

METHODOLOGY

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This chapter deals with the methods that were employed in addressing the research question for the study and includes the following sections:

- Location and setting
- Research design
- Sample
- Research Tools
- Data collection
- Analysis

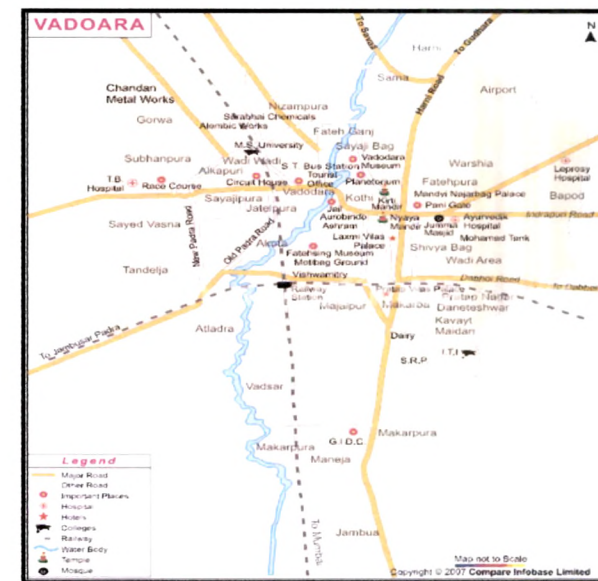
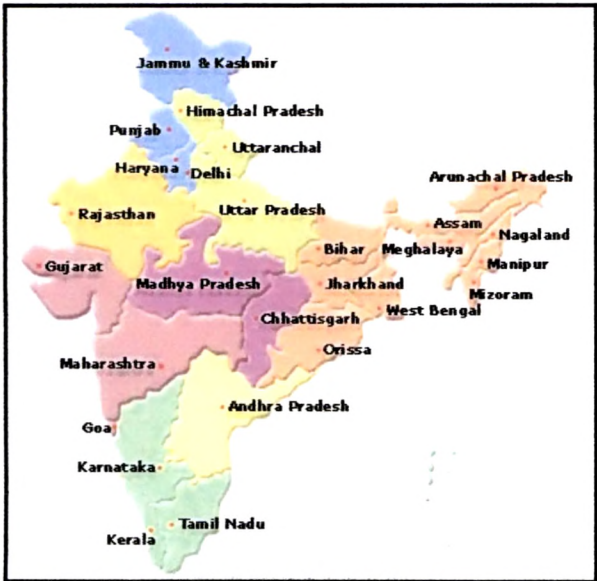
Location and Setting

This research was conducted at Early Childhood Education (ECE) Centers identified and selected across Jaipur, Mumbai, and Vadodara. A brief introduction and description for each of the cities is presented below.

Jaipur

Jaipur is the capital of the state of Rajasthan. It is the eleventh largest metropolitan city of India with an area of 11,143.00 sq. km. As per the 2001 census, the population of Jaipur city is 5,251,071, of which 53% are men (2,768,203) and 47% are women (2,482,868). More than 15% of the population of Jaipur is under 6 years of age (T = 919,392; M = 484,167; F = 4,351,225).

FIGURE 3: Location and Site of the Study



The city has an average literacy rate of 67%, which is higher than the national average of 64.7%. Hindi is the official language in Rajasthan and in its capital city Jaipur. Seven ECEs from Jaipur were selected as samples for this study. Of these, four were run by private organizations and three, by non-government voluntary organizations. No ECE centers were run by the city's municipality

Mumbai

The island city of Mumbai, in Maharashtra state, is the largest metropolitan city of India, with an area of 236 sq. km. As per the 2001 Census, the population of Mumbai city is 8,640,419, of which 68% was male (4,741,720) and 64% was female (3,898,699). In Mumbai, 24% of the population is below six years of age (T = 54,503, M = 28,164; F = 26,339). The city has an average literacy rate of 77%, which is higher than the national average. It has a multilingual, multicultural group of residents, many of whom are migrants from the different states of India.

A total of 31 centers were selected from Mumbai, of which 10 ECE centers were run by non-government, voluntary organizations. There was remarkable difference in the number of the ECE centers run by each NGO. Some NGOs had only one pre-primary center whereas others had 50–60 ECE centers under their administration and management (as part of a project or areas adopted in the cities for ECE centers).

Ten schools of the Brihanmumbai Municipal Corporation (BMC) and the Navi Mumbai Municipal Corporation (NMMC) were selected as study samples. An important and interesting feature noted was that the ECE centers run by the NMMC were attached to its municipal schools, and the NMMC was responsible for their administration. In the cases where ECE centers were run by the BMC under its project on community development, it assigned the centers to voluntary and other organizations (such as the Lions Club) for the provision of resources such as toys, books, equipment, creating a suitable classroom ambience, and payment of salaries to ECE teachers. These centers were also attached to municipal schools, and their functioning was supervised by project officers (BMC personnel).

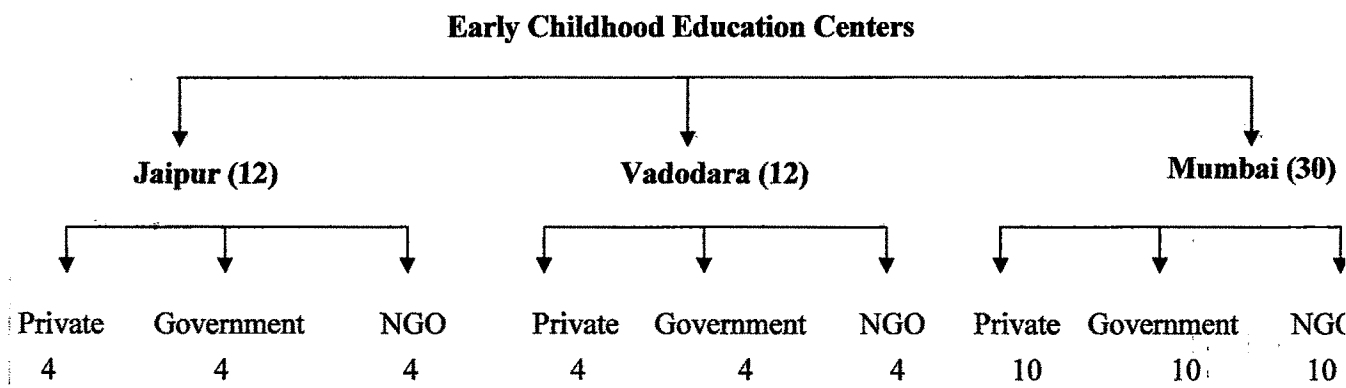
Eleven ECE centers were selected from the private sector. Of these, only one center was managed by a male administrator and proprietor, while the remaining centers had female personnel for the management as well as for other duties.

Vadodara

Vadodara is located in the state of Gujarat. It is the eighteenth largest city of India with an area of 148.95 sq. km. As per the 2001 Census, Vadodara's metropolitan area had a population of 36,418.2, and 52% (1,744,454) of the population was male and 48% (1,297,368), female. Vadodara has an average literacy rate of 78%, which higher than the national average of 59.5%. In Vadodara, 11% of the population is under 6 years of age (T = 493196; M = 261562, F = 231634). The city is multilingual, and has Gujarati as the official language. Twelve ECE Centers were selected here, of which four each were run by private organizations, NGOs, and the municipal corporation.

A diagrammatic representation of the sample selection is given in Figure 4.

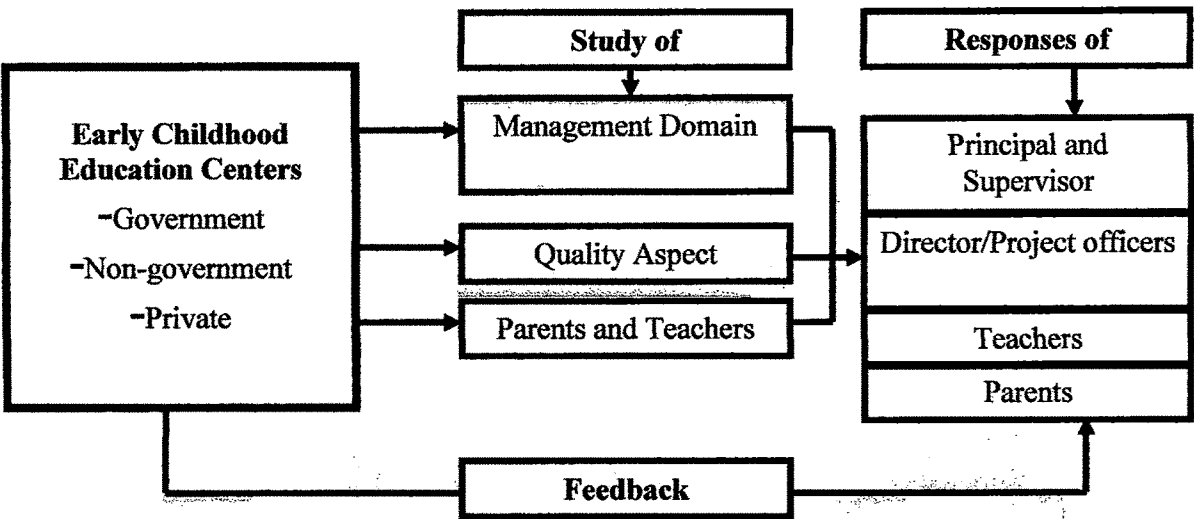
FIGURE 4: Diagrammatic Representation of the Sample (n = 54)



Research Design

The study design is exploratory and descriptive in nature, and both quantitative and qualitative approaches have been employed. The ECE centers catering to children of ages ranging from 2–6 years in Jaipur, Mumbai, and Vadodara are the frames of reference for this study.

FIGURE 5: Design Framework



Sample

The sample selection for this exploratory study required delineation of the relevant population or phenomena for investigation on the basis of theoretical and conceptual considerations. Thus, the sample included:

- i) Early childhood education centers
- ii) Teachers from these centers
- iii) Parents of the children studying in the centers

Early Childhood Education Centers (Appendix 5)

A sample from the following organizations was taken by the researcher. The total sample comprised 46 centers spread across the three cities and operated by three different types of management, as indicated in Table 1. The variation in the sample size in the three different cities was due to the differences in population density, availability of services, and establishment pattern across these cities.

TABLE 1: Sample Description

Categories	Number of Schools			
	Jaipur	Mumbai	Vadodara	Total
Government	—	10	4	14
Non-government	3	10	—	13
Private	4	11	4	19
Total	7	31	8	46

The following criteria were used for the selection of private ECE centers: (i) the centre should have been established and ongoing since at least five years and (ii) the centre should not be attached to any primary or secondary school.

Purposive snowball sampling was used to select ECE centers. The centers were identified through a referral process and intentionally selected to represent pre-defined characteristics or traits. As there was no list of private and NGO-conducted preschool

centers available, professional connections of the researcher with ECE settings were used to obtain additional centers for the sample.

Parents and Teachers of Children in Early Childhood Education Centers

The respondents were drawn from NGO, government, and private ECE centers of the three cities. Although mothers and fathers were initially invited to participate in the study, the final sample only involved mothers. Parents were drawn from sixteen local ECE centers operating in Jaipur and Vadodara and from thirty-one ECE centers in Mumbai. From each of the centers, three parents and three teachers were selected to respond to the questionnaire prepared for them. The details of the respondents are given in Table 2 below.

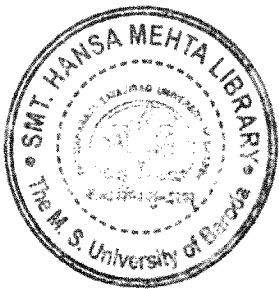
TABLE 2: Total Number of Parents and Teachers as Respondents

Place	Number of Parents	Number of Teachers	Total
Jaipur	18	21	39
Mumbai	95	64	159
Vadodara	24	8	32
Total	137	93	230

Research Tools

The following tools were prepared by the researcher for data collection in order to achieve the objectives of this study. The tools used for the present study are as follows:

1. Scale to measure the management domain of ECE Centers.



- 2. Scale to measure the Quality of ECE Centers.
- 3. Questionnaire for administrators/principals.
- 4. Questionnaire for teachers.
- 5. Questionnaire for parents.
- 6. Guide for the observation of ECE Centers.
- 7. Secondary data from reports, handouts, and prospectus.

1. Scale to Measure the Management Domain of Early Childhood Education Centers (Appendix 1part 2)

The tool for evaluating the management of ECE centers was developed by the researcher. This tool consisted of different domains, with each domain containing different items, as described in Table 3.

TABLE 3: Management Domains of ECE Centers

No.	Domains	Parameters
1.	Planning and administration	<ul style="list-style-type: none">Organization frameworkMission and aimsDevelopment plansSafety measures

2.	Leadership	<ul style="list-style-type: none"> ▪ Management of daily operations ▪ Professional knowledge ▪ Skills and abilities ▪ Working relationship with staff ▪ Relationship with parents
3.	Staff management	<ul style="list-style-type: none"> ▪ Qualification of ECE educators and allocation of duties ▪ Allocation of duties for others (non-teaching staff) ▪ Effectiveness of staff development ▪ Effectiveness of staff appraisal ▪ Staff communication ▪ Staff collaboration ▪ Staff participation in management
4.	Utilization of Resources	<ul style="list-style-type: none"> ▪ Arrangement and utilization of space ▪ Physical settings and facilities ▪ Provision and organization of teaching research ▪ Management and use of resources ▪ Financial planning and monitoring
5.	Institution Evaluation	<ul style="list-style-type: none"> ▪ Institutional evaluation framework ▪ Attachment to professional organization/bodies networking

A set of closed items were prepared under each management domain with a four-point rating scale of excellent, good, acceptable, and unsatisfactory. The scoring procedures adopted to analyze the responses were in accordance to the ratings of the domains.

2. Scale to Measure the Quality of ECE Centers

This scale will help the researcher determine whether the ECE setting is of good quality, and whether it is a supporting and nurturing place for the child. Five key indicators of quality are as shown below.

TABLE 4: Quality Aspects of Early Childhood Education Centers

No.	Aspects	Items
1.	Physical set up	<ul style="list-style-type: none"> ▪ Building, light, ventilation ▪ Space: indoor, outdoor, display storage ▪ Safety: Transportation, fire extinguisher ▪ Sanitary facilities ▪ Drinking water facilities
2.	Program Content	<ul style="list-style-type: none"> ▪ Program schedule, planning by teacher, age appropriateness of activities, use of play materials and teaching, aids, balancing learning activities ▪ Classroom management ▪ Children participations in activity ▪ Assessment of children’s progress ▪ Evaluation of program ▪ Communication skills and interaction

		<ul style="list-style-type: none"> ▪ Health and nutrition facilities
3.	Staff and Personnel	<ul style="list-style-type: none"> ▪ Staff qualifications ▪ Personal characteristics ▪ Moral ethical dimension ▪ Staff constancy <ul style="list-style-type: none"> • Staff cooperation • Professional growth of staff
4.	Parent-Teacher association, involvement and participation	<ul style="list-style-type: none"> ▪ Parent involvement and participation ▪ Parent-teacher association ▪ Parent information
5.	Children	<ul style="list-style-type: none"> ▪ Age group of children ▪ Group size ▪ Adult/child ratio ▪ Equality of opportunities ▪ Greetings and departures ▪ Personal grooming ▪ Honoring birthdays and holiday celebrations

A set of closed items was prepared under each aspect and assigned the ratings very good, good, satisfactory, and needs some change (appendix 1 part 1). Each of these alternatives was assigned to a number in descending order.

Validation and Reliability of the Instruments

In order to improve face and content validity, four experts and professionals who possessed extensive experience in the field of ECE and management were consulted. Two types of reliability analysis were carried out for the final scale. The inter-item reliability analysis (Cronbach's α) provided a reliability coefficient of 0.948. The split-half reliability analysis yielded a coefficient of 0.931 on the management domain scale. For the quality tool, the inter-item reliability analysis (Cronbach's α) provided a reliability coefficient of 0.972. The split-half reliability analysis yielded a coefficient of 0.950. Both these strong reliability coefficients are an evidence of the reliability of the tools used in this study.

Pilot Study

In order to determine the feasibility of the research, a pilot study was first conducted with the following objectives:

- a) To identify potential practical problems that may be encountered in following the research procedure.
- b) To design a research protocol and assess whether the research protocol is realistic and workable.
- c) To determine the resources (financial and other) required for the planned study.
- d) To help minimize the errors encountered at the time of data collection.

On the basis of the results from the pilot study, the content, language, and structure of some of the questions were modified so that they could be easily understood by the respondents. From the pilot study, it emerged that in a situation where there could be a language problem, the questionnaires were also prepared in the Marathi language in order to avoid difficulties in understanding the questions posed.

3. *Questionnaire for Administrators*

A questionnaire was developed for the administrator/principal. The information sought was related to the administration of the ECE centers, their experiences, number of the children enrolled in the centers, financial provision, personnel activities, and other related activities. (appendix 1 part 3)

4. *Questionnaire for Teachers*

The questionnaire for teachers aimed to obtain the teachers' profiles. The questionnaire was used to collect information such as the teacher's age, qualifications, experience, knowledge about the center, job description, staff relationship, and benefits provided to them (Appendix 2).

5. *Questionnaire for Parents*

The questionnaire to be filled by the parents is a structured questionnaire, consisting of close- and open-ended questions to elicit information regarding the child's family background. Part A was intended to gather personal information of the respondents, including parental occupation, educational level, family income, and number of siblings. Part B contained open- and close-ended questions, which are clubbed together to elicit

information on (a) the facilities provided by the school to the parents, (b) parental participation in various school activities, and (c) parental evaluation of certain aspects of the functioning of the preschool (Appendix 3).

6. *Observation Guide for the ECE Centers (Appendix 4)*

The observation guidelines were developed by the researcher to observe the environment, facilities, and learning activities inside and outside the classroom setting of ECE centers. The following features were primarily observed in this study: physical features, academic programs, teacher-child interactions, play materials used, learning techniques, pedagogical content, parent- teacher interaction, child - child interaction, record keeping, and general atmosphere of the preschool.

Data Collection

First, the academic term and the vacation period of each of the centers in Jaipur, Mumbai, and Vadodara were identified. Second, letters requesting permission to conduct research in the ECE centers and describing the study in detail were issued to the concerned authority (principal/proprietor in the case of private schools, education officers in the case of government schools, and directors/in-charges in the case of NGO-run schools) (please refer to Appendix 6). Permission was also sought to collect responses from the parents and teachers. The next step was to make telephone contact with the head teacher/director/administrator to explain the purpose of the study and to encourage participation. Data collection was scheduled at the respondent's convenience before, during, or after the working day, or on the weekends. If the respondents were not available to complete the tools at the scheduled time, an additional attempt was made to

reschedule the process. Third, the school location was identified and data collection was initiated by administering the following tools:

a. Administration of Scale to measure the Management Domain of ECE Centers..

The program director/principal was instructed in the use of the scale and the approximate amount of time required to complete it. The respondents were instructed to select the best possible answer and go the next question.

b. Administration of scale to measure the Quality of ECE Centers

This tool was explained to the administrators, who were instructed to read the instruction and mark the most suitable answer.

c. Questionnaire for administrators

The administrators' views were ascertained using a specially designed questionnaire.

d. Questionnaire for teachers

The teachers of the classes observed in each ECE center were given a specific questionnaire. The questionnaire explored the teachers' beliefs about how children learned their views on the goals of ECE centers, their position on policies related to centers, and their satisfaction with current practices. The teacher's questionnaire was translated in Hindi, Gujarati, or Marathi depending on the need of the teachers.

e. Questionnaire for parents

The parent's questionnaire provided them with the opportunity to express their preferences on the content of information they would like to receive. The questionnaire was translated for ease of filling it, and any problems or queries were resolved by the researcher.

f. Observation

As the major focus was on the quality and management of ECE Centers, it was very important to understand all the events occurring in the center. The guidelines were designed to observe the early childhood settings. Each center was observed for an entire functional day, which would be a minimum of 3–4 hours. Field notes was the major strategy for recording the observation. The researcher arrived at the classroom before the scheduled opening time in order to observe the preparation for the day and arrival of the children, the school and physical environments, the teaching-learning process, play material, curriculum content, child-to-child interactions, and the nature and the number of records maintained by teachers. During the process of data collection itself, data definition files were created, and data coding was simultaneously initiated.

The whole process of data collection was a unique experience. While collecting information from the various ECEs, the researcher observed the willingness of the NGOs, the bureaucracy of the municipal schools, and autocracy of private preprimary centers.

Data Analysis

Research data lay a foundation for analysis, but they do not speak for themselves (Burgess, 1972). For statistical analysis, data were entered into SPSS 12.0 for Windows. Descriptive statistics, i.e., frequencies, percentages, and means were calculated for demographic data and research variables as deemed appropriate. Each response to the various categories was carried out independently for the respondents from three cities and also the cumulative analyses of the respondents put together.

Inferential statistics were computed using ANOVA and post-hoc test. The latter test is used to determine the significant difference between group means in an analysis of variance. The process of data analysis involved visiting, re-visiting, organizing, and re-organizing research data and related literature in a spiral trajectory.

The qualitative answers were transcribed. The non-English transcripts were translated by the researcher.