

CHAPTER IV

THE RESEARCH DESIGN

The foregoing chapter elaborated the need for the study, described its important objectives, posited hypotheses and discussed implications of key terms, namely, equality, equalization and utilization of opportunity. The present chapter describes the research design - logical outgrowth of chapter III- and details about methodology, the sampling procedure and the tools administered to collect the data.

Locale

The empirical part of the study was carried out in the cosmopolitan city of Delhi -the capital of India. It is a Union Territory and skirted by Haryana on three sides and Uttar Pradesh in the east. The total area of Delhi is 1,485 square kilometres and density of population is 2,738 individuals per square kilometres which is the highest in the country. The community-wise break up of population in the capital is given in table 4-1.

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RELIGIONWISE
POPULATION DISTRIBUTION
CENSUS DECEMBER 1, 1971

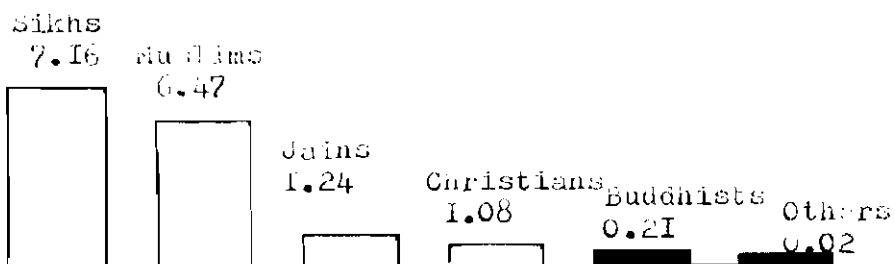


TABLE 4-1

RELIGION-WISE POPULATION DISTRIBUTION IN DELHI

Community	*Population	Percentage to total population
1	2	3
Hindu	3,407,835	83.82
Muslim	263,019	6.47
Christians	43,720	1.08
Sikhs	291,123	7.16
Buddhists	8,720	0.21
Jains	50,513	1.24
Others	768	0.02
Total	4,065,698	100.00

(*Figures based on 1971 Census)

The usual pattern of Muslim population is quite similar to other religious minorities of the world i.e. its concentration into pockets known as mohallas.

Educational Structure in Delhi

It has a Metropolitan Council which functions according to the provisions of the Delhi Administration Act 1966. Here

education is mainly run under three-tier system i.e. the responsibility is shared by (1) the Delhi Administration, (2) the Municipal Corporation and (3) the New Delhi Municipal Committee.

Primary education. The primary stage includes grades I to V. This is mainly the obligation of the local bodies, namely, Delhi Municipal Corporation and New Delhi Municipal Committee. But there are also other agencies, though their participation is very small, which impart primary education. These are composite schools with grades I to XI which are run and controlled by Delhi Administration. There are also a few such schools administered by the Kendriya Vidyalaya Sangathan (Central Schools Organization). However, major responsibility in this sphere is largely shouldered by the Municipal Corporation which covers more area and caters to more population.

Primary education is free in all the recognized government and local bodies' schools. In Delhi, there is one primary school within the radius of 1 kilometre. The constitutional obligation stipulates that the government shall provide primary education through the mother tongue of children. It has been decided that the interests of linguistic minorities (where the mother tongue is different from the Regional or the State's official language) should be protected by making special arrangement of instruction in their mother tongue if there are either 40 students in the whole school or 10 students in the class opting for that medium.

To attract economically backward classes to schools text-books, two sets of school uniform in a session, milk, spectacles, if needed are provided to them free of costs. The criterion for the admissibility of these facilities is the economic status of the family. Children whose family earnings do not exceed Rs. 300/- per month are entitled to these benefits.

At the time of independence there were less than 500 primary schools whose number has now increased to over 1,500 (figures are for the year 1972-73). Yet, more than one lakh children in the 6 to 11 age-group still go without schooling.

Accommodation being a big problem, most of the primary schools are running in two shifts - a practice which certainly lowers efficiency and standard of education. Many schools are housed in tents or pre-fabricated buildings, and where children lack even the basic amenity of gari or katankatti. Some of these schools, particularly in the walled city are in buildings which were never designed to serve school purposes. Schools with such arrangements are handicapped educationally in several ways.

Further, the two-shift schools present all manner of administrative and educational problems. An Expert Committee of Delhi Administration has recently gone on record that double shifts were a curse on efforts to maintain any educational standard (1). But in the case of Delhi, with higher population growth rate, unplanned development, slums, large immigrations, it remains a distant goal to provide single-shift schools with

spacious buildings and healthy environment.

TABLE 4-2

EXPENDITURE UNDER PLAN AND NON-PLAN HEADS INCURRED BY
MUNICIPAL CORPORATION, DELHI

Year	Non-Plan(in lakhs)	Plan(in lakhs)
1	2	3
1966-67	Rs. 492.50	Rs. 65.27
1967-68	Rs. 563.91	Rs. 88.79
1968-69	Rs. 557.69	Rs. 59.19
1969-70	Rs. 611.32	Rs. 83.12
1970-71	Rs. 620.00	Rs. 63.80
1971-72	Rs. 647.00	Rs. 111.41
1972-73	Rs. 645.00	Rs. 154.55
1973-74	Rs. 745.00	Rs. 170.00

(*Figures made available by the Education
Department of M.C.D.)

Table 4-2 describes that the increase in the expenditure at the primary stage was small as compared to increase in enrolment which rose from 327,030 in 1966-67 to 401,941 in 1973-74 (value of rupee has shrunked and is further shrinking as a result of soaring prices and large fluctuations in the market. Officials estimate put the value of rupee about 25 paisa).

Middle and higher secondary education. Primary, middle and higher secondary education is administered by the Directorate of Education, Delhi Administration. Other agencies, such as, trusts, religious organizations, missions and the Kendriya Vidyalaya Sangathan are also in the field.

The Board of Secondary Education is the examining body which conducts All-India Higher Secondary Examination for schools of All-India character (all Kendriya Vidyalayas of Delhi and most of the unaided schools) and the Higher Secondary Three-year course for government and government-aided schools of Delhi Administration.

On the average, there is a higher secondary school within a radius of 3 kilometres. There are only 5 higher secondary schools which have arrangements of imparting instructions through Urdu. All these institutions are situated in old Delhi. There is one more, Urdu-medium higher secondary school; and that is run and maintained by Jamia Millia Islamia, New Delhi.

Of over 900 middle and higher secondary schools (figures are for the year 1972-73), the most of them like the primary schools have two-shifts, and are housed in tents or pre-fabricated buildings. It is due to paucity of space that there are no auditoriums in schools; and library services are also in a bad shape in most of the schools. About 70 percent of middle schools and 40 percent of higher secondary schools do not have any library (2). To espouse the cause of talented

children of poor homes, 12 model schools were opened in 1972. There is a plan to further increase this number, so that a large part of the population of Delhi may be gradually covered. Three gymnasias have been constructed and equipped at the cost of Rs. 20 lakh. Funds have been earmarked to improve the existing play-grounds, and sports material worth "Rs. 1 lakh have been provided (3)." Provision of Rs. 54.55 lakhs has also been made for granting scholarships to the poor students (4).

SAMPLING

The objectives of the study call for collection of data from the following sources:

A) Students of Grades V, VIII and XI

These three classes mark three end-points in our educational ladder. Most of the students drop out at primary, middle and higher secondary stages. They either join some professional courses or enter the world of work. Therefore, grades V, VIII and XI being terminal stages for a majority of students are important from our point of view.

There are in all 16 boys' and 17 girls' Urdu-medium primary schools in Delhi. Muslims, in general, send their children to these schools for the simple reason that Urdu is their mother tongue. All such schools which impart instruction in Urdu are located in old Delhi and fall under the jurisdiction

of the Municipal Corporation. Of the 16 Urdu-medium boys', 17 Urdu-medium girls', 6 boys' and 7 girls' schools were selected through random sampling method (the name of schools are given in Appendix I). Number of students included in our sample are shown in Table 4-3.

TABLE 4-3

NUMBER OF STUDENTS IN SAMPLE BY SEX AND COMMUNITY (GRADE V)

Sex	Community		Total
	Muslim	Non-Muslim	
1	2	3	4
Boys	297	176	473
Girls	212	151	363
Total	509	327	836

One of the important objectives of the study is to compare the utilization of educational opportunity by the Muslim community vis-a-vis other communities. As the locality in which the school is situated largely determines the utilization pattern of education, it is imperative that for making valid comparisons, schools catering to the needs of the two communities should be selected from the same neighbourhood. Keeping this important point in view 5 boys' and 4 girls' schools, other than the Urdu-medium ones were selected on the basis of their proximity to the Urdu-medium schools (schools are given in Appendix II).

Of all the middle and higher secondary schools of Delhi, 12 middle and 5 higher secondary schools were either wholly Urdu-medium schools or provide facilities of instruction through Urdu. Only students from higher secondary schools, both from grades VIII and XI were selected in our study. Since there are only 3 Urdu-medium boys' higher secondary schools (all are aided and recognized), and 2 Urdu-medium girls' higher secondary schools (both are government schools), they were included in the sample (the names of the schools are given in Appendix III). The table below shows distribution of students by sex and community:

TABLE 4.1

NUMBER OF STUDENTS IN SAMPLE BY SEX AND COMMUNITY (GRADES VIII AND XI)

Grade VIII				Grade XI		
Sex	Community		Total	Community		Total
	Muslim	Non-Muslim		Muslim	Non-Muslim	
Boys	294	103	397	172	84	256
Girls	141	114	255	128	117	245
Total	435	217	652	300	201	501

To compare Muslim students with their counterparts i.e. non-Muslim students on the utilization pattern of educational

opportunities 2 boys' and 1 girls' school were selected on the basis of their proximity from the Urdu-medium schools (schools are shown in Appendix IV).

B) Principals, Headmasters, Primary and Higher Secondary School Teachers

The main purpose of the information received from principals and headmasters was to identify the overall picture like physical plants and academic factors which are considered necessary for the educational advancement of the child. Teachers were requested to state their educational and occupational status, length of service and nature of in-service training, if any, because these are presumed to affect quality of education imparted to children.

All the principals, headmasters and teachers of schools in which the study was conducted were included in the sample.

C) Parents

Those parents who do not avail of or partly avail of the educational opportunity provided for their childrens' education were interviewed to find out reasons which prohibit them from the proper utilization of the opportunity.

Fifty parents on the basis of purposive sampling were selected from the different pockets of Muslim population which included: 13 from Lal Khan, 10 from Jama Masjid, 10 from Gali Qasim Jan, 6 from Bara Hindu Rao, 5 from Hans Rani village, 2 from Chanan Hoola and 4 from Okhla village.

D) Public Leaders

This included eliciting the opinions of political leaders, educationists and social workers (the list of their names is given in Appendix V). In all 45 such persons were interviewed to have their opinion on various problems which have explicit or implicit bearing on poor participation of Indian Muslims in the educational activity.

Type of Data Collected

1. To find out if the Muslim community has an equal access to educational opportunity as compared to non-Muslims, the investigator collected figures of students on community basis studying at different levels and worked out co-efficient of equality.

2. To identify whether schools offer equal educational opportunities in terms of certain criteria which are regarded as good indicators of educational equality, the data have been collected on the following variables:

(i) Students' socio-economic status, self-concept, parents' aspirations, physical facilities offered by the school, intelligence and achievement, etc., (ii) teachers: their educational and occupational status, amount of teaching experience and their opinions on such facts which affect the quality of education given to children; (iii) principals and headmasters: type of school, academic results, co-curricular

programmes etc., and their views on problems related to the school in general.

3. To understand as to how far the backwardness of Muslims in social, economic and educational spheres affects the utilization of educational opportunity, 50 parents who do not send their children to schools at all or partly make use of educational opportunities have been interviewed and their opinions analyzed. Views of different political leaders are also ascertained on this issue.

Tools Used for Data Collection

A brief description of the tools used in the study is given below:

1. Questionnaires.
2. Interview schedules.
3. School examination record.
4. Cattell's Culture Fair Intelligence Test.

1. Questionnaire. Questionnaires for principals, headmasters, teachers of the primary and higher secondary schools were constructed by the investigator keeping in view the following points:

- (a) The purpose of the study was explained on the cover page and appeal was made to extend co-operation.
- (b) Dummy tables were prepared to avoid irrelevant questions.

- (c) Each question was made specific and pin-pointed.
- (d) Questions were framed in simple and easy language.
- (e) Questions were logically structured.
- (f) Pre-coding of the probable responses was done to reduce errors and statistical analysis.

The questionnaires for the principals, headmasters, and teachers included questions on factual knowledge and matters of opinion (questionnaires for principals, headmasters and teachers are given in Appendix VI).

The questionnaires for students were framed in Urdu and Hindi. The list of questions framed to elicit information from students of grades V, VIII and XI included four types of questions, namely, relating to factual, knowledge, their motivation and opinions (questionnaires for the students of grades V, VIII and XI are Appended in VII).

Our questionnaires for the students of grades VIII and XI included items on education, occupation and income from Kappaswamy's socio-economic scale. It was done to find out the socio-economic status of the students. In the case of students of grade V, they were required to indicate the education of parents in terms of literate and illiterate. Occupation was obtained under the heads of service and business. Because students of grade V could not give the income of parents, they were asked to put a tick on the list of items owned by them.

This was just to have an idea of the income level of their parents.

Kuppuswamy's socio-economic scale measures the individual's position in society. It includes three variables, namely, education, occupation and income. To him, social prestige is associated with these factors. This fact has also been proved by many researchers. According to Kuppuswamy attempts have been made to estimate the socio-economic status of an individual on the assumption "that there is a class structure in the society, that status positions are determined mainly by a few commonly accepted symbolic characteristics and that these characteristics can be scaled and combined using statistical procedures (5)."

Presently the scale was standardised for use in Urban parts of India. Each of the three variables were scaled on a 7-point scale, by providing equal weightage to the different variables and by assuming equal intervals between the different points of scale. The final weightage accepted for education is 7, occupation 10 and income 12. To find out the socio-economic status of the individual the weighted scores of the three variables are added (6).

The weights for the three variables were ascertained by making a discriminant function analysis. "It was found that when all the three variables are used the multiple biserial R is .885, while it is .773 when income is eliminated, .742 when education is eliminated .667 when occupation is

eliminated. The correlations substantiated the above conclusion (7)."

Pilot study. Any research instrument can be improved after the pre-test. For this purpose, the questionnaires of principals, and headmasters were administered to one principal of government higher secondary school, at Kalka, and 2 headmasters of primary schools at Juliana respectively. Similarly the questionnaire meant for teachers was also tried out in these schools. All the questionnaires excepting that for teachers worked well. Therefore, the latter was modified accordingly.

For an effective try-out of the first draft of the questionnaire for students two pronged approach was followed. Firstly, it was given to four teachers each of the Vth and VIIIth gradea of different schools for their comments (this phase was completed in two days). Secondly, it was administered to 8 students each from grade V, VIII and XI of Urdu-medium boys' and girls' schools and Hindi-medium boys' and girls' schools. The average time consumed for the completion of the questionnaire in the case of the Vth, VIIIth and XIth grades boys was 20 minutes, 35 minutes, and 1 hour respectively; whereas girls of the same classes, completed it in 18 minutes, 32 minutes, and 57 minutes respectively. Thus we see that boys and girls took more-or-less the same time to complete the tests.

From the responses received from the teachers and students, it was revealed that some questions needed modification because they did not elicit the information they were designed to.. Some of the words in questions were not uniformly understood and some were not properly sequenced. In the light of suggestions, questionnaires of grades V, VIII and XI were revised, linguistic structure improved and new items inserted. This revised questionnaire was again administered in the same schools, but to the different students of the same grades. This time students did not find any difficulty in recording their responses and their performance in terms of average time improved considerably.

2. Interview schedule. Two interview schedules were framed: one for public men to obtain necessary information on educational issues concerning Muslims, and the other for Muslim parents to identify the factors which act as barriers in the proper utilization of educational opportunities for their children (interview schedule used for public leaders and parents are given in Appendix VIII).

These interview schedules were prepared by the investigator, but were modified and finalized by the Supervisor.

3. School examination record. In Delhi when the study was undertaken there existed a common examination for students of grade IV at the end of the year. Likewise, the Directorate

of Education held -though at zonal levels- a common annual examination for the students studying in secondary and higher secondary classes. Students answered the same question papers -though these were evaluated by the respective schools. This provided a certain degree of justification for comparison of scores secured by students. Other factors which affected the achievement of students, such as teachers' subjectivity and school environment could be expected to have more-or-less an uniform impact on our sample. Therefore, marks obtained by the students of grade V (only total marks because of the non-availability of subject-wise marks) grade VIII and grade XI in their annual examination of the previous year i.e. grades IV, VII and X were taken down from the examination registers of schools under study. Its purpose was to have some idea about the achievement of Muslim and non-Muslim students respectively.

4. Cattell's Culture Fair Intelligence Test. The investigator administered Cattell's test of "g" Culture Fair Scale 2, Form A and Scale 3 Form A to the students of the Vth, VIIIth and XIth grades respectively. The purpose was to find out if there was any significant difference between intelligence of Muslim and non-Muslim students.

The aim of Culture Fair Test is to single out the most consistant core of basic mental capacity. Culture Fair tests minimise to a great extent the differences of language and cultural environment, and possess wider applicability. They

are better predictor of native capacities. Cattell states the proof of the validity of his Culture Fair Intelligence Test in the following words:

The primary evidence of the validity of an intelligence test is its direct correlation with the general ability factor as determined uniquely by factor analyses According to original published researches the correlations with "g" of the four types of sub-test range through .63, .68, .89 and .99..(8).

The reliability of the test has been evaluated both in terms of the Dependability Co-efficient and Homogeneity Co-efficient which vary from .71 to .92.

Data Processing

Since the amount of data gathered was huge, it was felt necessary to use the electric computer for data processing. Data were processed with the aid of HONEYWELL 400, IBM 1620 and IBM 7044.

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