METHODS OF INVESTIGATION

Introduction:

It has been mentioned earlier that the present study is concerned with the existing nature and extent of volumetric educational dynamism relevant to different social strata of the region in consideration at the E.E.A.L.* (age-group 5 plus to 14 plus).

So, decision is to be taken on the following items:

(1) The nature and extent of student-flow from community to school (as a whole) at the E.E.A.L. and the corresponding educational wastage of human resources at the specific age-group; and

(2) Growth of elementary education at the school and the community.

These depend on:

(a) The nature of demand situation of education in different sex-groups and age-groups;

(b) The nature of progress of elementary education in schools in different social strata;

(c) The nature of supply of elementary education in the community with respect to variations in the age, sex and social ranks.

* E.E.A.L. - Elementary Educational Age-Level.
(d) The nature of social resistences to flow of population in different socio-economic groups within the community.

(e) The relationship of student-flow with certain specific socio-economic and socio-cultural factors affecting these demand and supply conditions.

(a) The demand situation of education in different social strata of the community can be known by actually studying the households of each stratum. The number of boys and girls in the E.E.A.G. (age-group 5 plus to 14 plus) participating from each household in the schools enumerates the actual roll strength of the school. So, rise and fall of roll strength of schools is dependent on the growth and fall of student-flow from different social strata of the community to school. It is, therefore, essential to locate the various strata that affect student-flow at different levels of elementary education. It has been discussed earlier that the community under study has been divided into four well defined and more or less permanent stratification. These are the (i) Scheduled Tribes, (ii) Scheduled Castes, (iii) the Minority-religion-groups and (iv) all other Hindu groups.

The rate of student-flow and demand for elementary education is not the same in all these four groups. In some groups the demand is greater; while in others, it may be the least. In this situation, each group requires to be proportionately included in the sample so as to ascertain the nature of demand and student-flow of each stratum. Obviously, proportionate number of households.

* Elementary Educational Age-group.
of each stratum should be studied in order to know the exact
number of participants (in the age-group 5 plus to 14 plus)
coming from the various strata. The non-participants in the
age-group (5 plus to 14 plus) determine the educational wastage
in the community. This is one side of the picture. On the
other side, other variables also determine the demand situation
or student-flow and corresponding educational wastage in the
community. These are sex variations and age-group variations.
The demand for education is lower for girls than that for boys
and this is evidenced from the rate of literacy in the two sex
groups. The demand for women-education is also not constant in
different permanent social strata. In some groups, flow of girl-
student-population is lowest. Naturally, the exact number of
girl participants of each group requires to be ascertained.

Finally, the demand condition is also dependent on age
variations. When boys or girls become helpful to their parents
for domestic or occupational purposes, there is every likelihood
that circumstances may disallow them to participate in school.
The demand for education for this age-group (9/10 and upwards),
therefore, seems to fall; and student-flow at this stage is
thwarted resulting in educational wastage. It is obvious,
therefore, that the above factors are very significant in deter-
mining the demand for education and student-flow so also in
determining the volumetric educational dynamism. Thus, each of
the above factors are to be studied from households or the
community. The elementary education is limited to particular
The Constitution provides for free and compulsory education for all children until they complete the age of fourteen years. Thus, "active steps are being taken in the country for universalising elementary education amongst children in the age-group 6 to 14." Henceforth, almost all studies and literature on elementary education deal with age-group 6 to 14. This age-group has also been divided into two levels: (1) age-group 6 to 11 for classes I to V and (2) age-group 11 to 14 for classes VI to VIII.

However, the present study tends to avoid the overlapping of age at 11; and also overlapping of educational stage at class V. In the region under study primary schools facilitate education for classes I to IV. A few Basic type schools extend it up to class V. In all other cases class V standard goes under the Middle or Secondary School. At the initial stage of investigation, it was noticed that a good number of pupils, reading in class I, have not crossed five years of age.

Secondly, R.C. Sharma and C.L. Sapra in their study on "Wastage and Stagnation in Primary and Middle Schools in India" have shown that school admission starts even at the age of four and this is encouraging at the age of 5 to 6 and retention is quite appreciable for those who are admitted at this age.

References:
The lower level includes 5 plus to 10 plus age-group and the upper level takes into consideration 11 plus to 14 plus age-group. So, it follows the constitutional age-ranges for universal elementary education. Thus, the present investigation selects a target population belonging to age-group (5 plus to 14 plus) instead of (6 plus to 14 plus).

(b) Next the investigation directs attention towards exploring the nature of growth of elementary education in the existing formal schools. Elementary education in the region under the study is facilitated by (i) Primary Schools; (ii) Junior High Schools and (iii) Secondary or Madhyamik Schools. The lower level of elementary education ranging from classes I to IV is the concern of Primary Schools and Junior Basic Schools (that are very few in number); while, upper elementary education from classes V to VIII is related to Madhyamik or Junior High Schools. It is natural, therefore, that every type of school should be included in the sample so as to study the nature of progress of education in the upper as well as lower elementary stage. In this specific study progress is principally the quantitative growth of student population that determines the volume of education. It is not the intention of this study to view the problem from qualitative side. Obviously, the rate of growth of student population in the two levels of elementary education over time (that is per year) has been attempted to be ascertained. The common approach to estimate the rate of growth of student population is to collect data from the school attendance register.
at the end of the two successive years and the difference of the number of student population in these two years represents the growth or fall of population during the period. At the same time the rate of growth of population in the community at the specific age-group (E.E.A.G) is also an indicator of student population growth. So the growth of population in the two areas (in the school and in the community) needs to be compared in order to exemplify the nature of real growth of education in the elementary stage as a whole.

This investigation also considers the growth of elementary schooling in the non-formal agencies for boys and girls belonging to the age-groups (5 plus to 10 plus) and (11 plus to 14 plus) during the period (1974 to 1976).

(c) Education in the primary stage is entirely supplied by the District School Board. More or less uniform regulations are meant for every village school. Primary education is, on the whole, co-educational. It is free upto class IV for all student-population belonging to S.T., S.G., M.R. and A.O.H. groups. So, for primary educational age-group (E.E.A.G.), ranging from age 5 plus to 10 plus, there is more or less a homogeneous pattern of education. Some variations are found with regard to Harijan schools, exclusively girls' schools and exclusively boys' schools. But these are few in number. So, the nature of supply situation has been viewed from the following directions:

2. Elementary Educational Age-group. **. Schools meant for S.T. and S.C. population.
(i) Number of primary schools in relation to potential total student population per village.

(ii) Total number of male and female teachers in the schools under study.

(iii) Accommodation in the schools in terms of the number of class units.

(iv) Optimum capacity of intake of pupils in terms of number of existing teachers in the schools under study.

(v) Optimum capacity of intake of pupils in terms of number of class units and accommodation available.

(vi) Amount of school fees, if any.

(vii) Supply of text books.

(viii) Supply of learning materials.

(ix) Supply of tiffin.

(x) Working hours in school.

(xi) Average distance of schools from the houses of pupils.

From the above, it appears that item (i) is the basic consideration for obtaining data with regard to items (ii), (iii), (iv), (v), (vi), (vii), (viii), (ix), (x) and (xi). Unless representative villages and schools are selected at the initial stage, no data can be obtained for items (ii) to (xi) representing the features of supply conditions in primary education. Naturally,
villages will be so selected that represent primary schools which are capable of supplying data for all the items, (ii) to (xi). Once schools are selected, most of the relevant data can be collected from the school records of teachers and pupils. In some cases physical verification and observation will be required.

For the upper elementary stage, that is for classes V to VIII all the items from (i) to (xi) are also applicable. But it is very difficult to draw inferences from these data; because, in most of the schools upper elementary and secondary classes (that is, classes IX and X) are not managed separately. The same organisations deal with secondary education for classes V to X. Naturally, there is every possibility of overlapping of the features of supply situation in upper elementary with that of classes IX and X. Therefore, precautions are to be taken in the selection of secondary schools and collection of data needed for examining the nature of supply situation in the upper elementary stage of education. So, inclusion of some Junior High Schools becomes essential. For Junior High Schools, there is no question of overlapping; but for High Schools, the opinion of the Headmaster of the school becomes of primary importance as there is but little scope of having independent source of information in regard to some specific data for lower secondary stages of Madhyamik Schools. The supply situation of formal education has been examined from two aspects:

(a) Schooling facilities in terms of supply of institutions, and

(b) Educational opportunities in terms of their utility to the community.
The first five items, \(i, ii, iii, iv, \) and \(v\) have been considered for the former; and last six items, \(vi, vii, viii, ix, x, \) and \(xi\) have been examined for the latter.

The supply of non-formal and informal agencies of education has been studied from 1974 to 1976 so as to examine whether dropouts and unschooled boys and girls belonging to age-groups (5 plus to 10 plus) and (11 plus to 14 plus) get any schooling.

(d) Next the present investigation directs attention towards identification of the causes of resistances to flow of student-population from the community to school. Attention is paid to a real situation. The statements of teachers, guardians and social workers, as community members, are taken into consideration. However, the statements of students and school supervisors have not been considered. Regular students and sometimes supervisors make a guess - why do certain boys and girls remain non-participants to school? But they may not always exactly identify the real causes of non-participation. Again, the drop-outs are not available at home when they are needed for interview; if available at all, they express very little as they are introvert in most of the cases; their reaction time is too high.

For the above reasons the teachers, social workers and guardians become the objects for interview.

Check-lists have been prepared for this purpose. The items have been selected from relevant research studies, opinion of


* They are government officials. They are not local persons.
experts and local social workers. Thirty-five (35) items, a few having a sub-item, are selected so as to prepare a check-list for determining teachers', social workers' and guardians' views on the causes of non-participation. This was served upon all the guardians who do not send all their wards (belonging to age 6 plus to 14 plus) to school. The check-lists (with the exclusion of sub-items) were served upon 46 teachers of the selected schools and 26 social workers of the community under the study. The scores were separately obtained for boys and girls. When causes of non-participation are identified, the relationships of demand-flow of education with occupation and also with educational levels of guardians are determined. The investigator, therefore, classifies guardians in several major occupational groups and tends to find out the relationships of student-flow with each of these occupational groups. Guardians are also classified into a number of groups in terms of their educational qualifications so as to detect the relationship of student-flow with educational level of each group.

II. Preliminary Investigation

The investigation was started in the month of January 1974, and continued throughout 1975 and early part of 1976. But preliminary work of the study had been started as early as in October 1973 and this continued till the earlier part of 1974. At the preliminary stage the following areas were explored:
1. Discussions with Primary and secondary teachers' 
Associations of the district in order to have first-hand 
information with regard to the nature of educational 
dynamism and wastage in different strata in different 
parts of the district.

2. With the same ends in view the secondary and primary 
teachers' training colleges of the district have been 
contacted. The teachers of the training colleges and the 
deputed teachers coming from different parts of the 
district were informally interviewed.

The discussions and interviews with teachers' associations 
and training colleges opened certain wide fields of enquiry and 
gave vent to important sources of information. These were the 
following:

(i) There is glaring poverty in the village life. However, 
poverty is not the only cause of non-participation in 
elementary school. Guardians are mostly unconcerned or 
indifferent to education of their wards.

(ii) Prevailing social-habit does not encourage school education 
in the village folk.

(iii) Boys and girls are employed in the occupations and 
domestic work of their parents. However, they have their 
leisure which they enjoy through folk activities, songs, 
dances and native games. The schools do not attract them. 
Parents also like folk activities.
(iv) Girls are discouraged by parents to join school. Some higher caste-groups allow their girls to go to school.

(v) The numerical growth of schools and teachers does not guarantee volumetric growth of education.

(vi) Student-flow from the community to elementary schools has not been increasing in S.T. and under-privileged classes although educational facilities are being extended to them.

(vii) Educational facilities are being wasted in all the social strata.

(viii) The schooling conditions, too, are very wretched and unsystematic.

(ix) Illiteracy of guardians is also a great educational problem.

(x) The informal agencies are not conducive to literacy; and the idea of non-formal education is not clear to them.

These are some valuable information about the community.

On the other side, some information about the nature of elementary schools were also available, viz.: 

(A) The primary schools in the village community are next to homogeneous, in the sense, that these are controlled and financed by the same authority (School Board); that courses of studies and evaluation systems are identical; and that the
qualifications and pay scales of teachers follow a uniform pattern throughout the district. The pupils also come from typically and almost identical stratification systems. However, schools may be differentiated on the following aspects:

(i) It may be differentiated in terms of number of teachers and number of pupils.

(ii) It may also be differentiated in terms of Harijan Schools and ordinary schools.

(iii) In some schools the S.T. population may have dominance and in others the S.C. population may have dominance along with other Hindu population.

(iv) A few schools are Basic type, or exclusively for girls or exclusively for boys. But these are too few in numbers.

(B) Elementary education after post-primary stages is managed by several types of schools. These are:

(1) Secondary schools from classes V - X.

(2) Middle Schools or Junior High schools from classes V - VIII.

(3) Junior Madrasha schools from classes V - VIII. These are meant for Muslims.

However, the Madrasha, being only two in number in the whole district, is insignificant. Upper elementary schools, therefore, are of two types:

(i) Ten-class High schools or Madhyamik schools; and

(ii) Eight-class Junior High or Middle schools.

* Schools meant for S.T. and S.C. population.
In both the cases pupils reading in classes V to VIII constitute the subjects for upper elementary education. On financial aspects these schools may be identified as lump-grant or deficit-grant schools. These are all co-educational schools in the villages, except for Laxmanpur. The management is also more or less identical. So, all these are valuable guidelines for selection of sample schools. Next, the investigator was mostly concerned with the nature of regional variations of schooling facilities, (b) ethnic and religion-population and (c) communication links. The researcher exchanged discussions with the District Inspector of Schools, Head Assistant of School Board, S. I. of Schools, Purulia Muffasil, Editor, Purulia Gazette, B. D. O., Purulia Muffasil, Tribal Welfare Officer, Agent, United Bank of India, District Industrial Officer, local reporter to Akash Banik**, Sri A. K. Sarkar, Editor, Jhattrak, the mouthpiece of Purulia culture and a number of Headmasters of some big schools, for collection of relevant facts.

The discussions with these agencies and responsible personnel came to be of great help for understanding the magnitude of the problem and probable procedure for attacking the problem. The opinion and observations of all these agencies and local experts were evaluated or verified with available criteria or sources. These are the Census Reports 1961 and 1971; the "Panchayat Parichiti" of the district, "The Fact Finding Survey" of the district and "Industrial Potentials of the district" and

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* Sub-Inspector of Schools, ** A district is divided into a number of development areas or blocks. Each block has a development officer S.D.O.
*** All India Radio.
local newspapers like Purulia Gazette, Chatrak, Mukti, etc. Certain guide lines, thus, become clear, viz.,

(1) The Kan-sabati River differentiates the South-Western Purulia with that of North-Eastern regions with respect to the percentage of ethnic population, village school ratio, literacy ratio and probably cultural activities. The Tata-Purulia-Highway is the main road-link with the South-Western Purulia. While Purulia-Ranchi and Purulia-Raghunathpur highways are the communication links with the North and North-Eastern Purulia. This knowledge came to be of great help to the researcher in the selection of sample villages and schools.

(2) There are 17 P.S. and 20 Blocks in the whole district and all the Blocks have High and Junior High schools. Primary schools are available in almost all the villages.

(3) The Clean caste groups are distributed in all the Blocks of the district. However, the minority-religion groups are unevenly distributed. In the South and South-West, the percentages of S.T. population are higher than that in the North and North-Eastern regions of the district. But the percentages of Scheduled castes are greater than the percentages of tribal people in the North and North-Eastern portion of the district.

(4) In both the regions of the district villages are isolated. Foot-track is the only link for contracting the villages in most of the cases. Even Rickshaws are rarely available. The undulating hill tracks are the barriers to all sorts of transportation.

*: police station.
(5) The population strength of a village generalises certain things such as, number of schools, health-centres, postal advantages, water supply, recreational and cultural facilities and its popularity. The populated villages are heterogeneous and are, somehow, in an advantageous position, and these characteristics are prevalent in all the Blocks of the district.

(6) It was also ascertained that small villages might constitute homogeneous population. Some villages are exclusively dwelt by Muslims or by tribal people or by Scheduled Castes. So, sample selection becomes an intricate problem. Measures were, therefore, taken to represent all these various characteristics.

(7) Finally, it was made sure that Bengalee is prevalent lingua franca throughout the district. Even the tribal people can understand and express ideas in it.

The above information was of immense help to explore the problem.

NATURE OF SUBJECTS USED IN THE STUDY

The study intends to analyse the nature and extent of demand-flow of various social strata and supply conditions of elementary education in the schools - formal, non-formal or informal. So, persons directly concerned with demand and supply conditions of elementary education principally comprise the subjects of the study.
On the demand side, the nature of subjects are the following:

1. Guardians of all the four social stratifications as considered in the present study.
2. Social workers and conversant people knowing the community life and demand conditions of pupils and guardians.

On both the demand and supply sides, the nature of subjects comprise the following:

3. Teachers, especially the Head of an institution;
4. Organisers of informal and non-formal agencies of education;
5. Some officials - Tribal Welfare Officer, D.I. of Schools, Social and Physical Education Officers of the district, editors of local newspapers and so on.

I. Guardians

The head of each household has been considered to be the guardian. The number of guardians is equal to the number of households selected for the study, in as much as, one guardian has been interviewed from each selected household in 1974. The households or guardians belonging to the four different ascribed strata have been considered. These represent 20% guardians from each of S.T., S.C., M.R. and A.O.H. groups; and all the four District Inspectors of Schools.
strata more or less proportionately constitute the subjects. The target population comprises boys and girls in the age-group (5 plus to 14 plus) and in the class norm, (I to VIII).

The guardians are considered from four directions:

(1) Some guardians send all the children to elementary schools.

(2) Some guardians send a few of their children.

(3) While, a number of guardians may not have children in the specific age-group; and

(4) Finally, many guardians do not send children in schools at all.

All these four types of guardians were not selected in 1975 as the subject for interview. Guardians in the category of (2) and (4) were selected for interview; so that the real picture might be manifested. Naturally, guardians without being affected by non-participation have been excluded for identification of causes of non-participation.

II. SOCIAL WORKERS AND CONVERSANT PEOPLE KNOWING THE COMMUNITY LIFE

"The term" social worker, "has been used loosely or include the politician as well as the humble Gram Sevak or Sevika and their widely different efforts to serve their country in their own specific fashions."

The
qualifications required to be a social worker are a spirit of dedication and a love for his fellow men. However, social workers are now-a-days professional persons in specific areas of services, they are skilled workers of community and social services. They are paid or voluntary workers. In the area under study the two types of social workers were available.

(a) Some social workers were professional men such as, the village and Block-level workers, members of the Panchayet; Health-Services and other agencies of the community. Their opinion, aid and advice were required occasionally. Naturally, they were not continuously related with the present research. Such social workers comprised eight in numbers. They were local persons of the selected eight villages. They are designated as "Gram-Sevak". They were conversant with the problems of their own village community.

(b) Some other social workers are literate voluntary workers of the village. They are actually philanthropists. Many of them are H.S. or S.F. passed or even highly qualified. They have experience of teaching in primary school or adult literacy centre or they sometimes worked as census workers, land survey workers or other social services including Health-Education-Services. Two of such social workers were selected from each of the selected eight villages. So, there


* Local Administration
** Higher Secondary (class XI-XII)
*** School Final (class X)
were sixteen (16) voluntary social workers. Two (2) other leaders who could organise and co-ordinate field work of this research were fortunately found out from Kantadih Siksha Satra (High School) which actually became a nucleus of a school-complex that was at the embryonic stage at the commencement of this research. These social workers were directly acquainted and conversant with the four social strata of their respective localities. They had also fair knowledge of the problems of elementary schooling, as many of them were school teachers. Some workers were thoroughly acquainted with the procedure of data collection for social investigation, that is why they were selected as the key personnel for field services of this investigation. They were invited, inspired, organized and trained up for this specific job in the school complex, at Kantadih High School. The researcher could do very little to shaft out the real facts from the community without the assistance from these social workers. They guided the researcher from door to door, helped the researcher to come in close contact with households and guardians, the folk activities and socio-economic realities of the community. On the other side, they were closely related with local schools, clubs, health centres and other non-formal or informal agencies of social services etc. This sort of social workers who voluntarily contributed their labour, services and valuable suggestions throughout the courses of the investigation were eighteen (18) in numbers.
III. TEACHERS

Elementary education comprises both primary and secondary schooling. So, teachers can be selected from Primary, Middle and Madhyamik Schools. The Heads of the institutions were much helpful in the collection of records and relevant information with regard to the supply of elementary education. As the number of primary school teachers per school was not more than 2 or 3 in ordinary circumstances, all the teachers were included in the subject. However, the teachers selected as social workers were not considered to be the subject in the teachers' category. They were treated as social workers. The number of primary school teachers from the real situation came to be 22 during 1974. Seven of them were selected as social workers. So, the actual number of teachers who could be treated as subjects, became 15 for primary schools. For Middle and Madhyamik schools, the head of the institution and three other local teachers were selected as the subject for interview. Any teacher who contributed his/her membership as a social worker was not included in the teacher's category. The total number of teachers from the eight secondary schools were 31, as one of the secondary school teachers was selected as a social worker. The subjects in the teacher's category, therefore, constituted 46 in numbers.

* Secondary School (Class-X)
IV. ORGANISERS OF INFORMAL AND NON-FORMAL AGENCIES OF EDUCATION AND CULTURE.

Education is not only facilitated by formal schools but also by non-formal and informal agencies of education and culture. The organisers of non-formal and informal agencies were, therefore, interviewed. These organisers were required to supply data with regard to the nature of education in these agencies, number of candidates, age-group for whom these agencies were meant; the nature of their cultural activities.

All the informal and non-formal agencies were taken into consideration; and all the organisers became the subject.

V. OFFICIALS AND IMPORTANT PERSONS

Relevant data with regard to certain facts of supply situation of elementary education of the district were collected from the Office of the D.I. of Schools or S.I. of Schools of the selected Blocks under study. The Tribal Welfare Officer and the District Statistical Officer were approached time and again when intricate problems of supply situation of education of the underprivileged and minority groups arose. The S.I. of Schools of the selected Blocks, the District Social and Physical Education Officers were interviewed in connection with informal and non-formal agencies of education.

From the above discussions the different subjects who have been used in the study came to be known. The next task is
to clarify the nature of these subjects in terms of their sex, age, and the mode of contacting them.

SEX OF THE SUBJECT: The subject may belong to either sex.

AGE OF THE SUBJECT: The subject is an adult person.

MODE OF CONTACTING THE SUBJECT:

(i) The school teachers and various elite persons and officials are directly approached by the researcher at the initial stage, and the purposes of this contact are explained. After preliminary discussions dates and hours for purposeful interview, discussions or data collection are scheduled; and the researcher acts in accordance with the schedule so framed.

(ii) Contacting and Organising the Social Workers: It has been discussed earlier that the researcher, in the preliminary investigation, came in contact with the Primary and Secondary teachers through Teachers' Associations and of the Teachers' Training College of the District. The names and addresses of voluntary social workers and philanthropists were collected and some of them came to be known personally from these sources. Many of the social workers discharged voluntary services to local schools; and this they did for two reasons, (i) for social status - in the state of being a teacher and future prospect of becoming a permanent teacher and (ii) secondly, voluntary social service is a step towards leadership in the community. This preliminary contact was the starting point of organizing social workers for the field services of the research.
After selection of villages the researcher, first of all, met the primary schools along with a letter of introduction from the Primary Teachers' Association of the District; and also searched for the local voluntary social workers whose names had been collected earlier. Some of the social workers were found from the selected primary schools and some came to be known through persuasion. It is the voluntary social workers and teachers who arranged for introducing the researcher with some Block and Village-level workers of the Panchayat. They were professional social workers.

The Secondary Schools were approached next. The idea of organizing social workers for field work was appreciated by the Headmasters of Secondary Schools. It is these Headmasters who advised the researcher not to stay at any of the isolated villages during night; they also hinted that many of the villagers might be annoyed at the enquiry of their personal matter by an unknown person. This could be avoided, provided the unknown person was introduced to the villagers by a well-known leader or an educated person who has access to them. It is the local social workers who have access everywhere. The Headmaster of Kantadih Siksha Satra High School introduced the researcher with two of such social workers. One of them was an influential teacher of the aforesaid High School and the other was a teacher who rendered his services to local primary school on voluntary basis. These two social workers were really philanthropists. These two social workers who by their personal
capacity and formulated directions, co-ordinated all other social workers of the selected 8 (eight) villages. The voluntary social workers, 18 (eighteen) being in number, were requested to get-together at the Kantadih School-Complex during the occasion of Saraswati Puja and to stay there for two days; enjoy the Puja festival, discuss the problems of elementary education and meet the researcher for exchange of ideas and note uniform procedures in connection with field work of the research. This became possible due to hearty co-operation of the Headmaster.

The entire memorandum for surveying the 8 (eight) villages, 10 (ten) Primary Schools and 8 (eight) Secondary Schools were drawn up after thorough discussions with the social workers. The next date for getting-together was scheduled on the 15th August of the same year (1974).

(iii) When the social workers were so organized, it became easier on the part of the researcher to easily contact the important persons of the villages under the survey and select households for inclusion in the sample. Therefore, the researcher could meet the social workers in the respective villages under study from time to time. The process of contacting the subjects at their houses became a new experience and a thrill to the researcher as he could meet various community members of the isolated village community at such an unknown place.

(iv) The guardians were met by the researcher along with two social workers and a few neighbours of the village.

* A well known festival for the worship of the goddess of learning.
SELECTION OF SAMPLE

It appears from the 'Panchayet Parichiti' and 'District Census Hand Book 1971' that the total population of the district, in 1971 was 1,602,875 of which 1,470,508 were distributed in 2,459 villages located within 16 P. S. or 20 Blocks. The percentage of urban population to total population was only 8.26%. As the study is primarily concerned with a typically underdeveloped region, the urban population was not included in the sample. The simplest method of obtaining a sample from a population is that of obtaining a random sample, which is simply a sample in which every case in the population has equal chance of being included. According to H. E. Garrett, "The most trustworthy way of securing representativeness, is to make sure that the sampling is random". However, he suggests that stratified sampling is applicable when the population is composed of sub-groups or status of different sizes, so that a representative sample must contain individuals drawn from each category or stratum in accordance with the sizes of the sub-groups. Within each stratum or sub-group the sampling is random. John W. Best also suggests to subdivide the population into smaller homogeneous groups in order to get more accurate representation of each subdivision. Within each sub-group some process of probability selection is generally used. This process gives the researcher a more representative sample than one selected at random from the entire population.

3. Ibid., P - 206.
community. He is of opinion that the characters of the entire population together with the purposes of the study must be carefully considered before a stratified sample is decided upon. It is natural, therefore, that variations of characteristics of groups owing to variations of geographical conditions or environmental conditions should be carefully considered so as to safeguard representativeness. Alfred Kinsey opines, "the cases that are used to represent each ultimate cell in the human population should be drawn from a number of groups, widely distributed geographically, and including as a great diversity as is possible within the limits of the groups".

In view of the above facts it was considered that simple random technique may not represent all the sub-groups and many of the local characteristics of different parts of the district (that have been considered in the study). So, randomisation, within several stratification, in accordance with the purpose of the study will be the convenient approach of sample selection. The researcher, after thorough discussions with local competent persons and dependable sources, Panchayet Parichiti and Census Report etc., came to realize that villages situated in the Blocks of South-West may not represent many of the criteria and stratifications that are found in the Blocks around North-East and North-West portions of the district. It has been noticed earlier that Blocks situated in the


Southern and South-Western part of Purulia comprise greater percentage of S.T. population; while the Blocks standing at the North-East and North-West part of Kansabati river have a larger percentage of S.C. population. All other Hindus are, more or less, evenly distributed. But the M.R. population, show uneven distribution on the two sides of the river. It is equally important to note that there are some variations of occupation and percentage of literacy on the two sides of Kansabati river which are evidenced from the Census Report 1971. But the region on the South and South-West have fewer number of Secondary Schools than that of the opposite side. The Blocks on the South-Western portions are mainly connected with Purulia-Tata communicating links; while the Eastern and Northern portions are connected with Asansol-Purulia and Ranchi-Purulia links. It is probable, therefore, that nature of sample may vary in these two sides of the river. Naturally, the researcher selects identical samples from both the sides or zones. Equal number of villages and more or less equal number of schools are selected from the two opposite sides of the river in order to overcome the possibilities of biasness. For this purpose one Block (centrally located on the communicating link) of each zone has been chosen from both sides of Kansabati river. The Block is so selected as represents the major characteristics of each zone with respect to the purposes of the study.

As soon as Blocks are selected the investigator pays greater attention to the criteria of representativeness of the
Blocks so selected. The following criteria of representativeness (only for the rural areas of the whole district) were available from sources like District Census Handbook of Purulia 1971 & 1961, the Report of the Fact Finding Survey of Purulia District, published by U.B.I. and the Industrial Potential of Purulia District, prepared by S.I.E.T. Institute, Hyderabad (1971) and Panchayat Parichiti, D.I. of Schools and local sources. These are the criteria:

1. Literacy Rate of the District (1971).
2. Percentage of backward community to total population (1971).
3. Percentage of working population to total population (1971).
4. Dependence on primary sector.
5. Sex Ratio (Rural) in 1971.
7. Rate of growth of education 1961-71 (Rural).
8. Village and Primary-school-Ratio for the district (1974), in rural areas. It is the ratio between the number of villages and the primary schools.
11. Communication and transport systems etc.

On the basis of the above criteria the following two Blocks are finally selected for studying the community and schooling conditions. These Blocks are:

1. Arsha Block from the South-West and South-East of Kansabati river; and
2. Purulia Muffasil Block-I, from the North-East and North-West of Kansabati river.
TABLE - M (II)

REPRESENTATIVENESS OF THE TWO BLOCKS

<table>
<thead>
<tr>
<th>Criteria of Representativeness</th>
<th>THE SAMPLE</th>
<th>POPULATION</th>
<th>Differences between block-I and (C) &amp; (D)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>(A)</td>
<td>(B)</td>
<td>(C) &amp; (B)</td>
</tr>
<tr>
<td>1. Literacy Rate (1971)</td>
<td>Arsha Block</td>
<td>Purulia Block</td>
<td>Combined as a whole</td>
</tr>
<tr>
<td>(a) Male</td>
<td>23.07%</td>
<td>41.21%</td>
<td>32.14%</td>
</tr>
<tr>
<td>(b) Female</td>
<td>2.64%</td>
<td>7.97%</td>
<td>5.32%</td>
</tr>
<tr>
<td>(c) Total</td>
<td>13.08%</td>
<td>25.26%</td>
<td>19.17%</td>
</tr>
</tbody>
</table>

2. Percentage of backward community to total population 1971

<table>
<thead>
<tr>
<th></th>
<th>(A)</th>
<th>(B)</th>
<th>(C) &amp; (B)</th>
<th>(D)</th>
<th>Differences between (C) &amp; (D)</th>
</tr>
</thead>
<tbody>
<tr>
<td>(a) Scheduled Tribes</td>
<td>21.25%</td>
<td>16.43%</td>
<td>18.84%</td>
<td>19.58%</td>
<td>0.74%</td>
</tr>
<tr>
<td>(b) Scheduled Castes</td>
<td>10.47%</td>
<td>19.75%</td>
<td>15.11%</td>
<td>14.99%</td>
<td>0.12%</td>
</tr>
<tr>
<td>(c) Total of (a) &amp; (b)</td>
<td>31.72%</td>
<td>36.18%</td>
<td>33.95%</td>
<td>34.57%</td>
<td>0.62%</td>
</tr>
</tbody>
</table>

3. Percentage of working population to total population in 1971

<table>
<thead>
<tr>
<th></th>
<th>(A)</th>
<th>(B)</th>
<th>(C) &amp; (B)</th>
<th>(D)</th>
<th>Differences between (C) &amp; (D)</th>
</tr>
</thead>
<tbody>
<tr>
<td>(a) Male</td>
<td>53.34%</td>
<td>50.76%</td>
<td>52.05%</td>
<td>52.71%</td>
<td>0.66%</td>
</tr>
<tr>
<td>(b) Female</td>
<td>10.90%</td>
<td>8.39%</td>
<td>9.64%</td>
<td>9.83%</td>
<td>0.19%</td>
</tr>
<tr>
<td>(c) Total</td>
<td>33.63%</td>
<td>29.90%</td>
<td>31.76%</td>
<td>31.60%</td>
<td>0.16%</td>
</tr>
<tr>
<td>(A) Arsha</td>
<td>(B) Purulla</td>
<td>(C) Muffasal Combined District as a whole (rural)</td>
<td>(E) Differences between (C) &amp; (I).</td>
<td></td>
<td></td>
</tr>
<tr>
<td>----------</td>
<td>-------------</td>
<td>------------------------------------------</td>
<td>-------------------------------</td>
<td></td>
<td></td>
</tr>
<tr>
<td>53.91</td>
<td>47.55</td>
<td>49.84</td>
<td>47.37</td>
<td>1.97%</td>
<td></td>
</tr>
<tr>
<td>36.16</td>
<td>34.19</td>
<td>34.90</td>
<td>35.54</td>
<td>0.64%</td>
<td></td>
</tr>
<tr>
<td>90.07</td>
<td>81.74</td>
<td>84.74</td>
<td>83.41</td>
<td>1.33%</td>
<td></td>
</tr>
</tbody>
</table>

4. Dependence on ** primary sector (1971)/(in %) (a) Cultivation

5. Sex ratio (1971) 950 950 965 970 or 0.50%

6. Decennial population growth (1961-71) 19% 15% 17.50% 18.01% 1.49%

7. Rate of growth of education during Not available. 4.02 4.02 4.48 0.48%

8. Village and Primary-School- 238 : 253 2459:2532 There is but little difference in the village and primary-school ratio
ratio (1974) 96 142 or or approx. approx.
| 108 | 145 |

9. Average number of Secondary Schools per Block (1974) 19/2 or 189/20 or 9.5 9.5 approx. approx.

10. Recreational and cultural facilities (2) (5) in the villages-club in or folk agencies, etc. (7) in (70) in 238 villages in 35 villages or 1 in an average. 0.5% villages 34 villages (average)
TABLE- M (II) Contd.

<p>| | | | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>(a) Post Offices per Block</td>
<td>16</td>
<td>16 per Block</td>
<td>14 per Block</td>
<td>2</td>
</tr>
<tr>
<td>(b) Rail Stations per Block</td>
<td>2</td>
<td>2 in an average</td>
<td>1 in an average</td>
<td>1</td>
</tr>
</tbody>
</table>

It is observed from the above table that the two sample Blocks taken together largely satisfy the criteria of representativeness of Purulia District as a whole. There is no significant difference between the two percentages obtained from the sample and the population, with respect to each of the criteria 1, 2, 3, 4, 5, 6, 7, 8, 9 and 10. For criterion (8) the actual village-school-ratio is 100:106 for the sample and 100:103 for the population. This difference of 3% between the sample and the population is not a significant difference. Thus, the sample closely parallels with the population. For criterion 11, the sample Blocks have two more post offices and one more rail-station (in an average) than that of the population. These are no marked differences. Thus, the two Blocks, taken together, represent the various characters of Purulia District that have been considered purposeful for this study.

When representative Blocks are finally selected a number of sequential steps are arranged. These steps have been arranged in the following manner:

* Source: Office of the District Physical Education; & Panchayet Offices under the Blocks.
** Local News Editors.
STEP - I: Selection of representative villages from Arsha and Purulia Muffasil Block - I.

STEP - II: Selection of Primary Schools from the villages so selected.


STEP - IV: Verification of representativeness of the sample villages and families.

STEP - V: Selection of Secondary Schools.

STEP - VI: Selection of Non-formal and informal agencies of education; and

STEP - VII: Selection of teachers and social workers from the selected schools and villages.

I. SELECTION OF SAMPLE VILLAGES:

(i) It appears from the Census Report 1971 that big villages consist of almost all the strata, i.e., S.T., S.C., and A.O.H. population. But the number of M.R. population cannot be ascertained from the Census Report 1971 or Panchayet Parichiti. M.R. population is unevenly distributed. Again, some villages are dominated by S.T. and some by S.C. population with varying number of A.O.H. or M.R. population.

(ii) With regard to availability of educational facilities in the villages, it is observed from the "Panchayet Parichiti" that big villages have more schools than the smaller ones,
and secondary schools are located in big villages. Naturally, the size of population is the basic factor in determining availability of educational facilities and social stratifications that have been considered in the present study. The investigator, therefore, pays attention to divide villages into some broad based groups on the basis of the size of population. The report of the Fact Finding Survey in Purulia District (U.B.I.) classifies villages according to the following classes in terms of the size of population of the district. The Annexure below gives a clear picture.

**ANNEXURE**

<table>
<thead>
<tr>
<th>Size of population</th>
<th>No. of villages</th>
<th>Percentage of each class of village</th>
<th>Percentage of rural population in each class of village</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Population less than 500</td>
<td>1,682</td>
<td>65.1</td>
<td>31.1</td>
</tr>
<tr>
<td>2. Population between 500 - 999</td>
<td>573</td>
<td>23.0</td>
<td>31.2</td>
</tr>
<tr>
<td>3. Population between 1000 - 1,999</td>
<td>243</td>
<td>9.8</td>
<td>25.4</td>
</tr>
<tr>
<td>4. Population between 2000 - 4,999</td>
<td>48</td>
<td>1.9</td>
<td>10.4</td>
</tr>
<tr>
<td>5. Population between 5000 - 9,999</td>
<td>4</td>
<td>0.2</td>
<td>1.0</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>2,490</strong></td>
<td><strong>100%</strong></td>
<td><strong>100%</strong></td>
</tr>
</tbody>
</table>

*United Bank of India*

**Fact Finding Survey - (U.B.I.) op. cit., P - 5.

The number of villages include both inhabited and uninhabited villages.
It is clear from the above that only 1.9 per cent of the population reside in 4 villages that have the highest population size ranging from (5000 to 9999). The four villages are semi-towns. These are (1) Mangobindapur in Manbazar Block, (2) Tulin in Jhalda Block, (3) Saltor in Neturia Block; and (4) Arra (now a Railway town) in Raghunathpur Block. Naturally, the question of inclusion of the fifth category of village having population between (5000 to 9999) does not arise. The other four classes of villages are included in the sample. It is obvious, therefore, that at least four (4) villages (one from each class) are to be selected from both Arsha and Purulia Muffasil Block - I, so as to represent the various strata that are intended to be included in the sample. The diagram below exemplifies the classes of villages in each Block that represent the sample villages.

**DIAGRAM SHOWING (4) CLASSES OF VILLAGES**

<table>
<thead>
<tr>
<th>BLOCK</th>
<th>Arsha Block</th>
<th>Purulia Muffasil Block - I</th>
</tr>
</thead>
<tbody>
<tr>
<td>No. 1: Arsha Block</td>
<td>(1) Population less than 500</td>
<td></td>
</tr>
<tr>
<td>Villages</td>
<td>(2) Population between (500 to 999)</td>
<td>(2) Population between (500 to 999)</td>
</tr>
</tbody>
</table>

This is the first type of classification of villages. A second type of classification is also needed. This is based on the distance of the villages from the highways or nearest bus or rail station. The idea is to represent the different aspects of isolation of the village communities. Thus, apart from considering the zonal representation of villages (viz., North-East zone and South-West zone of Kangsabati) two other broad based principles of stratification in the selection of villages are followed. These are: (1) size of the population, and (2) the isolation of the villages. Lists of villages are, therefore, first of all, framed according to size of the population; and next, villages are classified according to their distance from the main road.

I. Four different sub-lists are drawn according to the size of the population for both the Blocks in the following manner:

<table>
<thead>
<tr>
<th>Sub-Population List</th>
<th>Formation of Muffasil Lists of villages</th>
<th>Formation of Lists of villages</th>
</tr>
</thead>
<tbody>
<tr>
<td>Less than 500</td>
<td>Arsha Block:</td>
<td>Purulia Block - I</td>
</tr>
<tr>
<td></td>
<td>No. of villages</td>
<td>Population less than 500.</td>
</tr>
<tr>
<td></td>
<td>in each sub-list list with their symbols or Mouza Nos. (old or new whichever is available)</td>
<td>No. of villages in each sub-list with their symbols or Mouza Nos. (old or new whichever is available)</td>
</tr>
<tr>
<td>500 - 999</td>
<td>do</td>
<td>do</td>
</tr>
<tr>
<td>1000 - 1999</td>
<td>do</td>
<td>do</td>
</tr>
<tr>
<td>2000 - 4999</td>
<td>do</td>
<td>do</td>
</tr>
</tbody>
</table>
Each of the sub-lists represents its size of population and its uniqueness in connection with the size of population. These sub-lists are drawn from Panchayet Offices under each Block (that is, Arsha and Purulia Muffasil Block-I) and are verified with the Panchayet Parishiti of the district (1974).

II. In the second place, each of the sub-lists of villages, thus formed, has been classified into three different sub-groups according to their distance from the roadways or rail-stations. The help of local teachers, Panchayet offices and some postmen became essential for this purpose. The classifications were drawn in the following order:

THREE SUB-GROUPS ACCORDING TO DISTANCE FROM THE ROAD OR RAIL STATION

SUB-GROUP (A): This consists of villages in complete isolation standing at a distance of more than 6 Kms. (kilometers) from the highways or rail station (even the cycle rickshaw does not enter there).

SUB-GROUP (B): This consists of villages in semi-isolation standing within walkable distance from the roadways or rail station (less than 4/5 Kms.), accepting that boys in the age-group plus to 14 plus can walk 4/5 Kms. per hour.

SUB-GROUP (C): This comprises villages standing at a distance of not more than 1 Km. from the highways etc.

Each Sub-List (according to size of population) has, thus, three sub-groups (in terms of distance). The total sub-classes are, therefore, (24) twenty-four, (12) being placed in each Block.
The mode of forming sub-groups has been shown in a tabular form below:

<table>
<thead>
<tr>
<th>Sub-Lists</th>
<th>Size of Population</th>
<th>Sub-Groups</th>
<th>Distance</th>
<th>Slips representing No. of Mouzas, clt</th>
<th>or new whichever is available</th>
</tr>
</thead>
<tbody>
<tr>
<td>I</td>
<td>Less than 500</td>
<td>A</td>
<td>6 Km. and above</td>
<td>-do-</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>B</td>
<td>5/4 Kms.</td>
<td>-do-</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>C</td>
<td>1 Km. and less</td>
<td>-do-</td>
<td></td>
</tr>
<tr>
<td>II</td>
<td>500-999</td>
<td>A</td>
<td>6 Kms. and above</td>
<td>-do-</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>B</td>
<td>5/4 Kms.</td>
<td>-do-</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>C</td>
<td>1 Km. and less</td>
<td>-do-</td>
<td></td>
</tr>
<tr>
<td>III</td>
<td>1000-1999</td>
<td>A</td>
<td>6 Kms. and above</td>
<td>-do-</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>B</td>
<td>5/4 Kms.</td>
<td>-do-</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>C</td>
<td>1 Km. and less</td>
<td>-do-</td>
<td></td>
</tr>
<tr>
<td>IV</td>
<td>2000-4999</td>
<td>A</td>
<td>6 Kms. and above</td>
<td>-do-</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>B</td>
<td>5/4 Kms.</td>
<td>-do-</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>C</td>
<td>1 Km. and less</td>
<td>-do-</td>
<td></td>
</tr>
</tbody>
</table>

It is obvious that each of the sub-groups, that is, sub-group (A), sub-group (B) and sub-group (C) represents (4) four types of villages according to size of population.

It is the intention of the researcher to select small number of villages representing the various population-sizes and isolation-forms, and this is required for intensive study of the community.

III. The Mode of Selection of Sample Villages

The mode of selection has been shown in a tabular form, which is represented below. The mode of selection of sample

* A mouza represents (or symbolizes) a village.
villages has been diagrammatically represented below. One village is selected at random (lottery system) from the sub-group (C) and another village from sub-group (A) of Arsha and Purulia Muffasil Block - I, respectively, out of the sub-list No. I. Similarly, two villages are drawn (one from each Block) from the sub-group (B) shown in the sub-list No. II. And two other villages are also drawn out of sub-group (B) of the two Blocks (taking one from each Block), from the sub-list No. III. Finally, one village is selected from sub-group (A) of Arsha Block, and another from sub-group (C) of Purulia Muffasil Block - I, out of the remaining sub-list No. IV.

The diagram exemplifies the mode of selection.

Diagrammatic arrangements for the selection of sample villages

<table>
<thead>
<tr>
<th>ARSHA BLOCK</th>
<th>PURULIA MUFFASIL BLOCK - I</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sub-Lists</td>
<td>Population Sizes</td>
</tr>
<tr>
<td></td>
<td>(A) (B)</td>
</tr>
<tr>
<td>I.</td>
<td>Population</td>
</tr>
<tr>
<td>II.</td>
<td>Population</td>
</tr>
<tr>
<td>III.</td>
<td>Population</td>
</tr>
<tr>
<td>IV.</td>
<td>Population</td>
</tr>
<tr>
<td></td>
<td></td>
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<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

The sample includes the biggest and smallest villages.
along with two other intermediate villages in terms of the size of population; and at the same time, the isolated, partially isolated and least-isolated villages are also taken into considerations.

In the final form the following (8) eight villages, (4) four from Arsha Block and (4) four from Purulia Muffasil Block - I constitute the sample villages. These, according to their respective symbols and Mouza numbers, are Ulidih, Bagudih, Baligara and Lagia from Purulia Muffasil Block - I, and Majdih, Pithati, Patuara and Puyara from Arsha Block.

Just after the selection of sample villages, the researcher directs attention towards selection of primary schools.

II. **SELECTION OF PRIMARY SCHOOLS**

(a) Primary Schools provide schooling for grades I, II, III and IV. In case of Basic Schools grade V is also facilitated. This is one type of stratification.

(b) The next type of stratification can be drawn with regard to schools facilitating co-education and schools teaching girls' or teaching boys' exclusively.

(c) Another type of classification can also be conceived, such as, schools for Harijans and ordinary schools.

(d) Still another type of stratification can be drawn on the basis of number of teachers or size of school population.

* Scheduled Castes or Tribes.
However, the conventional ways of stratification on the basis of building conditions, equipments, salary of teachers, qualifications of teachers etc., have not been considered, because all the Primary Schools under (a), (b), (c) and (d) as stated above, are managed by the same authority with uniform pattern of finance and administration. So, there are least variations in these aspects (viz., buildings, salary of teachers etc.).

Each of the eight sample villages has one school in it with the exception of the largest village, which alone has three types of school, viz., (i) co-educational, (ii) exclusively for boys and (iii) exclusively for girls. The co-educational one is meant for Harijans. So, this village alone represents three types of schools. One of the villages has a Basic School and another has a Harijan School. The rest five villages have one co-educational school each. The number of teachers is dependent on the number of population enrolled, and the latter mostly depends on the size of population of the village.

In order to represent the criteria as mentioned in (a), (b), (c), and (d) and also to represent all the villages along with their primary schooling facilities, the (10) ten primary schools within the selected (8) eight villages comprise the sample. Thus, the sample includes all the (10) ten Primary Schools within these (8) eight sample villages.

III. SELECTION OF SAMPLE FAMILIES

When villages and schools are finally selected identification of sample households becomes the principal objective. However, the number of households in these eight villages is too large to have direct contact with them. Obviously, 20% of households are selected for thorough investigation. Each stratum, that is, the S.T., S.C., M.R. and A.O.E. is proportionately represented so that 20% of households of each group may be included in the sample. As a convenient procedure every 5th household from each stratum has been designed to be studied. In order to make it a uniform procedure, the North-Westernmost household of each village is identified as the first household or family number (1) for the village in question. The assistance of local school teachers and social workers thus, becomes essential for the selection of households. 1974 is taken to be the base year. The sample comprises the number of households or families from S.T., S.C., M.R. and A.O.E. population during 1974; and the population includes boys and girls in the age-group 5 plus to 14 plus belonging to these sample families during 1974. The head of each family is identified as the guardian for boys and girls belonging to E.E.A.G. So, the number of guardians is equal to the number of sample families. The guardian may be either an adult male or female. The selection of sample families involves two important considerations:

(1) Formation of lists of S.T., S.C., M.R. and A.O.E. families or households of each village, and identification of


*(Elementary Educational Age-group)
every fifth household of each stratum.

(2) When the number of households in any category (of any village) is less than 5, even then one household is to be represented in the sample. When the remainder is 2 or more in cases of S.T., SC., and M.R. (1) one point is to be added to the number of families or households of a group. In case of A.O.H. such addition is only considered when the remainder is 3 or more.

On the basis of the foregoing principles the sample families are finally selected from the eight sample villages. When relevant data with respect to the purposive criteria of representativeness are obtained, the question of determining the representativeness of the sample arises. The representativeness of the villages and sample families with the universe has thus been determined.

In the Table - M (III) given below, the sample families are represented by Z, villages by Y, and the population by X. The closeness (of each of the different criteria), of the sample with the population has been shown in the table:

Table - M (III)

IV. Representativeness of the Sample Families and Sample Villages:
Available criteria (1971) and Their closeness with the Sample Villages (1971) and Sample Families (during 1974): (The data for the families were not available for the year 1971).
<table>
<thead>
<tr>
<th>Criteria</th>
<th>Population</th>
<th>Sample Villages and Sample Families</th>
<th>Differences between (X) and (Y)</th>
<th>Differences between (Y) and (Z)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>(X)</td>
<td>(Y)</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Literacy rate (%)</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>M</td>
<td>-32.06</td>
<td>31.56</td>
<td>31.25</td>
<td>19.28</td>
</tr>
<tr>
<td>F</td>
<td>5.92</td>
<td>6.71</td>
<td>7.07</td>
<td>0.06</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>-19.28</td>
<td>19.25</td>
<td>0.03</td>
<td>19.28</td>
</tr>
<tr>
<td><strong>Percentage</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ST</td>
<td>19.58</td>
<td>17.00</td>
<td>17.01</td>
<td></td>
</tr>
<tr>
<td>SC</td>
<td>14.99</td>
<td>19.16</td>
<td>18.29</td>
<td></td>
</tr>
<tr>
<td><strong>Community total</strong></td>
<td>34.57</td>
<td>36.16</td>
<td>1.59</td>
<td>35.30</td>
</tr>
<tr>
<td><strong>Dependence</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(a) Cultivation</td>
<td>47.87</td>
<td>41.19</td>
<td>40.14</td>
<td></td>
</tr>
<tr>
<td>(b) Agri-labour</td>
<td>35.54</td>
<td>40.34</td>
<td>38.91</td>
<td></td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>83.41</td>
<td>81.53</td>
<td>81.53</td>
<td></td>
</tr>
<tr>
<td><strong>Sex-Ratio</strong></td>
<td>M : F</td>
<td>1000 : 970</td>
<td>1.00</td>
<td>1000:980</td>
</tr>
<tr>
<td><strong>Average</strong></td>
<td>1.60% per year</td>
<td>1.65% per year</td>
<td>0.05%</td>
<td>4.97% during 1971 to 1974</td>
</tr>
<tr>
<td><strong>Growth of population per year (average)</strong></td>
<td>0.45% calculated over 1961-1971.</td>
<td>0.30% calculated over 1961-1971.</td>
<td>0.15%</td>
<td>0.31% calculated over 1971-1974</td>
</tr>
<tr>
<td><strong>Village and primary school ratio</strong></td>
<td>24 : 25</td>
<td>8 : 10 or approx.</td>
<td>24 : 30</td>
<td>Same as in (Y)</td>
</tr>
<tr>
<td><strong>Average No. of secondary schools per 10,000 population</strong></td>
<td>1.3</td>
<td>2 Schools</td>
<td>0.6%</td>
<td>Same as in (Y)</td>
</tr>
</tbody>
</table>
It appears from the table above that there is practically no difference between the population and the sample villages and also between the population and the sample households for almost all the criteria. However, little differences (between the population and the sample households) are apparent for criteria (3) and (4). These differences are due to the fact that the percentages of population had been determined from the census data of 1971 and the percentages of the sample households were calculated from the data collected during 1974. This time-gap of 3 years may give rise to percentages of non-workers or unemployed persons. The percentages of working population and cultivators, naturally, came down owing to growth in population (which has an average growth rate of 1.60% per year).

For criterion (10) the villages are less than 35. Naturally, 1 club may be the cultural agency for more than (8) eight villages and it has been shown in table-M(II) that the ratio between club and village is 1:34. So, the sample practically represents the population.

For (X) - Criteria 1, 2, 3, 5, 6 Census Handbook, Purulia 1971. (Y) & (VI).
Criterion 4 - Census Handbook 1971 (abstracted for rural areas).

For (Y) - Criteria 1, 2, 3, 4, 5 (abstracted from Census Handbook 1971).

For (Z) - Collected from sample households during 1974.

* N.A = Not Available
V. SELECTION OF SECONDARY SCHOOLS FACILITATING UPPER ELEMENTARY EDUCATION (Classes V to VIII)

A. Upper elementary education has been facilitated by two types of schools, i.e., (1) Junior High or Middle School and (2) Madhyamik School. The number of Madrasas, being two throughout the district, is insignificant. However, each of these two types may be characterised as lump-grant and deficit-grant school. There is also another variety which is known as unaided school. But unaided schools are few in number, and are not found in all the Blocks. Again, there are a few rural schools (4 being in number) in the whole district which are exclusively meant for boys or for girls. All other schools are co-educational.

B. As the number of Madrasa and exclusively girls' or boys' schools are insignificant in this district, the major sub-groups of schools can be represented in the following diagrammatic forms:

```
Sub-groups of Schools

(a) Junior High (lump-grant) X X X X X
(b) Junior High (deficit-grant) X X X X X
(c) Madhyamik (lump-grant) X X X X X
(d) Madhyamik (deficit-grant) X X X X X
(e) Unaided School

It is learnt from D.I. of Schools that all the secondary schools in the selected (2) two Blocks and their adjacent Blocks are co-educational (in rural areas). After 1973 most of the unaided schools of these Blocks have been converted into aided schools. So, each zonal list of schools may represent: (4) four varieties or sub-groups of schools. These are:

---
(a) Deficit-grant Madhyamik School,
(b) Deficit-grant Junior High School,
(c) Lump-grant Madhyamik School, and
(d) Lump-grant Junior High School.

All these schools are co-educational and they vary with respect to their population strength. Deficit-grant Madhyamik Schools are numerous and accommodate a greater number of student population. But the number of Madhyamik Schools is more than twice the number of Junior High Schools in the Blocks under consideration.

C. It is obvious, therefore, that each of the (4) four sub-groups should be included in the sample and the number of Madhyamik Schools should be more than double the number of Junior High Schools. This is the condition throughout the district. Besides, Deficit-grant Madhyamik Schools should have greater representation in the sample. If the sample is to consist of various sub-groups, the sample is to be represented by at least (8) eight schools, (four being represented from each zone).

Four of these schools should be Deficit-grant Madhyamik, (2) two Lump-grant Madhyamik and the rest (2) two Junior High Schools (of which one should be Lump-grant and another Deficit-grant).

Four sub-lists of schools (for each Block), are accordingly framed. It is observed that there is no Lump-grant Madhyamik School in

1. Source: B.I. OF SCHOOLS, Purulia.
Arsha Block. It has only (3) three deficit-grant Madhyamik Schools and (4) four Junior High Schools. It also appears from the lists of schools that Purulia Muffasil Block-I has (3) three Junior High Schools and (12) twelve Madhyamik Schools of which one school stands on the South-West bank of Kansabati River; because, a small portion of Manbazar Block has been recently transferred to Purulia Muffasil Block-I.

Naturally, this school is included in one of the lists of Arsha Block, as it stands on the South-West zone. However, this is not even a lump-grant school. In this situation a school is selected from the neighbouring Balarampur Block. This is a lump-grant school and this is very close to Arsha Block (4 kms. from the border line of Arsha Block)

B. FINAL SELECTION: The (8) eight sample villages have only two schools, one standing in each zone, of which one is a deficit-grant Madhyamik School, and the other is a deficit-grant Junior High School. This Junior High School stands in Arsha Block. So, the second lump-grant Junior High School is selected from Purulia Muffasil Block-I. As, the number of such lump-grant school is only two in Purulia Muffasil Block-I, the older school is selected. Therefore, the two purposive Junior High Schools are finally selected.

E. Selection of two Lump-grant Madhyamik Schools: There are (4) four Lump-grant Madhyamik Schools in Purulia Muffasil Block-I in the North-Eastern zone and these are almost homogeneous in character. The most isolated school is, therefore, selected. It is 8 Kms. away from the bus route. (For Arsha Block in the
South-West zone), it has been pointed out, that a lump-grant school which is very close to Arsha Block, has been selected from Balarampur Block, since, there were no lump-grant Madhyamik Schools in Arsha Block. Thus, the two lump-grant schools are represented in the sample.

F. Selection of Four Deficit Grant Madhyamik Schools: There are $(7 + 1 = 8)$ deficit-grant Madhyamik Schools in Purulia Muffasil Block-I of which one school stands on the South-West zone of Kansabati River. Again, there has been an automatic representation of one school which stands in one of the selected (4) four villages of Purulia Muffasil Block-I, and it also stands closer to the bus route. Naturally, a school in semi-isolation has been selected out of the six schools, as a purposive sample. Arsha Block has (3) three deficit-grant schools of its own. It gets the 4th deficit-grant school from Purulia Muffasil Block-I that has been transferred from Manbazar Block (in the South-West Zone). Two schools are to be selected out of these four schools. As the schools are mostly homogeneous and are not isolated from bus route the new and the oldest one have been included in the sample.

Thus, all the varieties of schools have been included in the sample. The distance of one school from another is about 10 kms. in an average.

The sample schools thus selected for elementary education (primary, Junior High and Madhyamik), are more or less uniformly distributed over the two zones, i.e., the South-West and North-East regions of Kansabati River. The zonal distributions of schools are, therefore, shown.
NAMES AND ZONAL DISTRIBUTION OF SAMPLE SCHOOLS (PRIMARY & SECONDARY)

<table>
<thead>
<tr>
<th>Arsha Block and South-West Zone</th>
<th>Purulia Muffasil Block-I &amp; North-East Zone</th>
</tr>
</thead>
</table>

**PRIMARY SCHOOLS**

1. Pithati Harijan Prathamik Siksha Kendra
2. Puyara Prathamik Vidyalaya
3. Patua Junior Basic School
4. Majdih Prathamik Vidyalaya

**SECONDARY SCHOOLS**

1. Puyara Junior High School
2. Bara-Uurma High School
3. Gobindaipur High School
4. Kantadih Siksha Satra (High School)
5. Ulidi Harijan Vidyalaya
6. Bagudih Primary School
7. Lagda Harijan Prathamik Vidyalaya
8. Lagda Boys' Primary School
9. Lagda Girls' Primary School
10. Baligara Prathamik Vidyalaya

**VI Selection of Non-formal and Informal Agencies of Education**

As the number of non-formal and informal agencies of education are not too numerous, within the selected (8) eight villages, all the non-formal and informal agencies within these villages comprise the sample. This study is not principally confronted with the scope of non-formal education alone. But, it considers the nature and extent of supply facilities of the non-formal and informal agencies.
within the (8) eight village communities in consideration, so as to understand the supply conditions of various schooling facilities in the village communities. A large sample has not, therefore, been considered.

VII Selection of Teachers and Social Workers

It has been stated in course of discussions on the Nature of subjects that all the teachers of selected primary schools, and the Headmasters and three other local teachers of every selected secondary school are to be considered as the subject, provided the teachers do not come under the category of social workers. Accordingly, (15) fifteen teachers of the Primary schools and (31) thirty-one teachers of selected secondary schools comprise the subject in the teachers' category. The total number of them is, therefore, (46) forty-six. Teachers are, thus, selected from Primary schools, Junior High Schools and Madhyamik Schools.

The social workers comprise one village-level professional worker and two other voluntary workers of each village. In addition to these, two other leaders (voluntary) who could organise team work, have been included in the category of social workers. Many of the voluntary social workers are associated with formal or non-formal education. A few of them also organize informal agencies of local culture. The village level and voluntary workers, taken together, are (26) twenty-six in number.
CONSTRUCTION OF TOOLS:

Tools are related with objectives of the study. It has been stated in the first chapter that this research deals with the nature and extent of educational dynamism of an underdeveloped region in the context of the following:

(i) Non-participation by boys and girls in the elementary educational age-group (5 plus to 14 plus) belonging to different caste/ethnic or religion-groups of the region under study.

(ii) Rates of educational dynamism and wastage at the lower and upper levels of elementary educational age-group in the community under study.

(iii) Nature of demand for and supply of elementary education in the primary and upper-elementary schooling within various ethnic/caste, religion and sex groups; and the relation of wastage with supply and demand conditions of elementary education.

(iv) It also deals with supply conditions of informal and Non-formal education in the community under the investigation.

(v) Finally, it intends to find out the formidable causes of non-participation in elementary schooling and the relations of non-participation with occupation and educational background of guardian.

Tools are, therefore constructed with the above objectives in view. The following tools are developed for this study.
The information blank (Appendix - T) was needed to collect identifying data with regard to (i) religion, caste or ethnic belongingness, (ii) occupation and (iii) educational level of the various guardians under study, so that boys and girls in the age-group (5 plus to 14 plus) originating from these various groups of population may be thoroughly studied in view of educational wastage and educational dynamism within different groups or strata of the community at the elementary level of education. Obviously, the information blank intends to collect (a) the total number of target population or boys and girls of each household in the age-group 5 plus to 14 plus, (b) the total number of boys and girls in the age-group participating in elementary schooling. Naturally, boys and girls in the same age-group not participating in any form of schooling (formal or non-formal), comprise educational wastage, total or partial. The rate of educational dynamism and wastage at the lower or upper levels of elementary educational age-group in the community may be computed from these data.

Items are selected with the same ends in view. This Community Information Blank attempts to collect data having a fact rather than a value judgement bias. There are (15) fifteen items in the Community Information Blank - (Appendix - T). The first (9) nine items are concerned with general information of the village community and its stratifications; and the next (6) six items specifically deal with the target population (age-group
age-group 5 plus to 14 plus) of the community. The Information Blank has been so devised that data with respect to general information may be collected from the Panchayet Parishiti, and Census Report 1971, or from the office of the local Panchayet in consultation with the local social workers and conversant people. However, all these general information will be verified with the statement of the guardians under the study; and in case of any discrepancies the original sources of relevant data will be assigned importance. For example, the caste, religion and educational level of a subject or guardian is known to local social workers and Panchayet members; but this is not the original source of information. The guardians or the subjects, themselves better realise their belongingness to any faith, caste-group or educational level. So, in these cases, the statements of the subject of origin are dependable. For having information with regard to the target population in the Elementary-Educational-Age, the statement of guardians are recorded. However, these statements are noted in presence of the social workers (who are also local persons) and a few literate neighbours. So, the guardians do not and cannot conceal facts in presence of these conversant and important known faces. They also helped in establishing rapport between the subject and the interviewer.

The total population at the elementary educational-age-group consist of the Non-participants plus the school goers of elementary stage stages (entire Primary and Classes V to VIII). The items, therefore,
two sub-divisions in the age-groups 5 plus to 14 plus. The first sub-division comprises (5 plus to 10 plus) age-group, and the second other (11 plus to 14 plus) age-group.

(ii) **Basis of Selection:** If any boy or girl attains 11 plus but reads in primary school, he/she will be placed and counted in the age-group (5 plus to 10 plus), although his/her chronological age is 11 plus. Similarly, a boy/girl of 15 plus reading in classes V to VIII will be included in the age-group 11 plus to 14 plus. This is the nature of thing, because, educational facilities are mainly grade-norm-oriented rather than being age-norm oriented.

For item No.3 the basis of selection is 1 in 5 or originally 20% of households of each stratum. When the reminder is 2 or more in cases of S.T., S.C. and M.R., (1) one point is added to the number of families or households of a group. In case of A.O.H. such addition is only considered when the reminder is 3 or more. For families (of any village) less than 5 in any category, 1 (one) is added; and for six families of any group, (2) two is added to the sample households of that group.

(iii) **Recording of Data and Use of Symbols:**

In a number of cases data are to be noted with certain symbolic expressions.

(a) For item number (5) the symbols are (M) and (F), standing for male and female respectively.
(b) For items (6) and (7) the symbolic expressions are S.T., S.O., M.R., and A.O.H., in accordance with the belongingness of the subject with any of these groups.

(c) The villages, also, are expressed with symbols in order to avoid writing of full names of the villages. The first three or four letters are used to symbolize the name of the village.

(d) In case of item (8) (L.E) represents a literate person who did not study much higher than primary schooling; (M.E) represents an educated person who completed primary schooling, but did not complete secondary education; and (E) represents person who passed the Secondary School Final Examination and above. These symbols identify the educational level of the subject. Finally, (I.L) represents illiterate.

(e) For item (9) the subject has been identified with (A.G.O) for agricultural occupation and (N.A.G.O) for non-agricultural occupation.

Each Information Blank is used for a particular guardian and it is preserved for the next year to note changes.

(iv) Mode of Interviewing the Subject

At the initial stage, the local social workers introduce the researcher with the head of the household in presence of a few literate neighbours and explain reasons why they have come to him. The head of the household or the guardian is assured that the interview is in no case harmful to him nor he would be compelled to
do anything against his will. Rapport is established with the
subject by enquiring of certain cultural practices and festivals
of this region; and how do the subject and his wards become associated
with them? In course of these conversations the items of the
Information Blank are placed before the subject who is encouraged
to talk freely and the responses are verified at once with the
remarks of social workers and the neighbours present before the
subject, and finally, the correct data are arrived at; and Information
Blanks are filled in with appropriate responses.

(v) The Period of Meeting the Subject for Data Collection:

The research work was started in 1974. The early part of the
year was devoted to selection of sample and other preparatory work.
Data have been collected at the end of the academic sessions
1974, 1975 or onwards, so that, the growth of population at the EEA,
and consequent growth of education over the years, might be calcu­
lated. The months of November and December were considered to be
convenient for collection of data, in as much as, these two months
are scheduled for closing of academic session of each year and are
also prosperous months of the year to the community.

(vi) Sorting and Tabulating Data:

When the collection of data from all the selected house­
holds of a village is completed for a particular year (say for 1974),
completed Community Information Blanks are arranged in a
systematic way. (These Information Blanks are also to be used
in 1975 or 1976).
(a) The data, relevant to the target population (age-group 5 plus to 14 plus) that have been collected from the households, are, first of all, treated. The Information Blanks are sorted out into four appropriate groups in terms of caste, ethnic or religious belongingness of the subject (with respect to items 10 to 15). These four appropriate groups are S.T., S.C., M.R. and A.O.H. The proforma shown below, has been devised to plot the frequency scores of each item of all the Information Blanks used for a village. The additive numbers of different categories, in respect of each item, are organized as indicated below.

**THE PROFORMA FOR THE INSERTION OF GROUPED SCORES OF EACH STRATUM OF A VILLAGE WITH REGARD TO SEX DIFFERENCES.**

<table>
<thead>
<tr>
<th>Name of the village</th>
<th>Scores of each group with respect to sex differences</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>S.T.</td>
</tr>
<tr>
<td>ITEM NO. (10) &amp; SCORES</td>
<td></td>
</tr>
<tr>
<td>ITEM NO. (11) &amp; SCORES</td>
<td></td>
</tr>
<tr>
<td>ITEM NO. (12) &amp; SCORES ETC., ETC.,</td>
<td></td>
</tr>
<tr>
<td>ITEM NO. (15) &amp; SCORES</td>
<td></td>
</tr>
</tbody>
</table>

In the above arrangements scores of each group in respect of item (10 to 15) are inserted in the identical proforma. The scores give the demographic picture of a particular village.
(b) When the collection of data from all the selected 
villages has been completed, the village-wise distribution of scores 
are next arranged in a number of tabular forms prepared for 
each item of 
representing the complete picture of the eight village communities 
under study so as to arrive at the final form of data.

(c) The treatment of scores of all other items (viz., items 
1 to 9) is very simple. The scores of these items are not too 
numerous for a single village. All the villages are arranged in 
vertical columns so that the corresponding horizontal rows are 
meant for tabulation of scores of different items as consolidated 
for each village. The village-wise scores of different items are 
arranged in a number of tabular forms prepared for processing of 
data. Items 4, 5, 6 and 7 respectively indicate the Serial Number 
of the house, the head of the household, and his/her belongingness 
to the S.T., S.C., M.R. or A.0.H. groups. The purpose of tabular 
arrangements is to see the nature and relationship of data in 
bold relief, as placed in rows and columns according to somelogical 
plan of classification.

An item or a group of items are plotted in different 
tabular forms in order that the complication of data processing 
may be minimised.

The following presents the Tabular Form for Various Items:

(A) ITEM - I REPRESENTS THE NUMBER OF HOUSEHOLDS AND POPULATION IN THE SELECTED VILLAGES DURING 1971 AND 1974

<table>
<thead>
<tr>
<th>BLOCK NO.</th>
<th>Villages with</th>
<th>No. of families</th>
<th>Total population</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Symbols</td>
<td>in the village</td>
<td>in the villages</td>
</tr>
<tr>
<td>Purulia</td>
<td>Bali</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>Bagu</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>Lag</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>Uli</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Arsha</td>
<td>Puyara</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>Patuara</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>Pithati</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>Majdih</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Total</td>
<td>(2)</td>
<td>(8)</td>
<td>(8)</td>
</tr>
</tbody>
</table>

(B) ITEM - 2 PRESENTS THE NUMBER OF HOUSEHOLDS IN DIFFERENT STRATA OF THE VILLAGE COMMUNITY (during 1974).

The (8) eight villages are placed in the vertical column; and the number of families of each village in the different strata is shown in the horizontal rows. The arrangements are like this:

<table>
<thead>
<tr>
<th>Symbol of villages</th>
<th>No. of families in different strata - 1974</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>ST</td>
</tr>
</tbody>
</table>
All these numbers for the (8) villages are added
vertically. Appendix - T₁ (B) shows the complete picture of the
tabular organization of data for 1974.

(C) ITEM - 3 presents the number of sample families in
different strata of the village community during 1974 and
onwards. The arrangements for columns and rows are exactly
similar to that of the above tabular organization [T₁ (B)].
Appendix - T₁ (C) shows the complete picture.

ITEMS - 4, 5, 6 and 7 are used for designing the various tabular
forms.

(D) ITEM - 8 presents the number of illiterate and literate
guardians. The number of guardians of different strata is shown
in the horizontal rows and the (8) eight villages are arranged
in vertical columns. The numbers of guardians of different cate­
gories of these villages are added vertically. The complete
picture has been given in APPENDIX - T₁ (D).

(E) ITEM - 9 has been designed to show the distribution of
Target Population (E.E.A.G.) originating out of agricultural
occupational groups and non-agricultural occupational groups. The
distribution of target and enrolled population, depending on the
two occupational groups, has been represented in Appendix - T₁ (E).

* Elementary Educational Age-Group
ITEMS (10, 12, 15) REPRESENT THE DEMOGRAPHIC INFORMATION OF THE TARGET POPULATION (during 1974 and onwards). The target population (Age 5 plus to 14 plus) originating from the households under study are determined, first of all, from the community Information Blanks of each village by the frequency scores of item (15). The scores of each village are shown vertically and totalled to have the overall picture of the target population (Appendix - T1 (F)). Next, the target population is arranged in two different age-groups. The age-group (5 plus to 10 plus) is organised from the scores of item 10. Similarly, the age-group (11 plus to 14 plus) is organised from the scores of item (12). The summation of the population of these two age-groups results in the overall target population under study. The tabular arrangements have been shown in (Appendix T1 (F)).

ITEMS (11 and 13) PRESENT THE DEMOGRAPHIC INFORMATION OF THE ENROLLED TARGET POPULATION (in the two age-groups). This has been represented in (Appendix T1 (G)).

Finally, item - 14 presents the number of children (Age 5 plus to 14 plus) who are reading outside the village. These numbers are determined by the frequency scores of each stratum as shown in (Appendix - T1 (H)).

DATA PROCESSING AND SCORING

When all the tabular forms are systematically filled in with the data they give expression to some resultants. Finally, these resultants are processed and scored in order to arrive at
certain conclusive results. The steps towards arriving at the conclusive results are the following:

I. The target population (P) under the study at the EJ5AG (age-group 5 plus to 14 plus) is distributed in the four stratified groups in vertical columns; and each of the groups has been represented in percentile scores with respect to the total population under the study. Similarly, the enrolled target population (EP) or school-participants at the EEA.E. (age-group 5 plus to 14 plus) have been distributed in the four stratified groups and each of the groups has been represented in percentile scores. The non-participants are educational wastage wholly or partly.

II. From the two sources (P) and (EP), (i.e., target population under study and enrolled target population), the incidence of educational dynamism and the corresponding rate of educational wastage of human resources have to be calculated by utilizing the following procedures:

(1) The target population under study (P) has two components—the boy-population and the girl-population. The total of boys and girls represents the target population for a particular year; and this has been denoted by 100.

(2) The enrolled target population (EP) has also two components, such as, boy and girl population. The summation of these two results in the number of school-participants in the community.

(3) The differences between (1) and (2) represent the non-participants.
(4) The percentages of the boy and girl non-participants determine the rates of educational wastage of human resources in the community for the two sex groups; and the percentages of total non-participants express the rate of educational wastage of the combined boy and girl population.

(5) Finally, rates of educational dynamism for boys and girls, express the percentages of school going boy and girl population; and the rate of educational dynamism for the combined boy and girl population determines the percentage of total school-going population for a particular year.

All these five steps become the basis of the estimation of educational dynamism and corresponding educational wastage, in the total population, and also, in different groups - viz., S.T., S.C., M.R. and A.O.H. population.

These procedures are equally applicable to elementary education as a whole; and at the primary and upper elementary levels of education separately. These two rates, that is, the rate of wastage and dynamism, determine the in-group-relations. In other words, these determine the rates of wastage and dynamism for a particular group of boys or girls.

The out-group-relations have been estimated by comparing the in-group position of each group with the total population under study; and this has been done by working out the rates of wastage and dynamism from the percentages of each stratum on the total
population in the community under study. Separate estimations are
drawn for boys and girls. The above principles have also been
applied to estimate the relation between guardians' occupation and
non-participation and guardians' education and non-participation.
The rate of demand-flow, has been expressed by the percentages of
school-going population for 1974 and also for 1975. Naturally, the
changing rates of demand-flow are the changes in the rates of educa­
tional dynamism in the out-group and in-group distributions after an
interval i.e., over a period of time. It is obvious, therefore, that
the rates of 1974 and 1975 are the comparable data for the period.

Naturally, same types of data should be obtained during 1975.
As in previous year, the researcher with his team of organized social
workers appears before the same households and subjects for the
collection of data in the same community with the same Community-
Information Blank that has been preserved so as to use the same
during the year 1975. The number of households are kept constant
for two reasons - (i) the same households are studied in 1974 and
1975 in order to determine the changing rates of demand-flow over
the year, and (ii) the number of families in the selected (8) eight
villages did not grow appreciably during the period 1971 to 1974.
It was less than (5) five per thousand during these (3) three years
(Appendix - T4 (a)]. So, numerical changes of families during the
period of investigation from 1974 to 1976 are insignificant.

Same procedures were followed in different stages of data
collection and processing for the year 1975, so that, the results
of 1974 and 1975 may be compared in all respects. The changing rates of demand-flow over one year (1974-1975) are to be ascertained by the differences in the rates of dynamism between 1974-1975 in all the stratified groups in the elementary level of education as a whole and in lower and upper stages separately. Both the out-group and in-group relations are to be estimated from these differences. The growth rates of population and the growth rates of education can also be estimated from the difference between target Population and Enrolled target Population for the years 1974 and 1975. These are the devices to understand the nature and extent of demand-flow of elementary education at different stages and in different sex groups with respect to various strata of the underdeveloped village community in consideration.

Next, the researcher utilizes such instruments as are capable of expressing the demand-supply relationship of school education, and also the relationship of demand-flow of education in the school and the community. Tools are accordingly devised.

The study schedules for school information have been devised to collect identifying data with regard to the demand-supply situation of primary and middle school (upper elementary) education in terms of participation or demand-flow and schooling facilities and educational opportunities. The demand conditions express the enrolments of boys and girls of different stratified groups during the years 1974-1975. The school records were the primary sources of information for these data. The supply situations, in terms of educational opportunities, have only been
examined for 1974. The records and practices of the schools are the sources of information for these data. Two study schedules are devised. These are $T_2 - S 1 (A)$ and $T_2 - S 1 (B)$. The former has been devised to collect general information and educational opportunities of school, and the latter determines the roll strength of boys and girls of S.T., S.C., M.R., and A.O.H. population of each class unit of all the schools. [Appendix $T_2 - S 1 (A)$ and $T_2 - S 1 (B)$]

(i) Items: There are (4) four items along with a number of sub-items in the $T_2 - S 1 (A)$ and (3) three columns in $T_2 - S 1 (B)$. The items of $S 1 (A)$ are arranged in rows. The first item of $S 1 (A)$ is the identity of the school. There are (6) sub-items in it. Item (2) two is the expression of educational opportunities and population strength of the school (for a particular year). It has (3) three sub-items. Item (3) three is concerned with those student-population who are not local or born and brought up in the district. And item (4) four indicates the number of teachers both male and female, including the headmaster.

In $S 1 (B)$, the first column has exclusively been meant for girls and column number (2) for boys only. The column (3) expresses the belongingness of the student in any of the racial, caste or religion-groups viz., S.T., S.C., M.R., and A.O.H.

(ii) Mode of Interviewing the Subject: At the initial stage the researcher met the Headmaster of the school in person, and explained the objectives of the interview, and also the nature of information to be collected from teachers and the school.
records. After preliminary discussions convenient dates were scheduled for meeting the teachers and recording the data with the help of a person authorised by the Headmaster. However, a few social workers were available who were also very helpful in this respect. As rapport was established with the school through a number of contacts the researcher could verify the information and the relevant registers of the school so as to guard against any error or omission of data as supplied by the school.

(iii) **Reliability of Data**: The data were collected in the two different study schedules on two different dates. The study schedule \( T_2 - S I (A) \) was first of all used to record the total population strength of a school, at both the primary and secondary stages (up to class VIII for secondary school). Next, the class-wise distributions of S.T., S.C., M.R. and A.O.H. student-population were recorded with the help of the study schedule \( T_2 - S I (B) \). The consistencies between the two study schedules on the total student population justified the reliability of data.

(iv) **Recording of Data**: For study schedule \( T_2 - S I (A) \) the data, with respect to items (1), (2), (3) and (4), can easily be collected from the school records and the report of the Headmasters and other senior teachers of the school without any specific direction. However, the Headmaster of a school was fully clarified the purposes of all the sub-items and the nature of data relevant to each sub-item.
For schedule Tg-SI (B) the Headmaster was requested to follow the instructions given below the study schedule itself for recording data with respect to columns (1), (2) and (5) (Appendix Tg-SI (B) Inst.).

(w) Period of collection of Data: The end of the academic session of each year, that is, 1974 and 1975 has been regarded the convenient time for collection of data, because this gives the total picture for a particular academic session; and this is also the lean session of the year for every school.

(vi) Sorting and Tabulating Data: After collection of data from all the schools for the year 1974 (and also for 1975), the study schedules of Tg-SI (A) and Tg-SI(B) are sorted out into four groups, viz., (a) SI(A) Primary, (b) SI(A) Secondary, (c) SI(B) Primary and (d) SI(B) Secondary. The data with respect to Tg-SI(A) are organized first. The data of each individual school grouped and tabulation arrangements are done item by item. Frequency scores for each accountable number are grouped in a number of columns and rows. - (1) The descriptive scores of sub-items under items (1) and (2) are organized in one form of a table and the numeral sub-items under items (1) and (2) have been organized in another form of a table along with item Nos. (3) and (4). All the scores of the table have been expressed in numerical terms. The scores of each item of every school have been plotted in rows in the former table. In the latter case, the grouped scores of each individual school are, next tabulated in the columns of
each sub-item; and these are totalled for processing of data. The tabular forms for the former and latter have been organized below in the following manner:

(I)

**TABULAR ORGANIZATION FOR GENERAL INFORMATION AND SUPPLY SITUATION OF EDUCATIONAL OPPORTUNITIES**

(Appendix - T2 - SI(A) I)

<table>
<thead>
<tr>
<th>Symbol of School</th>
<th>Working hours of school</th>
<th>Average of Tuition fees</th>
<th>Tiffin, Text Books and learning materials supplied or not</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Similar tabular devices are utilized for treatment of data of primary and secondary schools both for 1974 and 1975.

(II)

**TABULAR ORGANIZATION FOR GENERAL INFORMATION AND SUPPLY OF SCHOOLING FACILITIES**

(Appendix T2 - SI(A) II)

<table>
<thead>
<tr>
<th>col of class units, including Junior accommodation, etc.</th>
<th>No. of Roll</th>
<th>Number of teachers</th>
<th>Number of pupils</th>
<th>Nature of aid</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

The tabular devices for the primary and secondary schools are the same for 1974 and 1975. Next, the data of T2 - SI(B) are organized. The scores of S.T., S.C., M.R., A.O.H. boys and girls of each school grade of all schools have been, first of all, grouped.
The distributions of the student-population in different school grades or classes and in different sex groups of different strata (Items(1), (2), (3) SI(B)) are organized in vertical columns separately for primary and secondary schools. The complete pictures have been given in Appendix Tg- S I (B) primary and secondary - 1974/75. The number of students (AG 5 plus to 14 plus) is only 1 in Non-formal schools. So, the question of sorting of data does not arise.

(VII) DATA PROCESSING AND SCORING:

When all the sub-items and items of study schedules S I (A) and S I (B) are systematically arranged and organized in a number of groups these are finally processed and scored in order to obtain certain conclusive results. The steps towards arriving at the conclusive results are the following:

(1) The demand for school education in terms of participation of boys and girls at the elementary schooling by different stratified groups are expressed in percentages. This is, first of all, treated for class ranges I to VIII. Next, the percentages of distributions are treated separately for class-ranges (I to IV) and class-ranges (V to VIII), that is, lower and upper elementary stages of education.

(2) The rates of demand for boys and girls of S.T., S.C., M.R., A.O.H. groups and of the total population are estimated for 1974 and 1975 through same procedures. The rates of demand are expressed through percentages of participation of each group in relation to total school population for a particular year which is taken to be 100 for that year. These are the cut-group
estimation of *rates of demand* in various groups.

(3) The enrolled boys and girls are arranged in five horizontal rows:

(A) The first row includes the number of total population in schools under study;

(B) The second row includes the number of S.T. population in the schools under study;

(C) The third row has been arranged for S.C. population in the schools under study;

(D) The fourth row is meant for M.R. population;

(E) The fifth or the final row is devised to include the number of A.O.H. population in the schools under study.

(4) Boys and girls of each group are added to represent (separately) the total population of each group [(A), (B), (C), (D) and (E)]. All these three sets of numbers corresponding to boys, girls and total of boys plus girls of each row is converted into percentile scores in relation to total population of the school in the first row, (A).

(5) The growth rates of enrolment are estimated from the differences of rates between two successive years.

The growth rates of enrolment are estimated for all the groups, that is, S.T., S.C., M.R., A.O.H. and total population. These are estimated in the context of in-group and out-group population. That is, variations of the rates of growth in relation to the same group and all other groups in different
times. The growth rates are also separately estimated for lower and upper elementary stages of education.

(6) 1974 has been taken as the base year for data collection. The same tools and same procedures have been followed in the collection and analysis of data for 1975 (and also 1976 for Non-formal schools).

(7) When the rates of growth of school enrolment are determined for various groups from the school situation, the results are compared with the rates obtained from the community under the study in order to examine the nature of consistencies between these two outcomes.

(VIII) DATA PROCESSING FOR SUPPLY-SITUATION:

Supply of education has been treated in two ways:

(A) It has been treated as schooling facilities in the community in terms of supply of schools; and

(B) Educational opportunities in the schools within the community that depend on policy matter and various welfare provisions.

(A) Schooling Facilities:

This deals with (i) optimum capacity of intake of pupils (in an average) in terms of number of existing teachers of the schools, (ii) optimum capacity of intake of pupils in terms of number of class units and accommodation available in the schools; and (iii) actual enrolment in the school under study in terms of number of schools. The steps towards processing of data are the
following:

(a) The number and types of schools are arranged in a horizontal row so as to express the total number of schools.

(b) The number of teachers have been noted in the second horizontal row in order to show the total number of teachers for a particular year.

(c) Students' accommodation and the number of class units are arranged in the third row for having the total picture of accommodation.

(d) The optimum capacity of intake of pupils, (in an average), has been calculated in terms of student-teacher ratio as permitted by existing regulations of Primary and Secondary schools in West Bengal.

(e) The optimum capacity of intake in terms of number of class units and accommodation available, is calculated by multiplying the number of available class units with the number of population in an optimum size of a class unit. Educational wastage of human resources in terms of availability of teaching services has been estimated by deducting the actual enrolment of a particular year from the optimum capacity of intake in terms of number of existing teachers for that particular year. Similarly, educational wastage of human resources in the context of the availability of material resources and accommodation has been ascertained by deducting the actual enrolment from the optimum capacity of intake, depending on the class units that can be made available. The rates of wastage are determined for both the cases. These rates
are determined separately for primary and upper elementary schooling. The above procedures are equally applicable to both the stages of lower and upper elementary education.

(B) Educational Opportunities:

Educational opportunities have been examined in terms of their utility to the community, viz., school hours, distance of the school, amount of school fees, nature of supply of textbooks, learning materials and tiffin. These opportunities have been separately examined for the age-groups (5 plus to 10 plus) and (11 plus to 14 plus). The facilities are considered in two ways for both of the age-groups. These have been considered in the context of formal schooling, and (II) Non-formal and In-formal schooling facilities. [Appendix - \( T_2 \) and SI(A) III].

(i) Data Processing for Formal Schooling:

(a) The (average) distance of the school from the houses of the pupils has been arranged in horizontal row.

(b) The tuition fees for students have been arranged in the second row.

(c) The supply of textbooks has been shown in the third row.

(d) The fourth row has been meant for learning materials etc.

(e) The next row has been arranged for tiffin; and finally,

(f) The working hours of the school has been presented in the last horizontal row.
The distance has been estimated in Kms (Kilometres).
The number of positive responses (given by the guardians), with respect to boys and girls of S.T., S.C., M.R. and A.O.H., will determine the fact whether text books, tuition fees, tiffin and learning materials are supplied to students. It will also determine the specific social group or groups for whom these are supplied. Finally, the working hours of the school have been determined by analysing the time of commencement and break up of all the schools in consideration (that is, at what times the school opens and breaks up). Same principles of data processing are followed for the age-group (5 plus to 10 plus) and (11 plus to 14 plus) separately.

(ii) Data Processing for Non-formal and Informal Schooling:
The data collected from the (8) eight villages have been separately treated for the age-groups (5 plus to 10 plus) and (11 plus to 14 plus). However, the principles of processing are the same for the two age-groups. The numbers of Non-formal and Informal agencies are small. Facts are, therefore, presented in a table in the form of statements. The number of participants, the nature of activities, schooling hours, etc., have been organized in the right vertical column of the table. These agencies were studied from 1974 to 1976. As there were no noticeable changes, these have not been analysed separately for 1974, 1975 and 1976.

CHECKLISTS FOR TEACHERS AND SOCIAL WORKERS AND INTERVIEW SCHEDULE FOR GUARDIANS:
The tool (Appendix - T3) aims at collecting data with respect to some definite causes of non-participation in elementary
schools in the region under study. Here, the non-participants imply both the unschooled and drop-outs who did not complete elementary schooling. This instrument has been meant for the application on teachers of elementary education, social workers of the locality, and also on guardians who are victims of the incidence of non-participation. It aims at collecting data having a fact as well as opinion bias. However, the instrument has been applied to the guardians (along with other tools) with a little modification in language, without changing the meaning. The Check-list has been constructed by consulting (i) relevant studies and literature, (ii) expert opinion, and (iii) local community members:

(i) The relevant studies and literature refer to works on the causes of traditional wastage and non-attendance to school published from time to time by UNESCO or NCERT or SIE, West Bengal or by experts in the field. All the probable causes of non-participation have been listed from these sources so as to examine the nature of contents for the Check-list. This assures, to some extent, the selection of valid items.

(ii) Expert opinion has been considered from two angles, such as, (a) local competent persons and field experts; and (b) educational experts in advanced studies and research.

(a) Local competent persons and field experts consist of (1) two Headmasters of primary and (2) two Headmasters of secondary schools who are also closely associated with the Teachers' Association of the district and (3) one teacher of the local State Institute of Education.
Training College who deals with problems of elementary education. These five heads constitute the local competent persons. Necessarily, the competent persons may or may not belong to the selected schools and villages.

(b) Educational experts in advanced studies and research consist of the Principal, State Institute of Education, Govt. of West Bengal, Principal and Ex-officio Director of Research Wing, Post Graduate Basic Training College, Banipur, Govt. of West Bengal and the Head of the Department of Education of Calcutta University and also of Kalyani University. These are the four experts.

(iii) The particular backward region under the study may have special problems of its own. Obviously, the researcher depends on local sources of information to a great extent. Much time was devoted to collection of facts in informal ways from the eight selected villages; including the (10) primary and (2) secondary schools within these villages. A number of literate persons having leadership in their own ethnic, caste or religion group, (that is, S.T., S.C., M.R. or A.O.H. group) are informally interviewed for several times along with the local social workers who introduced the researcher with them in order that a congenial relationship could be developed with these community members. The purposes of having such a congenial relation were the following:

(1) Identification of causes of non-participation in elementary schools through the courses of conversation with them.
(2) Organization of conditions towards 'accessibility' of the required information through the check-lists to be formally applied to the community, school and social workers.

(3) Cognition, or understanding by the respondent of what is required of him in connection with check-list (that is to be finally formed).

(4) The nature of resistances (if any) that would be faced by the investigator at the application of the final check-list to the respondents.

Step - I. SELECTION OF ITEMS:

The first hand knowledge gathered from these interactions helps the researcher in the selection of items of the check-list or the interview schedule (for the guardians). Items are thus, collected from two sources - (i) discussions of community members and (ii) findings of related research studies.

The socio-economic factors are enlisted in the first instance. Next, the socio-cultural factors are considered. Educational factors are of overlapping character; that is, educational factors, occupy a position between socio-economic and socio-cultural factors. Thus, educational factors occupy the next position in the check-list. Finally, all other undefined

miscellaneous items are included. As many as 34 items are selected from the above sources.

Step - II. To have content validity the items are next placed before the judgement of competent persons. The items, in the first instance, are placed before the local competent persons for inclusion of new items, elimination of inappropriate items and simplifying the language of the questionnaire, or the Check-list. These members after careful consideration of the 34 items, suggested to add 3 items. The members also suggested to transcribe the Check-list (for teachers and social workers) and the interview schedule (for guardians), in regional language. They considered that the schedules might not be understandable to all social workers and primary school teachers. They also mentioned that boys and girls are affected by different causes.

The 34 items along with the suggestions of local competent persons were then placed before the second body of technical advisers or expert judges for further improvement. After careful examination of all the (34 plus 3 = 37) items, two experts opined that 2 of the items should be eliminated as these might not be applicable to the underdeveloped region. One item was connected with transport facility and the other, with private coaching at home. So, they suggested to select 35 items. But two other experts suggested to leave vacant cages at the end of these 35 items so that the respondents may insert their opinion (if any) in these cages. They suggested further that the language, be it
English or regional) should be clearly clarified to the respondents so that they might thoroughly understand the meaning and purpose of each item before putting their opinion. These directions were followed in order to have face validity of the items.

**Step - III :**
(a) The Check-list (Appendix T3), therefore, consists of 35 items: (12) items bear relations with socio-economic causes, (14) items with socio-cultural causes and (7) items with educational and overlapping causes with socio-economic and socio-cultural factors and (2) items represent miscellaneous causes.

(b) Vacant cages are left open at the end of these 35 items for noting respondents' opinion (if any) that may be treated as new items.

(c) The Check-list was cyclostyled in English; but a second list was transcribed in regional language so that the items of the Check-list might be meaningful to the social workers and Primary school teachers. However, this was used as the interview schedule for guardians with a slight modification. The language was changed without changing the meaning. Statements were expressed in interrogative forms.

(d) As per suggestions of the local competent persons the causes of non-participation at school were viewed from two aspects - (i) causes affecting boys and (ii) causes solely affecting girls. Two different columns are, therefore, provided for (i) and (ii).
The English version of the checklist has been meant for (46) teachers of the primary and secondary schools under consideration, and (26) social workers of the (8) eight village communities under study.

The Bengali version has been meant for interviewing the guardians. However, all the guardians have not been interviewed, because, all the guardians are not the victims of non-participation of their wards. It was noted at the initial stage of interviewing the guardians, during 1974, that (36) thirty-six guardians have no children in the A.G. \( (4 \text{ plus to } 14 \text{ plus}) \), and (57) fifty-seven guardians used to send all their wards to the elementary school. So, these (93) ninety-three guardians were excluded from the subjects. The remaining affected guardians, therefore, become the subjects for interview. They comprise, \( (345-93 = 252) \), two hundred and fifty-two in number. All of them were interviewed with the aid of the same tool. The Bengali version of the interview schedule has been given in (Appendix T3). However, the English version of the checklist finally appears in the following form:
<table>
<thead>
<tr>
<th>Item</th>
<th>Probable causes of Non-participation in elementary schooling by children in the age-group 5+ to 14+</th>
<th>Space for putting opinion</th>
<th>For Boys</th>
<th>For Girls</th>
</tr>
</thead>
<tbody>
<tr>
<td>A. 1</td>
<td>Poverty/want of dietary facility at home at the time of coming to school mainly on the ground of poverty.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>Want of clothing needed for attending school.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>Want of text books for Primary education.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>Want of text books for upper elementary education.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>Want of learning materials - paper, pen, pencil.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>Lack of facility to study at home.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>Parents are unable to bear the expenses of education at the Primary stage.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8</td>
<td>Children have no time to come to school.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>9</td>
<td>Death of father.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>10</td>
<td>Parents are unable to bear the expenses of the upper elementary education.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>11</td>
<td>Helping parents in their occupation.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>12</td>
<td>Employed - part or whole time basis.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>B. 12</td>
<td>Early marriage (primary stage).</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>14</td>
<td>Early marriage (upper elementary).</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>15</td>
<td>Prejudice of co-education at the primary stage.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>16</td>
<td>Prejudice of co-education at the upper elementary stage.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>17</td>
<td>Children are not willing to go to school.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>18</td>
<td>Helping in domestic work.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Item No.</td>
<td>Probable causes of non-participation in elementary schooling by children in the age group 5 to 14.</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>---------</td>
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<tr>
<td>19.</td>
<td>School education is meaningless to guardian</td>
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<td>20.</td>
<td>Ignorance of guardians/illiteracy.</td>
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<td>21.</td>
<td>Parental indifference/parents taking no interest in education of their wards.</td>
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<tr>
<td>22.</td>
<td>Prevalent social habit of not sending children to school/cultural inertia.</td>
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<td>23.</td>
<td>Parental opposition for education of their wards (Primary).</td>
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<td>24.</td>
<td>Parental opposition for education of their wards (upper elementary).</td>
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<td>25.</td>
<td>Guardians are not aware of educable potentials of their wards.</td>
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<td>26.</td>
<td>Caste and communal sentiment of parents.</td>
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<td>27.</td>
<td>The Primary school is away from the house of the students.</td>
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<td>The upper elementary school is away from the house of the students.</td>
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<td>School hours are not suitable for children.</td>
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<td>30.</td>
<td>Lack of school community contact and joint programme.</td>
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<td>Guardians are not consulted by schools.</td>
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<td>Lack of attracting power of schools.</td>
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<td>School hours are not suitable for parents.</td>
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<td>34.</td>
<td>Lack of adequate sleep and rest</td>
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<td>35.</td>
<td>Illness and disease.</td>
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</table>

Any Other Suggested Causes
Step IV: Collection of Data:

It has been pointed out that data have been collected from teachers and social workers and also from guardians. The teachers and social workers are considered first. The researcher approached the respondents in person at the end of 1975 and also at the earlier part of 1976 for re-application of the checklist on the selected teachers and social workers. The intervening period between these two contacts was more than one month and less than two months.

It has been noted from some recent studies that the interval between a test and a re-test for statements from adults should be, more or less, one and a half month. As the researcher met the teachers and social workers several times, a good relation has been developed between the researcher and the respondents. So, there was an advantage of having rapport. The tool, being a new type of schedule for them, required clarifications and instructions for inserting their opinion. So, a number of directions was given to the respondents. When the researcher became confirmed that the meaning and purpose of the checklist had been clear to the respondent, the person in question was requested to fill in all the gaps in the checklist. No signature of the respondent was required for this purpose.

Step V: Directions to Teachers and Social Workers:

Each item was clearly clarified to the respondent in regional language and necessary instructions towards recording their opinion in

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the Checklist were, first of all, verbally communicated and then the following written instructions were explained once again; so that, they can insert their opinion in presence of the researcher.

**Directions**: The Checklist contains 35 probable causes of non-participation to elementary schools by children in the age-group 5 plus to 14 plus. They may be totally unschooled boys and girls or drop-outs. You are at liberty to identify the causes of non-participation by putting the symbol \( R.C. \) (where R.C. denotes the real cause), in the appropriate cages shown separately for boys and girls in the right vertical columns of the Checklist. There is no right or wrong answer: your opinion is final. If an item does not reflect the cause of non-participation at all, please leave it blank. You are also at liberty to add new items expressing the cause of non-participation. Please put these items against numbers 36, 37 and so on.

**Step VI**: COLLECTION OF DATA AND THE MODE OF INTERVIEWING THE GUARDIAN:

It has already been pointed out that the local social workers introduced the researcher with the guardian of each household in presence of a few literate neighbours and explained the purposes of the interview with the guardian. The guardian was assured that the interview was in no case harmful to him, nor he would be compelled to do anything against his will. Rapport was established with the guardian through enquiry of certain cultural and occupational practices and festivals of this region. As the guardians were already acquainted with the researcher (through other interviews of 1974 and 1975) and were confirmed that the interview would in no way be harmful to them, they could freely talk to the researcher and social workers and others. In course of these
conversations the items of the interview schedule (Appendix - T3) were expressed one by one, in interrogative forms and the subject was encouraged to talk freely and relate facts from his own experience. The responses relevant to each item were subjected to the arguments and discussions of the social workers and the neighbours present before the subject. As the local social workers and neighbours were aware of the Socio-economic and home-background of the respondent, it became difficult to conceal facts before these conversant people. So, the guardians had to rectify irrelevant statements and relate facts accurately which were finally noted in the interview schedule. The appropriate responses to each item, finally stated by the guardian, were noted separately for boys and girls. The possibilities of unreliable data have been eliminated by critical discussions and review of the statements by the literate neighbour and social workers who were present at the time of interview. The above procedures were adopted to have reliable data. Fifteen to sixteen guardians were interviewed everyday, so that, the task could be completed by fifteen days. The months of November and December are convenient for data collection. These two months are the best season of the year and prosperous period to the community. The researcher collected data from the selected 252 guardians within the stipulated period.

Step VII : SORTING AND TABULATING DATA:

When collection of data from the three sources was completed, the Check-lists and Interview schedules were arranged systematically into three different groups, that is, (i) the Check-lists for 46 teachers and (ii) 26 social workers, and (iii) the Interview Schedules for 252 guardians.
Step VIII: TREATMENT OF DATA:

The data collected from teachers, social workers and guardians are treated in three separate tables. However, the principles of scoring are the same. The scores of each item (for the three separate groups) have been converted into frequencies and the frequencies for boys and girls have been shown side by side. The frequencies were then converted into percentages, so that the percentages might represent rank order of each item of definite cause. In case of indefinite responses, the percentages of frequencies have only been shown, but these are not expressed in rank order.

Finally, the scores have been arranged into two categories i.e., (i) the most formidable and (ii) the less formidable causes. The variables or items securing higher rank positions and percentile scores (around 50% and above) by teachers, social workers and guardians jointly were considered to be the most formidable causes. Some of the variables might secure high percentile scores by one group, while the other groups might not assign much importance to these. In this situation, there would be no common agreement of all the groups with regard to the importance of these variables. Naturally, these should not become formidable causes. But a number of variables or items might secure high scores by all the groups. There should be no reason to disagree that these items must represent the most formidable causes. Even, the scores of two definite responses and one indefinite response, securing more than 50% frequency scores by all the three groups might be considered most formidable causes. The percentile scores of these variables occupy places in the right half of the normal curve.
In the light of the above common expression of all the groups, the less formidable causes should have percentile scores ranging between 33% and 49%. The items securing less than 33% frequency scores should be treated as insignificant causes.

Validity and Reliability: The measures towards selection of valid items have already been discussed. The steps towards reliability measures are discussed here.

Reliable tests, whatever they measure, yield comparable scores upon repeated administration. Ideally one would wish to gauge reliability by repeating the scale (or test) on the same people using the same methods. In this particular study reliability has been tested by the co-efficient of correlation between the frequency scores obtained by repeated (twice) administration of the Check-list on (46) teachers and (26) social workers. The correlation between the two sets of scores (i.e., test and Re-test) can easily be obtained by the rank differences of the frequencies of different items.

The correlation co-efficient for different sets of scores have been calculated from the data that are obtained after the administration and re-administration of the same Check-list on teachers and social workers. The scores of the 1st and 2nd administration have been shown in the following order:

<table>
<thead>
<tr>
<th>Test(T1) Re-Test(T2)</th>
<th>Boys</th>
<th>Girls</th>
<th>Test(T1) Re-Test(T2)</th>
<th>Boys</th>
<th>Girls</th>
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</table>

The correlation coefficients obtained from the rank differences of and T₂ (that is, test and re-test) justify the reliability of data. The scores of frequency scores are, therefore, tabulated so as to ascertain the relation coefficient.
<table>
<thead>
<tr>
<th>Ranks showing scores of teachers in Test (T₁) and Re-test (T₂)</th>
<th>(1) For boys</th>
<th>(2) For Girls</th>
<th>Rank differences</th>
<th>D²</th>
<th>p²</th>
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<td>T₁ - T₂</td>
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<td>D for (2)</td>
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</table>

(i) The coefficient of correlation, $r$, for boys, is given by:
\[
1 - \frac{6 \times \sum D^2}{N (N^2 - 1)} = 1 - \frac{6 \times 44.50}{35 (35^2 - 1)} = 1 - 0.01 = 0.99.
\]

(ii) Similarly, the coefficient of correlation for girls is,
\[
1 - \frac{6 \times 75}{35 (35^2 - 1)} = 1 - 0.01 = 0.99
\]
### Ranks showing scores of Social Workers in Test ($T_1$) and Re-test ($T_2$)

<table>
<thead>
<tr>
<th>(1) For boys</th>
<th>(2) For girls</th>
<th>Rank differences</th>
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<th>$D^2$</th>
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The Coefficient of correlation for boys is given by:

\[
1 - \frac{6 \times 394}{35(35^2-1)} = 1 - 0.06 = 0.94 \]

The Coefficient of correlation for girls is given by:

\[
1 - \frac{6 \times 448.50}{35(35^2-1)} = 1 - 0.06 = 0.94
\]
It follows from these results, that in case of teachers, the correlation coefficient between the test and re-test is 0.99 for boys. It is also 0.99 for girls.

In case of social workers, the correlation coefficients are 0.94 for boys and also 0.94 for girls. These high correlations fully justify the reliability of data.

Thus, the frequency scores of the tests, \( T_1 \) have been utilized for ascertaining the relative importance of variables in determining the causes of non-participation to school.

The relationship of school participation of wards with the occupational pattern and educational levels of guardians has been dealt with in the last section. The mode of collection and treatment of data have already been pointed out in the preceding sections.

The chapter, on the methods of investigation closes here. The next chapter has been devoted to presentation and analysis of data.