories Having Two Levels* : These are State and District level. (1) Manipur (ii) Nagaland (iii) West Bengal (iv) Sikkim (v) Arunachal Pradesh, and (vi) Chandigarh. In Arunachal Pradesh the collection and consolidation is done in the district sub-divisional offices instead of district offices.

(d) *State/Union Territories Having Only One Level* : (1) A & N Islands, (2) Dadra and Nagar Haveli, (3) Delhi, (4) Daman & Diu, (5) Goa (6) Himachal Pradesh, (7) Lakshadweep, and (8) Pondicherry.

The chart showing the system of collection of educational statistics in States may also be seen at Annexure I.

Time-lag in Educational Statistics

At present there is time lag of about six years in the publication of numerical data and more than nine years in the case of financial data. The problems of time-lag is quite serious and deserves appropriate action at all the levels. Without reducing the time lag, no proper use of educational statistics can be made for educational planning. However, there are various reasons for time lag which cannot be done away altogether. These are enumerated as under:

(i) *Magnitude* : There are about 8 lakh recognised educational institutions in India from which the information has to be collected at different levels (Block, District and State).

(ii) Delay in printing and supply of institutional proformae by the States.

(iii) *Lack of Sufficient and Trained Statistical Machinery* : There does not exist sufficient machinery in States especially at district and block level for the collection of educational statistics.

(iv) Non-cooperation by institutions falling under the departments other than education.

The issue of reducing the time-lag and ensuring timeliness in production and dissemination of statistical data has been discussed since the very start of the systematic collection of educational statistics which began with the Report of the Indian Education Commission (1882) which in subsequent years, was collected and published in quinquennial reviews till 1937 and thereafter in a decenial review in 1947.

During post-independence period, a proforma designed to collect a comprehensive and complete set of statistics designated as 'Form A', and introduced w.e.f. 1949-50, proved to be a significant landmark in the system of collection of educational statistics in India. The first National Seminar on Educational Statistics held in September 1962 evaluated it into the following series of forms and introduced them w.e.f. 1963-64

1. Form A (essential data)

2. Form B (data relating to SC/ST)

3. Form C (special entry year)

4. Form A-3 (district-wise data).

The collection of data became so cumbersome that timelag increased from mere 3-4 years to as high as 7-8 years. The collection of educational statistics was almost in crisis in 1975-76. The sixth All India Conference on Educational Statistics held in August 1975 replaced the A-Series of forms by the following ES-series of forms with a view to reducing the time- lag. These were introduced with effect from 1976-77.

1. ES-I (numerical data)
2. ES-II (financial data)
3. ES-III (examination data)
4. ES-IV (data relating to SC/ST)
5. ES-V (district-wise)

This revision was done by staggering the collection on various items by splitting up forms which included essential and minimum number of items. But even this could not help and like the previous years the time-lag continues to persist.

In the beginning of the Seventh Plan when all these efforts failed to reduce the time-lag, it was decided to computerise educational statistics. In 1987-88 a pilot project of computerisation of educational statistics in Uttar Pradesh for the collection of limited data for the year 1985-86 was initiated. This further led to formulation of a Central Plan Scheme to computerise educational statistics in all the States. The scheme was started in collaboration with National Informatics Centre (NIC) in 1989. The scheme covered numerical data only. The computerised form S-1, S-2 and S-3 cover the data pertaining to primary, upper primary and high/higher secondary education respectively. Not much progress has been made in this regard and thus the goal of reducing the time-lag in the collection of educational statistics remain to be an elusive goal.

Financial Statistics

Important statistics relating to income of different educational institutions by sources and expenditure incurred by items and type of institutions are collected. The income and expenditure break-up into recurring and non-recurring is also collected. This data is published in the Ministry's annual publication 'Education in India, Vol. II'. The maximum time-lag is in this publication. The latest available publication is for the year 1983-84. Some of the major difficulties faced in the collection of financial statistics from States are enumerated below:

1. The details of the statistics collected in Form ES.II and for that matter in the higher education institutional returns are far more comprehensive and difficult to collect than those of the school level. In the case of institutions of higher education most of whome have hostels, libraries, science laboratories and equipment for which details have to be given itemwise while in the case of institutions of school level not many of them have hostels, libraries, equipment, fees, etc. of the same magnitude as in the case of higher education. Taking the case of fees alone, there are quite a number of instructions on this particularly with regard to admission fees, laboratories fees, fees foregone on account of free studentship, messing fees (to be excluded from the hostel fees), library fees and deposites relating to caution fees, some of which are to be included in the fees and some of which are to be excluded from the fees. Now these are the instructions which have been given in the Manual and mostly have to be taken care of by the institutions of higher education alone. Therefore, one of the major difficulty thus is the proper understanding of the concepts and definitions by the institutional staff who are to fill in these returns. The collection of statistics from the institutions of higher education thus comes to be the major reason for the delay in the timely receipt and publication of financial statistics.

2. In most of the cases, the authorities concerned have to obtain financial data from the Accounts Departments. This is in the case of universities, DPI offices, district offices etc. and the Accounts Departments generally do not cooperate in furnishing these statistics. In some of the States, the Accounts Department do not even maintain the data as per classification required in ES.II.

3. Lot of time is spent in collection of data in Form ES.II, particularly in case of government institutions because the information is mostly taken from budget books. But itemwise details as required in Form ES.II are different from those of budget items and therefore, lot of time is spent in working out such details. In this process even the estimates have also to be prepared. This is more so in the case of higher education.

4. In some of the States like Rajasthan and others also, the salaries of the teachers particularly those of the primary and middle schools are not paid by the government institutions themselves. The salaries of the teachers are disbursed by the District Education Office (DEO). Even in DEO's office the statement of the accounts of the salaries so disbursed are not maintained institution-wise, for example of primary schools, middle schools, etc. so that

it becomes difficult to apportion these salaries so disbursed to the primary schools and to the middle schools. Further, the DEO's office has to obtain this data from their Accounts Department which further adds to the time lag because of the latter's apathy in maintaining this account properly and furnishing to the DEO's office well in time.

5. Some of the institutions particulary the institutions of higher education, universities or the Boards of Education are not prepared to submit these statistics unless these are audited. Auditing of financial statistics takes quite a long time, say one to two years and the audited data is available after a very long time which adds to the time lag. Instructions have been issued to the State Governments that the concerned departments and agencies as well as institutions may be advised to furnish the pre-audited figures, as the same would serve the purpose of this publication. Though most of the State Governments have fallen in line with these instructions, some of the universities and institutions under the control of the departments other than the education still insist on supplying audited figures only.

These difficulties have been reduced to great extent by the transfer of university education to UGC retaining in the Ministry only the collection of the data pertaining to non-affiliated institutions of higher education. The matter has further been facilitated by splitting the Form ES-II into two, i.e., ES-II(s) meant for school education and ES-II(c) for non-affiliated higher education. By separating school education from higher eduation, all those difficulties associated with higher education have been removed. It is not that shool education is free from problems but these can be removed by appropriate steps taken by State education departments. In the case of schools, data in respect of expenditure is very simple, involving as it does collection of the items mostly in respect of salaries of the teachers, salaries of non-teahing staff, hostels, fees, etc.

The scheme of computerisation which has hitherto covered only numerical data should also be extended to financial data pertaining to school education. If the scheme could not make much headway, it is because of the reason that the collaborating agency i.e. NIC is giving very low priority to educational statistics and according to the state education departments, the agency is not cooperating with them. Solution has, therefore, to be found to this aspect of the problem by taking up the matter by Central Government with NIC for ensuring top priority to educational statistics.

As far as the non-affiliated higher education is concerned, it is a very small fraction of the whole system and does not create any problem. The collection of financial

data pertaining to university education has rightly been handed over to UGC who can reduce the time lag to the minimum by making the release of grants to colleges conditional i.e. the grant would be released only after the financial statistics are made available.

The Central Department of Education also brings out another financial publication entitled "Analysis of Budgeted Expenditure" which is compiled from documents of Central and State Governments. The latest data available in this publication is for 1990-91. But this publication though very important, neither gives information in the form given in Form ES-II, nor does it covers the private sector institutions which according to the current trends are likely to increase its proportion. So the collection of the information in Form ES-II continues to be the most important if the time lag by linking it to the national hook of computerisation of NIC is reduced to the minimum.

The only gap in financial statistics is the data on private expenditure i.e. the expenditure made by students themselves and their parents on them. NSSO in its 42nd round made an effort but that is only one time attempt. If it is taken up by NSSO at some regular intervals, reliable estimates on this item can emerge and the gap can be filled.

The paper can be concluded by the statement that the most befitting attempt in the history of collection of educational statistics was made when the collection was staggered by splitting the form and separating the collection of school education, non-affiliated higher education and university education and hand over the collection of university education to its parent department, i.e., UGC and retaining the collection of school education, and non-affiliated higher education in separate forms with State Education Departments which are their own babies. Handing over the collection to any other agency other than their own parent department is likely to get the step-motherly treatment which may damage the whole system of collection of educational statistics which has been nurtured and developed by meticulous thinking of innumerable committees, commissions and conferences during the past one century. The only snag is the absence of the effective linkage of the collection of educational statistics with the national hook of computerisation developed by NIC which for the present is dysfunctional as far as educational statistics is concerned. Once it is achieved, the problem of time lag will disappear and educational statistics will become the base of our educational planning.

Problems and Issues in Collection of Financial Data Relating to Education

A.B.L. Srivastava

1. Deficiencies in Financial Statistics

The financial statistics relating to education which are collected by the Department of Education, Ministry of Human Resource Development, suffer from several shortcomings, the most serious being the time lag of 8 to 9 years in publication of these statistics. Although the Ministry has been experiencing this problem for several years, and it has been discussed on a number of occasions in seminars and other meetings, no satisfactory solution has been found so far. Needless to say, the financial statistics are of little practical value when they are so out of date. The time lag is not the only problem, the statistics lack accuracy and fail to provide the information needed for computation of unit costs and for estimating the cost of future development and expansion of educational system. While taking note of the deficiencies of financial statistics, it may be mentioned that it is much more difficult to collect financial data than any other kind of data on education. Some of the difficulties that are encountered in data collection are as follows:

(i) The data that is needed for calculating unit cost separately for primary, upper primary, secondary and higher secondary and other levels and types of education, is not readily available. There are schools which have both primary and upper primary classes, and often the same school or institution offers programmes/ courses of different levels and types. Some teachers teach students at two or more levels. In such cases it is difficult to distribute expenditure on teachers salaries and other recurrent expenditure by level and type of education.

(ii) There are several sources of finance for education, the chief one being the central and state governments. But local bodies such as Municipal Corporations usually run primary and upper primary schools. Often the statistics of expenditure on education incurred by local bodies and private agencies are not easily available.

(iii) Since some local bodies raise funds by taxation and also get grants from the state governments, it becomes difficult to determine exactly what amounts

are contributed by different sources for the expenditure incurred on education.

(iv) It takes time to finalise the accounts after necessary auditing, and so the data that is usually made available is of budgeted expenditure rather than actual expenditure.

(v) In the case of teacher emoluments which forms the bulk of expenditure on education, it is only one salaries that are generally included, while the expenditure on pensions gratuity, etc. is left out. Also certain allowances that are paid need to be examined from the point of view of whether they form a part of teachers emoluments or are a part of expenditure on administration, or welfare services or examinations or any other item.

(vi) The private expenditure on education is most difficult to determine. Many private schools particularly those which are unaided do not suply the required information on income and expenditure, and even when they supply the data very often it is not very reliable. Also a part of the private expenditure is that which is incurred by parents on their children's books, stationary etc. (and even on private tutors). Hardly any data is available on such expenditure except for what the National Sample Survey have collected in some of the rounds for example the 42nd round (1986-87) which focussed on consumption.

(vii) Often the accounts are maintained by institutions local bodies and even government departments in such a way that they do not facilitate the task of collecting financial data. The statements of income and expenditure are more according to the requirements of Accounts Department, which have to be analysed properly to meet the needs of statistics. If the original financial statements are so prepared that the required information can be easily extracted from them, then they can become a good source of financial data.

2. Situation in other Asian Countries

The problems listed above are not peculiar to India. An analysis of the statistics on educational finance and expenditure supplied to UNESCO by different countries showed that only four out of 20 countries in Asian region had supplied the required statistics in time. Some of the problems encountered by other countries are also the same which we experience in India, for example:

i) lack of data on educational expenditure incurred by other Ministries or Departments;

ii) no detailed break up of expenditure by purpose (e.g. administration, teacher salaries, other salaries, scholarships, etc.);

iii) lack of data on educational finance from private sources, and sometimes also from local bodies such as municipal authorities;

iv) no break up of government subsidies to private education by level and type of education;

v) non-availability of separate expenditure data by purpose for different levels of education, and for different types of courses at any given level (e.g. for Science, Commerce, Technical courses, etc at secondary level), and such other types of education as adult education and special education;

vi) lack of data on foreign aid for education and its utilisation on different items.

Out of the 20 countries for which the information was analysed, 11 had not provided details of current expenditure on education by purpose (e.g. administration, teachers salaries, books, etc.), 7 had failed to give the break up by level of education (primary, secondary, etc.) and 14 did not give the details of current expenditure broken up by level/type of education and purpose. We, in India, however should not feel complacent because of the fact that the situation is bad in other countries too, but should find ways and means of improving the quality, coverage and timeliness of all educational statistics and particularly financial statistics relating to education.

3. Review of Existing Procedures

In India, certain changes were introduced in the forms for collection of financial statistics from the States/UTs following the recommendations of High Level Committee on Educational Statistics (report published in 1982). Before that there used to be a single ESII Form to collect financial data for educational institutions of all levels (primary to university). The Committee's recommendations were:

"At the elementary stage, the data should be collected only on (a) teachers salaries; (b) other recurrent costs grouped together; and (c) capital costs; at higher levels a more detailed classification of items of expenditure is necessary. In the case of schools fully financed by the government or local bodies, such data should be collected from the concerned educational authorities. In the case of private aided and unaided schools, a separate form should be used to collect income and expenditure data".

As a result of these recommendations, the forms were simplified. Form ES-II was split into two forms; ES-II(C) for collecting financial data relating to colleges and universities, and ES-II (S) for collecting data relating to schools. In this form, the income and expenditure tables for the elementary stage (upper primary, primary and

pre-primary schools) have been made much simpler than those for schools of other levels. These forms which are being currently used for collecting financial statistics provide break up of income and expenditure for the different levels and types of institutions as follows :

(A) .For universities, colleges and other institutions of higher education and. secondary, higher secondary schools, boards, and institutions offering secondary level diploma courses;

(a) *Income by Source for Recurring and Non-recurring Expenditure* : The sourcs which are listed for both these types of expenditure are : Central Government; State Government; University Grants Commission; Local bodies; Tuition fecs; Hostel fees; Endowment and other sources.

(b) *Expenditure by Item* : The items listed for recurring expenditure are:

° Salaries and allowances of teaching and academic staff;

° Salaries and allowances of non-teaching staff;

° Hostel;

° Libraries;

° Stipends, scholarships and other financial concessions;

° Apparatus, chemicals and consumable stores;

° Other items

The items listed for non-recurring expenditure are :

° Libraries

° Building

° Other items

(B) For elementary schools (Upper primary, primary and pre-primary):

(a) *Income by Source* : The sources of income which are listed for both recurrent and non-recurring expenditure are : Government; Local bodies; endowment and other sources;

(b) *Expenditure by Item* : The items listed in the form are:

* Salaries of teaching staff;

* Other recurring expenditure;

* Non-recurring expenditure.

Although the forms have been simplified to some extent, and in particular the expenditure items on which information is sought for below secondary level schools are now reduced to just three, the procedures of data collection and compilation have not changed, and as a result, the time lag has not decreased and other problems still persist.

4. Some Suggestions for Improvement

It is, of course, difficult to introduce changes in the system of data collection which can improve the quality of financial statistics overnight but some steps must be taken to ameliorate the situation. A few suggestions in this regard are being made below:

(i) For primary and upper primary schools under government and local bodies, the financial data need not be collected from schools; all the information on expenditure incurred on these schools should be obtained directly from the concerned authorities managing these schools;

(ii) For private aided schools, the information on grants given to them should be obtained from the financial statements/records of the government and local bodies. Only the information on income from other sources may be obtained directly;

(iii) For private unaided schools, the information on income and expenditure should be obtained on a sample basis. Usually their records are not properly maintained and the statistics provided by them are not reliable, except perhaps for the few reputed public schools which maintain their accounts properly. With the sample survey approach, it should be possible for investigators to check records and cull out the relevant statistics seeking clarification from principals where necessary;

(iv) The details of data required for different levels of education need not be the same. Of course, the tables in the form ES II for collecting financial statistics for below secondary schools have been considerably simplified but one has to examine carefully what specific items should be included for reporting the break up of educational expenditure for the different levels of education, keeping in mind the use that will be made of such data;

(v) It is necessary to take steps for modification of procedures and forms of financial statements that are prepared and maintained at institutional level as well as at the level of local bodies, state governments, and private bodies running schools, so that the needs of financial statistics are adequately met. If necessary, certain legislative or administrative measures may be taken for this purpose;

(vi) Attention should be paid to procedures and forms used by the State education departments to collect data from institutions, local bodies etc. It is necessary but not enough to modify the ES forms for collecting the financial statistics from the States/UTs;

(vii) Since compilation of financial data involves heavy computational work, it is important to switch over to computerisation of financial statistics, not only at the central level but at the state and district levels too;

(viii) Methodological issues in deriving the statistics of income and expenditure for different levels/types of *education* from the statistics for different levels/types of *institutions* should be resolved. It is important to have such statistics for calculating unit costs for the different levels and types of education;

(ix) For the expenditure on education incurred by parents, households surveys conducted by NSSO should include suitable items to provide the required information at least once in 5 years. It will be difficult for Education departments to organise such surveys on a large scale;

(x) Departments of Education at the Centre and in the States should sponsor special studies and surveys to fill the existing data gaps. For example, case studies or surveys of selected institutions could be conducted to provide details of financial income and expenditure incurred on various items, e.g. expenditure on construction of school buildings, expenditure on books and instructional materials, expenditure on administration and recurrent training of teachers, etc.

(xi) For calculating unit costs, other relevant information on number of beneficiaries should also be collected, for example, the hostel fees or expenditure on hostels can be related meaningfully only to the number of students living in hostels, and hence it is necessary to have the data on number of hostellers too;

(xii) In addition to the figures of total income and expenditure, the statistical reports should also include information on important indicators such as unit costs, percentage of total government expenditure devoted to educaton, total expenditure on education as percentage of GDP, etc.;

These are a few suggestions which need to be considered and discussed so that a definite, practical solution is found to the problems of collection and compilation of financial statistics relating education. Perhaps a committee should be set up to look into various administrative, methodological and other issues so that its recommen-

dations help in improving the quality of financial data and reducing the time lag in its availability. It is high time that reliable financial statistics so crucial for educational planning, monitoring and evaluation of programmes are made available to users within reasonable time span.

Part IV
ANNEXURES

Discussion Schedule

Monday, 1st February, 1993

09.30-10.00 hrs.	**Registration**
	Welcome & Introduction to the Seminar
	Dr. Jandhyala B G Tilak
	Opening Remarks
	Shri Baldev Mahajan
10.00-11.30 hrs.	**Inauguration** Dr.(Mrs.) R. Thamarajakshi
	Rapporteur Dr.(Mrs) Ranjana Srivastava
11.45-13.30hrs.	**Status of Educational Statistics**
	Chairman Professor D.N. Rao
	Rapporteurs Dr. Furqan Qamar
	Dr. Arun C. Mehta
14.30-18.00hrs.	**Techniques and Procedures adopted in Collection, Processing & Dissemination of Educational Statistics by Various Organisations (CSO/NSSO, NIC, NCAER, IAMR, NCERT, UGC, etc.)**
	Chairman Professor K.R. Shah
	Rapporteurs Shri S.C. Sahai
	Dr. S.M.I.A. Zaidi

Tuesday, 2nd Febraury, 1993

10.00-13.30 hrs.	**Requirements of Researchers and Planners and Gaps in Educational Statistics**
	Chairman Professor Tapas Majumdar
	Rapporteurs Dr. N.V. Varghese
	Shri Jai Ram Singh

14.30-17.00 hrs.	**Measures for Improvement and Policy Concerns**
	Chairman Shri S.V. Giri
	Co-Chairman Dr. M. Seshagiri
	Rapporteurs Shri R.N. Khera
	Dr. N.V. Varghese
17.00-17.30 hrs.	**Concluding Observations**
	Dr. Jandhyala B G Tilak

List of Papers

Seminar Papers

1. Department of Education: Status Paper on Educational Statistics

2. Department of Education: Educational Statistics in India

3. Arun C. Mehta: A Note on Educational Statistics in India

4. K.R. Shah: A Note on requirements of Educational Statistics for estimating Human Capital

5. V.V. Rao: Computer based Management Information Systems on Educational Institutions

6. C.L. Kaul: Statistical Information Systems in Education - Imperatives for the Future

7. D.R. Kapool: Status of Educational Statistics in India with Reference to Financial Data

8. A.B.L. Srivastava: Problems and Issues in Collection of Financial Data Relating to Education

9. R.N. Pandey: Status of Educational Statistics in India

10. Shashi Kumar and Surendra Prasad: Educational Statistics with Emphasis on Financial Statistics

Background Papers

1. Central Statistical Organisation: "Education, Science and Technology, Culture, Mass Communication, Recreation and Entertainment", in *Guide to Official Statistics,* 3rd Edn., 1987, CSO, New Delhi.

2. *Report of High Level Committee to Review the Educational Statistics System in India* (New Delhi, Government of India, Ministry of Education, September 1982)

3. Central Statistical Organisation: "Education, Employment, Level of living and related Statistics", in *National Seminar on Social Statistics* New Delhi: Allied Publishers for CSO, 1977, pp. 23- 30.

4. Department of Education: "Educational Statistics", in *National Seminar on Social Statistics* New Delhi: Allied Publishers for C.S.O., 1977, pp. 475-498.

5. A.R. Kamat: "Educational Statistics: Sources, Limitations and Improvement", in *National Seminar on Social Statistics* New Delhi: Allied Publishers for CSO, 1977, pp. 489-498.

6. A.B.L. Srivastava and K.N. Hiriyanniah: "Educational Statistics in India - Deficiencies and Suggestions for Improvement", in *National Seminar on Social Statistics* New Delhi: Allied Publishers for CSO, 1977, pp. 499-514.

7. Jandhyala B.G. Tilak: "Data Base for Analysis of Cost of Education", in *Analysis of Costs of Education,* NIEPA Ocassional Paper No. 10, New Delhi, 1985.

Other Material Distributed

1. *Selected Educational Statistics 1991-92* (New Delhi: Department of Educattion, Ministry of Human Resource Development, 1993)

2. *Statistical Database for Literacy* (New Delhi: National Institute of Adult Education, 1992).

3. *District Information System of National Informatics Centre - DISNIC - Education Version 1.0* (Planning Commission, NIC)

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