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4.0 INTRODUCTION

"Research in common parlance refers to a search for knowledge. One can also define research as a scientific and systematic search for pertinent information on a specific topic." Kothari C.R. (1993). Research is an original contribution to the existing stock of knowledge making for its advancement. Having defined the research problem decision concerning the inquiry or in other words the "research design" of the study has to be continued.

"A research design is the arrangement of conditions for collection and analysis of data in a manner that aims to combine relevance to the research purpose with economy in procedure." Selltiz Cetal (1962 p.50). These design constitutes the blueprint for the collection, measurement and analysis of data.

4.1 RESEARCH DESIGN

The research design for the present study discuses the method for study, the sample selection procedure and a description of the tools used for the study.

4.1.1 Method of Research – Descriptive Research :

According to Best J.W. and Kahn J. V. (1980); descriptive research seeks to find answers to questions through the analysis of variable relationship.

Correlational research is one of the types of descriptive research which is used to seek a fuller understanding at human behaviour by testing out simple relationship among those factors deemed to have some bearing on the phenomena in question or being investigated (Cohen Louis, Manion L. Rawerence 1980, P.127).

The details of the research design are described below :

Sometimes known as non-experimental research deals with the relationship between variables, the testing of hypothesis and the development of generalization, principles or theories that have universal validity. It is concerned with functional relationships. The expectation is that if variable "A" is systematically associated with variable "B" prediction of future phenomena may be possible and the results may suggest additional or competing hypothesis to test.

Descriptive research studies are designed to precise information concerning obtaining the current status of phenomena and whatever possible, to draw valid general conclusions from the facts discovered. They are restricted not only to fact findings but may often result in the formulation of important principles of knowledge and solution of significant problems concerning local, state, national and international issues.

Descriptive research differs from other types of research in purpose and scope. A clear-cut distinction can be drawn between

descriptive studies and historical studies on the basis of time. The later deals with the past and the former with the present. Descriptive studies investigate phenomena in their natural setting. Their purpose is both immediate and long range. Such studies, provide information useful to the solution of local problems and at times provide data essential for solving long term problems.

4.1.1.1 Survey Method :

Survey studies are conducted to collect detailed descriptions of existing phenomena with the intent of emptying data to justify current conditions and practises or to make more intelligent plans from improving them. Their objective is not only to analyze, interpret and report the status of an institution, group or area in order to guide practice in the immediate future, but also to determine the adequacy of status by comparing it with established standards.

Survey studies may take different forms depending upon the scope, nature and purpose of the problem under investigation. Survey data may be collected from every unit of a population or from a representative sample.

Advantages of Survey Method :

Following are some advantages of survey method:

1. Accumulation of information from individuals is possible at relatively low cost.

2. Generalizability to larger population is more legitimate.

3. Unlike experimentation, surveys are flexible. Data is collected with use of a variety of data collection tools.

4. Survey sensitize the researcher to potential problems that were originally unanticipated or unknown.

5. Surveys may be used as good tools for verifying theories.

The survey method was found appropriate for this study as it involved identifying the relationship between teachers competency and fifth standard students performance in English.

4.1.2 Sample Selection Procedure :

Most of the educational phenomena consist of a large number of units. Some populations are so large that their study works be expensive in terms of time, money, effort and manpower.

The process of sampling makes it possible to draw valid inferences or generalizations on the basis of careful variables within a relatively small observation proportion of population. A measured value based upon sample data is statistic. A population value inferred from statistic is a parameter.

Sample is a small proportion of a population selected for observation and analysis. A good sample must be as nearly representative of the entire population as possible from which the sample has been drawn.

Fox D.J. (1969, pp. 319,322) gives the procedure for selecting sample for educational research. According to him there are five steps in sampling process and there corresponding five levels of samples viz.

a) Universe b) Population
c) The invited sample d) Accepting sample and
e) Data producing sample.

a) Universe : Universe includes all possible respondents a certain kind.

b) Population : It is that portion of universe to which a research has access.

c) The Invited Sample : It defined as all the elements of the population to which an invitation to participate in research is extended.

d) The Accepting Sample : It is that portion of invited sample that accepts the invitation and agrees to participate.

e) The Data Producing Sample : It is defined as that portion of the accepting sample that actually produces data.

The population of the present study includes all the 86 Marathi Medium co-educational primary schools and 38 Marathi Medium secondary schools in Karveer Taluka of, Kolhapur District in the state of Maharashtra. Since the population was found to be too large, a random sample was selected.

The sample consists of -

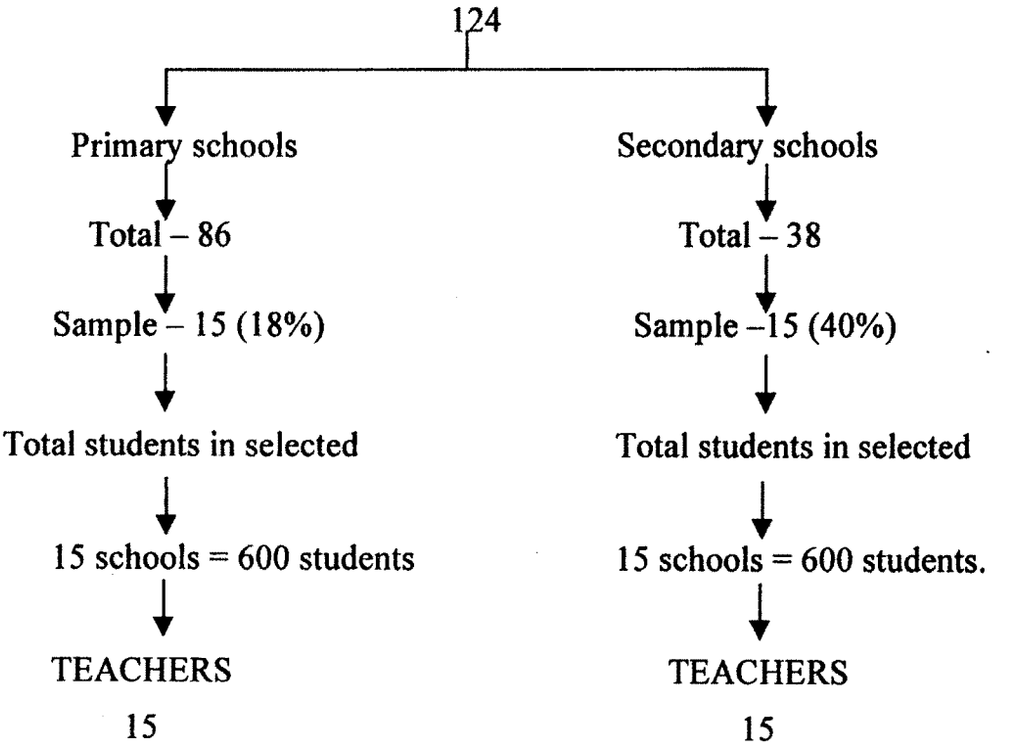
i. 15 Primary school and 15 Secondary schools

ii. The English teachers and

iii. Students of their schools in Karveer Taluka of Kolhapur District in the State of Maharashtra. In the present study they form the sample.

4.1.2.1 Sample for the study :

Primary and Secondary
Marathi Medium co-educational
Fifth Standard
Total Schools in Karveer Taluka (2001-2002)



Why 18% Pr. & 40% Sec. schools?

To study the relationship between teachers competency and fifth standard students performance in English from 30 schools, teachers and students of Karveer Taluka were randomly selected. The names of the primary schools have been included in the Appendices as appendix 'E'. The name of the secondary school is included as appendix 'F'.

The name of the primary school teachers is given in the Appendices as 'G'. The name of the secondary school teachers is given in the Appendices as 'H'. Through random sampling procedure data producing teacher and student sample was selected from each of the 15 primary and 15 secondary schools.

4.1.3 Tool Discussion :

The following tools were used for data collection in this study:

i. Teachers Competency Questionnaire (TCQ)
ii. Skill Performance Test For Students (SPTS)

4.1.3.1 Teachers Competency Questionnaire (TCQ)

Questionnaire is a popular means of collecting all kinds of data in research. TCQ was prepared by the researcher. A questionnaire is a device consisting of a series of questions dealing with each of the components under study i.e. the ten competencies.

i. Construction of TCQ :

The TCQ was especially constructed in Marathi by the researcher to identify the level of the ten competencies in the primary and

secondary school teachers based on 'Teacher Competency Enrichment' published by Maharashtra State Council of Educational Research and Training, (M.S.C.E.R.T.) published in April 1997.

The TCQ comprises of two sections.

Section I is the initial information of the teachers their name, sex, type of school, subject of graduation and years of teaching experience.

Section II consists of questions competency wise as follows:

Sr. No.	Competency	No. of Questions	Score
1.	Contextual Competency	2	36
2.	Contextual Competency	6	36
3.	Content Competency	2	36
4.	Educational Transaction Competency	7	36
5.	Educational Activities Competency	5	36
6.	Competency in Preparation and use of Educational Aids	4	36
7.	Evaluation Competency	5	36
8.	Management Competency	4	36
9.	Parent Related Competency	6	36
10.	Community Rapport Competency	6	36
		Total Score	360

No consistency in the number of questions for each competency was maintained chiefly because of the difference in the nature of the competencies. There was variation in the nature of the questions

depending on the activities that each competency involved in the teaching of English (prose, poetry and grammar).

The TCQ was constructed in such a way that the teachers could answer it with ease, thereby eliciting maximum data regarding each teachers level of the ten competencies.

The TCQ was validated for its content by five experts. (Appendix 'A'). Before its finalization it was tested for its reliability on five teachers (Appendix 'B). The TCQ is included in the Appendices as Appendix 'C'.

ii. Administration of TCQ :

The TCQ was administered on the selected sample of teachers.

iii. Scoring of the TCQ :

Based on the marking by primary and secondary school teachers separately the scoring was done competency-wise. Each competency was alloted a score of 36, based on which the data was classified and tabulated. How the scoring was done? Scoring key?

The teachers were classified into three levels for each of the ten competencies as follows:

i. Low level of competency scores 0 – 12
ii. Middle level of competency scores 13 – 24
iii. High level of competency scores 25 – 36

4.1.2.2 Skill Performance Test for Students (SPTS) :

The SPTS was prepared by the researcher based on the standard fifth English Textbook 'LEARNING ENGLISH' to find out the level of the five skills attained by each of the student included in the sample. A copy of the SPTS is attached as Appendix 'D'.

i. Construction of SPTS :

The SPTS was prepared by the researcher for testing the standard fifth students on the five skills namely Listening, Speaking, Reading, Writing and Talking. The number of questions and the weightage given to them is as follows :

Sr. No.	Skill	No. of Questions	Marks
1.	Listening	3	20
2.	Speaking	4	20
3.	Reading	3	20
4.	Writing	4	20
5.	Talking	3	20

The test was constructed as per the directions of the Maharashtra State Bureau of Textbook Production and Curriculum Research, Pune, therefore the test was assumed to be valid and reliable.

ii. Administration of SPTS :

Fourty copies of the SPTS were handed over to each of the 30 Primary and Secondary school teachers who formed the sample at the

same time when the TCQ was administered. The teachers were requested to administer the SPTS on their own class of 40 students in the month of Jan. 2002.

By January over 80% of the syllabus is covered and students are expected to have mastered the five skills. The TCQ and SPTS were given to the teachers between July 2001 to December 2001. The SPTS and TCQ were collected from all the 30 schools at the same time. The time schedule for collection was as follows:

Month	Name of the School
January, 2002	V.M. Nigave, V. M. Varanage, V. M. Padali, V. M. Kanya Kerle, V. M. Kumar Kerli, V. M. Wadakshiwale, V. M. Nagdevwadi, V.M. Balinge, V.M. Chikhali, V.M. Kanya Vadanage.
February, 2002	V. M. Khatangale, V. M. Kumar Kerle, V. M. Ambewadi, V.M. Kanya Kerli, V. M. Jatharwadi, Kerli Girls High-school, Khebwade High school, Dindnerli High school, Ispurli High-school, Shri Ram High-school,Kuditre.
March, 202	Sangrul High School, Kaneri High School, Bhuye High School, Sangwade High School, Vasagade High School, Jyotirling High-School Nigave, Chuye High School, Shiye High School, Chikhali High-School, Wadanage High School.

iii. Scoring of the SPTS :

The score for each student was calculated skill wise for 20 marks. 600 primary and 600 secondary school students were classified into three levels, low, middle and high according to the scores for the five skills.

The fifth standard primary and secondary school students were classified separately into three levels for each of the five skills as follows:

i. Low level of skill scores 0 – 6
ii. Middle level of skill scores 7 – 14
iii. High level of skill scores 15 – 20

4.1.4 Method of Data Analysis :

4.1.4.1 Type of Data Collected :

The following type of data was collected:

1. Distribution of primary school teachers according to the three levels for each of the ten competencies.
2. Distribution of secondary school teachers according to the three levels for each of the ten competencies.
3. Skill-wise distribution of scores of primary school students according to the three levels for each of the five skills.
4. Skill-wise distribution of scores of secondary school teachers according to the three levels for each of the five skills.
5. Primary school teachers level of competency and their students skill-wise scores.
6. Comparison of primary school teachers level of competency and their students skill-wise performance.
7. Secondary school teachers level of competency and their students skill-wise scores.

4.1.4.2 Data Analysis :

The 't' test was used to find out the significance, the mean scores and S.D. scores of the data collected with the help of the TCQ and SPTS on teachers competency and students skill-wise performance in English.

The formula used to calculate the 't' test is given below:

't' statistic-

a) $$t_a = \frac{(x_1 - x_2)}{\sqrt{\frac{\sigma_1^2}{n_1} + \frac{\sigma_2^2}{n_2}}} = \text{t-cal}$$

b) t – tab = t – tab (d.f., L.S.)

t – tab = t- tab ($n_1 + n_2 - 2$, 0.05)

c) If t – cal < t – tab accept hypothesis.

= There is no significant difference.

d) If t- cal > t – tab reject hypothesis.

= There is significant difference

Discussion of the research design for the present study concluded with the method of data analysis. The next Chapter No. V is devoted to Analysis and Interpretation of Data.