

**AN ANALYSIS OF THE DEMOGRAPHIC LOGISTICS OF
NATIONAL ADULT EDUCATION PROGRAMME**

Dissertation submitted in partial fulfilment of the
requirements for the Degree of
MASTER OF POPULATION STUDIES

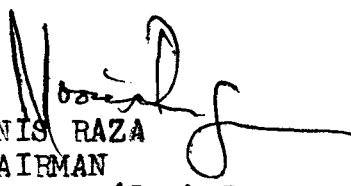
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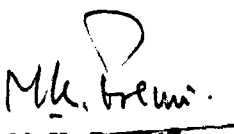
**CENTRE FOR THE STUDY OF REGIONAL DEVELOPMENT
SCHOOL OF SOCIAL SCIENCES
JAWAHARLAL NEHRU UNIVERSITY
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I certify that the dissertation entitled
"An Analysis of the Demographic Logistics of National Adult
Education Programme" submitted by Shri Om Parkash Batra,
in fulfilment of six credits out of the total requirements
of thirty credits for the degree of Master of Population
Studies (MPS) of the University, is, to the best of my
knowledge, his original work and may be placed before the
examiner for evaluation.


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A C K N O W L E D G E M E N T S

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INTRODUCTION

I.1 It has been a matter of common experience that achievements with regard to literacy programmes when compared to plan targets in India are dismally poor. The major factor responsible for this sad state of affair is the lack of public participation in planning activities which, in turn, can be attributed to the illiteracy of the people since illiterate people are unaware of the growth opportunities and governmental aid available to them.

In recent years the question of revitalizing India's literacy programmes has been engaging the attention of educationists, planners and others interested or engaged in adult education. The country has completed 29 years of planning for economic and social development. Although the plans laid greater emphasis on capital investment, they also had programmes for community development. Social education was also one such programme which was designed to increase functionality, awareness and literacy among the general population. This was sought to be achieved mainly through the adult literacy programme.

However, in spite of these programmes, the illiterate section of population continues to be substantial. The number of illiterates in population aged 5 and above has increased from 26.73 crores in 1961 to 30.72 crores in 1971, giving an annual compound growth rate of 1.4 per cent over this period. This increase is mainly due to inadequate provision for literacy programmes and explosive growth of population in India.

It is important to note that the illiteracy is much higher among the women as compared to the men in all parts of

the country. However, it is a heartening feature that recent growth in literacy has been relatively more among women than men.

The battle of literacy in the country is being won and lost at the same time. On the winning side, the percentage of literates in the population continues to rise. More people (both primary school children and adults) are becoming literate than before which gives a higher percentage of literacy rate for different age-groups over time. On the losing side, the number of illiterates continues to rise alarmingly. For several thousand school-age children, there are no schools within a reachable distance, and even when these are available, the children do not stay in the schools long enough to acquire permanent literacy. Thus, a new generation of illiterates continues to join the adult illiterate population. Also, many who become literate, whether through schooling or adult literacy programmes, relapse into illiteracy due to lack of opportunities to utilize the skills once acquired.

It thus appears that growth of population and illiteracy intensify each other in the Indian context. In formulating any strategy of educational development, it is, therefore, necessary to assess the impact of these demographic factors on the magnitude of the problem. A massive national adult education programme was launched by the government on October 2, 1978. The objective of the programme is to organize adult education programmes, with literacy as its focus, for approximately 100 million illiterate

Persons in the age-group 15-35. In concrete terms, the three R's i.e. reading, writing, arithmetic, together with social awareness and functionality constitute the basic pillars of the programme.

Considering the emphasis of the Government on the NAEP, an attempt has been made here to relate it with the size of the population at the all India and state level in order to determine how far the programme can be realistic and what will be its impact on the literacy rates of the population in the 15-35 age group.

I.2 The Concept of Adult Education :

Adult education to-day is regarded as life long education for every normal human being. In advanced countries, the aim of adult education is to broaden the horizon of the people and offer opportunity for further cultivation whereas in developing countries like India, the aim of such type of education is to make the illiterate people understand three R's in addition to awareness and functionality.

"Adult education is the acquisition of new ideas, skills, attitudes and understanding by people whose primary occupation in life is other than learning or studentship. In content, therefore, it deals with all problems of man and society, in scope it covers all population, except that part of it which belongs to schools, colleges and vocational institutions. In

form, adult education is as variegated as life itself¹

"Adult education is perceived to be any educational programme or activity designed to provide adults with an opportunity for further systematic learning. It involves an adult in a structured and supervised learning activity that is subsidiary (and an appendix) to his normal full time responsibility as a member of society. This may involve a few hours at a time over an extended period or many hours for a short period. Adult education may comprise of attendance at adult night school classes, one day workshops, refresher courses organised by professional associations, short training programmes provided by voluntary associations.²

In United States, the following definitions of Adult education are in vogue :

"Adult education is an organised institution for persons beyond compulsory school age (17 years old and older) who are not enrolled full time in a regular school or college programme"³.

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1. Sohan Singh ; History of Adult Education during British period. Chapter 1, p.1.
 2. Gary Dickinson and Coolie Veren's study of Canada - published in learning opportunities for Adults - vol. IV- participation in Education - pp. 76-77 - an OECD publication.
 3. Imogene E. Okes, Participation in Adult Education, 1969 ; Initial Report, National Centre for Education and Statistics, U.S. Office of Education.

"Adult education is a process through which persons no longer attending school on a regular basis, full-time basis undertake activities with the conscious intention of bringing about changes in information, knowledge, understanding, skills, appreciation and attitudes, or to identify and solve personal and community problems".⁴

In short, adult education is an education of the people outside the school-going age. There are many nomenclatures for this. By implication it means imparting education to those who at their educable age could not or did not go in for formal schooling. It is a sort of compensation for the denial of opportunity in childhood;

I.3 Relevance of Adult Education Programme Today :

It has been generally observed that there is a significant correlation between illiteracy and poverty. Adult education through its literacy programmes enables the poor to overcome their economic deprivation and thus quickens the pace of their socio-economic transformation. . Moreover, adult education improves the functional efficiency of the people and in a short period improves the earning potential of the down-trodden.

4. A.A. Liveright. A Study of Adult Education in the United States, Centre for the Study of Liberal Education for Adults, Boston, Massachusetts, 1968.

These definitions appeared in an O.E.C.D. publication entitled "Learning Opportunities for Adults - Vol. IV - Participation in Education - Paris 1977, pp.360-361.

Secondly, it is observed that the rate of illiteracy among the adult population and the rate of population growth have a direct relationship. Therefore, it is necessary to liquidate illiteracy in order to avoid the menace of population explosion. To this end, adult education programmes can be extremely useful.

Thirdly, empirical investigations seem to suggest that the educational level of the parents affect that of the children. Since the children are used in economic activities at very early ages the formal educational programmes will have their obvious limitations in the context of a poor economy like India. In view of this it seems plausible to tackle the problem by educating the adult parents which, in turn, would affect their children's schooling as well.

Finally, the non-formal education has an advantage that it can be easily adopted to meet the needs of the local population. The timing, the course content etc. can be designed in view of the specific requirements of a group of people. This evidently would have greater benefit when compared to the formal education.

1.4 Progress of adult education in India :

In the last 150 years or so, adult education was neglected as a result of the overemphasis on formal education. Nevertheless, some efforts in favour of adult education in

its modern meaning evolved under Congress regime during 1936-39. In 1949, the Committee appointed by the Central Board of Education suggested a new and comprehensive concept of adult education known as 'Social Education' which included civic education, cultural and recreational activities, literacy work library development, development of folk arts etc. The programme achieved a measure of success in several areas. But on the whole it did not receive sufficient resources and was not supported by adequate organisational and administrative set-up.

Agencies for the implementation of Social Education Programme :

The Union Ministry of Education provided supporting services to the programme of social education by giving financial assistance to various schemes like opening of community centres, development of integrated library service and improvement of rural library services, opening of Janata Colleges and assisting the training of teachers. The Ministry had also undertaken a scheme of bringing out a popular encyclopaedia known as "Gyan Sarover" for the new reading public. Sahitya Shivirs (Literacy Workshops) were established to train authors to write books.

Among the states, the Government of Maharashtra introduced a scheme known as Gram Sikshan Mohim. The Mohim (drive) for literacy in Rural Areas was started in Satara district of

Maharashtra in 1959 with a view to imparting literacy skills within four months, with the provision for follow-up services, to all inhabitants of a village. By 1963, the Mohim covered all the districts of the State. Literacy increase in Maharashtra State was about 10 per cent against 7 per cent for all India between 1961 and 1971. The Union Ministry of Education commended this pattern to other State Governments also. Sufficient financial assistance was given to the State Governments for starting pilot projects (like the Farmers Training & Functional Literacy Project) on the pattern of Gram Sikshan Mohim.

As a first step to arrest the illiteracy, Education Commission suggested a provision of part-time general and vocational education to the younger adults of the age-group 15-30. It was suggested to liquidate adult illiteracy in a phased manner in a period of 20 years, fresh addition to the rank of illiterates was to be stopped by making part-time education of one year compulsory for all children in the age-group 11-14 who had not completed the lower primary stage and were not attending schools.

The Commission felt that the universities and the voluntary agencies should be financed and equipped for carrying out the adult education work. The Commission recommended the establishment of a National Board of Education on

which all relevant ministries and agencies should be represented. Similar bodies should be set up at the State and district level.⁵

f.5 National Adult Education Programme:

On the basis of experience gained, suggestions made by the Education Commission and the national level discussion, a crash programme for the liquidation of adult illiteracy, known as National Adult Education Programme (NAEP) was launched on 2nd October 1978. Soon after assumption of office by the Janata Party, the Education Minister made a statement on the floor of Parliament on the 5th April, 1977 declaring that alongwith universalisation of elementary education, highest priority in educational planning will be accorded to adult education.

In the light of this, the NAEP has recognised the importance of giving priority to the age-group 15-35 because it is during this phase in life that people make families and have to upgrade their skills and understanding in the socio-economic perspective. The main objective of the NAEP is to organise adult education programmes, with literacy as an indispensable component, for approximately 100 million illiterate

5. Report of the Education Commission, 1964-66, pp.784,803-805, 808.

persons mainly in the age-group 15-35 with a view to providing them skills for self directed learning leading to self-reliant and active role in their own development and in the development of their environment. Every effort shall be made to extend the programme to approximately 100 million illiterate persons by the end of 1983-84.⁶ The projection of targets released by the Ministry of Education are as follows :

Year	Annual Coverage (in millions)	Cumulative coverage (in millions)
1978-79 (year of preparation)	1.5	1.5
1979-80	4.5	6.0
1980-81	9.0	15.0
1981-82	18.0	33.0
1982-83	32.0	65.0
1983-84	35.0	100.0

These are effective targets and even if a very efficient programme is organised, there could be about one-third wastage

6. National Adult Education Programme - An outline -
Ministry of Education and Social Welfare, New Delhi,
1978.

and the programme shall have to be organised keeping this in view.

What is aimed is that by 1983-84 a capability to organise adult education programmes for 35 million persons would be built up. At that stage it would be necessary to diversify the programmes - the aim then would be to strive for a learning society in which life long education is a cherished goal.

Highest priority is to be given to women's adult education. It is so because of the fact that exclusion of vast masses of people from educational opportunity affects women much more adversely than men. Although the NAEP emphasises the 15-35 age-group as its main target, keeping in view the uninhibited participation of girls in all family - activities, the age criteria will not be enforced to exclude girls below 15 and women over 35.

I.6 A review of the work done on the subject :

Scientific research in the field of adult education in India is extremely limited. The existing studies in this field are mostly descriptive or survey type. These can be broadly grouped into three categories viz; (a) sociological (b) philosophical and (c) administrative. The demographic aspect of the study has unfortunately been ignored by most of the researchers working in this field.

A survey of literature on adult education in India indicates that the first and pioneering work in the area was undertaken by Gadgil (1945) who discussed the problem of lapse into illiteracy. Rege⁸ made projections for the increase in literacy rates during the period 1961-81 under varying assumptions. He obtained the projections of literates separately for the age-groups below 15, 15-44 and 45 and above.

Considering the impact of formal education in the age-groups 5-9 and 10-14 Premi has developed projections of the literate population under varying assumptions of population growth upto 1986. According to his computations a little over half the population of the country would be literate by 1986 in case the population grows according to medium or low fertility assumption. In the population aged 10 and above about 75 per cent males would become literate by 1986 but the population of literate females would remain around 50 per cent only. However, neither Rege nor Premi have worked out the literacy

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7. M.N. Palsane and Pilloo Buch - Non-Formal Education - A Trend Report - Chapter 18 - pp.534-539 - Second Survey of Research in Education (1972-1978) - Editor M.B. Buch Society for Educational Research and Development, Baroda.
 8. K.B. Rege - Magnitude of illiteracy in India (1961-81) - National Council of Educational Research and Training.
 9. M.K. Premi - Probable Literacy Rates in India by 1986 under different assumptions of population growth, Manpower Journal, 1976.

rates for the age-group 15-35 which is the target group for the NAEP. Moreover, their projections have taken into account the social education programme besides the formal education programme as it was during the 60's.

In the light of the emphasis which the Government of India has placed on the adult education programme as also considering the availability of revised population projections (made by the expert Committee in 1979) it is considered necessary to obtain fresh projections of expected literacy rates in the age-group 15-35 for the next 10 to 15 years. This becomes all the more important in the light of the fact that the earlier researchers made only all India projections and did not carry out this exercise at the state level. To understand the effectiveness of the NAEP, we consider it necessary to carry this exercise at least at the State level.

I.7 Objectives of the Study:

It was mentioned earlier that a crash programme of adult education was launched by the Government of India on 2nd October 1978. The objective is to organise adult education programmes, with literacy as a major component, for approximately 100 million persons in the age-group 15-35 by 1983-84. It is generally felt that the target set by the Government in this respect is a little too ambitious. In view of this the present study aims at :

(a) An analysis of the present situation with regard to literacy rates in different states, an examination of the temporal trends over the recent past and also an analysis of the sexwise disparity between formal and social education between 1961-1971. This analysis is essential for a proper understanding of the existing situation and the spatial pattern of growth of literacy rates,

(b) an estimation of probable literacy rates in the age-group 15-35 for future dates. This will help in understanding the impact of the programme on literacy rates particularly in this age-group, when the impact of growth of population and also of the enrolment in the age-group 6-14 is taken into account. This would help in understanding the picture of development of literacy and education in different States in near future and also in examining the feasibility of successful realisation of the targets set by the Government for different States.

I.8 Chapter Scheme:

In Chapter II an account of the methodology and database for the present study has been discussed. Chapter III deals with the stock position of literates and the rates at which the literacy has been growing during the decade under review. This analysis covers the age-groups of 5-14 and 15-35 for males-females and rural-urban segments of the population.

Efforts have also been made to examine the literacy position in different States of India for these population segments through coropleth maps.

An attempt has been made in Chapter IV to estimate the literate population in age-group 15-35 during 1971-91. The final chapter contains a brief summary of results and discusses the policy implications of the present demographic structure with respect to the adult education programme.

Chapter - II

METHODOLOGY AND DATA - BASE

This chapter gives the details of the methodology and data-base used in the present study.

The study is based on census data released by the Office of the Registrar General & Census Commissioner, India and the enrolment data collected by the Ministry of Education. While some of these data are available in published documents, certain others have been obtained with the courtesy of the Ministry of Education from their files. Although these are the major data sources on educational statistics as will be seen later, they have their own limitations and leave a number of gaps in our data base. These gaps in the data have been filled-up by making plausible assumptions and by estimating the required information.

In Chapter I, it was indicated that our first objective of the present research is to compare the literacy rates of children in the age-groups 5-14 at two time periods by States and union territories in order to learn about the pattern of inflow of literate persons in young adult age-groups (viz; 15-34) at different time points. We also decided to analyse the literacy rates both spatially and temporally in the age-group 15-35. Data for this purpose have been obtained from Social and Cultural Tables (Table C-III) of the 1961 and 1971 population censuses respectively.

These data have been taken on their face value assuming that the pattern of age-misreporting is similar in the literate and illiterate population.

The second objective of the study is to examine the sexwise disparity in social and formal education. For this we needed data on enrolment both in formal education and social education. Data for this purpose have been obtained from Education in India, Ministry of Education for the years 1961 and 1971.

Our third objective is to make projections of literates in the age-group 15-35. Before discussing the data used in the projections of literate adults in this age-group for future dates it becomes necessary to describe the methodology used for the same.

The literate persons at time t_1 are constituted of survivors of literates at time t_0 and those who become literate through normal school system between t_0 and t_1 and through the adult literacy programmes during the same period. An account should be made of persons becoming literate through individual efforts also. Since reliable estimates of such persons may not be possible, hence it has been omitted from the present study. To this extent literacy figures will be underestimates. The estimates of surviving literates (in school-going as well as non-school-going ages) and the new literates are added to obtain the total literates in the age-group 15-35 in different quinquennia

from 1971-91,

It is assumed here that a child who has completed grade II attains a literacy level which can be retained almost permanently. We also assume that children who have failed in grade II more than once have attained a literacy which they can retain permanently. We, thus, assume that all these persons would be literate and would remain literate in the later part of their life.

In making the projections of the literate population in the age-group 15-35, one requires four types of information : (a) number of literates in age group 10-14 (b) break-up of literate population in the four five-yearly age-groups of 15-19, 20-24, 25-29 and 30-34 (c) survival ratios for the literates (d) number of adults made or to be made literate during each quinquennium during 1971-91.

For the estimate of literates in the age-group 10-14 for the period 1971-91, we need information relating to the number of literates in this age-group in 1966. This is necessary for maintaining an interval of five-years necessary for the estimates through second degree parabolic curves. The 1961 and 1971 censuses¹⁰ of population provide data on total and illiterate persons in different age-groups for the census count population. Literate persons in the age-group 10-14

10. Social and Cultural Tables (Table C-III) of 1961 and 1971 populations censuses respectively op. cit.

have been obtained by subtracting the illiterates from the corresponding population for both the censuses. Number of literate persons in this age-group in 1965-66 has been obtained by assuming a constant increase in them during the decade 1961-71 in different States of India.

Similarly, enrolment data in different grades and ages and information relating to the number of repeaters in grade II for less than two years (illiterate) and for more than two years (literate) are also required for the estimation of persons made literate in the formal education system. Statewise enrolment data viz; children below grade III-illiterate and those in grade III and above - literate in different age-groups for various years have been obtained from Form-A of the Ministry of Education & Culture. Similar information for the country as a whole has been obtained from Education in India, an annual publication of the Ministry of Education.

As regards the number of repeaters in grade II, statewise information on stagnation in different grades of elementary education, with different duration of repetition in each grade is available in Table-IV of Form-A-2, ¹¹ (unpublished)

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11. Form A-2 for Uttar Pradesh and Jammu & Kashmir for 1970-71 could not be traced in the Statistics and Planning Division of the Ministry of Education & Culture. Therefore, available information on stagnation in respect of Jammu & Kashmir and Uttar Pradesh for the years 1967-68 and 1973-74 respectively has been taken for use in the present study.

documents of the Ministry). Figures for the country as a whole have been obtained by aggregating statewise and union territorywise information for 1968 and 1971. It needs to be mentioned here that information relating to repeaters pertains to all the possible ages. In the absence of age-wise data on repeaters, it has been assumed that the available information holds good for the age-group 10-14 and below for working out the number of repeaters in grade II in 1970-71 and preceding years in the respective age-cohorts.

Estimates of population for the period 1971-91, required for the estimates of literates in different age-groups, have been used as per the projections obtained by the ¹² Expert Committee on Population Projections.

The second type of information needed for the estimate of literates in the age-group 15-34 relates to the break-up of literate population in the four five-yearly age-groups viz; 15-19, 20-24, 25-29 and 30-34. From Social and Cultural Tables (Table C-III) of 1971 census, statewise break-up of literates in the age-groups of 15-19, 20-24 and 25-34 can be obtained by residual method i.e. subtracting illiterates from the corresponding population. Unlike 1961 census data,

12. Report of the Expert Committee on Population Projections - Demography Division, Office of the Registrar General India - Census of India 1971, INDIA, Series I, Paper I of 1979.

sexwise break-up of the illiterates in the age-group 25-29 and 30-34 is not available in 1971 census data. However, the break-up of population in these age-groups is available in Social and Cultural Tables (Table C-II). In order to split the literates in the age-group 25-34 into two age-groups viz; 25-29 and 30-34 proportions of population in these age-groups to their sum have been worked out and the same proportions applied to the literate population in the age-group 25-34 years also.

The third type of information necessary for our projections; relates to the survival rates for the literates. In order to survive the literate population in ages 10-29 years from one quinquennium to the next, one requires life tables for the literates for that period. However, no ~~such~~ ^{such} life tables are available in India, What one can have, at best for this type of work, are life tables used for projecting total population for future dates and apply them assuming that the mortality pattern of the literates will be the same as that of general population. Therefore, the estimates of expectation of life at birth (e_0^o) for India and 15 major states, as worked out by the Expert Committee on Projections for the General Population, have been applied on literate population. ¹³

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13. Report of the Expert Committee on Population Projections, Chapter III, pp. 6-7.

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The survival ratios were obtained by making use of model "West" of the Coale & Demeny's Model Life Tables. The projected values of expectation of life at birth are given in Table II.1 (page 23)

The last type of information needed for the projections relates to new adults made literate through adult literacy programmes during time t_0 and t_1 . As is well known, a decision was taken to designate 'adult education' as 'social education' as early as 1949 and the Ministry of Education has been publishing data on 'adults made literate' under this programme in its annual publications entitled Education in India. These publications are available upto 1975-76. The information on enrolment

14. Coale Ansley J., and Demeny, Paul - Regional Model Life Tables and Stable Populations, Princeton : Princeton University Press, 1966.
15. It needs to be mentioned here that due to the re-organisation of States of Punjab and Assam, it has been felt safer to club Punjab, Haryana, Himachal Pradesh and Chandigarh as one unit and Assam, Meghalaya and Mizoram another and survival ratios corresponding to e_0^o 's projected for Punjab and Assam have been applied on these two units respectively. The States for which e_0^o 's have not been projected, the values projected for their adjoining states have been assumed to operate on these States. Thus, survival ratios corresponding to e_0^o 's estimated for Punjab and Haryana have been applied to Jammu & Kashmir and Delhi respectively and that of for Assam to both Tripura and Manipur.

Table II.1 - Projected Values of expectation of life at birth

States	Males				Females			
	1971-75	1976-80	1981-85	1986-90	1971-75	1976-80	1981-85	1986-90
1	2	3	4	5	6	7	8	9
INDIA								
Andhra Pradesh	48.6	51.5	54.3	57.0	48.0	51.0	54.0	57.0
Assam	57.0	59.3	61.6	63.8	54.0	56.8	59.6	62.3
Bihar	46.0	48.8	51.6	54.3	43.8	47.1	50.4	53.6
Gujarat	52.3	54.8	57.3	59.8	52.7	55.2	57.7	60.2
Haryana	51.9	54.4	56.9	59.4	50.4	53.4	56.4	59.4
Karnataka	50.9	53.4	55.9	58.4	50.0	52.8	55.6	58.3
Kerala	63.2	64.7	66.2	67.7	62.0	63.6	65.6	67.3
Madhya Pradesh	50.6	53.1	55.6	58.1	49.1	51.9	54.7	57.4
Maharashtra	52.6	55.1	57.6	60.1	53.0	55.5	58.0	60.5
Orissa	50.2	52.7	55.2	57.7	47.6	50.6	53.6	56.6
Punjab	53.9	56.2	58.5	60.7	52.3	55.1	57.9	60.6
Rajasthan	55.0	57.3	59.6	61.8	53.4	56.2	59.0	61.7
Tamil Nadu	48.0	50.8	53.6	56.3	47.3	50.3	53.3	56.3
Uttar Pradesh	44.1	46.9	49.7	52.4	43.1	46.1	49.1	52.1
West Bengal	52.6	55.1	57.6	60.1	49.9	52.9	55.9	58.9

Source : Report of the Expert Committee on Population Projections, Table 16, p.25 -
Census of India, INDIA, Series I, Paper 1 of 1979.

relating to social education is available for the years 1973-74, 1976-77 and 1977-78 in unpublished documents of the Ministry. No doubt many voluntary agencies have been functioning in the field of adult education. But these agencies are not maintaining statistics on adults made literate in ready form. Therefore, to this extent, estimate of literates in the age-group 15-35 are under estimates. The only alternative left is to use the enrolment figures of social (adult) education. No doubt, some of the enrolled adults must have dropped out and the full enrolment figures may be leading to overestimates of adults made literate during different quinquennia. But on the other side, we are not taking adults made literate through voluntary agencies and through individual efforts. Therefore, these underestimates and overestimates will be cancelled out leading to near the realities.

Rationale of the assumptions :

One may have an objection regarding the assumptions relating to the number of adults made or to be made literate in 15-35 age-group through adult literacy programme in different quinquennia as very discouraging and underestimates of the realities. In support of our assumptions, the following arguments have been put forth :

Regarding the targets of Adult Education, the

Education Commission recommended that every possible effort should be made to eradicate illiteracy from this country as early as possible and in no part of the country, however, backward, should it take more than 20 years. The national literacy percentage should be raised to 60 per cent by 1971 and to 80 per cent by 1976. As is clear from the 1971 census results, the country has not achieved even half the targets as recommended by Education Commission.

Secondly, the problem of dropouts of adult learners from the adult literacy programmes is very serious. From the recent studies regarding the functioning of the National Adult Education Programme in the States of Gujarat and Rajasthan¹⁷, it has been found that the problem of drop-outs of the learners in the age-group 15-35 is quite serious. The studies reveal that the learners in the age-group 15-35 tend to drop-out more frequently than those below 15 and above 35 years of age. The problem of drop-outs may be seen in Table II.2 (next page).

16. Report of the Education Commission, p.665.

17. The appraisal of the National Adult Education Programme in the States of Gujarat and Rajasthan by Sardar Patel Institute of Economic and Research and the Indian Institute of Management, Ahmedabad respectively.

Table II.2

Percentage of Drop-Outs	Age-group of Drop-outs					
	Below 15	15-19	20-24	25-29	30-35	Above 35
	4	29	24	21	14	6

Source : A.K. Jalaluddin - First Appraisals of NAEP in Gujarat and Rajasthan - their implications for reformulations of strategy - a document of the Directorate of Adult Education.

Estimates of number made literate in 15-35 age-group through adult literacy programme :

It needs to be mentioned here that the enrolment figures reported under 'social (adult) education' pertain to lower as well as higher than the age-group 15-35. Assuming that the figures below and above this age-group are negligible, the whole of the enrolment reported under the said programme has been treated as number of adults made literate in the age-group 15-35 upto 1977-78.

Now, the problem is of estimation of the number of adults to be made literate in the age-group 15-35 in 1978 and beyond in different States of India. The Ministry of Education and Culture has declared the projections of targets of number of adults to be made literate during the 6th Five Year Plan in its brochure entitled, An outline of the National Adult Education Programme¹⁸. But these are the targets for the

18. National Adult Education Programme - An Outline - p.8- Ministry of Education and Social Welfare, Government of India, 1978.

country as a whole and no sexwise break-up is given in these targets. Furthermore, no such information is available for different States except the policy implication that all the illiterates in the age-group 15-35 will be made literate by 1983-84.

Number of adult education centres (shown in Appendix I) may not give us a real picture of the enrolment of adults in each State and union territory of India. Similarly, the statement showing information (as on April 30, 1979) on NAEP, received from various States by the Directorate of Adult Education, is also incomplete and unscrutinized and, therefore, cannot be relied upon.

After making every attempt to obtain the information on the number of adults to be made literate during different quinquennia, the only alternative left with the author is to estimate the same for future dates on the basis of the available information on enrolment of social (adult) education under certain assumptions. However, an attempt has been made to utilize the projections of targets of NAEP as laid out by Government of India, for India only. The Statewise estimates have been made by making assumptions on the basis of enrolment of social (adult) education programme and by taking into consideration the efficiency of the first year of the NAEP. As a result of it, the sum^{total}/of literates in the

States in different quinquennia will not tally with the corresponding figures for India.

Since the projections of targets for adults to be made literate in NAEP pertain to both the sexes taken together, it becomes necessary to make an assumption regarding the coverage of each sex. As is well known that much emphasis will be laid on female illiterate adults to make them literate in NAEP, it has, therefore, been assumed arbitrarily that the targets refer to 50 per cent each for males and females.

The enrolment of 'social education' does not provide the break-up in the four age-groups viz; 15-19, 20-24, 25-29 and 30-34. On the basis of the given enrolment figures upto 1977-78, adults to be made literate through adult education have been projected upto 1991. From the projected population in five yearly age-groups, the survived literates and those who become literate through formal education and adults made newly literate have been subtracted in order to arrive at the number of illiterates in each quinquennium. The total number of adults made (or to be made) literate during a quinquennium have been distributed in the five yearly age-group in the same proportion as the one obtained for the illiterates in the age-group 15-35.

Explanation for the estimation of the number of adults of 15-35 age-group, made/to be made literate through adult education programme in different quinquennia of the

period 1971-91 is not out of place. For the quinquennium 1971-76, it has been assumed that 100 per cent enrolment of social (adult) education', as reported by the States and union territories of India, would have been made literate during this period.

For the quinquennium 1976-81, the enrolment of 'social (adult) education' is available for the years 1976-77 and 1977-78 with the Ministry of Education in its unpublished documents. The average of these two years have been multiplied by a constant 5 in the States and Delhi except Jammu & Kashmir, Tamil Nadu and Bihar. In Jammu & Kashmir there has not been any such programme in the near past. In Tamil Nadu the social education programme was negligible. But due to the operation of the present NAEP it has been noticed from the statement, received in the Directorate of Adult Education, showing the number of adults enrolled upto April 30, 1979 that there were 17,727 and 10,245 males and 10,829 and 34,882 females in Jammu & Kashmir and Tamil Nadu respectively. Since it will take about 10 months to make all of them literate the figures have, therefore, been multiplied by 3 to assume that the same number will be made literate during the subsequent years of the quinquennium 1976-81. In case of female adults in Bihar the number has been taken at par with the figure reported for males.

The present NAEP will operate upto 1983-84. But in the present study it has been assumed that it will continue

upto 1986. The efficiency of the programme during 1981-86 has been assumed for about four times of what it was during the previous quinquennium. Therefore, proportion of adults to be made literate in the age-group 15-35 to the corresponding illiterate population during this quinquennium will be four times of the similar proportion observed during 1976-81.

Similarly, for the quinquennium 1986-91, under the assumption that if the NAEP is continued upto 1991 with the same efficiency, the proportion of adults made literate in 15-35 age-group to the corresponding illiterate population will be four times of what it would have been during its previous quinquennium 1981-86 in India, States and Delhi.

Limitations of the Data :

It was mentioned earlier that data on age-sex and education have been taken on their face value assuming that the pattern of age-misreporting is similar in the literate and illiterate population.

The enrolment data obtained from the Ministry of Education pertain to recognised institutions only whereas population statistics are of census count. Hence, to this extent our estimates of literates are underestimates.

The projections have not been made for rural and urban areas separately because the enrolment data do not give any such break-up.

It was mentioned earlier that enrolment data on social education and stagnation are not available in single age-group.

The age-groups for figures on illiterate population are different in 1961 and 1971 censuses and, therefore, are not comparable.

Data for some of the States and union territories are not comparable at two points of time due to reorganisation of some of the states. To make the data comparable, Punjab, Haryana, Himachal Pradesh and union territory of Chandigarh have been clubbed under Punjab. Similarly, Assam, Meghalaya and Mizoram have been clubbed under Assam.

The exercise on projections has not been done for Nagaland State and union territories of A & N Islands, Arunachal Pradesh, Dadra & Nagar Haveli, Goa, Daman & Diu, Lakshadweep and Pondicherry due to certain discrepancies in enrolment and population data.

Some of the union territories in 1961 became States in 1971. For analysis purpose, the status of Manipur, Sikkim and Tripura have not been changed and hence these States have been treated as union territories in 1971 as well.

Chapter - III

SPATIAL AND TEMPORAL VARIATIONS IN THE LITERACY
RATE IN INDIA DURING 1961-71

Any attempt to formulate an adult literacy programme or, for that matter, any other strategy for educational development calls for a proper understanding of the existing situation. It is necessary to analyse present situation with regard to literacy rates in different States and also to examine the temporal trends over the recent past.

In this chapter an attempt has been made to analyse some aspects of educational development in India.

In the first section an analysis of the spatial variations of the literacy rates for the two years viz; 1961 and 1971 has been attempted with age, sex and rural-urban break-up. This break-up of literacy rates has been further analysed in terms of their growth over the period 1961-71. This particular exercise is expected to provide an understanding of the dynamics of the literacy development programme.

In the next section, an attempt has been made to study the various components of literacy programme in relation to each other, the components being male-female and rural-urban break-ups. This section is particularly important for evaluating the effectiveness of programmes geared to eradicate illiteracy. There are two programmes that make a dent on the literacy level viz; formal education and social (adult) education. The enrolment data under these two programmes, unfortunately are not available with rural-urban break-up. Only two components could, therefore, be studied in relation

to each other by developing an index of disparity. These components are sex-wise break-up (male/female) of the enrolment. The disparity between the male/female components have been examined both for formal as well as social education.

III.1 A Spatial Analysis of Literacy in India :

Over the past several years a number of researchers have undertaken exercises to bring out spatial variations in literacy rates by taking data at the district as well as at the State level. The office of the Registrar General India has produced detailed maps in this respect.¹⁹ However, we believe that an analysis of literacy rate by age particularly in the age-group 5-14 where children become literate in the formal school system and the age-group 15-35 which is the age-group on which the NAEP is concentrated is important. This analysis has not been covered by earlier researchers. Hence, in this section, we present the levels of literacy of male and female population by their rural-urban residence for 1961 and 1971 respectively.

The analysis here has been done at the State level because our major objective of the present study is to work out the future pattern of literacy rate under the impact of the formal education as well as adult education programmes. This

19. Census Atlas, Census of India - 1961 and 1971.

analysis has been done at the State level and hence the present analysis also.

To have a visual understanding of the spatial distribution of literacy rates coropleth maps have been drawn. This has been done for the age-groups 5-14 and 15-35 taking the males-females by rural-urban segments of the population separately for 1961 and 1971. The States of India have been grouped according to their levels of literacy.

For categorising the States into four groups the statistical method using mean and standard deviation has been used. This method uses the all India average literacy rates for the two age-groups ²⁰ and the standard deviation computed on the basis of State level figures. The four groups are (i) high, (ii) medium (iii) low, and (iv) very low. Those States whose literacy rates are above mean plus one standard deviation have been categorised as high and those states whose literacy rates are between mean and mean plus one standard deviation have been put under medium level States. Those States whose literacy rates are between below mean and mean minus one standard deviation have been treated as low level

20. The national literacy has been used instead of Mean literacy rates of all the States and union territories because the difference between the two is not much. National percentage, however, has its advantage of giving a relative picture of each State compared to the national picture.

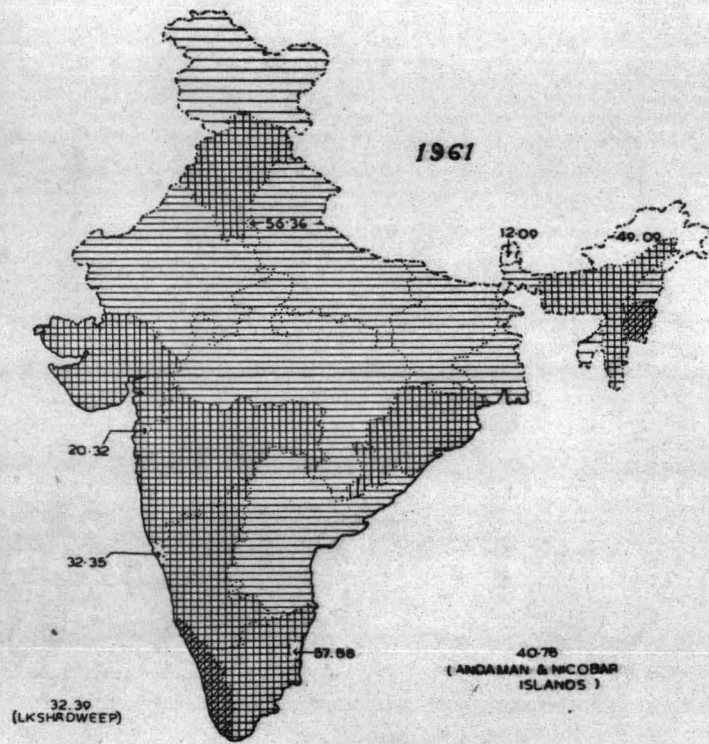
and those states having literacy rates below mean minus one standard deviation have been categorised as very low.

There has been a reorganisation of States between 1961 and 1971, therefore, some adjustments were made to make them comparable. The State of Meghalaya and Union Territory of Mizoram have been included in Assam in 1971. Similarly, the States of Haryana and Himachal Pradesh and Union Territory of Chandigarh have been included in Punjab in 1971. 1961 Punjab included Himachal Pradesh also. Since Manipur, Sikkim and Tripura were treated as union territories in 1961 their same status has been assumed for the year 1971 as well. The union territories which have not been clubbed in Assam and Punjab have been indicated with percentage points on the maps.²¹

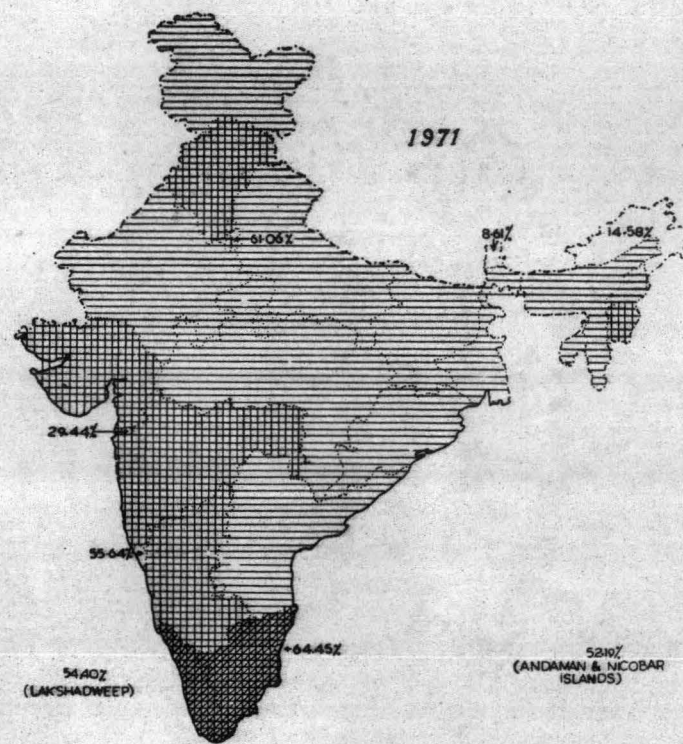
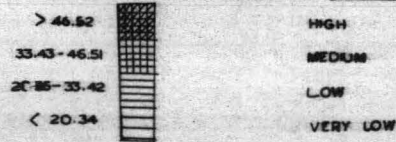
Figures 1-16 represent sexwise pattern of literacy rates of 5-14 and 15-35 age-groups in 1961 and 1971 according to male-female by rural-urban break-up. It has been noticed that some of the States/Union Territories have made rapid growth in their literacy levels while in others the progress is tardy. Therefore their relative position has slightly changed from 1961 to 1971.

21. The literacy level of the union territory of Arunachal Pradesh cannot be compared because it excludes that portion of the population where all India census schedule was not canvassed in 1961 i.e. 2,29,853 persons, 1,47,100 (males) and 1,50,753 (females).

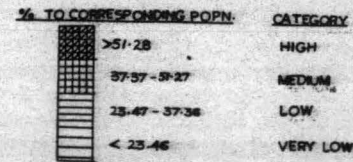
INDIA
RURAL MALE LITERACY IN THE AGE GROUP 5-14



(FIG. 1) % TO CORRESPONDING POPN. CATEGORY

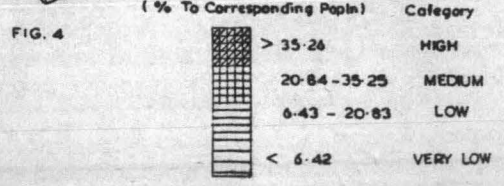
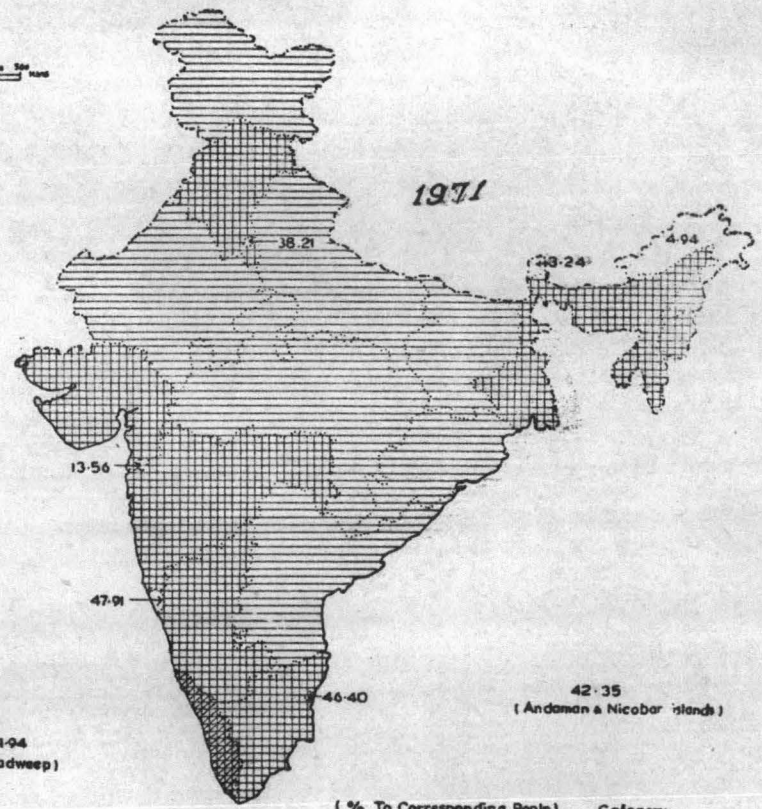
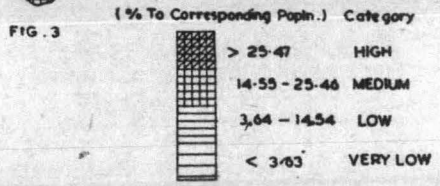
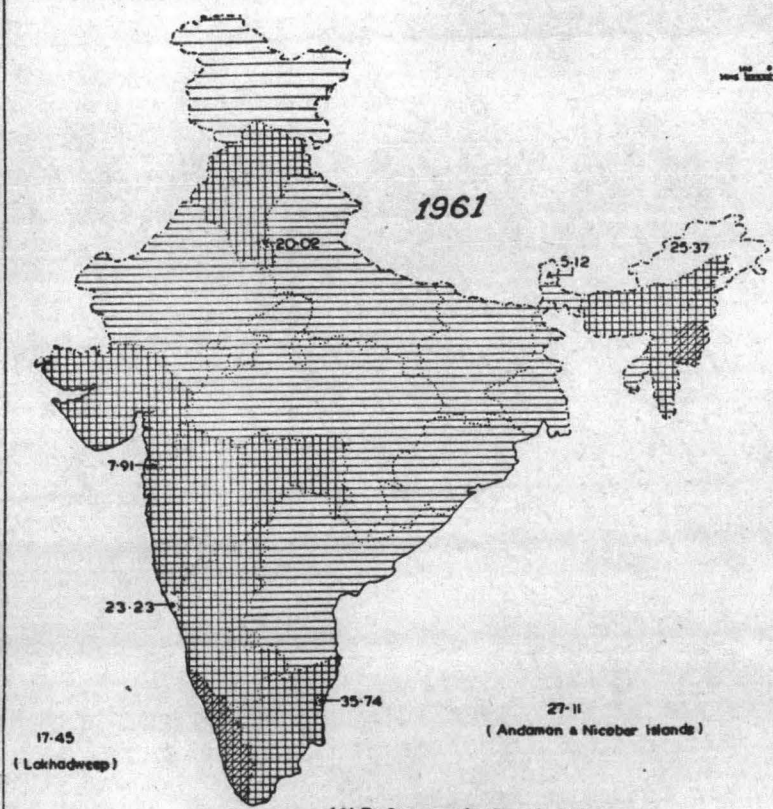


(FIG. 2)



INDIA

FEMALE LITERACY IN THE AGE GROUP 5-14 (RURAL)



While comparing male literacy in rural areas, shown in Figs. 1 & 2, it has been noticed that Kerala and Union Territories of Delhi and Pondicherry have maintained their high levels of literacy during the period 1961-71. Jammu & Kashmir, Tripura and Dadra & Nagar Haveli have improved their literacy level moving from very low to low category. Similarly, Tamil Nadu, Goa Daman & Diu and A&N Islands have also come up from lower to higher categories. The States of Orissa and Assam have come down from medium to low category whereas Union Territory of Manipur has slipped from high to medium category from 1961 to 1971. Jammu & Kashmir, Rajasthan, Andhra Pradesh, Uttar Pradesh, Bihar, Madhya Pradesh, West Bengal, Nagaland, Tripura, Sikkim, Dadra & Nagar Haveli, Lakshadweep and Goa, Daman & Diu remained below the national average in 1961 (33.43%) as well as in 1971 (37.37 %). Orissa and Assam also crept into this category while in Goa Daman & Diu and Lakshadweep the literacy rates were raised above the national average in 1971.

While comparing rural literacy among female children, shown in Figs. 3 & 4, it has been observed that all the States and union territories except Nagaland and Manipur have either maintained or improved their status of literacy over two points of time. Kerala, Pondicherry and A & N Islands maintained their high levels of literacy while Jammu & Kashmir,

INDIA

MALE LITERACY IN THE AGE GROUP 5-14 (URBAN)

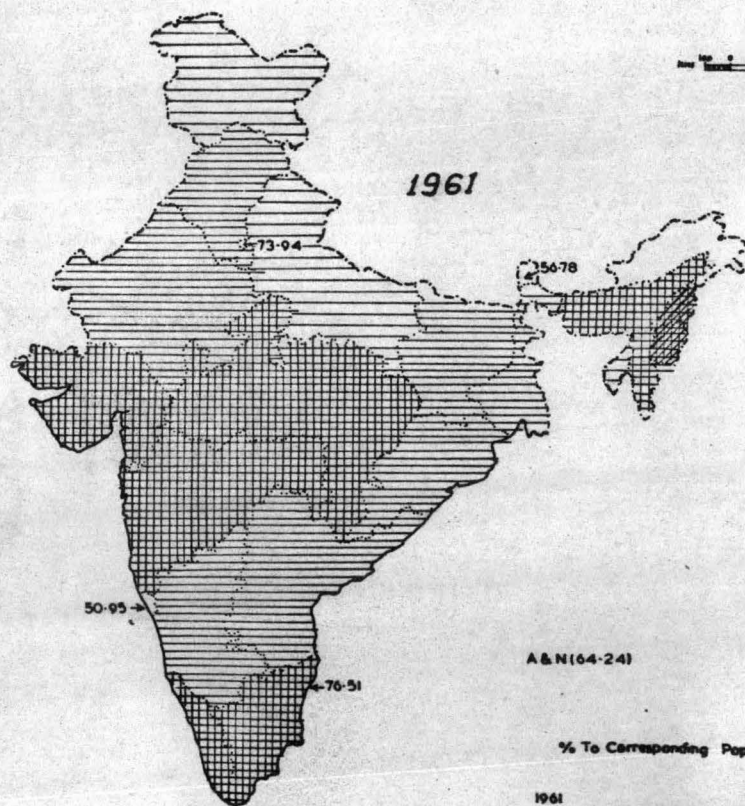


FIG. 5

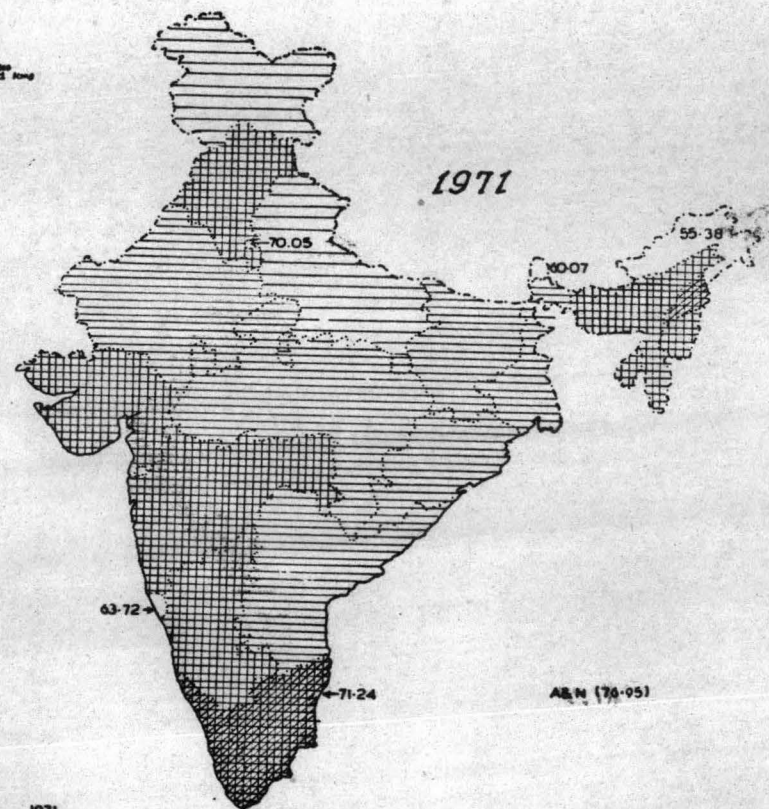


FIG. 6

A & N (64-24)

% To Corresponding Popn.

1961	Category	1971
> 68.15	HIGH	> 70.93
59.49 - 68.14	MEDIUM	63.41 - 70.92
50.76 - 59.44	LOW	55.90 - 63.40
< 50.75	VERY LOW	< 55.89

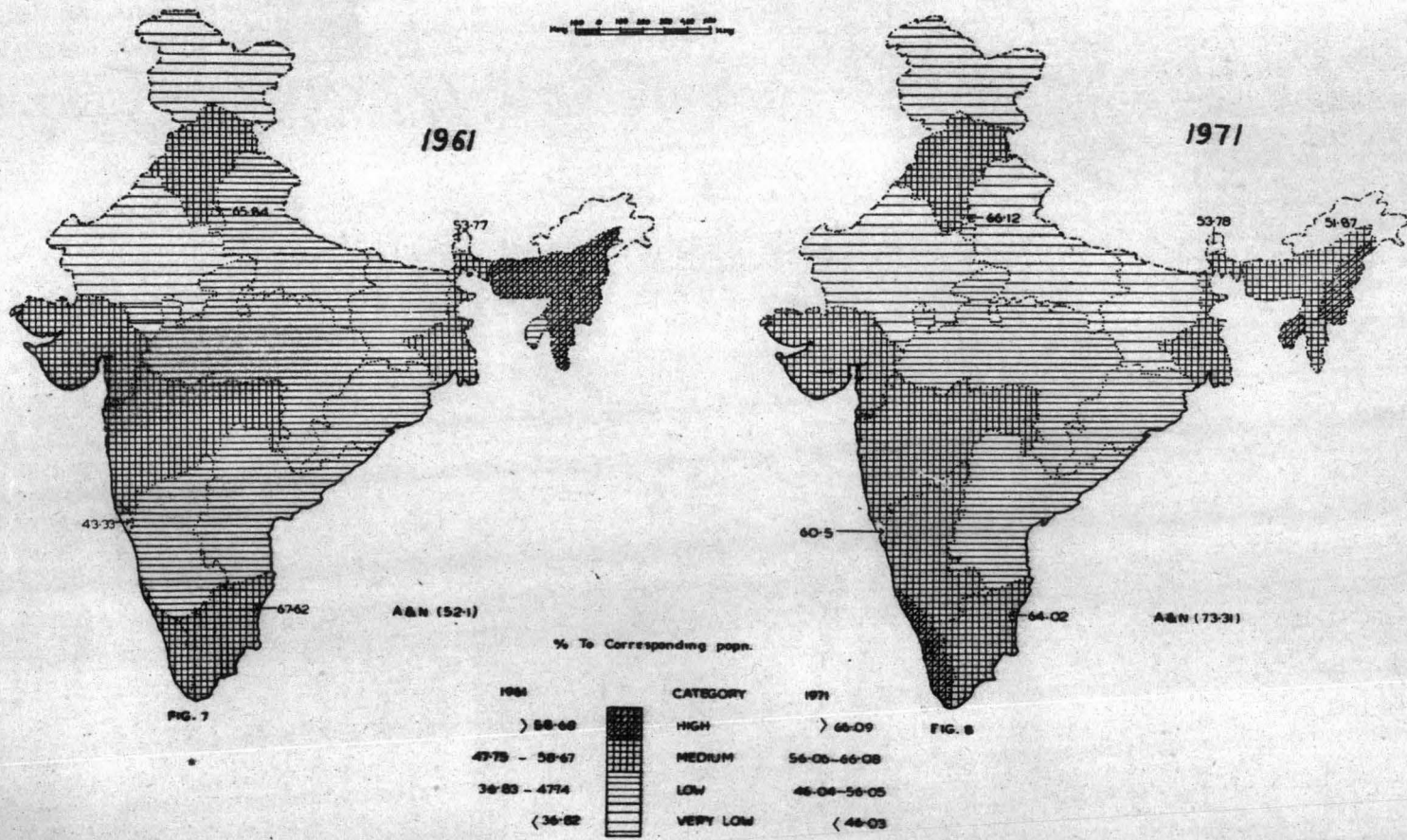
West Bengal, Tripura, Goa, Daman & Diu and Lakshadweep came up from lower to higher categories from 1961 to 1971. All those States/Union Territories viz; Jammu & Kashmir, Rajasthan, Uttar Pradesh, Madhya Pradesh, Bihar, West Bengal, Orissa, Andhra Pradesh, Tripura, Dadra & Nagar Haveli and Sikkim, having their literacy rates below the national average in 1961 (14.55%) remained so in 1971 as well except West Bengal and Tripura which improved their relative position showing their literacy rates above the national average (20.84%) in 1971. The State of Nagaland also crept into this category in 1971.

Figs. 5 & 6 showing male literacy of 5-14 age-group in urban areas reveal that Nagaland and Pondicherry maintained their high levels of literacy whereas Punjab, Karnataka, Kerala, Tamil Nadu, Tripura, A & N Islands and Goa, Daman & Diu improved from lower to higher categories from 1961 to 1971. Madhya Pradesh Manipur and Delhi came down from higher to lower categories during the same period. The States of Jammu & Kashmir, Rajasthan, Punjab, Uttar Pradesh, Bihar, West Bengal, Orissa, Andhra Pradesh, Karnataka and Union Territories of Sikkim, Tripura and Goa, Daman & Diu were below the national average in 1961 (59.45%). Madhya Pradesh also crept into this category while Punjab, Karnataka, Tripura and Goa, Daman & Diu came out of this category in 1971.

Literacy position among female children residing in urban areas is not very encouraging. In this connection,

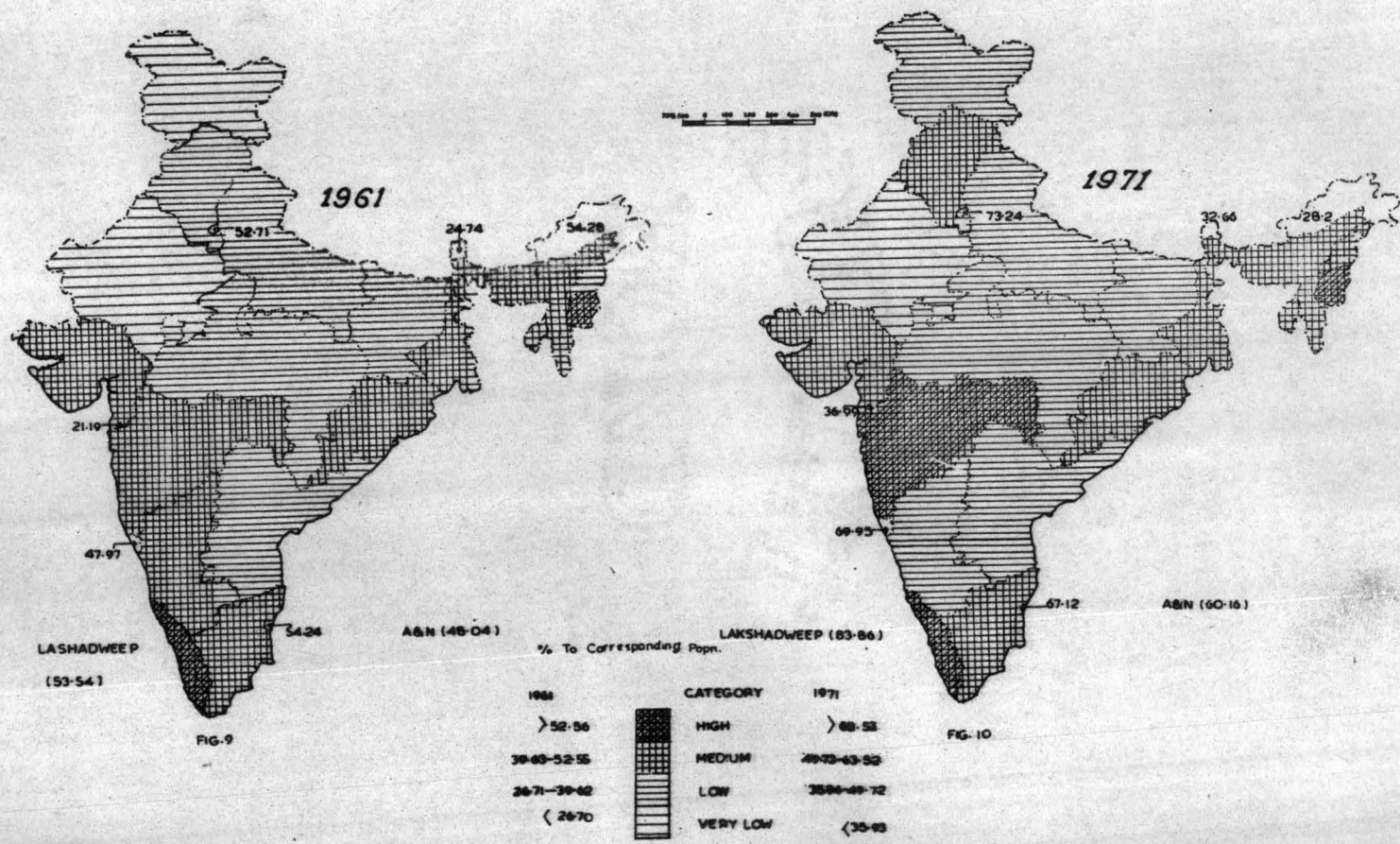
INDIA

FEMALE LITERACY IN THE AGE GROUP 5-14 (URBAN)



INDIA

MALE LITERACY IN THE AGE GROUP 15-35 (RURAL)

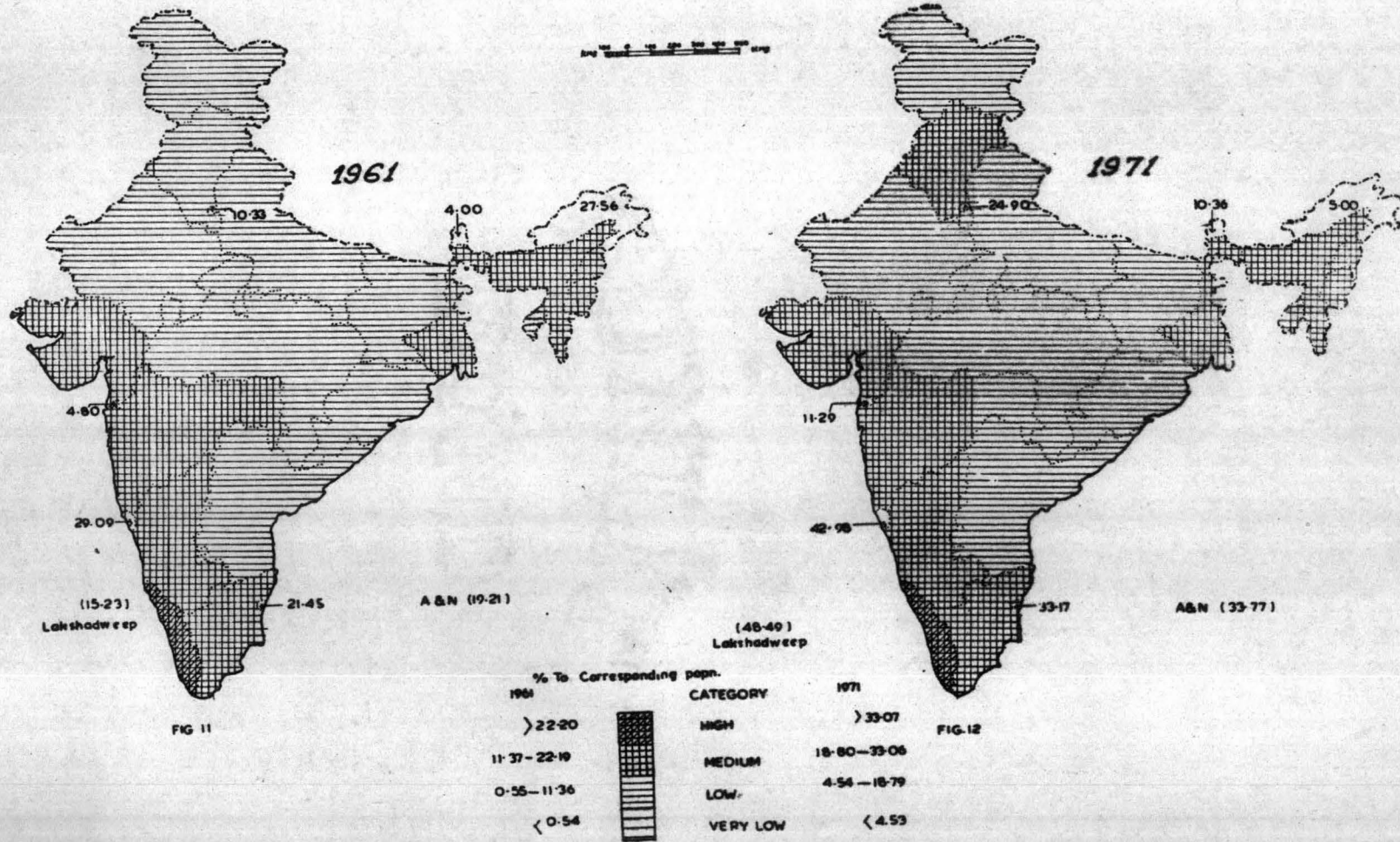


Figs. 7 & 8 show that the States of Jammu & Kashmir and Rajasthan were in the category of very low literacy rates in 1961. Uttar Pradesh and Bihar also joined this category in 1971. The State of Assam and Union Territory of Pondicherry are also shown to have come down from high to medium category from 1961 to 1971. However, Delhi, Manipur and Nagaland maintained their high levels of literacy while Karnataka, Kerala, Tripura, A & N Islands and Goa, Daman & Diu improved from lower to higher categories during this period. Jammu & Kashmir, Rajasthan, Uttar Pradesh, Madhya Pradesh, Bihar, Orissa, Andhra Pradesh, Karnataka, Tripura and Goa, Daman & Diu were below the national average in 1961 (47.75%). But in 1971, Sikkim slipped into this category while Karnataka, Tripura and Goa, Daman & Diu managed to come out of it.

Pattern of literacy rates for males of 15.35 age-group in 1961 and 1971 according to rural residence has been shown in Figs. 9 & 10. It has been observed that Kerala, Manipur, Delhi, Lakshadweep and Pondicherry have maintained their high literacy rates while Jammu & Kashmir, Punjab, Maharashtra, Nagaland, Dadra & Nagar Haveli and Goa, Daman & Diu improved their literacy rates from lower to higher categories over the two points of time. The State of Karnataka alone fell down from medium to low category. While comparing with the national average, Jammu & Kashmir, Punjab, Rajasthan, Uttar Pradesh, Bihar, Madhya Pradesh, Andhra Pradesh, Nagaland, Sikkim and Dadra & Nagar Haveli were below the national average

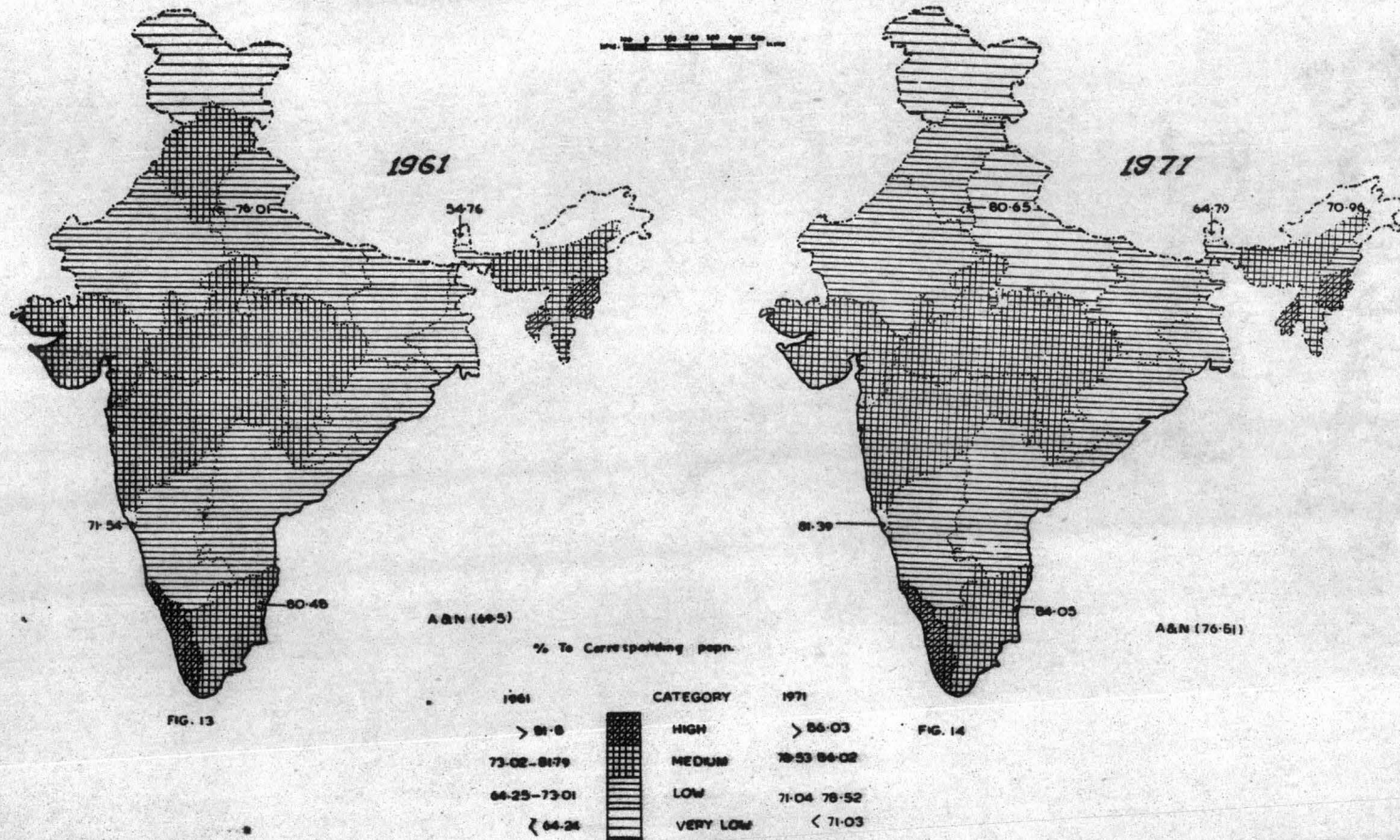
INDIA

FEMALE LITERACY IN THE AGE GROUP 15-35 (RURAL)



INDIA

MALE LITERACY IN THE AGE GROUP 15-35 (URBAN)



in 1961 (39.63%). Karnataka also fell in this category in 1971. However, Punjab and Nagaland came out of this category showing their literacy rates above the national average in 1971 (49.73%).

Figs. 11 & 12 showing female literacy rates of 15-35 age-group indicate that none of the States/Union Territories falls in very low category of literacy rates in 1961 as well as in 1971. Further, most of them fall under low category indicating the literacy rates below the national average, at both the points of time. These States are Jammu & Kashmir, Punjab, Rajasthan, Uttar Pradesh, Bihar, Madhya Pradesh, Orissa, Andhra Pradesh, Delhi, Tripura, Sikkim and Dadra & Nagar Haveli. However, Punjab, Delhi and Tripura including Lakshadweep, Pondicherry and A & N Islands showed improvement in coming up from lower to higher categories from 1961 to 1971.

The literacy position of males in the age-group 15-35 residing in urban areas (shown in Figs. 13 & 14) reveals that the relative position in majority of the States and Union Territories remained static over the period 1961-71. Kerala, Manipur and Tripura maintained their high literacy rates while Goa, Daman & Diu improved from low to medium category from 1961 to 1971. Punjab, Uttar Pradesh and Nagaland slipped from higher to lower categories. Jammu & Kashmir, Rajasthan, Uttar Pradesh, Bihar, West Bengal, Orissa, Andhra

INDIA

FEMALE LITERACY IN THE AGE GROUP 15-35 (URBAN)

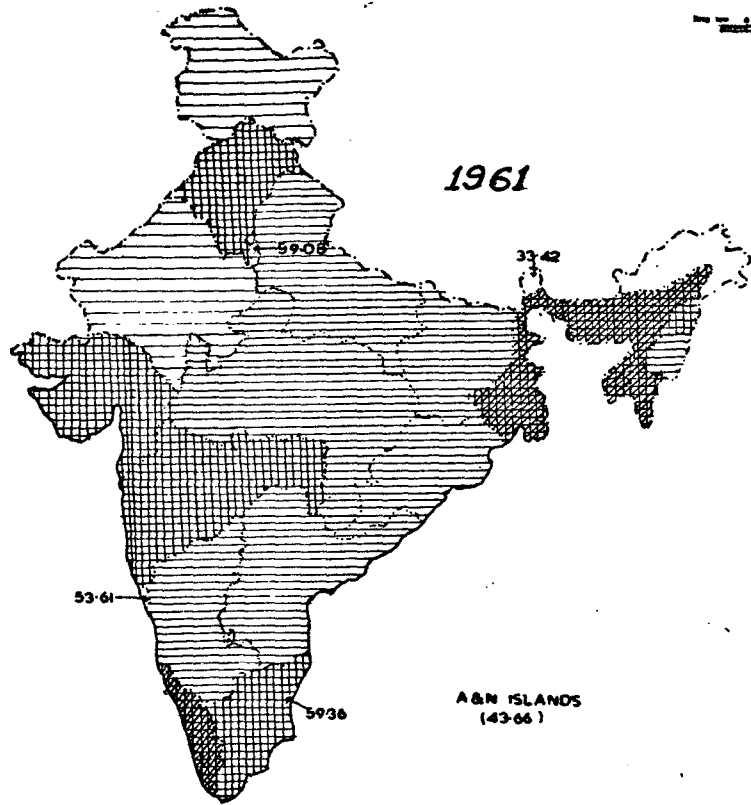


FIG. 15

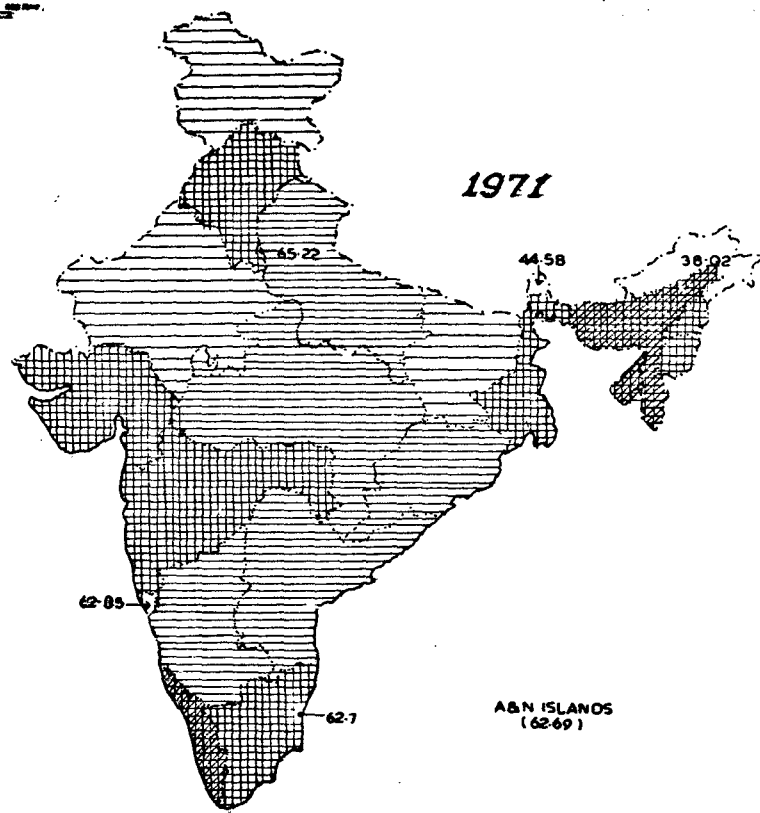


FIG. 16

% to corresponding pop.		CATEGORY	% to corresponding pop.	
1961			1971	
> 57.21	[Cross-hatched pattern]	HIGH	> 68.27	
45.59 - 57.2	[Diagonal lines pattern]	MEDIUM	56.07 - 68.26	
33.98 - 45.58	[Horizontal lines pattern]	LOW	45.08 - 56.66	
< 33.97	[Vertical lines pattern]	VERY LOW	< 45.07	

Pradesh, Karnataka, Sikkim and Goa, Daman Diu were below the national average in 1961 (73.02%). In 1971, Punjab and Nagaland also fell into this category while Goa, Daman & Diu came out of this category showing its literacy rate above the national average (78.53%).

While comparing literacy for females in the age-group 15-35 residing in urban areas, shown in Figs. 15 & 16, a point to be noticed is that none of the States/Union Territories improved except A & N Islands. West Bengal, Manipur, Delhi and Pondicherry are shown to have come down from higher to lower categories from 1961 to 1971. However, Kerala, Assam and Tripura maintained their high literacy rates during the same period. Jammu & Kashmir, Rajasthan, Uttar Pradesh, Bihar, Madhya Pradesh, Orissa, Andhra Pradesh, Karnataka, Manipur, Sikkim and A & N Islands were below the national average in 1961 (45.59%). However, Manipur and A & N Islands managed to come out of this category showing their literacy rates above the national average in 1971 (56.67%).

The above analysis indicates that the relative literacy position of majority of the States/Union Territories did not undergo much change though they might have made significant progress during the period under review. Table III.1 and III.2 showing statewise literacy position in the age-groups 5-14 and 15-35 respectively indicate that the literacy rates

Table III.1

Literacy Rates in the age-group 5-14 by Sex
and Rural-Urban Residence, 1961

State/Union Territory	All Areas Persons	Males	Females	Rural Areas Males	Females	Urban Areas Males	Females
1	2	3	4	5	6	7	8
INDIA	29.54	38.01	20.33	33.43	14.55	59.45	47.75
STATES							
1. Andhra Pradesh	26.44	33.62	19.03	28.49	14.09	56.98	41.90
2. Assam, Meghalaya and Mizoram	34.68	42.17	26.64	40.18	24.05	67.61	61.04
3. Bihar	23.56	34.44	11.53	32.28	8.99	58.27	41.28
4. Gujarat	38.38	46.59	29.24	41.46	22.11	61.76	50.70
5. Jammu & Kashmir	13.20	18.81	7.04	15.12	2.88	35.62	25.60
6. Karnataka	31.19	39.61	22.68	34.33	16.33	57.86	45.46
7. Kerala	51.50	53.97	48.96	52.80	47.56	60.87	57.27
8. Madhya Pradesh	22.67	32.22	12.23	27.25	6.89	61.14	44.62
9. Maharashtra	36.96	45.99	27.39	39.68	18.43	63.40	53.12
10. Nagaland	21.53	25.72	10.07	23.62	14.96	70.24	63.81
11. Orissa	26.31	36.44	15.71	35.10	14.24	57.65	40.44
12. Punjab, Haryana, Himachal Pradesh & Chandigarh	31.68	40.19	21.95	36.01	15.37	59.10	51.30
13. Rajasthan	20.23	29.66	9.45	24.81	4.63	54.19	34.54
14. Sikkim	10.23	13.55	6.81	12.09	5.12	56.78	53.77
15. Tamil Nadu	41.62	50.76	32.26	44.61	23.54	67.09	55.57
16. Uttar Pradesh	21.59	31.08	10.62	28.15	6.63	50.66	37.20
17. West Bengal	29.04	35.30	22.26	28.95	14.44	57.16	49.82

Contd./42

Table III.1 contd.

1	2	3	4	5	6	7	8
UNNION TERRITORIES							
1. A & N Islands	39.74	46.14	32.95	40.78	27.11	64.24	52.10
2. Arunachal Pradesh	39.31	49.09	25.37	49.09	25.37	-	-
3. Dadra & Nagar Haveli	14.40	20.32	7.91	20.32	7.91	-	-
4. Delhi	66.36	71.71	60.26	56.36	20.02	73.94	65.84
5. Goa, Daman & Diu	30.93	35.30	26.38	32.35	23.23	50.95	43.33
6. Lakshadweep	25.26	32.39	17.45	32.39	17.45	-	-
7. Manipur	50.18	61.84	38.12	60.76	35.71	74.17	65.97
8. Pondichery	53.04	62.39	43.61	57.88	35.74	76.51	67.62
9. Tripura	16.44	20.39	12.23	17.56	8.81	48.15	45.06

** Excludes population of that portion of Arunachal Pradesh where all India Census Schedule was not canvassed 2,97,853 persons, 1,47,100 (males) and 1,50,753 (females).

contd./43

Table III.1 (contd.)

Literacy Rates in the age-group 5-14 by Sex
and Rural-Urban Residence, 1971

State/Union Territory	All Areas			Rural Areas		Urban Areas	
	Persons	Males	Females	Males	Females	Males	Females
1	2	3	4	5	6	7	8
INDIA	35.22	42.49	27.50	37.37	20.84	63.41	56.06
STATES							
1. Andhra Pradesh	29.10	34.84	23.16	28.89	16.69	60.30	50.68
2. Assam, Meghalaya and Mizoram	31.26	35.47	26.89	32.44	23.56	67.43	63.37
3. Bihar	23.01	31.68	13.22	28.98	9.92	56.52	44.41
4. Gujarat	41.52	48.67	33.59	42.89	25.21	64.62	57.01
5. Jammu & Kashmir	22.83	30.38	14.66	26.79	9.24	45.66	37.47
6. Karnataka	38.69	45.90	31.41	40.39	24.01	63.85	56.22
7. xxxx Kerala	71.09	72.32	69.83	71.57	68.91	76.40	74.90
8. Madhya Pradesh	25.89	34.12	16.90	28.72	10.23	62.08	52.21
9. Maharashtra	47.57	54.85	39.88	48.94	30.89	69.60	63.02
10. Nagaland	27.47	30.80	23.97	27.62	20.73	73.19	67.86
11. Orissa	29.48	37.47	21.26	35.40	18.86	61.59	50.79
12. Punjab, Haryana, Himachal Pradesh and Chandigarh	42.41	49.66	34.08	46.17	27.86	65.14	61.08
13. Rajasthan	23.72	33.38	12.70	28.27	6.53	57.77	42.39
14. Sikkim	10.40	13.75	7.35	8.61	3.24	60.07	53.78
15. Tamil Nadu	51.59	58.74	44.27	52.74	35.10	72.62	65.62
16. Uttar Pradesh	27.46	36.12	16.98	33.52	12.23	52.47	44.50
17. West Bengal	35.55	40.94	29.84	35.05	22.43	61.11	56.73

contd./44

Table III.1 (contd.)

1	2	3	4	5	6	7	8
UNION TERRITORIES							
1.A.N.Islands	52.99	57.13	48.53	52.19	42.35	76.95	73.31
2.Arunachal Pradesh	11.09	15.83	5.98	14.58	4.94	55.38	51.87
3.Dadra & Nagar Haveli	21.55	29.44	13.56	29.44	13.56	-	-
4.Delhi	66.19	68.99	63.01	61.06	38.21	70.05	66.12
5.Goa, Daman & Diu	54.36	57.61	50.59	55.64	47.91	63.72	60.50
6.Lakshadweep	48.53	54.40	41.94	54.40	41.94	-	-
7.Manipur	38.82	48.06	29.44	45.07	24.26	69.77	67.29
8.Pondichery	60.61	67.25	53.77	64.45	46.40	71.24	64.02
9.Tripura	33.51	37.40	29.51	34.00	25.52	69.68	66.51

Table III.2

Literacy Rates in the age-group 15-35 by Sex
and Rural-Urban Residence, 1961

State/Union Territory	All Areas			Rural Areas		Urban Areas	
	Persons	Males	Females	Males	Females	Males	Females
1	2	3	4	5	6	7	8
INDIA	32.40	46.84	17.55	39.60	11.37	73.80	50.41
STATES							
1. Andhra Pradesh	28.49	41.01	16.25	34.04	11.32	69.90	38.34
2. Assam, Meghalaya and Mizoram	36.04	50.60	19.98	47.49	16.90	75.11	60.31
3. Bihar	24.41	40.45	9.21	36.73	6.85	70.34	36.31
4. Gujarat	40.66	55.03	25.61	46.38	17.44	76.59	48.19
5. Jammu & Kashmir	15.30	24.35	5.71	18.68	1.97	50.56	25.38
6. Karnataka	33.65	48.65	18.60	40.95	11.53	71.11	41.87
7. Kerala	65.79	76.50	56.01	75.09	54.23	83.59	65.59
8. Madhya Pradesh	23.31	37.24	8.79	29.82	4.10	73.70	37.07
9. Maharashtra	41.14	58.83	22.48	43.29	11.90	77.51	49.36
10. Nagaland	27.85	38.88	16.50	35.39	14.53	76.11	55.51
11. Orissa	27.68	44.62	11.10	42.14	9.51	70.60	35.63
12. Punjab, Haryana Himachal Pradesh and Chandigarh	32.58	45.22	18.68	36.52	10.80	73.80	50.41
13. Rajasthan	19.77	30.85	7.89	23.13	3.47	68.01	30.79
14. Sikkim	16.52	26.33	5.24	24.74	4.00	54.76	33.42
15. Tamil Nadu	39.14	56.25	22.84	47.32	13.79	73.60	46.58
16. Uttar Pradesh	24.44	38.32	9.96	33.29	5.94	66.27	38.13
17. West Bengal	48.12	54.40	40.81	46.91	14.01	70.21	57.42

contd./46

Literacy Rates in the age-group 15-35 by Sex
and Rural-Urban Residence, 1961.

State/Union Territory	All Areas			Rural Areas		Urban Areas	
	Persons	Males	Females	Males	Females	Males	Females
1	2	3	4	5	6	7	8
<u>Union Territories</u>							
1. A & N Islands	43.87	53.01	24.65	48.04	19.21	69.50	43.66
2. Arunachal Pradesh**	49.99	54.28	27.56	54.28	27.56	-	-
3. Daman & Diu	12.84	21.19	4.80	21.19	4.80	-	-
4. Delhi	65.36	73.95	54.02	52.71	10.33	76.01	59.08
5. Goa, Daman & Diu	42.61	52.20	33.26	47.97	29.09	71.54	53.61
6. Lakshadweep	33.38	53.54	15.23	53.54	15.23	-	-
7. Manipur	37.19	60.92	15.09	57.95	12.99	87.95	37.25
8. Pondicherry	45.10	60.59	30.83	54.24	21.45	80.48	59.36
9. Tripura	30.61	45.82	15.83	41.25	11.35	82.93	61.28

** Excludes population of that portion of Arunachal Pradesh where all India Census schedule was not canvassed i.e., 2,97,853 persons, 1,47,100 (Males) and 1,50,753 (Females) in 1961.

contd./47

Table III. 2

Literacy Rates in the age-group 15-35 by Sex and Rural-Urban Residence, 1971.

INDIA	All Areas			Rural Areas		Urban Areas	
	Persons	Males	Females	Males	Females	Males	Females
	9	10	11	12	13	14	15
INDIA	42.03	56.71	26.76	49.73	18.80	78.53	56.67
<u>STATES</u>							
1. Andhra Pradesh	34.65	47.16	22.36	38.94	15.44	75.24	48.26
2. Assam, Meghalaya and Mizoram	43.27	55.66	29.81	52.18	25.62	79.40	69.01
3. Bihar	29.00	45.75	12.64	41.92	9.41	71.94	42.41
4. Gujarat	50.06	64.38	34.91	55.82	24.17	82.42	60.45
5. Jammu & Kashmir	28.80	42.46	13.61	36.34	6.69	65.21	41.68
6. Karnataka	43.23	57.23	28.98	48.94	19.66	77.59	55.04
7. Kerala	80.51	87.28	74.13	86.49	72.69	90.99	81.25
8. Madhya Pradesh	34.05	51.14	16.35	43.63	9.18	82.08	51.19
9. Maharashtra	56.10	72.97	38.05	65.37	25.68	84.19	63.33
10. Meghaland	46.24	58.20	31.62	54.43	28.50	72.81	65.92
11. Orissa	37.28	54.53	20.40	51.68	17.68	78.03	48.81
12. Punjab, Haryana, Himachal Pradesh & Chandigarh	45.03	58.25	30.48	52.25	21.24	77.75	62.84
13. Rajasthan	27.83	42.30	12.42	33.94	5.91	75.66	41.83
14. Sikkim	26.33	36.27	13.34	32.66	10.36	64.70	44.58
15. Tamil Nadu	51.49	67.58	35.74	59.72	24.75	83.23	59.25
16. Uttar Pradesh	31.63	47.21	14.90	42.61	9.77	70.08	45.57
17. West Bengal	47.18	59.81	32.72	53.32	22.16	73.88	62.76

Table III.2

Literacy Rates in the age-group 15-35 by Sex
and Rural-Urban Residence, 1971.

	All Areas			Rural Areas		Urban Areas	
	Persons	Males	Females	Males	Females	Males	Females
	9	10	11	12	13	14	15
<u>Union Territories</u>							
1. A & N. Islands	56.34	64.64	40.64	69.16	33.77	76.51	62.69
2. Arunachal Pradesh	20.08	31.28	6.17	28.20	5.00	70.96	38.02
3. Dadra & Nagar Haveli	23.76	36.99	11.29	36.99	11.29	-	-
4. Delhi	71.88	80.00	61.46	73.24	24.90	80.65	65.22
5. Goa, Daman & Diu	61.58	73.66	48.53	69.95	42.98	81.39	62.85
6. Lakshadweep	65.57	83.86	48.49	83.86	48.49	-	-
7. Manipur	50.18	70.26	30.32	67.13	25.44	89.75	61.16
8. Pondicherry	59.88	74.60	45.91	67.12	33.17	84.05	62.70
9. Tripura	49.91	65.99	33.81	62.32	27.84	90.51	76.74

among rural dwellers are much less than that of the city people. The disparity between males and females is also too large. The comparison of rural-urban literacy rates in these two age-groups indicates that female literacy in 5-14 age-group is more than that of 15-35 in majority of the States and union territories at both the points of time. The situation is just the opposite in case of males. It calls for more literacy programmes particularly for the school-going population so as to stop this inflow of illiterates into adult ages.

To examine the variations in the literacy rates over the period 1961-71 an index of growth rate of literacy rate²² has been used. This index takes care of the increase in population and literacy simultaneously. While interpreting this index it may be noted that the percentage of literacy in the base period appears in the denominator. A high literacy rate in 1961 would depress the growth rate significantly giving in general a low growth rate. On the contrary, when the base year literacy rate is low the result would be just the opposite. The basic assumption for using this growth rate is that at the low level it is more important to increase the literacy rate; hence, even a small change should be considered significant. Similarly, a big change at the

22.

$$GR = \frac{LR_2 - LR_1}{LR_1} \times 100 \quad \text{where GR is growth rate of literacy}$$

rate. LR_1 and LR_2 are percentage of literacy to the corresponding population in the age-group x to $x + k$ in 1961 and 1971 respectively.

higher base level may be considered as not very significant.

Judging from the growth rate of literacy rates in the age-group 5-14 (Table III.3) , it is observed that the same has increased more among females than males both in rural and urban areas. It indicates that female participation in education is increasing which is a welcome sign. It may be attributed to opening of more schools for girls and greater awareness of the need for educating them.

It is surprising to note that the rate of growth of literacy rate in the rural areas over the period 1961-71 in this young age-group has been negative in certain States viz; Assam (both males and females), Bihar (males), Manipur (males and females) and Sikkim (males and females). This seems basically due to the lack of development of educational facilities commensurate with the population growth. This is a serious matter because, in turn, it implies that a larger number of illiterates will be moving from the 5-14 to the age-group 15-35 in the years to come in these States. This negates the whole programmes and policies of educational development particularly during the development decade of the 60's.

It is heartening to note that the rate of growth of literacy rate in Jammu & Kashmir for both males and females has been the highest. This may partly be due to the fact that the 1961 literacy rates in that State were very low. But it is also believed that the State has made very significant efforts for enrolling young children in the schools by providing

Table III.3

Growth Rate of Literacy Rate in the age-group 5-14 by Sex and Rural-Urban Residence, 1961 and 1971

State/Union Territories	All Areas			Rural Areas			Urban Areas		
	Persons	males	Females	Persons	Males	Females	Persons	Males	Females
1	2	3	4	5	6	7	8	9	10
STATES									
1. Andhra Pradesh	10.06	3.63	21.70	6.96	1.40	18.45	11.49	5.83	20.95
2. Assam	-9.86	-15.89	0.94	-13.34	-18.52	-2.04	1.50	-0.27	3.82
3. Bihar	-2.22	-8.01	14.66	-5.61	-10.22	10.34	0.97	-3.00	7.58
4. Gujarat	8.18	4.46	14.88	6.88	3.45	14.02	7.88	4.63	35.35
5. Jammu & Kashmir	72.95	61.51	108.24	97.53	77.18	220.83	35.38	28.19	46.37
6. Karnataka	24.05	15.88	38.49	27.06	17.65	47.03	16.05	10.35	23.67
7. Kerala	38.04	34.00	42.63	39.91	35.55	44.89	28.03	25.51	30.78
8. Madhya Pradesh	14.20	5.90	38.18	13.55	5.39	48.48	7.53	1.54	17.01
9. Maharashtra	28.71	19.27	45.60	36.92	23.34	67.61	13.61	9.78	18.64
10. Orissa	12.05	2.83	35.33	9.45	0.85	32.44	13.92	6.83	25.59
11. Punjab	33.87	23.56	55.26	42.67	28.21	81.26	12.27	10.22	19.06
12. Rajasthan	17.25	12.54	34.39	17.75	13.95	41.04	12.12	6.61	22.73
13. Tamil Nadu	23.95	15.72	37.23	28.79	18.22	49.11	12.65	8.24	19.09
14. Uttar Pradesh	27.19	16.22	59.89	31.76	19.08	84.46	9.73	3.57	19.62
15. West Bengal	22.42	15.98	34.05	31.51	21.07	55.33	9.99	6.91	13.87

Contd./52

1	2	3	4	5	6	7	8	9	10
<u>Union Territories</u>									
1. A & N Islands	33.34	23.82	47.28	38.86	27.98	56.22	29.03	19.79	40.71
2. Arunachal Pradesh	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	-	-	-
3. Dadra & Nagar Haveli	49.65	44.88	71.43	49.65	44.88	71.43	-	-	-
4. Delhi	-0.26	-3.79	4.56	27.48	8.34	90.86	-2.75	-5.26	0.43
5. Goa, Daman & Diu	75.75	63.20	93.29	85.98	71.99	106.24	31.54	25.06	39.63
6. Lakshadweep	92.12	67.95	140.34	92.12	67.95	140.34	-	-	-
7. Manipur	-22.64	-22.28	-22.77	-28.28	-25.82	-32.06	-2.32	-5.93	5.03
8. Nagaland	27.59	19.75	40.42	24.99	16.93	38.57	5.09	4.20	6.35
9. Pondicherry	14.27	7.79	23.30	18.55	11.35	29.83	-6.09	-6.89	-5.32
10. Sikkim	1.66	1.48	7.93	-33.37	-28.78	-36.72	3.35	5.79	0.02
11. Tripura	103.83	83.42	141.29	123.61	93.62	189.67	46.04	44.71	47.60
INDIA	19.23	11.26	35.27	20.93	11.79	43.23	11.15	6.66	17.40

Table III.4

Growth Rate of Literacy Rate in the age group 15-35 by Sex
and Rural-Urban Residence, 1961 & 1971

State/Union Territories	All Areas			Rural Areas			Urban Areas		
	Persons 2	Males 3	Females 4	Persons 5	Male 6	Females 7	Persons 8	Males 9	Females 10
1. <u>STATES</u> Andhra Pradesh	21.62	15.00	36.37	20.03	14.39	36.40	14.09	7.64	25.87
2. Assam	20.14	10.00	49.20	20.34	9.88	51.60	7.76	5.71	14.43
3. Bihar	18.80	13.10	37.24	19.26	14.13	37.37	5.99	2.27	16.80
4. Gujarat	23.12	16.99	36.31	25.31	20.35	38.59	14.17	7.61	25.44
5. Jammu & Kashmir	88.24	74.37	138.35	111.55	94.54	239.59	39.67	28.98	64.22
6. Karnataka	28.47	17.64	55.81	31.22	19.51	70.51	17.07	9.11	31.45
7. Kerala	22.37	14.09	32.35	23.78	15.18	34.04	15.37	8.85	23.50
8. Madhya Pradesh	46.07	37.33	86.01	55.04	46.31	123.90	18.98	11.37	38.09
9. Maharashtra	36.36	24.04	69.26	52.47	35.37	115.80	14.79	8.62	28.40
10. Orissa	34.68	22.43	83.78	34.58	22.64	85.91	16.15	10.52	36.99
11. Punjab	38.21	28.81	63.17	56.13	43.07	99.44	11.61	5.35	24.66
12. Rajasthan	40.77	37.12	57.41	48.64	46.74	70.32	18.74	11.25	35.86
13. Tamil Nadu	31.55	20.14	56.48	39.36	26.20	79.48	14.31	5.89	27.20
14. Uttar Pradesh	29.42	23.52	49.60	34.38	28.00	64.48	10.04	5.75	19.51
15. West Bengal	- 1.95	9.94	-19.82	24.44	13.66	58.17	5.99	5.23	9.30

Contd./54

Table III.4 (contd.)

U	1	2	3	4	5	6	7	8	9	10
<u>Union Territories</u>										
1. A & N Islands		28.42	21.94	64.87	31.18	25.23	75.79	17.54	10.09	43.59
2. Arunachal Pradesh	£		£	£	£	£	£	-	-	-
3. Dadra & Nagar Haveli		85.05	74.56	135.21	85.05	74.56	135.21	-	-	-
4. Delhi		9.98	8.18	13.77	56.46	38.95	141.05	7.49	6.10	10.39
5. Goa, Daman & Diu		44.52	41.11	45.91	47.42	45.82	47.75	16.66	13.77	17.24
6. Lakshadweep		96.43	56.63	218.38	96.43	56.63	218.38	-	-	-
7. Manipur		34.93	15.33	100.93	33.76	15.84	95.84	18.98	2.05	64.19
8. Nagaland		66.03	49.69	91.64	68.06	53.80	96.15	3.24	-4.34	18.67
9. Pondicherry		32.77	23.12	148.91	33.03	23.75	54.64	4.56	4.44	5.63
10. Sikkim		59.38	37.15	154.58	52.03	32.01	159.00	24.42	18.32	33.39
11. Tripura		63.05	44.02	113.96	73.65	51.08	145.29	14.82	9.14	25.23
INDIA		29.72	24.07	52.48	34.90	25.49	65.35	13.00	7.55	24.30

£ figures in respect of Arunachal Pradesh are not comparable because 1961 census, all India Census schedule was not canvassed in certain portion of North East Frontier Agency.

necessary facilities in the rural areas. Significant progress in the rural literacy has also been made among females in Uttar Pradesh and in Tripura, Goa, Daman and Diu and Dadra & Nagar Haveli among males. Other States and Union Territories have shown varying magnitudes of the growth of literacy rate over this decade.

The growth rate of literacy rate for males in the urban population of Assam and Bihar, again, turns out to be negative as in the case of rural areas. On the other hand, Jammu & Kashmir has shown highest growth in literacy, as it was in the case of its rural population.

Among Union Territories, Tripura holds the first position followed by Goa, Daman & Diu among both the sexes. Here, Pondicherry has slid into the category of negative growth rate of literacy rates. The negative growth in Delhi is not very significant because in 1971 after decline the rate is as high as 70.05 per cent. Reasons for negative growth in literacy among males in Manipur and among both the sexes in Pondicherry may be because of the slackening of the educational programme which had a high tempo in the beginning.

As in the younger age-group growth rate of literacy rates in the 15-35 age-group (Table III.4) is more among females than males in both rural and urban areas. It is a welcome sign that there is a positive growth of literacy throughout the country ^{contrary} to that of the children in the age-group 5-14 in rural

as well as in urban areas.

In rural areas, highest growth of literacy rate in respect of both the sexes has been registered in the State of Jammu & Kashmir. Among Union Territories, Lakshadweep has shown highest growth among males and Dadra & Nagar Haveli among females.

In urban areas, the same tendency holds good for Jammu & Kashmir showing highest growth among both the sexes. Sikkim has shown highest growth among males whereas Manipur among females.

From the above analysis it may be inferred that the educational programmes were more successfully implemented in the case of females as compared to the males in both the age-groups in urban as well as in rural areas during the decade 1961-71. Census figures reveal that there is no State/ Union Territory in the country where 15-35 years population is cent per cent literate though the dimension of the problem of illiterates varies from State to State. This stresses the need for an adult education programme to be operative in all parts of the country.

III.2 Disparity in the Progress of Education of Males and Females in the Formal and Social Education Systems :

Having discussed the progress of literacy in the 5-14 and 15-35 age-groups from 1961 to 1971 it would be useful

to look at the progress of enrolment of males and females in the educational system. Because, it is through this enrolment - formal or non-formal - that the population attains its literacy level. Since there have generally been social hindrances in educating girls in the various parts of the country and since the facilities for their education have been generally lacking it would be interesting to see whether the disparity between males and females in the formal education has increased or declined over the development decade of the 60's. Similarly, it would be interesting to analyse this pattern from the view point of social education.

The disparity index used in the present study is a slight variation of the index used by Sopher for measuring disparity in the literacy rate over time between locals and non-locals; whites and coloured population. Sopher suggests the following index:

$$D_s = \log\left(\frac{x_2}{x_1}\right) + \log\left(\frac{100-x_1}{100-x_2}\right) \quad 23$$

The index, however, has certain technical problems. The significance of a given gap between two observations x and $x + k$ decreases as x increases only upto a certain limit. Beyond that limit which in this case is $50 - k/2$, the significance

23. Prof. Sopher (1974) - Measuring the Disparity - Professional Geographer, vol. 26, No.4, November, pp.389-392.

24

of the given gap starts increasing. Thus, the disparity between two observations 40 and 30 would be the same as that between 70 and 60 which does not seem to be acceptable. In view of the above, the second term of D_s has been dropped. The modified index then becomes $D_s = \log\left(\frac{x_2}{x_1}\right)$. This would cause the disparity to decrease continuously at higher levels. The disparity between 70 and 60 would, therefore, be less than between 40 and 30 as per this modified index. In the context of the present study the modified index has been considered more appropriate.

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For working out the Disparity Index between males and females for formal education and social education in 1961 and 1971, percentage of enrolment in all the recognised institutions except in institutions for social education to the population (excluding 0-4) in the case of formal education and percentage of enrolment relating to social education to the population in ages 15 years and beyond. ²⁶ have been computed

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24. Amitabh Kundu - Absolute^{ness} and relativity in the measurement of inequality and poverty - Journal of Asian Studies Forthcoming issue.
25. $D_s = \log\left(\frac{x_2}{x_1}\right)$ where x_2 and x_1 are percentages of enrolment to the corresponding population for males and females respectively in the case of formal education and social education in 1961 and 1971 separately.
26. Generally, formal education relates to the population of the age-group 5-25 and social education to 15-45. However, in this exercise, since the criteria (relating to population age-groups) used in the denominator are uniform in all the States and Union territories, the analysis of disparity index will not be different from that worked out with other age-groups.

for 1961 and 1971 for all areas only.

From the disparity indices for formal education (Table III.5) one can infer that between males and females, the same has gone down throughout the country indicating that female population has been covered much more effectively during the sixties. For the social education, it is noticed that corresponding index has gone down in most of the States. The States where the disparity index has gone up are Andhra Pradesh, Orissa, Rajasthan and Uttar Pradesh. It, thus, appears that even in adult education programmes the trend is towards the decline of male-female disparities.

A point to be noted here is that the disparity both in 1961 and 1971 in adult education is considerably higher than the corresponding figures for the formal education. This is evidently due to greater reluctance among the adult females to get educated.

From the above analysis the following inference can be drawn that has important socio-economic significance :

Large disparity exists in literacy rates between rural and urban areas.

The relative literacy position of majority of the States/Union Territories in rural as well as in urban areas among both the sexes remained the same at both the points of time viz; 1961 and 1971.

27. This exercise has not been done for rural and urban areas separately on account of non-availability of the break-up of enrolment data into rural and urban areas.

Table III.5

Disparity between males and females in
Formal education and in Social (adult)
education, 1961 and 1971.

State/Union Territory 1	Formal Education		Social (adult) Education	
	1960-61 2	1970 - 71 3	1960 - 61 4	1970 - 71 5
INDIA	0.337	0.245	0.569	0.097
1. Andhra Pradesh	0.267	0.222	1.204	1.222
2. Assam, Meghalaya and Mizoram	0.223	0.156	0.477	0.247
3. Bihar	0.606	0.531	0.858	N.A.
4. Gujarat	0.271	0.211	0.646	0.151
5. Jammu & Kashmir	0.452	0.308	N.A.	N.A.
6. Karnataka	0.260	0.174	1.071	0.829
7. Kerala	0.100	0.073	N.A.	N.A.
8. Madhya Pradesh	0.548	0.410	0.989	0.544
9. Maharashtra	0.256	0.205	0.262	-0.031
10. Manipur	0.351	0.209	0.704	0.329
11. Nagaland	0.215	0.106	0.477	0.106
12. Orissa	0.388	0.336	0.655	1.230
13. Punjab, Haryana, Himachal Pradesh and Chandigarh	0.348	0.235	-0.426	-0.125
14. Rajasthan	0.620	0.548	0.988	1.190
15. Tamil Nadu	0.249	0.166	0.699	0.699
16. Tripura	0.237	0.158	0.456	-0.008
17. Uttar Pradesh	0.582	0.268	0.699	1.301
18. West Bengal.	0.251	0.185	0.659	0.637

1	2	3	4	5
Union Territories				
1. A & N Islands	-0.015	-0.125 ⁰⁷⁵	0.759	0.101
2. Arunachal Pradesh	0.227	0.473	N.A.	N.A.
3. Dadra & Nagar Haveli	N.A.	0.367	N.A.	*
4. Delhi	0.053	0.004	-0.380	*
5. Goa, Daman & Diu	N.A.	0.134	N.A.	0.301
6. Lakshadweep	0.282	0.202	0.968	0.216
7. Pondicherry	0.256	0.185	0.859	0.510

N.A. Not Available

* In these union territories, enrolment for females is nil and hence the disparity index becomes indeterminate.

The overall literacy level among females in the age-group 15-35 is very poor.

Female children in general and ^{female} adults as a consequence thereof are the relatively more neglected segment of society and this is only through adult education programmes, female illiteracy level can be improved.

Children in the age-group 5-14 and adults in the age-group 15-35 residing in rural as well as urban areas of Jammu and Kashmir showed highest growth of literacy rate indicating a significant improvement in literacy in this State over the period 1961-71. Such a trend has also been noticed in Tripura in the case of 5-14 age-group.

There is a large disparity in the literacy rates among males and females. The trend is towards decreasing this disparity. However, growth in literacy rate is more among females than males in younger as well as in adult age-groups.

The disparity between males and females has gone down in formal as well as in social education from 1961 to 1971. But the disparity in social education when compared to formal education remained higher at both the points of time. It indicates the need for emphasis on adult education.

Chapter IV

**ESTIMATES OF LITERATES IN THE AGE-GROUP 15-35
IN VARIOUS QUINQUENNIA**

It was indicated in Chapter I that one of the main objectives of the study is to understand the impact of National Adult Education Programme on literacy rates, particularly in the age-group 15-35 taking into consideration the factors of population growth and that of enrolment in the age-group 6-14. This would be possible only when projection of literacy rates for future dates are obtained under the specified conditions. Keeping this objective in view, this chapter presents the estimates of literacy rates of India's population and of its States and Union Territories in the age-group 15-35 for the years 1976, 1981, 1986 and 1991.

In such an exercise it would be more useful to work out the estimates of literate population in different quinquennia under alternative assumptions of population growth. However, this could not be undertaken for several reasons : Firstly, the official population projections at the State level are available under one assumption only. Secondly, although one could prepare population projections at the State level under alternative assumptions of population growth and then estimate the literate population for each of them, this work could not have been completed within the limited time available to the present researcher. In what follows we, therefore, present the estimate of literates in the age-group 15-35 on the basis of official population projections only.

Similarly, the trend of growth of enrolment in formal education system can be worked out under alternative assumptions.

But as the target date for achieving universal education in the age-group 6-14 has constantly changed, we have preferred to use the trend in enrolment in the age-group 6-11 to work out the number of literates through formal education system in the age-group 10-14 and have preferred not to make any alternative assumptions of enrolment growth.

Finally, with regard to adult education programme, we have gone by the official version since our basic objective has been to analyse its impact on the literacy rate in the age-group 15-35.

Methodology:

The literate persons at any particular point in time t_1 are constituted of survivors of literates at time t_0 and those who become literate through normal school system between t_0 and t_1 and through the adult literacy programmes during the same period. An account should be made of persons becoming literate through individual efforts also. Since reliable estimate of such persons may not be possible hence it has been omitted from the present projections. To this extent literacy figures will be under estimates. Since the children in the age-group 10-14 mostly become literate through the normal school system, estimates of this age-group at the end of each quinquennium have been obtained first. The estimate of surviving literates and the new adult literates in 15-35 age-group are added to obtain the total literates in this age-group in each quinquennium. Literates in age-group 15-19

(part of the age-group 15-35) are the survivors of children in the age-group 10-14 i.e., coming from school system in the previous quinquennium.

IV.1 Estimate of Literates in the Age-Group 10-14:

Population in this age-group can be divided into four categories viz. (1) persons in the school system but still illiterate (2) persons in the school system but literate (3) drop-outs from the school system after attaining literacy and (4) persons outside the school system and illiterate.

Attainment of permanent literacy is considered to be the main objective of primary education and certain researchers have concluded that, 'as a minimum, for⁴⁷ years of schooling is necessary for every child to ensure the retention of effective literacy in his later life. Gadgil^{28 29} conducted a project on literacy. He developed a test of reading and writing by which the lapse into illiteracy could be measured. One of the significant findings of his study was that it was necessary for a pupil to complete four-year course at school in order to ensure the retention of literacy throughout his later life. These investigations were carried out more than 30 years ago.

28. Council for Social Development, 1968.

29. Gadgil, 1945 - Non-Formal Education, A Trend Report by M.N. Palsane & Pилоо Buch, Chapter 18 pages 534-539 of Second Survey of Research in Education (1972-1978) - Editor M.B. Buch - Society for Educational Research and Development, Baroda.

During the past three decades or so, many more influences helpful to retention of literacy, e.g. increased, newspapers' circulation, radio, films and literature for neo-literates etc. have become available and begun to show their impact on permanent retention of literacy among the masses. In view of this, it can be assumed that all those persons who leave the school after completing grade II are literate. Gadgil and Dandekar have concluded that among those persons who leave school from III standard, 87.8 per cent retain literacy, of the census type. ³⁰ Rege ³¹ has also concluded that the achievement of literacy of the census level is attained after the completion of the second standard of primary education.

Further, some of the children repeat in grade II for one year and beyond. Those who repeat in grade II for more than two years can safely be assumed as good as those who pass grade II. Therefore, all those children who are repeating in grade II for more than two years are also literate. But, this group of children is assumed to be negligible after 1971.

From the available enrolment data for 1966, separate computations for boys and girls who are in school but below grade III - illiterate - and who are in school in grade III and above - literate - have been made in the age-group 10-14.

30. Gadgil and Dandekar. Primary Education in Satara District: Report of two investigations. Poona, Gokhale Institute of Politics and Economics, 1955. p.34

31. K.B.Rege - Magnitude of illiteracy in India, 1961-1981 - National Council of Educational Research and Training.

The difference between total literates and those literates who continue to remain in schools gives the estimate of literates outside the school system. Similarly, estimates of illiterates outside the school system have been obtained for 1966.

From the available information on enrolment in different grades and the repeaters in grade II, similar computations for boys and girls separately in the age-group 10-14 have been done in 1971 also. The literate drop-outs in 1971 in the age-group 10-14 in India are obtained in Table IV.1 (page 70)³². The procedure followed in estimating the literate persons in this age-group is as below :

Columns 1 and 2 start with the years and the age-groups chosen for analysis of population in that year and move in the backward direction so as to follow the same age Cohort upto 1967. Columns 3 and 5 give the enrolment in schools in grade II + and grade III + respectively for the corresponding age-groups.

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32. Similar Tables have been worked out for each State and the Union Territory of Delhi. However, these detailed tables have not been included in this dissertation to save space. These can be made available to any researcher interested in this work.

This exercise could not be done for Nagaland State and Union Territories of A & N Islands, Arunachal Pradesh, Dadra and Nagar Haveli, Goa, Daman & Diu Lakshadweep and Pondicherry due to certain discrepancies in enrolment and population data. In case of Nagaland, number of literates in 10-14 age-group as reported in the 1971 census, is less than that of enrolment in grades III and above even in 1966 and 1971 both among males and females.

Column 4 gives enrolment in grade II. Column 6 gives the difference in enrolment of grade II₄ in a year from enrolment in grade III₄ of the same age Cohort in the subsequent year. These are the persons who (i) fail in grade II but join the same grade in the subsequent year(s) (ii) fail in grade II onward and drop-out (iii) pass grade II onward and drop-out or drop-out from different grades before completing the same. Out of these persons if the number of repeaters in grade II in the subsequent year is subtracted (here number of repeaters are those who repeat in grade II for less than two years), one gets the number of those persons who leave the school system after passing grade II and above or after failing in grade III and above and dropping-out or repeating in grade II for more than two years. All these persons are literate persons. In the residual figure there may be a very small proportion of those who drop-out of the school system before completing grade II, but it is not possible to estimate their number and hence they have also been regarded as literate. From the available information the number of repeaters in grade II in the subsequent year(s) has been worked out. For this, percentages of repeaters in grade II for less than two years to the enrolment in grade II in the age-group 10-14 have been worked out for the year 1970-71 and it has been assumed that the same proportions will be applicable in working out the number of repeaters in grade II in the preceding years

in the respective age cohorts during the quinquennium 1967-71. These figures are given in column 7. The difference between column 6 and column 7, given in column 8, then leads to an estimate of literate drop-outs in the age-group 10-14 in 1971.

Procedure and Assumptions underlying Estimates of Literates from 1971-1991 in the age-group 10-14:

The estimates of Literate population in the age-group 10-14 from 1966-1991 are presented in Table IV.2 for the nation as a whole. The first two rows of each block depict the situation as obtained in 1966 and 1971 for boys and girls separately. The estimates of children not in school but literate for 1971 (column 5) have been brought from column 8 of Table IV. 1. The corresponding figures for 1966 are the residual of total literates (column 12) minus children in school in grade III and above (column 4) minus number of repeaters in grade II for more than two years (column 11). Column 6 gives the number of children not in school and illiterate which is obtained by subtracting column 3 showing number of children in school but below grade III and column 12 showing total literate children, from the population in ages 10-14 given in column 2. Column 10 gives the percentage of repeaters in grade II for more than two years. This percentage relates to all age-groups but on account

Table IV.1

Estimate of Literate drop-outs in the age-group 10-14
in India, 1971

Year	Age Group	Enrolment in grade II and above	Enrolment in grade II	Enrolment in grade III and above	Difference in enrolment in grade II \downarrow in a year from enrolment in grade III \downarrow in the subsequent year	Repeaters in Grade II $\text{\textcircled{2}}$ 14.46% for boys and 14.95% girls respectively This is for more than one year and less than two years 7	Literate drop-outs
1	2	3	4	5	6	7	8
	<u>Boys</u>						
1971	10-14	1,72,77,280	7,77,757	1,64,99,523	27,51,593	1,12,464	26,39,129
1970	9-13	1,92,51,116	16,31,383	1,76,19,733	28,32,301	2,35,898	25,96,403
1969	8-12	2,04,52,034	33,02,396	1,71,49,638	30,55,182	4,77,526	25,77,656
1968	7-11	2,02,04,820	52,76,416	1,49,28,404	26,35,791	7,62,970	18,72,821
1967	6-10	1,75,64,195	64,88,090	1,10,76,105	-	9,38,178	-
							<u>96,86,009</u>
	<u>Girls</u>						
1971	10-14	79,34,722	4,40,377	74,94,305	18,17,365	66,013	17,51,323
1970	9-13	93,11,710	9,51,482	83,60,228	21,99,720	1,42,627	20,57,093
1969	8-12	1,05,59,948	18,88,888	86,71,060	22,58,356	2,83,144	19,75,212
1968	7-11	1,09,29,416	21,02,703	78,26,713	19,73,750	4,65,095	15,08,655
1967	6-10	98,00,463	39,14,460	58,86,003	-	58,6,778	-
							<u>72,92,312</u>

Table IV.2

Estimate of Literate population in the age-group 10-14 in India, 1966-91

Year	Total population	Children in School but below grade III	Children in school in grade III and above	Children not in school but literate	Children not in school and illiterate
1	2	3	4	5	6
<u>Boys</u>					
1966	2,90,81,000	11,04,096	1,44,54,950	35,67,636	98,72,190
1971	3,37,39,000	11,21,348	1,64,99,523	96,86,009	63,99,532
1976	3,88,55,000	7,96,528			29,64,637
1981	4,24,49,000				0
1986	4,48,58,000				0
1991	14,57,47,000				0
<u>Girls</u>					
1966	2,79,47,000	6,84,835	61,21,012	32,87,505	1,78,32,946
1971	3,11,84,000	66,3,744	74,94,345	72,92,312	15,714,443
1976	3,60,51,000	4,72,268			1,34,47,023
1981	4,01,14,000	0			98,43,976
1986	4,20,05,000	0			50,82,605
1991	4,30,35,000	0			0

contd./72

Table IV.2 (contd.)

72

Year	Percentage of children in school but below grade III	Percentage of children not in school and illiterate	Children in grade II	Percentage of Repeaters in grade II for more than 2 years	No. of Repeaters in grade II for more than 2 years	Total literate children
	7	8	9	10	11	12
	<u>Boys</u>					
1966	3.80	34.01	7,54,1.82	4.26	32,128	1,80,54,714
1971	3.32	18.97	7,77,757	4.19	32,588	2,62,18,120
1976	2.05(A)	7.63 ^(B)				3,50,93,835
1981	0.00	0.00				4,24,49,000
1986	0.00	0.00				4,48,58,000
1991	0.00	0.00				4,57,47,000
	<u>Girls</u>					
1966	2.45	63.81	4,38,608	4.72	20,702	94,29,219
1971	2.13	50.39	4,40,377	4.35	19,156	1,48,05,813
1976	1.31 (C)	37.30(D)				2,21,31,709
1981	0.00	24,54(D)				3,02,70,024
1986	0.00	12.10 (D)				3,69,22,395
1991	0.00	0.00				4,30,35,000

contd./73

Table IV.2 (contd.)

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- (A) Obtained by fitting the Curve $y = 3.80 - 0.087x - 0.393x^2$ to the data for the years 1966, 1971 and 1981.
- (B) Obtained by fitting the curve $y = 34.01 - 16.89x + 1.85x^2$ to the data for the years 1966, 1971 and 1981.
- (C) obtained by fitting the curve $y = 2.45 - 0.072x - 0.248x^2$ to the data for the years 1966, 1971, 1981
- (D) Obtained by fitting the curve $y = 63.81 - 13.5845x + 0.1645x^2$ to the data for the years 1966, 1971 and 1991

of non-availability of age-wise data on stagnation in grade II with different durations, the same proportions have been assumed to operate on enrolment in grade II in 10-14 age-group also. No doubt, percentage of repeaters in this age-group in grade II for more than two years must be less than that of the younger ages. To this extent number of literates will be overestimated. Since their number is negligible, the assumption will not lead to any hazardous results regarding estimate of number of literates in this age-group. From the Statewise trend regarding percentage of repeaters in grade II for more than two years, it has been noticed that the proportions got reduced from 1966 to 1971 and, therefore, it has also been assumed that these percentages will be reduced to zero by 1976 throughout the country. Column 11 gives the number of repeaters in grade II for more than two years. These figures have been obtained by applying the percentages given in column 10 to the enrolment figures in grade II given in column 9.

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On the basis of Enrolment Trends in States, one can safely make assumptions that 100 per cent population in 6-11 age-group will be covered in classes I-V in the near future. Of course, it depends upon the administrative policy

33. Ministry of Education & Social Welfare, Enrolment Trends in States - 1968-69 - 1978-79, Delhi, Controller of Publications, 1979. Statement VI of this brochure gives the percentage of enrolment in classes I-V to the population of corresponding age-group (6-11)years, pp.20-22.

of the Government as how soon to achieve 100 per cent coverage of this segment of population in the schools. But on the basis of the past trend it is evident that no miracle is expected in the near future. To be on the safe side, linear increase in trends of percentage of enrolment in classes I - V to the population of corresponding age-group (6-11 years) has been assumed. This means that 100 per cent literacy in 6-11 age-group in a quinquennium will definitely lead to 100 per cent literacy in the age-group 10-14 in the next quinquennium.

The above assumption is subject to another assumption implied in the present study that enrolment of children below the age of 6 will be eliminated gradually and whatever little enrolment there will be, it will be limited to nursery/ K.G. classes only. Thus, for the present purpose, it is assumed that below 6 year old children will be out of primary education. It leads to the further assumption that children aged 6,7,8,9 and 10 will be in classes I,II,III,IV and V respectively. With the achievement of 100 per cent enrolment in 6-11 age-group, if there is no drop-out, all the 6 years old children in class I in a quinquennium, after passing through mortality experience, will be in class VI in the next quinquennium and will be 11 years old. The break-up of assumptions relating to India, States and Delhi is as follows :

Assumptions - India:

For the nation as a whole, it has been noticed that

100 per cent population in the age-group 6-11 was enrolled by 1976 in the case of males and in the case of females the parity with males will be achieved by 1986 under the assumption of linear increase. It means that there will be no male child in the age-group 10-14 in 1981 who will be in school but below grade III. This will also imply that at that time no male child in 10-14 age-group will be left illiterate. Hence, the percentage of boys in school but below grade III (column 7) and percentage of boys outside the school system and illiterate (column 8) become zero from 1981 onwards. Taking the proportions of boys in school but below grade III for 1966, 1971 and 1981, a second degree curve viz; $y = 3.80 - 0.087x - 0.393x^2$ has been fitted and the proportion of male children in this age-group obtained for 1976. By fitting another second degree curve viz; $y = 34.01 - 16.89x + 1.85x^2$ to the proportions of male children not in school and illiterate in 1966, 1971 and 1981, estimate of proportions for 1976 has been obtained. These estimates of proportions then give the number of boys in the age-group 10-14 who are in school but below grade III and those who are not in school and illiterate.

In the case of girls, it has been assumed that 100 per cent enrolment in the age-group 6-11 will be achieved in 1986. Hence, there will be no female child in the age-group 10-14 in 1991, who will be out of school and illiterate.

Further, it may be mentioned that keeping in view the performance of children in school, administrative policy

and the age-group 10-14 which is comparatively matured as compared to younger ages in schools, it has also been assumed that there will not be any child either male or female in the age-group 10-14 in 1981 who will be enrolled below grade III.

With these assumptions a second degree curve viz;

$y = 2.45 - 0.072x - 0.248x^2$ has been fitted to the percentages of children who are in school but below grade III in 1966,

1971 and 1981. This curve gives the percentage and the number for 1976. Similarly, another second degree curve viz;

$y = 63.81 - 13.5845x + 0.1645x^2$ has been fitted to the percentages of girls not in school and illiterate in 1966, 1971 and 1991 to estimate respective percentages and the number for the intervening quinquennia. Sexwise estimates of Literate children in the age-group 10-14 (given in col.12) have been obtained for different quinquennia by subtracting the number of those who are in school but below grade III (col.3) and of those who are outside the school system and illiterate (col.6) from the available estimates of total population of ages 10-14. According to the above assumptions, all males in the age-group 10-14 from 1981 onward are treated as literate but all females in this age group could be treated as literate only in 1991.

Assumptions - States and Union Territory of Delhi:

As has been mentioned earlier, the percentage of repeaters in grade II for more than two years will become

zero by 1976 in India, States and Union Territory of Delhi among both the sexes. Assumptions regarding the percentage of male children in School but below grade III being zero by 1981 is not uniform in States and Delhi. In cases of Assam, Kerala and Manipur among both the sexes and in cases of Maharashtra and Tamil Nadu among males only, 100 per cent literacy in 6-11 age-group has already been achieved in 1971 indicating that there was no child who was in school and below grade III in 10-14 age-group in 1976. Hence percentage of children in school but below grade III in the above cases has been taken as zero in 1976 and in rest of the States and Delhi the assumption is uniform i.e. there will not be any child who will be in the school and illiterate in 1981.

The assumption regarding the date by which the percentage of children not in school and illiterate will be zero varies from State to State. Some will achieve this zero much before the nation as a whole and some will take more time subject to the assumption of increase in enrolment for 6-11 age-group. For instance, Kerala and Manipur would have attained zero proportions both among males and females in 1976 together with male children in Uttar Pradesh in the same category. Similarly there would not be any male child in 10-14 age-group who would be out of school and illiterate in Tamil Nadu in 1971. Still there are certain States which will take much time beyond the national tendency in enrolling

100 per cent children in 6-11 age-group.

As a result of variations in assumptions regarding the period by which cent per cent male/female population in 6-11 age-group will be enrolled, achievement of 100 per cent literacy in the age-group 10-14 will also vary from State to State. Therefore, to obtain the proportions and the number of boys and girls separately who would be in school but below grade III and those who would be outside the school system and illiterate for the quinquennia following 1971 have been obtained by fitting the second degree curves to the data for the years 1966, 1971 and the end point year subject to the varying assumption of making it zero on the basis of past experience of enrolment trend pertaining to the age-group 6-11. Separate second degree curves have been fitted for males and females for the two groups of population in each State and Union Territory of Delhi, in Appendices 2-5. Subtracting the figures of children in school but below grade III and of children not in school and illiterate from the corresponding estimated population one gets estimated literate population in ages 10-14 in different States in the various quinquennia.

IV.2 Estimates and Assumptions underlying the Estimate of Literates in the Age-Group 15-35 - India, States and Union Territory of Delhi, 1971 - 1991:

In order to estimate number of literates in the age-group 15-35, at least four types of basic information is

needed viz; (1) Literate population in the five-year age-groups, 15-19 ,20-24,25-29 and 30-34 in 1971;(2) number of children in 10-14 age-group ^{made literate} through formal school system (3) survival ratios of the literates and (4) administrative policy regarding the number of adults made or to be made literate in the age-group 15-35. The availability of information on the above four aspects has already been discussed in Chapter II and also in the earlier part of this chapter. Estimates of literate population in the age-group 15-35 separately for males and females from 1971 to 1991 for India may be seen in Tables IV.3 and IV.4 respectively and for the different states and the Union Territory of Delhi in appendices 6-41.

Column 1 of Table IV.3/IV.4 gives the age-groups. Columns 2,6,10,14 and 18 give number of literates in the various age-groups in 1971,1976,1981,1986 and 1991 respectively. Columns 3,7,11 and 15 give the survival ratios corresponding to the projected expectation of life at birth in quinquennial age-groups from 10-29+ for the quinquennia 1971-76, 1976-81, 1981-86 and 1986-91 respectively. Columns 4,8,12 and 16 give the number of survived literates from the previous quinquennium to the next one in each of the four age-groups viz; 15-19,20-24, 25-29 and 30-34. Columns 5,9,13 and 17 give the number of adults made or to be made literate during the respective quinquennia viz; 1971-76, 1976-81, 1981-86 and 1986-91.

The literate population from 10 to 30 years of 1971 (column 2) when survived to 1976 becomes aged 15-35 (column 4) which comprises age-group 15-19 also. These are the persons who were in the age group 10-14 in 1971 and have become literate basically through the formal school system, the estimates of which have been brought from Table IV.2. To this if one adds the number of adults made literate during the quinquennium 1971-76, he gets the estimate of literate persons in ages 15-35 in the year 1976. The same procedure is repeated from one quinquennium to the next from 1971 to 1991.

This exercise has been done for India, States and Union Territory of Delhi. The total number of literates in 15-35 age-group in different quinquennia in the States and Delhi will not tally with the corresponding estimated figure for India, due to two reasons : (1) different approaches have been applied to estimate the number of adults to be made literate during each quinquennium except 1971-76 (the explanation for this is given in Chapter II) and (2) there are differences in the assumptions for the estimation of literates in the age-group 10-14.

It may also be added here that whereas the projections of the total population in different age-groups take into account migrants also and this is particularly so in the immigrating States of Assam, West Bengal, Tripura and the Union Territory of Delhi, but the projected literate population

Table IV.3

Estimate of Male Literates in the age-group 15-35
in India , 1971 - 1991

Age-group	No. of Literates	1971 Survival Ratios at $e_0^m = 49.0$	Survived literates	1976 Adults made literate during the quinque- nnium	Total literates	Survival Ratios at $e_0^m = 51.5$	Survived Liter- ates	1981 Adults made & to be made literate during the quinquennium
1	2	3	4	5	6	7	8	9
10-14	2,62,18,120	0.9761			3,50,93,835	0.9800		
15-19	1,59,84,840	0.9743	2,55,91,507	3,00,354	2,58,91,861	0.9777	3,43,91,958	10,02,797
20-24	1,30,93,810	0.9747	1,55,74,030	4,66,979	1,60,41,009	0.9774	2,53,14,472	18,72,951
25-29	1,01,98,444	0.9712	1,27,62,537	41,3,909	1,31,76,446	0.9743	1,56,78,482	29,14,092
30-34	91,86,547		99,04,729	4,13,370	1,03,18,099		1,28,37,811	25,74,753
15-34	4,84,463,641		6,38,32,803	15,94,612	6,54,27,415		88,22,723	8,364,593

contd./83

Table IV.3 (contd.)

Age group	Total literates	Survival Ratios at $e_0 = 54.0$	1986			1991			Total literates
			Survived literates	Adults to be made lit during the quin- quennium	Total literates	Survival ratios at $e_0 = 56.5$	Survived literates	Adults to be made litrate during the quin- quennium	
	10	11	12	13	14	15	16	17	18
10-14	4,24,49,000	0.9836			4,48,58,000	0.9866			457,47,000
15-19	3,53,94,755	0.9805	4,17,52,836	-	4,17,52,836	0.9834	4,42,56,903	-	4,42,56,903
20-24	3,71,87,423	0.9801	3,47,04,557	36,23,443	3,73,28,000	0.9823	4,10,59,739	-	4,10,59,739
25-29	1,85,92,574	0.9774	2,66,46,393	49,14,607	3,15,61,000	0.9802	3,66,67,294	-	3,66,67,294
30-34	1,54,12,564		1,81,72,382	76,21,618	2,57,94,000		3,09,36,092	-	3,09,36,092
15-34	9,65,87,316		12,12,76,168	1,51,59,668	13,64,35,836		15,29,20,028	-	15,29,20,028

Estimate of Females Literates in the age-group 15-35,
in India 1971-1991

Age Group	1971		1976			1981		
	No. of Literates	Survival Ratios at $e_0 = 47.5$	Survived Literates	Adults made Literate during the quinquennium	Total Literates	Survival Ratios at $e_0 = 50.25$	Survived Literates	Adults made and Literate during the quinquennium
1	2	3	4	5	6	7	8	9
10-14	1,48,05,813	0.9737			2,21,31,709	0.9778		
15-19	83,86,940	0.9803	1,44,16,420	1,83,281	1,45,99,701	0.9822	2,16,40,385	17,35,643
20-24	61,85,339	0.9780	82,21,717	1,98,102	84,19,819	0.9796	1,43,39,826	19,74,562
25-29	39,53,182	0.9677	60,49,262	1,83,585	62,32,847	0.9710	82,48,055	21,32,787
30-34	34,48,394		38,25,494	1,78,295	40,03,789		60,52,094	19,59,098
15-34	2,19,73,855		3,25,12,893	7,43,263	3,32,56,156		5,02,80,360	78,02,090

Table IV.4.(Contd.)

Estimate of Females Literates in the age-group 15-35,
in India 1971-1991

Age-group	1986					1991				
	Total Literates	Survival Ratios at e=53.00	Survived Literates	Adults made to be Literates during the quinquennium	Total Literates	Survival Ratios at e=55.75	Survived Literates	Adults made to be Literate during the quinquennium	Total Literates	
	10	11	12	13	14	15	16	17	18	
10-14	3,02,70,024	0.9816			3,69,22,395	0.9850			4,30,35,000	
15-19	2,33,76,029	0.9838	2,97,13,056	96,62,944	3,93,76,000	0.9855	3,63,68,559	78,88,441 [@]	4,42,57,000	
20-24	1,63,14,388	0.9812	2,29,97,336	1,6,82,664	3,46,80,000	0.9831	3,88,05,048		3,88,05,048	
25-29	1,03,80,842	0.9742	1,60,07,678	1,32,55,322	2,92,63,000	0.9770	3,40,93,908		3,40,93,908	
30-34	80,11,192		1,01,13,016	1,42,15,984	2,43,29,000		2,85,89,951		2,85,89,951	
15-34	5,80,82,450		7,88,31,086	4,88,16,914	12,76,48,000		13,78,57,466	78,88,441	14,57,45,907	

* As per NAEP target, the figure upto 1983-84, if equal stress is laid on Women's Education, comes to 4,25,00,000 and by 1986 it may be presumed that rest of the illiterate i.e. 63,76,914 women also be made literate.

@ It has been assumed that all the illiterate in 15-19 years age-group would be made literate during 1986-1991.

is not able to take stock of those persons who are literates among these persons. Actually, our projection technique considers the migrants as illiterates and to this extent the technique has its limitation. In view of this the literacy rates for future dates for the States of Assam, Tripura, West Bengal and the Union Territory of Delhi become underestimates and they have been excluded from further discussion.

Statewise Position regarding estimate of Literates in the age-group 15-35, 1971-1991 :

The projections of literacy rates in the age-group (pages 87-89) 15-35 presented in Table IV.5 indicate that even if the National Adult Education Programme is extended upto 1991 a number of States will still fail to eradicate illiteracy in this age-group. Whereas States like Jammu & Kashmir, Karnataka, Kerala, Maharashtra, Manipur, Punjab, Tamil Nadu, Tripura, Uttar Pradesh and West Bengal will achieve 100 per cent literacy among males by 1991 the States which are not able to achieve this target would not be far from it. Since none of the remaining States will have male literacy rate below 90 per cent.

The situation in the case of females, however, will be quite bad in some of the States. For example, it is expected that Rajasthan will not be able to have even two-fifth of the females as literate in this age-group; Bihar would be just above the two-fifth level. The other States where the literacy rates among females will be comparatively low are Bihar, Assam, Orissa, Gujarat and Andhra Pradesh. The remaining States would achieve at least 75 per cent literacy rates for females by 1991.

Statewise Estimated Literacy Rates in the
age-group 15-35, 1961-1991.

State/Union Territory	1961			1971		
	Persons	Males	Females	Persons	Males	Females
1	2	3	4	5	6	7
INDIA	32.40	46.84	17.55	42.03	56.71	26.76
1. Andhra Pradesh	28.49	41.01	16.25	34.65	47.16	22.36
2. Assam, Meghalaya & Mizoram	36.04	50.60	19.98	43.27	55.66	29.81
3. Bihar	24.41	40.45	9.21	29.00	45.75	12.64
4. Gujarat	40.66	55.03	25.61	50.06	64.38	34.91
5. Jammu & Kashmir	15.30	24.35	5.71	28.80	42.46	13.61
6. Karnataka	33.65	48.65	18.60	43.23	57.23	28.98
7. Kerala	65.79	76.50	56.01	80.51	87.28	74.13
8. Madhya Pradesh	23.31	37.24	8.79	34.05	51.14	16.35
9. Maharashtra	41.14	58.83	22.48	56.00	72.97	38.05
10. Manipur	37.19	60.92	15.09	50.18	70.26	30.32
11. Orissa	27.68	44.62	11.10	37.28	54.63	20.40
12. Punjab, Haryana, Himachal Pradesh & Chandigarh	32.58	45.22	18.68	45.03	58.25	30.48
13. Rajasthan	19.77	30.85	7.89	27.83	42.30	12.42
14. Tamil Nadu	39.14	56.25	22.84	51.49	67.58	35.74
15. Tripura	30.61	45.82	15.83	49.91	65.99	33.81
16. Uttar Pradesh	24.44	38.22	9.96	31.63	47.21	14.90
17. West Bengal	48.12	54.40	40.81	47.18	59.81	32.72
18. Delhi	65.36	73.95	54.02	71.88	80.00	61.46
INDIA *	-	-	-	-	-	-

* On the basis of totalling the state level estimates.

Table IV.5

Statewise Estimated Literacy Rates in the
age-group 15-35, 1961-1991

State/Union Territory	1976			1981		
	Persons 8	Males 9	Females 10	Persons 11	Males 12	Females 13
INDIA	49.31	63.62	34.19	67.12	81.19	52.11
1. Andhra Pradesh	42.19	53.70	30.61	55.00	66.63	43.26
2. Assam, Meghalaya & Mizoram	40.43	57.78	25.86	52.11	65.57	37.91
3. Bihar	33.63	50.17	16.07	43.50	62.93	22.45
4. Gujarat	54.12	66.53	40.41	61.51	74.62	47.20
5. Ja-mmuh & Kashmir	33.12	48.06	16.98	46.07	65.86	25.59
6. Karnataka	52.67	66.57	38.52	67.88	82.87	52.75
7. Kerala	84.30	90.01	78.77	93.34	96.18	90.48
8. Madhya Pradesh	37.86	54.09	20.31	47.18	65.03	27.52
9. Maharashtra	64.94	80.90	48.40	73.96	88.77	58.54
10. Manipur	69.21	95.73	44.39	83.43	100.00	68.54
11. Orissa	40.24	56.05	24.26	49.77	66.49	32.48
12. Punjab, Haryana, Himachal Pradesh & Chandigarh	50.97	63.18	37.30	63.59	74.76	51.05
13. Rajasthan	32.10	48.09	14.57	40.72	60.32	18.85
14. Tamil Nadu	62.39	76.77	48.16	77.46	88.69	65.96
15. Tripura	60.81	76.10	45.40	74.64	90.02	60.04
16. Uttar Pradesh	44.90	61.07	26.92	61.80	78.86	42.12
17. West Bengal	53.72	66.80	38.92	62.69	76.04	47.96
18. Delhi	64.03	68.37	58.70	60.14	62.58	57.26
INDIA *	48.94	63.27	33.84	60.43	75.02	44.75

basis of
* On the totalling the state level estimates.

Table IV.5

Statewise Estimated Literacy Rates in the
age-group 15-35, 1961-91.

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State/Union Territory	1986			1991		
	Persons	Males	Females	Persons	Males	Females
	14	15	16	17	18	19
INDIA	100.00	100.00	100.00	100.00	100.00	100.00
1. Andhra Pradesh	69.08	80.82	57.07	82.83	94.38	70.82
2. Assam, Meghalaya & Mizoram	61.67	78.04	44.61	79.19	97.56	59.88
3. Bihar	55.20	77.74	30.62	66.64	90.14	41.07
4. Gujarat	71.66	86.79	55.39	81.86	95.97	66.59
5. Jammu & Kashmir	64.10	86.40	41.39	88.71	100.00	77.53
6. Karnataka	85.08	100.00	69.80	96.41	100.00	92.61
7. Kerala	96.18	97.32	95.01	99.03	100.00	98.03
8. Madhya Pradesh	59.54	80.28	36.87	73.00	92.33	51.76
9. Maharashtra	84.49	96.72	71.73	93.17	100.00	86.03
10. Manipur	100.00	100.00	100.00	100.00	100.00	100.00
11. Orissa	63.17	82.50	42.88	77.11	96.84	56.02
12. Punjab, Haryana Himachal Pradesh & Chandigarh	82.34	90.52	73.18	96.70	100.00	93.06
13. Rajasthan	52.50	77.25	25.07	67.69	94.63	38.63
14. Tamil Nadu	91.90	100.00	83.60	97.36	100.00	94.65
15. Tripura	100.00	100.00	100.00	100.00	100.00	100.00
16. Uttar Pradesh	77.09	93.26	58.48	90.66	100.00	79.97
17. West Bengal	77.00	92.24	60.66	92.22	100.00	83.92
18. Delhi	61.81	61.27	62.43	66.78	64.24	69.59
INDIA *	73.34	88.34	57.26	85.51	97.66	72.51

* On the basis of totalling the state level estimates.

Table IV.5 also shows that only the two eastern states i.e., Manipur and Tripura will be able to achieve 100 per cent literacy both among males and females and that too by 1986 itself. However, in case of Manipur, there seems to be some serious error either in the projected population or in the assumptions of persons becoming literate over the period under study since the projected population of males in certain age-groups in 1981 and beyond turns out to be lower than the projected literate population. In view of this the figures for the State will have to be interpreted with caution.

At the national level assuming that the targets set out by the Ministry of Education & Culture for the universalisation of elementary education as also of the NAEP will be achieved by the set dates, we can expect 100 per cent literacy rates both among males and females by 1986 itself. However, as the Statewise analysis has clearly brought out, the expectation regarding fulfilment of the national targets seems to be an utopian goal and a more correct picture can emerge by adding the Statewise projections of the literate population. On this basis the national literacy rate of males in 1991 will be 97.66 per cent and that of females will be only 72.51 per cent.

The results of the study clearly point out towards the need for much higher efforts for making female literates in the next decade or so.

Chapter - V

SUMMARY AND CONCLUSION:

Several Researchers in the field of educational statistics have pointed out from time to time towards the slow growth of literacy in the country. This fact has been recognised in the official circles also and it was probably a result of this recognition that the Government of India launched a crash adult education programme from 2nd October 1978 hoping that it would be able to eradicate illiteracy in the age-group 15-35 by 1983-84 or so. Keeping in view the progress of literacy in the different States of India and its Union Territories between 1961 and 1971 we felt that it is necessary to look at the National Adult Education Programme in the demographic perspective and it was in this context that the present research was formulated.

The analysis of the literacy rates in the age-groups 5-14 and 15-35 presented in Chapter III has conclusively shown that there exist significant disparities between rural and urban areas in almost all the States. This also shows that tremendously lot more efforts are required to be made in the rural areas in the near future to eradicate illiteracy.

Similarly, the analysis of male and female literacy rates has brought out in bold relief the adverse position of females with respect to their literacy and education.

There is a large disparity in the literacy rates between males and females in young as well as adult age-groups. The overall literacy position among female adults in the age-group 15-35 is alarmingly poor in 1961 as well as in 1971. However, the trend indicates a decline in this disparity which implies

that the growth rate in literacy rates among the female population is significantly higher than that of the male population in younger as well as in adult age-groups.

Children in the age-group of 5-14 and adults of 15-35 age-group in rural as well as in urban areas of Jammu & Kashmir showed the highest rate of growth in literacy during 1961-71. Similar trend has been observed for the young age-group in Tripura. One may infer from this that the smaller and the peripheral States have done better in terms of educational development programmes during this period.

The disparity between males and females has gone down in formal as well as social education in 1971 as compared to 1961. However, the disparity in social education when compared to formal education remained higher at both the points of time which indicates a limited impact of the adult literacy programmes in India, this is particularly so in the case of females.

On the basis of the projected figures of population and literates in 15-35 age-group one can suggest that in the States of Kerala, Tripura and Manipur male and female illiterates will cease to exist by 1986. Similarly, in the States of Karnataka and Tamil Nadu there will be no male illiterate in this age-group by 1986.

Taking the past trends as the basis it can be further stated that literacy rates in this age-group in the States of Rajasthan, Madhya Pradesh, Gujarat, Andhra Pradesh, Orissa,

Bihar and Assam are likely to remain below the national average by 1991.

The projected figures of the magnitude of illiteracy in the age-group 15-35 in different States in 1991 exhibits that the number of illiterates will be highest in Bihar followed by Maharashtra, Andhra Pradesh, Gujarat, Assam and West Bengal.

Conclusion

From the above analysis one can venture to make certain policy prescriptions. In view of the relative deprivation one can argue that a higher priority ought to be given to the women oriented adult education programmes. This would be all the more desirable since an increase in the literacy rate of women generally leads to an increase in the general literacy rate. In view of the present social set-up which demands the presence of women at home for most of the time, only adult education programme seems to be the appropriate institutional set-up. The focus of adult education for women should be towards the rural areas since only then a sizable proportion of the total illiterate population can be netted in.

Finally, no adult education programme, however massive, will help in eradicating illiteracy in the higher age-groups unless cent per cent population in the age-group 6-14 is made literate i.e., inflow of illiterate children is stopped. It is, therefore, important to give a high weightage to primary education to ensure cent per cent enrolment of the children in the relevant

age-group. Also, Government should spare no effort to stop drop-outs from the schools.

The present NAEP needs to be restructured to meet the requirements in space by taking into consideration the expected number of illiterate adults in different States of India. On the basis of the above analysis one would perhaps suggest that in the States of Bihar, Maharashtra, Andhra Pradesh, Gujarat, Assam and West Bengal there should be greater drive needing significant stepping up of the Governmental expenditure allocated for the purpose of educational development.

An important dimension of the exercise undertaken here is the policy implication of National Adult Education Programme in relation to the overall literacy level of the country's population in the years to come. For this purpose, we have tried to work out the contribution of three factors viz; survivors of the literates from the base year, persons becoming literate through formal education system and adults that have been made literate through adult education programme in the total number of literates. It is obvious that the share of the first factor will go on declining with time and that of the second one will go on increasing. However, the question here is : How far the NAEP would help in raising the level of literacy and whether it is worth while to put high priority on this programme or should priority be placed on some other aspect of the educational system?

In working out the respective share we have survived the base year literates separately, the literates made through formal education system separately and those who have become literate through adult education programme separately. In doing so we have assumed that the survivorship ratios for a particular age-group would be the same for different categories. The results of this exercise at the all India level for males and females are presented in Table V.1 below : -

Table V.1

Distribution of the percentage share of survived
Literates, Literates coming from formal education
system and those who have been made literates through
Adult Education Programme

Year	Survivors	Formal education	Adult Education Programme	Total
1	2	3	4	5
<u>Males</u>				
1976	58.45	39.11	2.44	100.00
1981	28.63	61.51	9.86	100.00
1986	10.91	73.29	15.80	100.00
1991	0.00	93.17	6.83	100.00
<u>Females</u>				
1976	54.12	43.35	2.23	100.00
1981	23.98	61.64	14.38	100.00
1986	6.15	50.84	43.01	100.00
1991	0.00	68.72	31.28	100.00

The share of the adult education programme in the total male literates increases from 2.44% in 1976 to 9.86% in 1981 to 15.80% in 1986. Similarly, the share of adult education programme in the total female literates increases from 2.23% in 1976 to 14.38% in 1981 to 43.01% in 1986. Since they have assumed that National Adult Education Programme will continue only upto 1984 its effect has declined sharply in 1991.

When we look at these figures separately for males and females we observe that the NAEP will have its influence to a much greater extent on female literacy rates since it accounts for 43.01% whereas the corresponding figure for males is only 15.80%. However, the higher influence of NAEP on female education is because of our assumption that 4.88 crores of females will be made literate between 1981 and 1986 through this programme. This, however, seems to be most improbable. If we take the national situation as it emerges from totalling the State level estimates, the contribution of the NAEP in female literacy in 1986 will be 4.78% and in 1991, it will be 9.02 per cent only.

In the light of this analysis, one would say that NAEP will have a certain impact on the overall literacy rates of both males and females in the age-group 15-35 in the next decade or so and, therefore, it should continue till such time as the formal education is able to take care of literacy

of the people throughout the length and breadth of the country but, at the same time, it is necessary that wholehearted efforts are made during the eighties to enforce compulsory school enrolment at elementary level.

A P P E N D I C E S

Appendix - 1

Number of Adult Education Centres
Running on 30.6-1979

States/ Union Territories	R.F.L.P.	Voluntary Agencies			N.Y.Ks.	Univ- ersities and	ICDS	Total
		State Govt. Projects	With GOI Assist.	Without GOI Assist.				
1	2	3	4	5	6	7	8	9
Andhra Pradesh	584	330	288	214	1066	199	232	2,913
Assam	2400	4200	270	..	238	66	127	7,301
Bihar	1490	1945	1936	..	399	64	309	6,143
Gujarat	2000	711	5342	1426	226	443	43	10,191
Haryana	2089	820	190	..	81	..	100	3,280
Himachal Pradesh	715	..	60	..	410	..	48	1,233
J. & K.	1143	231	..	..	68	..	94	1,536
Karnataka	880	..	458	6834	324	105	90	8,691
Kerala	1200	..	374	3490	378	..	122	5,564
Madhya Pradesh	3000	1300	778	170	620	88	180	6,136
Maharashtra	3314	530	3090	1224	..	465	142	8,765
Manipur	185	300	374	2..	140	..	73	1,072
Meghalaya	165	178	..	..	..	..	50	393
Nagaland	340	200	..	..	3	..	20	563
Orissa	1020	1110	439	40	521	224	56	3,410
Punjab	..	..	120	..	236	38	100	494
Rajasthan	1369	1064	2600	..	414	..	85	5,532
Sikkim	170	254	..	2	4	..	64	494
Tamil Nadu	3600	..	1124	137	364	720	296	6,241
Tripura	608	1421	..	43	102	..	100	2,274
Uttar Pradesh	..	2457	1176	35	984	341	352	5,345
West Bengal	880	1825	380	..	296	845	255	4,481
Arunachal Pradesh	191	216	..	30	23	..	..	460
A & N. Islands	60	34	..	3	4	..	..	101
Chandigarh	54	84	..	..	38	..	..	176
Dadra & Nagar Haveli	41	30	..	..	..	..	11	82
Delhi	241	270	..	2	109	70	100	792
Lakshadweep	30	..	..	..	..	..	..	30
Goa, Daman & Diu	..	..	..	..	22	..	..	22
Mizoram	160	70	..	..	..	..	..	230
Pondicherry	67	64	30	..	59	..	..	236
Total	27996	19644	19029	13650	7129	3684	3049	94,18

Source : Col. 2,3 & 5 State Governments/UT Adms. concerned, col.4 - The voluntary Agencies, col. 6 The NYKs, col. 7 - The University Grants Commission; and col.8- The Ministry of Social Welfare.
This Table has been taken from the 1st Year National Adult Education Programme Ministry of Education and Culture, New Delhi. p.14.

Appendix - 2

The Second degree curves fitted to the data on the percentage of male children in schools but below grade III for India, States and Delhi are as given below :

S.No.	State	Second Degree Curve
	INDIA	$Y = 3.80 - 0.087x - 0.393x^2$
1.	Andhra Pradesh	$Y = 2.34 - 0.945x + 0.055x^2$
2.	Bihar	$Y = 0.93 + 1.145x - 0.485x^2$
3.	Gujarat	$Y = 8.26 + 2.4265x - 1.7265x^2$
4.	Jammu & Kashmir	$Y = 1.59 - 1.16x + 0.21x^2$
5.	Karnataka	$Y = 3.82 - 2.5433x + 0.4233x^2$
6.	Madhya Pradesh	$Y = 6.40 - 0.6283x - 0.5017x^2$
7.	Orissa	$Y = 0.58 + 0.0067x - 0.0667x^2$
8.	Punjab, Haryana, Himachal Pradesh and Chandigarh	$Y = 2.24 - 1.2017x + 0.1517x^2$
9.	Rajasthan	$Y = 4.27 + 3.3517x - 1.5917x^2$
10.	Tripura	$Y = 2.67 - 1.415x + 0.175x^2$
11.	Uttar Pradesh	$Y = 3.32 - 0.5866x - 0.1734x^2$
12.	West Bengal	$Y = 3.56 + 1.0284x - 0.7384x^2$
13.	Delhi	$Y = 0.40 + 0.4267x - 0.1867x^2$

Appendix - 3

The Second degree curves fitted to the data on the percentage of male children not in school and illiterate for India, States and Delhi are as given below :

S.No.	State	Second Degree Curve
	INDIA	$Y = 34.01 - 16.89x + 1.85x^2$
1.	Andhra Pradesh	$Y = 46.03 - 21.2708x + 2.4408x^2$
2.	Assam, Meghalaya and Mizoram	$Y = 43.53 - 8.874x + 1.034x^2$
3.	Bihar	$Y = 51.38 - 22.6067x + 1.8267x^2$
4.	Gujarat	$Y = 17.75 - 1.152x - 1.588x^2$
5.	Jammu & Kashmir	$Y = 49.08 - 30.94x + 4.86x^2$
6.	Karnataka	$Y = 30.57 - 9.035x - 0.385x^2$
7.	Madhya Pradesh	$Y = 40.76 - 12.6016x - 0.3284x^2$
8.	Orissa	$Y = 42.28 - 10.2783x - 1.2717x^2$
9.	Punjab, Haryana, Himachal Pradesh and Chandigarh	$Y = 28.00 - 2.4733x - 2.2867x^2$
10.	Rajasthan	$Y = 44.86 - 8.4383x - 2.1717x^2$
11.	Tripura	$Y = 33.62 - 5.6916x - 1.8384x^2$
12.	West Bengal	$Y = 33.94 - 5.2933x - 2.0067x^2$
13.	Delhi	$Y = 10.39 + 9.5017x - 4.3217x^2$

Appendix - 4

The Second degree curves fitted to the data on the percentage of female children in schools but below grade III for India, States and Delhi are as given below :

S.No.	State	Second Degree Curve
	INDIA	$Y=2.45-0.072x-0.248x^2$
1.	Andhra Pradesh	$Y=1.66-0.7734x+0.0734x^2$
2.	Bihar	$Y=0.56+0.2133x-0.1333x^2$
3.	Gujarat	$Y=5.96+1.2935x-1.0935x^2$
4.	Jammu & Kashmir	$Y=0.75-0.495x+0.065x^2$
5.	Karnataka	$Y=3.44-2.4117x+0.4217x^2$
6.	Madhya Pradesh	$Y=2.06+0.2084x-0.2984x^2$
7.	Maharashtra	$Y=9.48-0.805x-0.785x^2$
8.	Orissa	$Y=0.26-0.06165x-0.00835x^2$
9.	Punjab, Haryana, Himachal Pradesh and Chandigarh	$Y=1.89-0.81x+0.06x^2$
10.	Rajasthan	$Y=1.10+0.0784x-0.1484x^2$
11.	Tamil Nadu	$Y=6.57+0.74x-0.31x^2$
12.	Tripura	$Y=1.04-0.3817x+0.011x^2$
13.	Uttar Pradesh	$Y=1.81+0.2267x-0.2767x^2$
14.	West Bengal	$Y=2.27+0.4834x-0.4134x^2$
15.	Delhi	$Y=1.57+3.0967x-1.2067x^2$

Appendix - 5

The second degree curves fitted to the data on the percentage of female children not in schools and illiterate for India, States and Delhi are as given below :-

S.No.	State	Second Degree Curve
	India	$Y=63.81-13.5845x+0.1645x^2$
1.	Andhra Pradesh	$Y=68.52-18.428x+1.168x^2$
2.	Assam, Meghalaya and Mizoram	$Y=63.51-1.3037x-0.4063x^2$
3.	Bihar	$Y=84.03-7.9395x-0.3205x^2$
4.	Gujarat	$Y=49.23-3.0066x-0.3934x^2$
5.	Jammu & Kashmir	$Y=77.62-7.6874x+0.0574x^2$
6.	Karnataka	$Y=56.17-14.029x+0.639x^2$
7.	Madhya Pradesh	$Y=77.33-6.9620x-0.33804x^2$
8.	Maharashtra	$Y=41.96-7.17x-0.83x^2$
9.	Orissa	$Y=74.49-9.6598x-0.1402x^2$
10.	Punjab, Haryana, Himachal Pradesh and Chandigarh	$Y=56.02-0.1433x-6.1767x^2$
11.	Rajasthan	$Y=83.50-2.5278x-0.5822x^2$
12.	Tamil Nadu	$Y=48.83-26.5567x+3.4267x^2$
13.	Tripura	$Y=53.77+3.226x-2.796x^2$
14.	West Bengal	$Y=58.61-6.482x-1.048x^2$
15.	Delhi	$Y=19.60+2.3067x-2.9467x^2$

Appendix - 6

Estimate of male literates in the age-group 15-35 in Andhra Pradesh, 1971-1991.

Age-Group	1971		1976		1981			
	No. of Literates	Survival ratios at $e_0 = 48.6$	survived literates	Adults made literate during the quinquennium	Total literates	Survival ratios at $e_0 = 51.5$	survived literates	Adults made and to be made literate during the quinquennium
1	2	3	4	5	6	7	8	9
10-14	18,22,425	0.9776			25,83,605	0.9838		
15-19	9,50,865	0.9672	17,81,603	5,863	17,87,466	0.9758	25,41,751	10,687
20-24	8,56,119	0.9645	9,19,677	8,841	9,28,518	0.9701	17,44,209	17,875
25-29	6,89,522	0.9607	8,25,727	7,391	8,33,118	0.9670	9,00,755	27,430
30-34	6,25,858		6,62,424	7,037	6,69,461		8,05,625	22,863
15-34	31,22,364		41,89,431	29,132	42,18,563		59,92,340	78,855
				1986				
Total Literates	Survival ratios at $e_0 = 54.3$	Survived literates	Adults to be made literate during the quinquennium	Total literates	Survival Ratios at $e_0 = 57.0$	Survived literates	Adults to be made literate during the quinquennium	Total literates
10	11	12	13	14	15	16	17	18
31,92,239	0.9864			31,93,700	0.9888			31,07,600
25,52,438	0.9797	31,48,923	13,932	31,62,855	0.9833	31,57,931	-	31,57,931
17,62,084	0.9751	25,00,624	40,860	25,41,484	0.9797	31,10,035	51,759	31,61,794
9,28,185	0.9727	17,18,208	67,992	17,86,200	0.9777	24,89,892	1,46,142	26,66,034
8,28,488		9,02,846	1,04,058	10,06,904		17,46,368	2,40,840	19,87,208
69,71,195		82,70,601	2,26,842	84,97,443		1,05,04,226	4,38,741	11,09,42,96

Estimate of Female Literates in the age-group 15-35 in Andhra Pradesh, 1971-1991.

Age-group	1971		1976				1981	
	No. of literates	Survival Ratios at $e_0 = 48.0$	Survived literates	Adults made literate during the quinquennium	Total literates	Survival ratios at $e_0 = 51.0$	Survived literates	Adults made literate during the quinquennium
	2	3	4	5	6	7	8	9
10-14	11,91,790	0.9802			18,75,362	0.9826		
15-19	5,52,097	0.9744	11,68,193	844	11,69,037	0.9763	18,42,731	2,182
20-24	4,12,749	0.9676	5,37,963	942	5,38,905	0.9711	11,41,331	2,516
25-29	2,92,700	0.9562	3,99,376	869	4,00,245	0.9629	5,23,331	2,916
30-34	2,48,935		2,79,880	797	2,80,677		3,85,396	2,666
15-34	15,06,481		23,85,412	3,452	23,88,864		38,92,789	10,280

Total Literates	1986			1991				
	Survival ratios at $e_0 = 54.0$	Survived literates	Adults to be made literate during the quinquennium	Total literates	Survival ratios at $e_0 = 57.0$	Survived literates	Adults to be made literate during the quinquennium	Total Literates
10	11	12	13	14	15	16	17	18
24,32,451	0.9849			25,86,436	0.9872			27,58,669
18,44,913	0.9793	23,95,721	6,007	24,01,728	0.9824	25,53,330	12,914	25,66,244
11,43,847	0.9746	18,06,723	8,490	18,15,213	0.9786	23,59,458	23,370	23,82,828
5,26,247	0.9687	11,14,793	9,826	11,24,619	0.9747	17,76,367	32,834	18,09,201
3,88,062		5,09,775	11,315	5,21,090		10,96,166	37,802	11,33,968
39,03,069		58,27,012	35,638	58,62,650		77,85,321	1,06,920	78,92,241

Appendix - 8

Estimate of Male Literates in the age-group 15-35 in Assam, Meghalaya and Mizoram, 1971-1991

Age Group	1971			1976			1981	
	No. of literates	Survival ratios at $e_0 = 57.0$	Survived literates	Adults made lit- rate during the quinque- nium	Total Literates	Survival Ratios at $e_0 = 59.3$	Survived literat- es	Adults made and to be made literate during the quin- quennium
1	2	3	4	5	6	7	8	9
10-14	6,80,288	0.9929			9,14,419	0.9918		
15-19	4,21,023	0.9904	6,74,097	11,584	6,85,681 6,85,681	0.9904 0.9904	9,06,921	17,507
20-24	3,76,543	0.9891	4,16,981	12,297	4,29,268	0.9891	6,79,098	19,211
25-29	3,17,928	0.9877	3,72,439	9,480	3,81,919	0.9877	4,24,589	20,066
30-34	2,69,414		3,14,017	9,615	3,23,632		3,77,221	15,566
15-34	13,84,908		17,77,534	42,966	18,20,500		23,87,829	72,350

Total Literates	1986			1991				
	Survival ratios at $e_0 = 61.6$	Survived literates	Adults to be made literate during the quinquenn- ium	Total literates	Survived Adults Survival ratios at $e_0 = 63.8$	Survived literat- es	Adults to be made lit- rate during the quin- quennium	Total literates
10.	11	12	13	14	15	16	17	18
10,92,298	0.9927			15,05,669	0.9936			17,97,700
9,24,428	0.9904	10,84,324	47,624	11,31,948	0.9904	14,96,033	1,29,729	16,25,762
6,98,309	0.9891	9,15,553	64,655	98,0,208	0.9891	11,21,081	1,53,535	12,74,616
4,44,655	0.9877	6,90,697	70,162	7,60,859	0.9877	9,69,524	2,01,871	11,71,395
3,92,787		4,39,186	74,153	5,13,339		7,51,500	2,21,156	9,72,656
24,60,179		31,29,760	2,56,594	33,86,354		43,38,138	7,06,291	50,44,429

Appendix - 9

Females

Estimate of Literates in the age-group 15-35 in Assam, Meghalaya and Mizoram, 1971-1991

1971			1976				1981	
Age-Group	No. of literates	Survival ratios at $e_0 = 54.0$	Survived literates	Adults made lit. rate during the quinquennium	Total literates	Survival ratios at $e_0 = 56.8$	Survived literates	Adults made and to be made literate during the quinquennium
1	2	3	4	5	6	7	8	9
10-14	3,80,836	0.9824			4,90,554	0.9861		
15-19	2,67,533	0.9839	3,74,133	6,212	3,80,345	0.9856	4,83,735	11,396
20-24	1,92,551	0.9821	2,63,226	4,952	2,68,178	0.9836	3,74,868	9,722
25-29	1,26,784	0.9758	1,89,104	4,498	1,93,602	0.9785	2,63,780	7,709
30-34	95,918	0.9821	1,23,716	4,391	1,28,107		1,89,440	6,988
15-34	6,82,786		9,50,179	20,053	9,70,232		13,11,823	35,815

1986				1991				
Total literates	Survival ratios at $e_0 = 59.6$	Survived literates	Adults to be made lit. rate during the quinquennium	Total Literates	Survival ratios at $e_0 = 62.3$	Survived literates	Adults to be made literate during the quinquennium	Total literates
10	11	12	13	14	15	16	17	18
5,72,648	0.9886			7,34,672	0.9911			8,89,428
4,95,131	0.9871	5,66,120	46,091	6,12,211	0.9884	7,28,133	20,2,977	9,31,110
3,84,520	0.9847	4,88,744	44,060	5,32,804	0.9859	6,05,109	1,71,778	7,76,887
2,71,489	0.9808	3,78,706	37,416	4,16,122	0.9833	5,25,291	1,63,101	6,88,392
1,96,428		2,66,276	29,674	2,95,950		4,09,173	1,38,693	5,47,866
13,47,638		16,99,846	1,57,241	18,57,087		22,67,706	6,76,549	29,44,255

Appendix 10

Estimate of Male Literates in the age-group 15-35 in Bihar, 1971-1991

Age group	1971		1976				1981	
	No. of literates	Survival ratios at $e_0 = 46.0$	Survived literates	Adults made lit. rate during the quinquennium	Total literates	Survival ratios at $e_0 = 48.8$	Survived literates	Adults made and to be made literate during the quinquennium
1	2	3	4	5	6	7	8	9
10-14	22,71,914	0.9834			32,78,204	0.9853		
15-19	12,34,835	0.9838	22,34,200	-	22,34,200	0.9838	xx619 32,30,014	1,619
20-24	10,06,859	0.9811	12,14,831	-	12,14,321	0.9811	21,98,006	3,019
25-29	8,10,308	0.9774	9,87,829	-	9,87,829	0.9774	11,91,370	4,348
30-34	7,57,626		7,91,995	-	9,88,300 7,91,995		9,65,504	3,707
15-34	38,09,628		52,28,855	-	52,28,855		75,84,894	12,693
		1986			1991			
Total literates	Survival ratios at $e_0 = 51.6$	Survived literates	Adults to be made lit. rate during the quinquennium	Total literates	Survival ratios at $e_0 = 54.3$	Survived Lit. rates	Adults to be made literate during the quinquennium	Total Literates.
10	11	12	13	14	15	16	17	18
42,26,900	0.9867			45,01,700	0.9877			45,88,800
32,31,633	0.9838	41,70,682	-	41,70,682	0.9838	44,46,329	-	44,46,329
22,01,025	0.9811	31,79,281	6,381	31,85,662	0.9811	41,03,117	-	41,03,117
11,95,718	0.9774	21,59,426	11,811	21,71,237	0.9774	31,25,453	2.5115	35,50,568
9,69,211		11,68,695	16,948	11,85,643		21,22,167	45,956	21,68,123
75,97,587		1,06,78,084	35,140	1,07,13,224		1,37,97,066	71,071	1,38,68,137

Estimate of Female Literates in the age-group 15-35 in Bihar, 1971-9 1991

Age-group	1971		1976				1981	
	No. of literates	Survival ratios at $e_0^0 = 43.8$	Survived literates	Adults made literate during the quinquennium	Total Literates	Survival ratios at $e_0^0 = 47.1$	Survived Literates	Adults made and to be made literate during the quinquennium
1	2	3	4	5	6	7	8	9
10-14	7,32,448	0.9714			11,70,728	0.9760		
15-19	3,80,579	0.9738	7,11,500	-	7,11,500	0.9757	11,42,631	3,476
20-24	3,10,923	0.9708	3,70,608	-	3,70,608	0.9710	6,94,211	3,330
25-29	1,98,734	0.9619	3,01,844	-	3,01,844	0.9639	3,59,860	3,125
30-34	1,88,435		1,91,162	-	1,91,162		2,90,947	2,7.62
15-34	10,78,671		15,75,114	-	15,75,114		24,87,649	12,693

Total literates	Survival ratios at $e_0^0 = 50.4$	1986			1991			
		Survived literates	Adults to be made literate during the quinquennium	Total literates	Survival ratios at $e_0^0 = 53.6$	Survived Literates	Adults to be literate during the quinquennium	Total literates
10	11	12	13	14	15	16	17	18
16,99,845	0.9800			22,21,812	0.9838			27,29,643
11,46,107	0.9775	16,65,848	13,138	16,78,986	0.9794	21,85,819	45,977	22,31,796
6,97,541	0.9737	11,20,320	13,571	11,33,891	0.9754	16,44,399	51,366	16,95,765
3,62,985	0.9683	6,79,196	12,954	6,92,150	0.9714	11,05,997	52,817	11,58,814
2,93,709		3,51,478	12,088	3,63,566		6,72,355	50,187	7,22,542
25,00,342		38,16,842	61,751	38,68,593		56,08,570	2,00,347	58,08,917

Appendix-12

Estimate of Male Literates in the age-group 15-35 in Gujarat, 1971-1991

Age group	1971		1976				1981	
	No. of literates	Survival ratios at $e_0^o = 52.3$	Survived literates	Adults made Lit. erate during the quinquennium	Total Literates	Survival ratios at $e_0^o = 54.8$	Survived Literates	Adults made and to be made lit. erate during the quinquennium
1	2	3	4	5	6	7	8	
10-14	13,27,920	0.9782			16,63,932	0.9829		
15-19	9,39,771	0.9758	12,98,971	12,8,96	13,11,687	0.9494	16,35,479	13,826
20-24	7,62,864	0.9730	9,17,029	15,534	93,25.63	0.9766	12,84,843	18,379
25-29	5,58,406	0.9712	7,42,267	13,904	7,56,171	0.9749	9,10,741	21,886
30-34	5,07,255		5,42,324	14,175	5,56,499		7,37,191	19,527
15-34	27,68,256		35,00,591	56,509	35,57,100		45,68,254	73,618
			1986			1991		
Total literates	Survival ratios at $e_0^o = 57.3$	Survived literates	Adults to be made lit. erate during the quinquennium	Total literates	Survival ratios at $e_0^o = 59.8$	Survived literates	Adults to be made literate during the quinquennium	Total literates
10	11	12	13	14	15	16	17	18
20,14,200	0.9868			21,00,100	0.9901			22,94,900
16,49,305	0.9829	19,87,613		19,87,613	0.9866	20,79,309	-	20,79,309
13,08,222	0.9788 0.9801	15,77,528 16,21,102	50,752	16,71,854	0.9840	19,60,979	-	19,60,979
9,32,627	0.9785	12,77,288	6,7307	13,45,095	0.9820	16,45,104	1,18,679	17,63,783
7,56,718		9,12,576	80,978	9,93,554		13,20,883	1,23,255	14,44,138
46,41,872		57.98,579	1,99,537	59,98,116		70,06,275	2,41,934	72,48,209

Appendix 13

Estimate of Female Literates in the age-group 15-35 in Gujarat, 1971-1991.

Age-group	1971		1976				1981	
	No. of literates	Survival ratios at $e_0^o = 52.7$	Survived literates	Adults made literate during the quinquennium	Total literates	Survival ratios at $e_0^o = 55.2$	Survived Literates	Adults made and to be made literate during the quinquennium
1	2	3	4	5	6	7	8	9
10-14	7,60,360	0.9828			10,05,387	0.9853		
15-19	5,35,596	0.9850	7,47,282	11,071	7,58,353	0.9856	9,90,608	8,042
20-24	3,99,996	0.9829	5,27,562	10,040	5,37,602	0.9833	7,47,433	7,605
25-29	2,54,075	0.9727	3,93,156	9,224	4,02,380	0.9753	5,28,624	6,890
30-34	2,28,041		2,47,139	9,258	2,56,397		3,92,441	6,273
15-34	14,17,708	0.9828	19,15,139	39,593	19,54,732		26,59,106	28,810

Total literates	Survival ratios at $e_0^o = 57.7$	1986			1991			
		Survived literates	Adults to be made literate during the quinquennium	Total literates	Survival ratios at $e_0^o = 60.2$	Survived literates	Adults to be made literate during the quinquennium	Total literates
10	11	12	13	14	15	16	17	18
12,10,578	0.9877			13,57,273	0.9898			16,13,401
9,98,650	0.9862	11,95,688	25,547	12,21,235	0.9898	13,43,429	87,643	14,31,072
7,55,038	0.9836	9,84,869	31,356	10,16,225	0.9838	12,05,115	97,297	13,02,412
5,35,514	0.9780	7,42,655	29,588	7,72,243	0.9803	9,99,762	83,472	10,83,234
3,98,714	0.9780	5,23,733	26,658	5,50,391		75,7,030	73,402	8,30,432
26,87,916		34,46,945	1,13,149	35,60,094		43,05,336	34,1,814	46,47,150

Estimate of Male Literates in the age-group 15-35 in
Jammu & Kashmir, 1971-1991

		1971		1976			1981		
Age-group	No. of literates	Survival ratios at $e_0^o = 53.9$	Survived literates	Adults made literate during the quinquennium	Total literates	Survival ratios at $e_0^o = 56.2$	Survived literates	Adults made and to be made literate during the quinquennium	
1	2	3	4	5	6	7	8	9	
10-14	2,20,778	0.9791			3,01,570	0.9836			
15-19	1,14,714	0.9726	2,16,164	-	2,16,164	0.9777	2,96,624	1,588	
20-24	90,240	0.9695	1,11,571	-	1,11,571	0.9747	2,11,344	10,101	
25-29	59,923	0.9676	87,488	-	87,488	0.9730	1,08,748	21,534	
30-34	52,376		57,981	-	57,981	-	85,126	19,958	
15-34	3,17,253		4,73,204	-	4,73,204		7,01,842	53,181	
		1986			1991				
Total literates	Survival ratios at $e_0^o = 58.5$	Survived literates	Adults to be made literate during the quinquennium	Total literates	Survival ratios at $e_0^o = 60.7$	Survived literates	Adults to be made literate during the quinquennium	Total Literates	
10	11	12	13	14	15	16	17	18	
3,37,500	0.9874			32,23,00	0.9912			3,53,700	
2,98,212	0.9823	2,33,248	-	3,33,248	0.98,69	3,19,464	-	3,19,464	
2,21,445	0.9795	2,92,934	19,263	3,12,197	0.9840	3,28,882	-	3,28,882	
1,30,282	0.9780	2,16,905	56,927	2,73,832	0.9826	3,07,202	75,298	3,82,500	
1,05,084		1,27,416	88,305	2,15,721		2,69,067	97,803	3,66,870	
7,55,023		9,70,503	1,64,495	11,34,998		12,24,615	17,3,101	13,97,716	

Appendix - 15

Estimate of Female Literates in the age-group 15-35 in Jammu & Kashmir, 1971-1991.

Age group	1971		1976				1981	
	No. of literates	Survival ratios at $e_0 = 52.3$	Survived literates	Adults made literate during the quinquennium	Total literates	Survival ratios at $e_0 = 55.1$	Survived Literates	Adults made and to be made literate during the quinquennium
1	2	3	4	5	6	7	8	9
10-14	78,390	0.9767	-	-	1,14,475	0.9813		
15-19	42,985	0.9739	76,564	-	76,564	0.9780	1,12,334	7,262
20-24	24,388	0.9704	41,863	-	41,863	0.9746	74,880	8,133
25-29	13,125	0.9661	23,666	-	23,666	0.9710	40,800	9,016
30-34	10,971		12,680	-	12,680		22,980	8,076
15-34	91,469		1,54,773	-	1,54,773		2,50,994	32,487

Total literates	Survival ratios at $e_0 = 57.9$	1986		Total literates	Survival ratios at $e_0 = 60.6$	1981		
		Survived literates	Adults to be made literate during the quinquennium			Survived Literates	Adults to be made literate during the quinquennium	
10	11	12	13	14	15	16	17	18
1,53,481	0.9857			1,82,056	0.9893			2,24,432
1,19,596	0.9821	1,51,286	28,086	1,79,372	0.9858	1,80,108	1,04,500	2,84,608
83,013	0.9789	1,17,455	32,262	1,49,717	0.9828	1,76,825	1,08,009	2,85,834
49,816	0.9759	81,261	37,405	1,18,666	0.9800	1,47,142	1,43,684	2,90,826
31,056		48,615	37,442	86,057		1,16,293	1,45,959	2,62,252
2,83,481		3,98,617	1,35,195	5,33,812		6,20,368	5,02,152	11,22,520

Appendix - 16

Estimate of Male Literates in the age-group 15-35 in Karnataka, 1971-1991

1971		1976					1981	
Age-group	No. of literates	Survival ratios at $e_0 = 50.9$	Survived literates	Adults made literate during the quinquennium	Total literates	Survival ratios at $e_0 = 53.4$	Survived literates	Adults made and to be made literate during the quinquennium
1	2	3	4	5	6	7	8	9
10-14	13,56,127	0.9825			18,01,264	0.9851		
15-19	8,50,873	23,32,303 0.9742	13,3,2395	44,350	13,76,745	0.9779	17,74,425	71,496
20-24	7,26,297	0.9682	8,28,920	67,014	8,95,904	0.9728	13,46,319	1,06,737
25-29	5,40,968	0.9747	7,03,201	58,390	7,61,591	0.9699	8,71,565	1,59,635
30-34	4,74,744		5,21,872	59,390	5,81,262		7,38,667	1,38,672
15-34	25,92,882		33,86,388	2,29,144	36,15,532	47,10,076	47,30,976	4,76,540
		1986					1991	
Total literates	Survival ratios at $e_0 = 55.9$	Survived literates	Adults to be made literate during the quinquennium	Total literates	Survival ratios at $e_0 = 58.4$	Survived literates	Adults to be made literate during the quinquennium	Total Literates
10	11	12	13	14	15	16	17	18
	22,78,600	0.9875		23,55,400	0.9897			25,06,000
	18,45,921	0.9815	22,50,118	-	22,50,118	0.9846	23,31,139	-
	14,53,056	0.9773	18,11,771	1,61,729	19,73,500	0.9815	22,15,466	-
	10,31,200	0.9749	14,20,072	2,38,328	16,58,400	0.9798	19,36,990	-
	8,77,339		10,05,317	3,53,683	13,59,000		16,24,900	-
	52,07,516		64,87,278	7,53,740	72,41,018	-	81,08,495	-

Appendix - 17

Estimate of Female Literates in the age-group 15-35 in Karnataka, 1971-1991.

Age-group	1971		1976				1981	
	No. of literates	Survival ratios at $e_0 = 50.0$	Survived literates	Adults made literate during the quinquennium	Total literates	Survival ratios at $e_0 = 52.8$	Survived literates	Adults made and to be made literate during the quinquennium
1	2	3	4	5	6	7	8	9
10-14	9,74,290	0.9818			14,18,736	0.9841		
15-19	5,06,954	0.9753	9,56,558	8,157	9,64,715	0.9782	13,96,178	22,407
20-24	3,55,044	0.9699	4,94,432	10,055	5,04,487	0.9732	9,43,684	26,835
25-29	2,32,624	0.9595	3,44,357	9,253	3,53,610	0.9654	4,90,967	32,960
30-34	1,95,702		2,23,203	8,528	2,31,731		3,41,375	30,078
15-34	12,90,324		20,18,550	35,993	20,54,543		31,72,204	11,2,280
			1986			1991		
Total literates	Survival ratios at $e_0 = 55.6$	Survived literates	Adults to be made literate during the quinquennium	Total literates	Survival ratios at $e_0 = 58.3$	Survived literates	Adults to be made literate during the quinquennium	Total literates
10	11	12	13	14	15	16	17	18
17,43,759	0.9864			20,17,259	0.9882			23,56,600
14,18,585	0.9812	17,20,044	58,309	17,78,353	0.9841	19,93,455	15,5,594	21,49,049
9,70,519	0.9769	13,91,916	85,090	14,77,006	0.9805	17,50,077	2,07,105	19,57,182
5,23,927	0.9711	9,48,100	101,311	10,49,411	0.9765	14,48,204	1,75,446	16,23,650
3,71,453		5,08,786	1,23,574	6,32,368		10,24,750	2,43,822	12,68,572
32,84,484		45,68,846	3,68,284	49,37,130		62,16,486	7,81,967	69,98,453

Appendix - 18

Estimate of Male Literates in the age-group 15-35 in Kerala, 1971-1991

Age-group	1971		1976				1981	
	No. of literates	Survival ratios at $e_0 = 63.2$	Survived literates	Adults made literate during the quinquennium	Total literates	Survival ratios at $e_0 = 64.7$	Survived literates	Adults made and to be made literate during the quinquennium
1	2	3	4	5	6	7	8	9
10-14	13,11,387	0.9918	13,00,634	-	14,05,800	0.9930	14,05,889	-
15-19	10,21,501	0.9874	10,08,630	-	13,00,634	0.9893	12,86,717	-
20-24	8,65,611	0.9851	8,52,713	-	10,08,630	0.9873	9,95,820	-
25-29	5,53,399	0.9841	5,44,600	-	8,52,713	0.9866	8,41,287	-
30-34	4,89,372	-	37,06,577	-	5,44,600	-	45,29,713	-
15-34	29,29,883	-	-	-	37,06,577	-	-	-

Total literates	Survival Ratios at $e_0 = 66.2$	1986		1991				
		Survived literates	Adults to be made literate during the quinquennium	Survived literates	Adults to be made literate during the quinquennium			
10	11	12	13	14	15	16	17	18
15,57,400	0.9943	-	-	16,66,400	0.9953	-	-	17,99,900
14,05,889	0.9910	15,48,523	-	15,48,523	0.9927	16,58,568	-	16,58,568
12,86,717	0.9895	13,93,236	-	13,93,236	0.9915	15,37,219	-	15,37,219
9,95,820	0.9888	12,73,206	-	12,73,206	0.9910	13,81,393	-	13,81,393
8,41,287	-	9,84,667	-	9,84,667	-	12,61,747	-	12,61,747
45,29,713	-	51,99,632	-	51,99,632	-	58,38,927	-	58,38,927

Appendix-19

Estimate of Female Literates in the age-group 15-35 in Kerala, 1971-1991

Age-Group	1971		1976				1981	
	No. of literates	Survival ratios at $e_0 = 62.0$	Survived literates	Adults made literate during the quinquennium	Total literates	Survival ratios at $e_0 = 63.6$	Survived Literates	Adults made and to be made literate during the quinquennium
1	2	3	4	5	6	7	8	9
10-14	11,51,394	0.9919			13,85,900	0.9930		
15-19	10,10,965	0.9883	11,42,068	-	11,42,068	0.9898	13,76,199	-
20-24	7,71,815	0.9852	9,99,137	-	9,99,137	0.9871	11,30,419	
25-29	46,3,204	0.9793	7,60,392	-	7,60,392	0.9825	9,86,248	-
30-34	3,98,571		4,53,616	-	4,53,616		7,47,085	-
15-34	26,44,555		33,55,213	-	33,55,213		42,39,951	-

Total literates	Survival ratios at $e_0 = 65.6$	1986			1991			
		Survived literates	Adults to be made literate during the quinquennium	Total literates	Survival ratios at $e_0 = 67.3$	Survived Literates	Adults to be made literate during the quinquennium	Total literates
10	11	12	13	14	15	16	17	18
15,02,500	0.9939			15,64,700	0.9950			16,84,200
13,76,199	0.9913	14,93,335	-	14,93,335	0.9925	15,56,877	-	15,56,877
11,30,419	0.9888	13,64,226	-	13,64,226	0.9904	14,82,135	-	14,82,135
9,86,248	0.9855	11,17,758	-	11,17,758	0.9882	13,511,129	-	13,51,129
7,47,085		9,71,947	-	9,71,947		11,04,568	-	11,04,568
42,39,951		49,47,266	-	49,47,266		54,94,709	-	54,94,709

Appendix - 20

Estimate of Male Literates in the age-group 15-35 in Madhya Pradesh, 1971-1991

		1971		1976			1981	
age-group	No. of literates	Survival ratios at $e_0 = 50.6$	Survived literates	Adults made literate during the quinquennium	Total literates	Survival ratios at $e_0 = 53.1$	Survived literates	Adults made and to be made literate during the quinquennium
1	2	3	4	5	6	7	8	9
10-14	16,62,688	0.9833			25,12,970	0.9857		
15-19	10,19,065	0.9843	16,34,921	14,902	16,49,823	0.9848	24,77,035	7,659
20-24	8,66,504	0.9776	10,03,066	19,033	10,22,099	0.9793	16,24,746	11,524
25-29	6,76,147	0.9683	8,47,094	16,326	8,63,420	0.9724	10,00,942	14,559
30-34	6,28,904		6,54,713	15,274	6,69,987		8,39,590	12,398
15-34	31,90,620		41,39,794	65,535	42,05,329		59,42,313	46,140
		1986			1991			
Total literates	Survival ratios at $e_0 = 55.6$	Survived literates	Adults to be made literate during the quinquennium	Total literates	Survival ratios at $e_0 = 58.1$	Survived Literates	Adults to be made literate during the quinquennium	Total literates
10	11	12	13	14	15	16	17	18
36,04,000	0.9873			40,00,600	0.9898			37,54,100
24,84,694	0.9853	35,60,031	-	35,60,031	0.9859	39,59,794	-	39,59,794
16,36,270	0.9808	24,48,169	29,302	24,77,471	0.9824	35,09,835	-	35,09,835
10,15,501	0.9760	16,04,854	44,179	16,49,033	0.9798	24,22,868	1,12,030	25,45,898
8,51,988	-	9,91,129	55,704	10,46,833		16,15,723	1,66,073	17,81,796
59,88,453		86,04,183	1,29,185	87,33,368		1,15,19,220	2,78,103	1,17,97,323

Appendix - 21

Estimate of Female Literates in the age-group 15-35 in Madhya Pradesh,
1971-1991

Age-group	1971		1976				1981	
	No. of literates	Survival ratios at $e_0^o = 49.1$	Survived literates	Adults made literate during the quinquennium	Total literates	Survival ratios at $e_0^o = 51.9$	Survived Literates	Adults made and to be made literate during the quinquennium
1	2	3	4	5	6	7	8	9
10-14	6,46,238	0.9730			10,30,867	0.9780		
15-19	3,65,859	0.9690	6,28,790	8,990	6,37,780	0.9737	10,08,188	12,985
20-24	2,85,164	0.9664	3,54,517	8,618	3,63,135	0.9706	6,21,006	11,658
25-29	1,75,178	0.9638	2,75,582	7,575	2,83,157	0.9678	3,52,459	11,157
30-34	1,57,923		1,68,837	6,921	1,75,758		2,74,039	9,780
15-34	9,84,124		14,27,726	32,104	14,59,830		22,55,692	45,580

Total literates	Survival ratios at $e_0^o = 54.7$	1986			1991			
		Survived literates	Adults to be made literate during the quinquennium	total literates	Survival ratios at $e_0^o = 57.4$	Survived literates	Adults to be made literate during the quinquennium	Total literates
10	11	12	13	14	15	16	17	18
15,65,014	0.9825			20,76,010	0.9866			22,78,277
10,21,173	0.9779	15,37,626	23,183	15,60,809	0.9821	20,48,191	1,92,129	22,40,320
6,32,664	0.9745	9,98,605	50,850	10,49,455	0.9786	15,32,871	2,05,040	17,37,911
3,63,616	0.9718	6,16,531	45,372	6,61,903	0.9759	10,26,997	1,92,535	12,19,532
2,83,819		3,53,362	43,270	3,96,632		6,45,951	1,71,362	8,17,313
23,01,272		35,06,124	1,62,675	36,68,799		52,54,010	76,1,066	60,15,076

Appendix - 22

Estimate of Male Literates in the age-group 15-35 in Maharashtra, 1971-1991

Age-group	1971		1976				1981	
	No. of literates	Survival ratios at $e_0 = 52.6$	Survived literates	Adults made literate during the quinquennium	Total literates	Survival ratios at $e_0 = 55.1$	Survived literates	Adults made and to be made literate during the quinquennium
1	2	3	4	5	6	7	8	9
10-14	25,47,979	0.9786			34,89,200	0.9831		
15-19	18,62,112	0.9760	24,93,452	1,02,632	25,96,084	0.9797	34,30,233	-
20-24	16,13,680	0.9733	18,17,421	1,21,078	19,38,499	0.9769	25,43,383	52,859
25-29	12,93,314	0.9715	15,70,595	93,541	16,64,136	0.9753	18,93,720	60,933
30-34	11,45,980		12,56,455	1,16,368	13,72,823		16,23,032	47,183
15-34	59,15,086		71,37,923	4,33,619	75,71,542		94,90,368	1,60,975
			1986			1991		
Total literates	Survival ratios at $e_0 = 57.6$	Survived literates	Adults to be made literate during the quinquennium	Total literates	Survival ratios at $e_0 = 60.1$	Survived literates	Adults to be made literate during the quinquennium	Total literates
10	11	12	13	14	15	16	17	18
38,98,900	0.9870			36,27,300	0.9903			35,53,800
34,30,233	0.9832	38,48,214	-	38,48,214	0.9862	35,92,115	-	35,92,115
25,96,242	0.9804	33,72,605	-	33,72,605	0.9837	37,95,109	-	37,95,109
19,54,653	0.9789	25,45,356	1,75,164	27,20,520	0.9823	33,17,632	-	33,17,632
16,70,215		19,13,410	2,04,162	21,17,572		26,72,367	2,09,833	28,82,200
96,51,343		1,16,79,585	3,79,326	1,20,58,911		1,33,77,223	2,09,833	1,35,87,056

Estimate of Female Literates in the age-group 15-35 in Maharashtra, 1971-1991

Age-group	1971		1976				1981	
	No. of literates	Survival ratios at $e_0^o = 53.0$	Survived literates	Adults made lit. erate during the quinquennium	Total literates	Survival ratios at $e_0^o = 55.5$	Survived literates	Adults made and to be made lit. erate during the quinquennium
1	2	3	4	5	6	7	8	9
10-14	16,48,446	0.9830			24,05,528	0.9856		
15-19	10,35,954	0.9851	16,20,422	90,022	17,10,444	0.9859	23,70,888	14,836
20-24	8,35,423	0.9831	10,20,518	94,694	11,15,212	0.9836	16,86,327	16,439
25-29	5,44,722	0.9731	8,21,304	93,778	9,15,082	0.9756	10,96,923	17,172
30-34	4,66,457		5,30,969	1,03,727	6,33,796		8,92,754	16,843
15-34	28,82,556		39,92,313	2,82,221	43,74,534		60,46,892	65,290
		1986				1991		
Total literates	Survival ratios at $e_0^o = 58.0$	Survived literates	Adults to be made literate during the quinquennium	Total literates	Survival ratios at $e_0^o = 60.5$	Survived Literates	Adults to be made literate during the quinquennium	Total Literates
10	11	12	13	14	15	16	17	18
32,77,608	0.9880			33,97,000	0.9900			33,37,900
23,85,724	0.9865	32,38,277	27,819	32,66,096	0.9870	33,63,030	-	33,63,030
17,02,766	0.9839	23,53,517	56,901	24,10,418	0.9841	32,23,637	1,09,075	33,32,712
11,14,095	0.9783	16,75,351	63,093	17,38,444	0.9806	23,72,092	2,15,769	25,87,861
9,09,597		10,89,919	65,680	11,55,599		17,04,718	2,76,995	19,41,713
61,12,182		83,57,064	2,13,493	85,70,557		1,06,63,477	5,61,839	1,12,25,316

Estimate of Male Literates in the age-group 15-35 in Manipur, 1971-1991

Age-group	1971		1976				1981	
	No. of literates	Survival ratios at $e_0 = 57.0$	Survived literates	Adults made literate during the quinquennium	Total literates	Survival ratios at $e_0 = 59.3$	Survived literates	Adults made and to be made literate during the quinquennium
1	2	3	4	5	6	7	8	9
10-14	63,175	0.9909			74,200	0.9918		
15-19	38,003	0.9904	62,600	2,486	65,086	0.9904	73,592	-
20-24	34,710	0.9891	37,638	9,913	47,551	0.9891	64,461	-
25-29	25,819	0.9877	34,332	3,485	37,817	0.9877	47,033	-
30-34	20,179		25,501	6,212	31,713		37,352	-
15-34	1,18,711		1,60,071	22,096	1,82,167		2,22,438	
			1986				1991	
Total literates	Survival ratios at $e_0 = 61.6$	Survived literates	Adults to be made literate during the quinquennium	Total literate	Survival ratios at $e_0 = 63.8$	Survived literates	Adults to be made literate during the quinquennium	Total literates
10	11	12	13	14	15	16	17	18
78,200	0.9927			97,200	0.9936			1,03,800
73,592	0.9904	77,629	-	77,629	0.9904	96,578	-	96,578
64,461	0.9891	72,886	-	72,886	0.9891	76,884	-	76,884
47,033	0.9877	63,758	-	63,758	0.9877	72,092	-	72,092
37,352		46,454	-	46,454		62,974	-	62,974
2,22,438		2,60,727	-	2,60,727		3,08,528	-	3,08,528

Female
Estimate of ~~Male~~/Literates in the age-group 15-35 in Manipur, 1971-1991

Age-group	1971		1976				1981	
	No. of literates	Survival ratios at $e_0 = 54.0$	Survived literates	Adults made literate during the quinquennium	Total literates	Survival ratios at $e_0 = 56.8$	Survived literates	Adults to be made literate during the quinquennium
1	2	3	4	5	6	7	8	9
10-14	36,070	0.9824			79,400	0.9861		
15-19	23,767	0.9839	35,435	2,809	38,244	0.9856	78,296	-
20-24	15,096	0.9821	23,384	2,340	25,724	0.9836	37,693	5,009
25-29	6,970	0.9758	14,826	2,192	17,018	0.9785	25,302	3,936
30-34	5,937		6,801	2,507	9,308		16,652	4,180
15-34	51,770		80,446	9,848	90,294		157,943	13,125

Total literates	Survival ratios at $e_0 = 59.6$	1986			1991			
		Survived literates	Adults to be made literate during the quinquennium	Total literates	Survival ratios at $e_0 = 62.3$	Survived Literates	Adults to be made literate during the quinquennium	Total literates
10	11	12	13	14	15	16	17	18
8,70,000	0.9886			1,02,000	0.9911			1,11,300
78,296	0.9871	86,008	-	86,008	0.9884	1,01,092	-	1,01,092
42,702	0.9847	77,286	-	77,286	0.9859	85,010	-	85,010
29,238	0.9808	42,049	22,951	65,000	0.9833	76,196	-	76,196
20,832		28,677	21,723	50,400		63,915	-	63,915
1,71,068		2,34,020	44,674	2,78,694		3,26,213	-	3,26,213

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Estimate of Male Literates in the age-group 15-35 in Orissa, 1971-1991

Age-group	1971		1976				1981	
	No. of literates	Survival ratios at $e_0 = 50.2$	Survived literates	Adults made literate during the quinquennium	Total Literates	Survival ratios at $e_0 = 52.7$	Survived literates	Adults made and to be made literate during the quinquennium
1	2	3	4	5	6	7	8	9
10-14	9,31,564	0.9866			12,67,287	0.9879		
15-19	5,44,421	0.9882	9,19,081	12,688	9,31,769	0.9882	12,51,953	11,547
20-24	4,42,043	0.9863	5,37,997	16,693	5,54,690	0.9863	9,20,774	18,200
25-29	3,91,340	0.9822	4,35,987	13,624	4,49,611	0.9822	5,47,091	23,636
30-34	3,57,206		3,84,374	12,419	3,96,792		4,41,608	19,205
15-34	17,35,010		22,77,439	55,424	23,32,863		31,61,426	72,588
			1986		1991			
Total literates	Survival ratios at $e_0 = 55.2$	Survived literates	Adults to be made literate during the quinquennium	Total literates	Survival ratios at $e_0 = 57.7$	Survived literates	Adults to be made literate during the quinquennium	Total literates
10	11	12	13	14	15	16	17	18
15,76,000	0.9889			17,28,200	0.9899			17,83,500
12,63,500	0.9882	15,58,506	-	15,58,506	0.9882	17,10,745	-	17,10,745
9,38,974	0.9863	12,48,591	42,283	12,90,874	0.9863	15,40,116	-	15,40,116
5,70,727	0.9822	9,26,110	67,506	9,93,616	0.9822	12,73,189	1,46,552	14,19,741
4,60,813		5,60,568	87,878	6,48,446		9,75,930	2,27,234	12,03,164
32,34,014		42,93,775	1,97,667	44,91,442		54,99,980	3,73,786	58,73,766

Estimate of Female Literates in the age-group 15-35 in Orissa, 1971-1991

Age-group	1971		1976			1981		
	No. of literates	Survival ratios at $e_0^c = 47.6$	Survived literates	Adults made literate during the quinquennium	Total literates	Survival ratios at $e_0^c = 50.6$	Survived literates	Adults made and to be made literate during the quinquennium
1	2	3	4	5	6	7	8	9
10-14	4,59,167	0.9755			6,63,317	0.9793		
15-19	2,69,058	0.9777	4,47,917	909	4,48,826	0.9794	6,49,586	3,988
20-24	1,72,912	0.9753	2,63,058	892	2,62,950	0.9767	4,39,580	4,160
25-29	1,20,091	0.9674	1,68,641	806	1,69,447	0.9700	2,57,800	4,119
30-34	1,04,463		1,16,176	747	1,16,923		1,64,364	3,689
15-34	6,66,524		9,95,792	3,354	9,99,146		15,11,330	15,955

		1986			1991			
Total literates	Survival ratios at $e_0^c = 53.6$	Survived literates	Adults to be made literate during the quinquennium	Total literates	Survival ratios at $e_0^c = 66.6$	Survived literates	Adults to be made literate during the quinquennium	Total literates
10	11	12	13	14	15	16	17	18
8,48,515	0.9824			10,61,974	0.9863			12,79,094
6,53,574	0.9810	8,33,581	13,095	8,46,676	0.9826	10,47,425	43,374	10,90,799
4,43,740	0.9779	6,41,156	15,447	6,56,603	0.9791	8,31,944	51,300	8,83,244
2,61,918	0.9726	4,33,933	16,075	4,50,008	0.9755	6,43,880	60,113	7,02,993
1,68,053	2,54,741	2,54,741	15,843	2,70,584		4,38,983	62,194	5,01,177
15,27,285		21,63,411	60,460	22,23,871		29,61,232	2,16,981	31,78,213

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Estimate of Male Literates in the age-group 15-35 in Punjab, Haryana, Himachal Pradesh and Chandigarh, 1971-1991.

Age-group	1971		/		1976		/		1981	
	No. of literates	Survival ratios at $e_0 = 53.9$	Survived literates	Adults made lit- erate during the quin- quennium	Total liter- ates	Survival ratios at $e_0 = 56.2$	Survived Liter- ates	Adults made and to be made liter- ate during the quin- quennium		
1	2	3	4	5	6	7	8	9		
10-14	13,97,881	0.9791			17,51,285	0.9836				
15-19	9,98,032	0.9726	13,68,665	9,208	13,77,873	0.9777	17,22,564	28,439		
20-24	6,85,329	0.9695	9,70,686	11,602	9,82,288	0.9747	13,47,146	43,478		
25-29	4,73,991	0.9676	6,64,426	11,928	6,76,254	0.9730	9,57,436	56,561		
30-34	3,94,920		4,58,634	11,016	4,69,650		65,80,92	56,555		
15-34	25,52,272		34,62,411	43,754	35,06,165		46,85,238	1,85,033		
		/		1986		/		1991		
Total Liter- ates	Survival ratios at $e_0 = 58.5$	Survived literates	Adults to be made lit- erate during the quin- quennium	Total liter- ates	Survival ratios at $e_0 = 60.7$	Survived literates	Adults to be made literate during the quin- quennium	Total literate		
10	11	12	13	14	15	16	17	18		
21,57,600	0.9874			19,86,500	0.9912			21,30,200		
17,51,003	0.9823	21,30,414	-	21,30,414	0.9869	19,69,019	-	19,69,019		
13,90,624	0.9725	17,20,010	1,05,496	18,25,506	0.9840	21,02,506	-	21,02,506		
10,13,997	0.9780	13,62,116	1,67,774	15,29,890	0.9826	17,96,298	1,58,002	19,54,300		
7,14,647		9,91,689	2,07,281	11,98,970		15,03,270	1,89,630	16,92,900		
48,70,271		62,04,229	4,80,551	66,84,780		73,71,093	3,47,632	77,18,725		

Estimate of Females Literates in the age-group 15-35 in Punjab, Haryana,
Himachal Pradesh and Chandigarh, 1971-1991

Age - group	/ 1971		/ 1976			/ 1981		
	No. of literates	Survival ratios at $e_0^o = 52.3$	Survived literates	Adults made lit- erate during the quin- quenni- um	Total liter- ates	Survival ratios at $e_0^o = 55.1$	Survived liter- ates	Adults made and to be made lit- erate dur- ing the quinquennium
1	2	3	4	5	6	7	8	9
10-14	7,95,358	0.9767			12,30,843	0.9813		
15-19	5,64,701	7,76,826 0.9739	9,844 7,76,826	7,86,670 9,844	7,86,670	0.9780	12,07,826	23,151
20-24	3,29,267	0.9704	5,49,962	9,747	5,59,709	0.9746	7,69,363	33,191
25-29	1,71,092	0.9661	3,19,521	9,621	3,29,142	0.9710	5,45,492	33,276
30-34	1,48,526		1,65,292	8,965	1,74,257		3,19,597	31,922
15-34	12,13,586		18,11,601	38,177	18,49,778		28,42,278	1,21,540

Total liter- ates	/ 1986			/ 1991				
	Survival ratios at $e_0^o = 57.9$	Survived liter- ates	Adults to be made literate during the quin- quennium	Total liter- ates	Survival ratios at $e_0^o = 60.6$	Survived liter- ates	Adults to be made literate during the quin- quennium	Total liter- ates
10	12	12	13	14	15	16	17	18
19,54,900	0.9857			19,01,000	0.9893			20,56,200
12,30,977	0.9821	19,26,945	-	19,26,945	0.9858	18,80,659	-	18,80,659
8,02,554	0.9789	12,08,943	90,887	12,99,830	0.9828	18,99,582	-	18,99,582
5,78,768	0.9759	7,85,620	1,30,294	9,15,914	0.9800	12,77,473	3,09,003	15,86,476
3,51,519		5,64,820	1,26,603	6,91,423		8,97,596	4,01,573	12,99,169
29,63,818		44,86,328	3,47,784	48,34,112		59,53,310	7,10,576	66,65,886

Estimate of Male Literates in the age-group 15-35 in Rajasthan, 1971-1991.

Age-group	1971		1976			1981			
	No. of literates	Survival ratios at $e_0^c = 55.0$	Survived literates	Adults made literate during the quinquennium	Total literates	Survival ratios at $e_0^c = 57.3$	Survived literates	Adults made and to be made literate during the quinquennium	
1	2	3	4	5	6	7	8	9	
10-14	9,88,862	0.9807			15,38,388	0.9847			
15-19	6,08,819	0.9744	9,69,777	18,752	9,88,529	0.9792	15,14,851	30,580	
20-24	4,47,663	0.9716	5,93,233	20,711	6,13,944	0.9765	9,67,968	12,676	
25-29	3,29,543	0.9717	4,34,949	19,064	4,54,013	0.9749	5,99,516	13,940	
30-34	3,07,747		3,20,217	17,516	3,37,733		4,42,617	12,804	
15-34	16,93,772		23,18,176	76,043	23,94,219		35,24,952	70,000	
		1986			1991				
Total literates	Survival ratios at $e_0^c = 59.6$	Survived literates	Adults to be made literate during the quinquennium	Total literates	Survival ratios at $e_0^c = 61.8$	Survived Literates	Adults to be made literate during the quinquennium	Total literates	
10	11	12	13	14	15	16	17	18	
21,73,200	0.9883			24,38,800	0.9914			26,92,000	
15,45,431	0.9835	21,47,774	-	21,47,774	0.9874	24,17,826	-	24,17,826	
9,80,644	0.9807	15,19,931	36,007	15,55,938	0.9852	21,20,712	-	21,20,712	
6,13,456	0.9796	8,61,718	48,931	10,10,649	0.9840	15,32,910	63,862	15,96,772	
4,55,421		6,00,941	53,667	6,54,608		9,94,479	1,30,031	11,24,510	
35,94,952		52,30,364	1,38,605	53,68,969		70,65,987	1,93,893	72,59,820	

Estimate of Females Literates in the age-group 15-35 in Rajasthan, 1971-1991

Age-group	1971		1976				1981	
	No. of literates	Survival ratios at $e_0^c = 53.4$	Survived literates	Adults made lit. erate during the quinquennium	Total literates	Survival ratios at $e_0^c = 56.2$	Survived literates	Adults made and to be made literate during the quinquennium
1	2	3	4	5	6	7	8	9
10-14	2,77,059	0.9779			4,17,426	0.9823		
15-19	1,74,973	0.9750	2,70,936	2,420	2,73,356	0.9792	4,10,038	9,383
20-24	1,36,382	0.9716	1,70,599	2,007	1,72,606	0.9761	2,67,670	8,030
25-29	82,166	0.9674	1,32,509	1,762	1,34,271	0.9725	1,68,481	6,715
30-34	73,717		79,483	1,651	81,138		1,30,579	5,872
15-34	4,67,238		6,53,531	7,840	6,61,371		9,76,768	30,000
			1986			1991		
Total literates	Survival ratios at $e_0^c = 59.0$	Survived literates	Adults to be made literate during the quinquennium	Total literates	Survival ratios at $e_0^c = 61.7$	Survived literates	Adults to be made literate during the quinquennium	Total literates
10	11	12	13	14	15	16	17	18
5,92,499	0.9864			8,16,330	0.9901			11,02,342
4,19,421	0.9830	5,84,441	38,740	6,23,181	0.9868	8,08,248	1,54,586	9,62,834
2,75,700	0.9802	4,12,291	36,587	4,48,878	0.9840	6,14,955	1,45,253	7,60,208
1,75,196	0.9773	2,70,241	31,288	3,01,529	0.9813	4,41,696	1,23,419	5,65,115
1,36,451		1,71,219	26,086	1,97,305		2,95,890	1,04,260	4,00,150
10,06,768		14,38,192	1,32,701	15,70,893		21,60,789	5,27,518	26,88,307

Estimate of Male Literates in the age-group 15-35 in Tamil Nadu
1971-1991.

1971			1976			1981		
Age-group	No. of Literates	Survival Ratios at $e_0=48.0$	Survived Literates	Adults made Literate during the quinquennium	Total Literates	Survival Ratios at $e_0=50.8$	Survived Literates	Adults made and to be made Literate during the quinquennium
1	2	3	4	5	6	7	8	9
10-14	22,90,200*	0.9798			25,72,000	0.9830		
15-19	13,48,382	0.9704	22,43,938	-	22,43,938	0.9749	26,26,576	-
20-24	12,52,848	0.9634	13,08,470	769	13,09,239	0.9691	21,87,615	-
25-29	9,80,212	0.9594	12,06,994	635	12,07,629	0.9659	12,68,784	1,85,459
30-34	8,59,180		9,40,415	788	9,41,203		11,66,449	1,54,541
15-34	44,40,622		56,91,817	2,192	57,02,009		72,49,424	3,40,000

1986					1991			
Total Literates	Survival Ratios at $e_0=53.6$	Survived Literates	Adults to be made Literate during the quinquennium	Total Literates	Survival Ratios at $e_0=56.3$	Survived Literates	Adults to be made Literate during the quinquennium	Total Literates
10	11	12	13	14	15	16	17	18
29,53,000	0.9857			27,05,800	0.9884			28,76,700
26,26,576	0.9789	29,10,772	-	29,10,772	0.9827	26,74,413	-	26,74,413
21,87,615	0.9742	25,71,155	-	25,71,155	0.9788	28,60,416	-	28,60,416
14,54,243	0.9717	21,31,175	-	21,31,175	0.9767	25,16,647	-	25,16,647
13,20,990		14,13,088	3,89,912	18,03,000		20,81,519	-	20,81,519
75,89,424		90,26,190	3,89,912	94,16,102		1,01,32,995	-	1,01,32,995

* Whole of the population is literate.

Appendix-33.

Estimate of Female Literates in the age-group 15-35 in Tamil Nadu
1971-1991.

1971		/		1976		/		1981	
Age-group	No. of Literates	Survival Ratios at $e=47.3$	Survived Literates	Adults to be made Literate during the quinquennium	Total Literates	Survival Ratios at $e=50.3$	Survived Literates	Adults to be made Literate during the quinquennium	
1	2	3	4	5	6	7	8	9	
10-14	16,55,516	0.9794			23,64,452	0.9820			
15-19	8,89,613	0.9724	16,55,515	77	16,55,592	0.9755	23,21,892	9,828	
20-24	6,79,464	0.9665	8,65,060	139	8,65,197	0.9702	16,15,030	19,889	
25-29	4,60,656	0.9549	6,56,702	143	6,56,845	0.9617	8,39,416	37,090	
30-34	3,66,821		4,39,380	151	4,40,031		6,31,688	37,893	
15-34	23,96,554		36,17,157	510	36,17,667		54,08,026	1,04,700	
		1986		/		1991			
Total Literates	Survival Ratios at $e=53.3$	Survived Literates	Adults to be made Literate during the quinquennium	Total Literates	Survival Ratios at $e=56.3$	Survived Literates	Adults to be made Literate during the quinquennium	Total Literates	
10	11	12	13	14	15	16,	17	18	
27,70,100	0.9842			25,39,600	0.9865			26,94,900	
23,31,720	0.9783	27,26,332	-	27,26,332	0.9816	25,05,315	-	25,05,315	
16,34,919	0.9735	22,81,122	37,007	23,18,129	0.9776	26,76,167	-	26,76,167	
8,76,506	0.9676	15,91,594	74,619	16,66,213	0.9736	22,66,203	-	22,66,203	
66,69,581		8,48,107	1,38,374	9,86,481		16,22,225	1,77,174	17,99,357	
55,12,726		74,47,155	2,50,000	76,97,155		90,69,910	1,77,174	92,47,084	

Estimate of Male Literates in the age-group 15-35 in Tripura
1971-1991.

1971			1976			1981		
Age-group	No. of Literates	Survival Ratios at $e_0=57.0$	Survived Literates	Adults made Literate during the quinquennium	Total Literates	Survival Ratios at $e_0=59.3$	Survived Literates	Adults made and to be made Literate during the quinquennium
1	2	3	4	5	6	7	8	9
10-14	69,727	0.9909			92,361	0.9918		
15-19	44,321	0.9904	69,092	8,587	77,679	0.9904	91,604	9,615
20-24	39,794	0.9891	43,896	11,405	55,301	0.9891	76,935	10,644
25-29	35,104	0.9877	39,360	7,108	46,468	0.9877	54,698	10,192
30-34	30,254		34,672	6,035	40,707		45,896	6,744
15-34	1,49,473		1,87,020	33,135	2,20,155		2,69,131	37,195

1986				1991				
Total Literates	Survival Ratios at $e_0=61.6$	Survived Literates	Adults to be made Literate during the quinquennium	Total Literates	Survival Ratios at $e_0=63.8$	Survived Literates	Adults to be made during the quinquennium	Total Literates
10	11	12	13	14	15	16	17	18
1,18,600	0.9927			1,44,500	0.9936			1,47,200
1,01,219	0.9904	1,17,734	—	1,17,734	0.9904	1,43,575	—	1,43,575
87,577	0.9891	1,00,247	13,053	1,13,300	0.9891	1,16,604	—	1,16,604
64,890	0.9877	86,622	5,873	92,500	0.9877	1,12,065	—	1,12,065
52,640		64,092	8,208	72,300		91,362	—	91,362
3,06,326		3,68,695	27,139	3,95,834		4,63,606	—	4,63,606

Estimate of Female Literates in the age-group 15-35 in Tripura
1971-1991.

Age-group	1971		1976			1981		
	No. of Literates	Survival Ratios at $e_0=54.0$	Survived Literates	Adults made Lit-erate during the quin-que-ennium	Total Literates	Survival Ratios at $e_0=56.8$	Survived Literates	Adults made and to be made Literate
1	2	3	4	5	6	7	8	9
10-14	43,510	0.9824			60,819	0.9361		
15-19	28,562	0.9839	42,744	8,915	51,659	0.9856	59,974	12,699
20-24	23,974	0.9821	28,102	7,748	35,350	0.9836	50,915	9,678
25-29	13,330	0.9758	23,545	6,774	30,319	0.9785	35,262	9,066
30-34	10,619		13,007	7,609	20,616		29,667	7,795
15-34	76,485		1,07,398	31,046	1,38,444		1,75,818	39,238

Total Literates	1986		1991					
	Survival Ratios at $e_0=59.6$	Survived Literates	Adults made Literate during the quin-que-ennium	Total Literates				
10	11	12	13	14	15	16	17	18
85,667	0.9836			1,24,350	0.9911			1,66,200
72,673	0.9871	84,690	51,510	1,36,200	0.9384	1,23,243	-	1,23,243
60,593	0.9847	71,736	47,664	1,18,400	0.9059	1,34,620	-	1,34,620
44,328	0.9803	59,666	40,834	1,00,500	0.9833	1,17,716	-	1,17,716
37,462		43,477	37,023	80,500		98,822	-	98,822
2,15,056		2,59,569	1,77,031	4,36,600		4,74,401	-	4,74,401

Estimate of Male Literates in the age-group 15-35, in Uttar Pradesh
1971-1991.

1971			/			1976			/			1981		
Age-group	No. of Literates	Survival Ratios at $e_0=44.1$	Survived Literates	Adults made Literate during the quinquennium	Total Literates	Survival Ratios at $e_0=46.9$	Survived Literates	Adults made and to be made Literate during the quinquennium	Total Literates	Survival Ratios at $e_0=49.7$	Survived Literates	Adults to be made Literate during the quinquennium	Total Literates	
1	2	3	4	5	6	7	8	9	10	11	12	13	14	
10-14	49,66,830	0.9768			63,26,910	0.9803								
15-19	27,78,900	0.9788	48,51,600	5,770	48,57,370	0.9795	62,02,270	8,389						
20-24	16,22,869	0.9723	22,30,587	19,166	22,49,753	0.9738	47,57,794	54,302						
25-29	12,90,404	0.9594	15,77,916	19,237	15,97,153	0.9641	21,90,809	1,80,607						
30-34	11,87,330		12,38,011	17,790	12,55,804		15,39,815	1,79,492						
15-34	63,70,503		93,98,117	61,963	90,60,080		1,46,90,688	4,22,790						
/			1986			/			1991					
Total Literates	Survival Ratios at $e_0=49.7$	Survived Literates	Adults to be made Literate during the quinquennium	Total Literate	Survival Ratios at $e_0=52.4$	Survived Literates	Adults to be made Literate during the quinquennium	Total Literates						
10	11	12	13	14	15	16	17	18						
66,35,400	0.9833			70,23,800	0.9857			74,50,500						
62,10,659	0.9801	65,25,572	-	65,25,572	0.9803	69,23,360	-	69,23,360						
48,12,096	0.9749	60,87,067	40,257	61,27,324	0.9759	63,97,018	-	63,97,018						
23,71,416	0.9685	46,91,312	2,00,612	48,91,924	0.9723	59,79,655	-	59,79,655						
17,19,307		22,96,716	6,40,387	29,37,103		47,56,418	-	47,56,418						
1,51,13,478		1,96,00,667	8,81,256	2,04,81,923		2,40,56,451	-	2,40,56,451						

Estimate of Female Literates in the Age-Group 15-35, in Uttar Pradesh
1971-1991.

Age-Group	1971		1976				1981	
	No. of Literates	Survival Ratios at $e_0=43.1$	Survived Literates	Adults to be made Literate during the quinquennium	Total Literates	Survival Ratios at $e_0=46.1$	Survived Literates	Adults to be made Literate during the quinquennium.
1	2	3	4	5	6	7	8	9
10-14	25,19,063	0.9649			35,42,475	0.9712		
15-19	7,41,976	0.9599	24,30,644	511	24,31,155	0.9661	34,40,452	9,831
20-24	5,15,474	0.9566	7,12,223	685	7,12,908	0.9622	23,48,739	10,969
25-29	3,24,217	0.9534	4,93,074	623	4,93,697	0.9583	6,85,960	15,834
30-34	2,93,574		3,00,106	579	3,00,685		4,73,357	14,341
15-34	18,75,211		39,45,047	2,398	39,47,445		69,48,508	50,975
Total Literates		1986		1991		1991		
Survival Ratios at $e_0=49.1$		Survived Literates	Adults to be made Literate during the quinquennium	Total Literates	Survival Ratios at $e_0=52.1$	Survived Literates	Adults to be made Literate during the quinquennium	Total Literates.
10	11	12	13	14	15	16	17	18
47,90,594	0.9767			58,8,450	0.9814			70,73,400
34,50,283	0.9714	46,78,973	29,067	47,08,040	0.9759	57,71,074	58,495	58,29,569
23,59,708	0.9671	35,51,605	30,233	33,89,838	0.9714	45,94,576	77,382	46,71,958
7,01,794	0.9636	22,82,074	42,416	23,24,490	0.9678	32,92,889	100,757	34,01,646
4,87,698		6,76,249	60,872	7,37,121		22,49,641	131,005	23,80,646
69,99,483		1,09,83,901	1,70,530	1,11,59,489		1,59,08,180	3,75,639	1,62,83,819

Estimate of Male Literates in the Age-group 15-35 in West Bengal
1971-1991.

1971		1976			1981			
Age-group	No. of Literates	Survival Ratios at $e_0=52.6$	Survived Literates	Adults made Literate during the quinquennium	Total Literates	Survival Ratios at $e_0=55.1$	Survived Literates	Adults made and to be made Literate during the quinquennium
1	2	3	4	5	6	7	8	9
10-14	19,69,225	.9883			26,10,215	0.9894		
15-19	14,27,623	0.9893	19,46,185	1,04,054	20,50,239	0.9893	25,82,547	73,243
20-24	11,30,510	0.9876	14,12,347	1,07,988	15,20,335	0.9876	20,28,301	95,322
25-29	9,73,594	0.9838	11,16,492	96,958	12,13,450	0.9838	15,01,483	98,701
30-34	8,75,588		9,57,822	94,938	10,52,760		11,93,792	88,249
15-34	44,07,315		54,32,346	4,03,938	58,36,784		73,06,123	3,55,515

1986		1991						
Total Literates	Survival Ratios at $e_0=57.6$	Survived Literates	Adults to be made Literate during the quinquennium	Total Literates	Survival Ratios at $e_0=60.1$	Survived Literates	Adults to be made Literate during the quinquennium.	Total Literates
10	11	12	13	14	15	16	17	18
33,91,000	0.9904			40,06,000	0.9914			43,06,000
26,55,790	0.9893	33,58,446	—	33,58,446	0.9893	39,71,548	—	39,71,548
21,23,623	0.9876	26,27,373	25,70,2,57,082	28,84,455	0.9876	33,22,511	—	33,22,511
16,00,184	0.9838	20,97,290	3,32,150	24,29,440	0.9838	28,48,633	1,01,412	29,50,100
12,82,041		15,74,261	3,41,768	18,16,029		23,90,083	17,817	24,07,900
76,61,638		96,57,370	9,31,000	1,05,88,370		1,25,32,830	1,19,229	1,26,52,059

Estimate of Female Literates in the Age-Group 15-35, in West Bengal
1971-1991.

		1971		1976			1981		
Age-Group	No. of Literates	Survival Ratios at $e_0=49.9$	Survived Literates	Adults made Literate during the quinquennium	Total Literates	Survival Ratios at $e_0=52.9$	Survived Literates	Adults to be made Literate during the quinquennium	
1	2	3	4	5	6	7	8	9	
10-14	12,20,322 12,06,322	0.9779			17,51,827	0.9818			
15-19	8,01,768	0.9799	11,79,662	28,735	12,00,395	0.9817	17,19,944	31,041	
20-24	5,70,392	0.9779	7,85,652	25,808	8,11,460	0.9792	11,86,281	31,095	
25-29	3,92,626	0.9704	5,57,793	23,820	5,81,613	0.9731	7,94,582	27,862	
30-34	3,38,929		3,81,004	23,657	4,04,661		5,65,968	25,562	
15-34	21,10,xxx 21,03,722		29,04,111	1,02,018	30,06,129		42,66,775	1,15,580	
		1986			1991				
Total Literates	Survival Ratios at $e_0=55.9$	Survived Literates	Adults made Literate during the quinquennium	Total Literates	Survival Ratios at $e_0=58.9$	Survived Literates	Adults to be made Literate during the quinquennium	Total Literates	
10	11	12	13	14	15	16	17	18	
23,67,537	0.9854			31,16,375	0.9885			40,11,200	
17,50,985	0.9836	23,32,971	94,106	24,27,07	0.9853	30,80,537	1,96,546	32,77,083	
12,17,376	0.9808	17,22,269	1,19,640	18,41,909	0.9822	23,91,399	3,17,755	27,09,154	
8,22,464	0.9761	11,94,002	1,19,428	13,13,430	0.9790	18,09,123	3,20,321	21,29,944	
5,91,430		8,02,807	1,06,538	9,09,345		12,85,848	3,02,928	15,38,776	
43,82,355		60,52,049	4,39,712	64,91,761		85,66,907	11,38,050	97,04,957	

Appendix-40.

Estimate of Male Literates in the age-group 15-35, in Delhi
1971-1991.

		1971		1976			1981	
Age-group	No. of Literates	Survival Ratios at $e_0=51.9$	Survived Literates	Adults made Lit-erate during the quin-ennium	Total Literates	Survival Ratios at $e_0=54.4$	Survived Literates	Adults made and to be made Lit-erate during the quinennium
1	2	3	4	5	6	7	8	9
10-14	2,16,933	0.9768			2,71,927	0.9819		
15-19	1,98,417	0.9698	2,11,900	193	2,12,093	0.9755	2,67,005	762
20-24	1,87,874	0.9665	1,93,395	217	1,93,612	0.9722	2,06,897	1,346
25-29	1,51,183	0.9643	1,81,580	193	1,81,778	0.9701	1,88,230	1,491
30-34	1,26,116		1,45,736	162	1,45,948		1,76,343	1,101
15-34	6,64,590		7,32,561 7,32,661	770	7,33,431		8,38,475	4,700

		1986			1991			
Total Literates	Survival Ratios at $e_0=56.9$	Survived Literates	Adults made Lit-erate during the quinennium	Total Literates	Survival Ratios at $e_0=59.4$	Survived Literates	Adults to be made Literate during the quinennium	Total Literates
10	11	12	13	14	15	16	17	18
3,49,700	0.9861			3,59,500	0.9899			4,23,300
2,67,767	0.9806	3,44,839	-	3,44,839	0.9853	3,55,869	-	3,55,969
2,08,243	0.9775	2,62,572	6,092	2,68,664	0.9825	3,39,770	-	3,39,770
1,89,721	0.9758	2,03,558	8,654	2,12,212	0.9811	2,63,962	40,055	3,04,017
1,77,444		1,85,130	7,712	1,92,842		2,08,201	42,726	2,50,927
8,43,175		9,96,099	22,458	10,18,557		11,67,802	82,781	12,50,583

Estimate of Female Literates in the Age-group 15-35 in Delhi
1971-1991.

1971		1976				1981		
Age-group	No. of Literates	Survival Ratios at $\alpha=50.4$	Survived Literates	Adults made Literates during the quinquennium	Total Literates	Survival Ratios at $\alpha=53.4$	Survived Literates	Adults made to be made Literate during the quinquennium
1	2	3	4	5	6	7	8	9
10-14	1,72,140	0.9744			2,35,272	0.9795		
15-19	1,38,766	0.9715	1,67,733	4796	1,72,529	0.9759	2,30,449	1,353
20-24	1,12,238	0.9698	1,34,811	5838	1,40,649	0.9721	1,68,371	2,239
25-29	80,741	0.9652	1,08,848	5974	1,14,822	0.9683	1,36,725	2,545
30-34	65,955		77,931	5258	83,189		1,11,182	2,098
15-34	3,97,700		4,89,323	21,866	5,11,189		6,46,727	8,235
1986				1991				
Total Literates	Survival Ratios at $\alpha=56.4$	Survived Literates	Adults made Literate during the quinquennium	Total Literates	Survival Ratios at $\alpha=59.4$	Survived Literates	Adults to be made Literate during the quinquennium	Total Literates
10	11	12	13	14	15	16	17	18
3,35,500	0.9842			3,68,800	0.9384			4,49,900
2,31,802	0.9803	3,30,199		3,30,199	0.9346	3,64,522	-	3,64,522
1,70,610	0.9769	2,27,236	9,662	2,36,898	0.9313	3,25,114	-	3,25,114
1,39,270	0.9736	1,66,669	13,324	1,79,993	0.9785	2,32,468	61,357	2,93,825
1,13,280		1,35,593	12,262	1,47,855		1,76,123	64,047	2,40,170
6,54,962		8,59,697	35,248	8,94,945		10,98,227	1,25,404	12,23,631

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