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Chapter 3: Action Research

I Action Research in relation to other types of Research

1. For what purposes could different types of research be used in context of a DIET?

Introduction:

In universalisation of elementary education, universal enrolment, universal attendance and universal attainment are the three challenges. Efforts are made under DPEP and SSA to ensure the first two, yet we are unable to improve the quality of elementary education. In view of this, the Government of India introduced Minimum Levels of Learning programme to raise the learning levels of children and ensure an equitable quality across different contexts of schooling.

To fulfill these basic requirements of elementary education, we need responsible teachers who can serve the cause more judiciously. To keep elementary teachers more active through continuous training, giving opportunity for continuing their education for the enhancement of their professional competencies. National and state level institutions like NCERT, NIEPA, DSERT etc. exist to cater to the needs of our elementary education. But, India as a geographically huge nation needs decentralisation.

Recent years have witnessed an enormous growth in elementary schools and adult education centers. This lead to the establishment of district level institutions to meet immediate needs of the teachers. Thus District Institutions of Education and Training (DIETs) have been setup in each district.

Research methods are of utmost importance in a research process. They describe the various steps of the plan of attack to be adopted in solving a research problem, such as the manner in which the problems are formulated, the definition of the terms, the choice of subjects for investigation, the validation of data gathering tools, the collection, analysis and interpretation of data and the processes of inferences and generalizations.

In Research there are three basic categories namely

1. **Historical method**: which provides a method of investigation to discover, describe and interpret what existed in the past.
2. **Descriptive method**: which provides a method of investigation to study, describe and interpret what exists at present.
3. **Experimental method**: which provides a method of investigation to derive basic relationships among phenomena under controlled conditions, or, more simply, to identify the conditions underlying the occurrence of a given phenomenon.

Write one instance for each of the following:

Descriptive study: Descriptive research studies are designed to obtain pertinent and precise information concerning the current status of phenomena and whenever possible, to draw valid general conclusions from the facts discovered. Descriptive studies are more than just a collection of data, they involve measurement, classification, analysis, comparison and interpretation. They collect and provide three types of information:

1. of what exists with respect to variables or conditions in a situation
2. of what we want by identifying standards or norms with desirable, and
3. of how to achieve goals by exploring possible ways and means on the basis of the experience of others or the opinion of experts.

The activities of descriptive studies researchers are not different from those of the other researchers. As in any study, they

1. identify and define their problems.
2. state their objectives and hypotheses.
3. list the assumptions upon which their hypotheses and procedures are based
4. choose appropriate subjects and source materials.
5. select or construct tools for collecting data.
6. specify categories of data that are relevant for the purpose of study, and capable of bringing out significant similarities, differences, or relationships.
7. describe, analyse, and interpret their data in clear and precise terms, and
8. draw significant and meaningful conclusions.

For descriptive study, in the context of DIET with respect to primary education several studies can be taken up. one such study is as follows:

A study on the impact of Mid-day meals scheme on improvement of school attendance among primary school children.

Objectives:

1. To know the effectiveness of Mid-day meals scheme.
2. To know about the achievements of Universalisation of Elementary Education.
3. To know about the increase in attendance among primary school children.

Hypothesis:

1. By providing mid-day meals there can be improvement in learning outcome among primary school children .

2. By providing mid-day meals there can be improvement in school attendance among primary school children.

Assumptions: Can we bring about improvement in school attendance and learning outcome among primary school children through mid-day meals scheme?

Selecting suitable tools: Questionnaires regarding effectiveness and improvement of mid-day meals scheme, to school Head Master, teachers, parents, SDMC members.

Analysis and interpretation of the data

conclusions based on the study conducted.

Experimental study: This is the most dependable method of obtaining data. It is used to investigate behaviour which can be studied under controlled conditions and which can be replicated. Control is the essential ingredient of experimental method. It refers to the extent to which different factors in an experiment are accounted for. Since more of the factors are accounted for with accuracy and more control is being enforced, the researcher has more confidence that his results are dependable.

stages in experimental study are as follows:

1. Identification and detection of problem
2. Formulation of Hypothesis
3. Identification of Independent and dependent variable.
4. controlling of Intervening variables
5. Analysis of the results
6. verification of Hypothesis

The following topics can be included for experimental study.

1. Impact of ಕೇಳಿ-ಕಲಿ programme on primary school children classwise.
2. Effect of ರಂಗ ಕಲೆ on language learning
3. usage of laboratory apparatus for science teaching in primary schools.
4. Impact of National service scheme(NSS) on D.Ed. students.
5. Evaluation of Accelerated Reading programme of Akshara prathishtana in Government primary schools.

Evaluation of Accelerated Reading programme of Akshara prathishtana in Government primary schools.

Bangalore urban DIET was asked to carry out this evaluation through a committee and submit an evaluation report. And accordingly the evaluation was carried out in Government primary schools.

Akshara Foundation has made interventions to augment reading skills among school-going children solely with the purpose of providing them opportunities to read and enjoy reading. This in turn would become the basis for the attainment of subsequent competencies. Reading means recognition of sounds, letters and the association of sounds with symbols (letters) Akshara Foundation decided to augment reading skills among children in an accelerated manner by creating an enjoyable learning atmosphere.

Nature of the programme: The Accelerated reading programme aims to improve a child's reading level by integrating activity based learning methods through stories, printed attractively on laminated cards. The package contains a total of forty-five story cards. These story cards have reading material on them (with pictures) that are graded according to an increasing level of difficulty. During the programme one card is given to a child each day and the entire set is given over a forty-five day period.

Before the story cards were introduced, each child's reading levels were evaluated and they were placed in categories. These categories were based on reading levels.

children who could not identify letters were placed at 'o' level, those who could identify letters at the 'L' level and those who could identify words at the 'W' level. Only children identified to be at these levels were chosen for intervention. Those who could read sentences and paragraphs were not selected for the programme.

Methodology of the study: A stratified random sampling method was adopted to select 25 experimental schools out of which 20 were Kannada medium and 05 were Urdu medium schools. Control schools located within a radius of one kilometer of the experimental schools were selected for comparison.

objectives of Evaluation:

1. To evaluate and assess the impact of the Accelerated Reading program in terms of progress levels achieved by the children from base line levels.

2. To understand and assess gross and net impact of the programme and the variations in reading levels among children from experimental and control schools.
3. To understand initial reading levels of children and to compare them across blocks, gender and as per mother tongue of children.
4. The evaluation study intends to provide objective feedback on implementation of the programme and to suggest the ways and means of effective implementation.
5. To compare the net impact and outcome of the programme over and above the reading practices adopted in classrooms where the programme is not under implementation.

Final size of the sample

Initially 50 Government schools were selected for the Accelerated Reading programme i.e., 25 Government schools and 25 control schools. Baseline/pre-Test assessment was conducted in all 50 Government schools. But the number of schools in the sample changed due to transfer of trained teachers etc. Out of 25 schools initially selected for the sample, six schools could not be included in the programme. Thereby the number of experimental schools came down to 19. Accordingly, the number of control schools was also reduced to 19. Among 19 experimental schools, 17 were Kannada medium schools and 2 were Urdu medium schools. As a result, the total number of schools in the sample got reduced to 38 from 50.

Limitations:

- ❖ Since ARP was implemented only in urban areas, it cannot be concluded that the findings are universally applicable. Also the number of schools selected was not large to precisely come to final conclusions about the reading levels of children in urban areas.

Data Analysis: It was carried out by taking internal impact assessment, impact over and above the control schools, Gross impact and net impact.

Conclusions:

1. The programme created a lot of excitement among children from experimental schools. The same levels of excitement were not found in control schools. The story cards were found to be very attractive to children and motivated them to participate effectively in the programme.
2. On the whole, the programme could create a gross impact of 61 percent while considering upward movement of children within the benchmark levels to higher reading levels.

Case study:The case study or case history method normally applies to a single case and its aim ordinarily is diagnosis and remedy. It is an indepth study of an individual or an institution.

Steps to be followed during case study:

1. Identification
2. collection of Data
3. Analysis and tentative hypothesis
4. Therapy
5. Follow up work

Information can be obtained for case-study from the following:

1. Preliminary information
2. Past history
3. social status
4. Intellectual status
5. physical status
6. emotions
7. interests
8. school achievements

In the DIET context following case studies can be conducted.

1. Problems of D.Ed. Students like weak in one/few subjects, long absentees, aggressive attitude, being dull in classroom etc.

II THE PROCEDURE OF ACTION RESEARCH

You may like to study these action research reports and find out whether the steps mentioned above are followed in them. Make your observations mentioning the study title.

1. 15 students of VII standard students have difficulty in drawing and labelling Biological diagrams.
2. 10 students of V standard having difficulty in pronunciation of kannada words starting with certain letters like 'ಅ' ಮತ್ತು 'ಹ', 'ಸ' ಮತ್ತು 'ಶ'
3. 8 students of IV standard facing difficulty in identifying and writing the place value of 4 digit numbers.

4. 14 students of VI standard facing difficulty in making sentences in English using Homophones.

III IDENTIFICATION OF THE PROBLEM

Study these action research topics conducted by a DIET and classify them into various areas mentioned above.

Identify

1. whether there are studies which do not fall into any of these categories?

The areas along with the studies conducted by DIET are listed below.

1. Academic:

- ಬೋಧನಾ ಕಲಿಕೋಪಕರಣಗಳ ಬಳಕೆ ಮತ್ತು ಸಾಧಕ-ಬಾಧಕಗಳು ಒಂದು ಅಧ್ಯಯನ.
- A study on the impact, implementation and effectiveness of English Language teaching from class I to IV

2. Social:

- students coming from other states facing difficulty in learning kannada in Government primary schools.

3. Curricular:

- 12 students of I D.Ed. facing difficulty in class room management during practice teaching in schools.

4. Evaluation:

- Evaluation of Accelerated reading programme (ARP) of Akshara prathishtana.

5. Administrative:

- ಸೇವಾ ನಿರತ ತರಬೇತಿ ಕಾರ್ಯಕ್ರಮಗಳ ಪರಿಣಾಮಕತೆ
- REMS ಅಡಿಯಲ್ಲಿ ಶಾಲಾ ಪ್ರಗತಿ ಪರಿಶೀಲನೆ ಬಗ್ಗೆ ಕೈಗೊಂಡ ಕ್ಷೇತ್ರ ಭೇಟಿ

6. Professional:

- The D.Ed. students who have studied in kannada medium facing difficulty to teach English language in schools.

IV PINPOINTING THE PROBLEM:

1. Academic:

- English method students of II D.Ed. are not able to speak English fluently.
- English method students of of II D.Ed. are not able to give seminar topic in English.
- I D.Ed. students are not able to understand the usage of different types of verbs.

2. Social:

- 08 students of I D.Ed coming from different districts having difficulty in staying in hostels.
- .05 girl students of I D.Ed having studied only in girls institutions till II P.U.C. facing difficulty to take part in various academic activities in front of boys.

3. Curricular:

- 08 students of I D.Ed. facing problem in teaching of subjects during practice teaching in schools.
- 12 students of I D.Ed. facing difficulty in class room management during practice teaching in schools.

4. Evaluation:

- 10 students of II D.Ed. having difficulty making a Blue-print during Question paper preparation.

5. Administrative:

- The II D.Ed. students facing problem in understanding the topics of the syllabus as they are deputed for Internship programme during the academic year itself.

6. **Professional:** The D.Ed. students who have studied in Kannada medium facing difficulty to teach English language in schools.

V FORMULATION OF ACTION HYPOTHESIS

1. Give an example for each type of hypothesis.

Declarative form:

Predictive form:

Question form:

Null form:

Eight students in class IV are not able to identify directions on a map. you have realised that inadequate exposure to map reading is the cause for the problem. Now write a hypothesis for finding a solution to this problem in all the four forms.your course of remedial action should be reflected in the hypothesis.

Declarative form: Eight students of class IV will be able to identify directions on a map when they are given adequate exposure to map reading.

Predictive form: Eight students of class IV, if given an adequate exposure to map reading will be able to identify directions on a map.

Question form:Is it possible for eight students of class IV to identify directions on a map when they are given adequate exposure to map reading?

Null form: There is no need to give adequate exposure to map reading for 8 students of class IV to identify directions on a map.

VI DESIGNING AND IMPLEMENTING THE ACTION PLAN

write a plan of action for solving a problem that you have identified. see if you need to include any other aspect other than those discussed.

ನಿರ್ದಿಷ್ಟ ಸಮಸ್ಯೆ: “ಏಳನೆಯ ತರಗತಿಯ ವಿದ್ಯಾರ್ಥಿಗಳು ಮಾನವನ ಹೃದಯದ ಚಿತ್ರ ಬರೆಯುವಲ್ಲಿ ಹಾಗೂ ಭಾಗಗಳನ್ನು ಗುರುತಿಸುವಲ್ಲಿ ಎದುರಿಸುತ್ತಿರುವ ಸಮಸ್ಯೆ”.

ಉದ್ದೇಶಗಳನ್ನು ಬರೆಯುವುದು:

1. ವಿದ್ಯಾರ್ಥಿಗಳಿಗೆ ಮಾನವನ ಹೃದಯದ ಚಿತ್ರ ಬರೆಯುವ ಹಾಗೂ ಭಾಗಗಳನ್ನು ಗುರುತಿಸುವ ನಿಯಮಗಳನ್ನು ತಿಳಿಸುವುದು.
2. ವಿದ್ಯಾರ್ಥಿಗಳಿಗೆ ಮಾನವನ ಹೃದಯದ ಚಿತ್ರ ಬರೆಯುವ ಹಾಗೂ ಭಾಗಗಳನ್ನು ಗುರುತಿಸುವ ಪ್ರಾಯೋಗಿಕ ತರಬೇತಿ ನೀಡುವುದು
3. ವಿದ್ಯಾರ್ಥಿಗಳಿಗೆ ಮಾನವನ ಹೃದಯದ ಚಿತ್ರ ಬರೆಯುವ ಹಾಗೂ ಭಾಗಗಳನ್ನು ಗುರುತಿಸುವಲ್ಲಿ ಆಸಕ್ತಿ ಬೆಳೆಸುವುದು.

ಕ್ರಿಯಾ ಯೋಜನೆಯನ್ನು ರೂಪಿಸುವುದು: ಶಿಕ್ಷಕರು ಮಾನವನ ಹೃದಯದ ರಚನೆ ಹಾಗೂ ಕಾರ್ಯಗಳನ್ನು ದುರಿತಾದ ಒಂದು ಪೂರ್ವ ಪರೀಕ್ಷೆಯನ್ನು ವಿದ್ಯಾರ್ಥಿಗಳಿಗೆ ಕೊಟ್ಟು ಪರೀಕ್ಷೆಯ ಅಂಶಗಳನ್ನು(ಗರಿಷ್ಠ ಅಂಕಗಳು-20) ಪರಿಶೀಲಿಸಿದಾಗ ಒಟ್ಟು 40 ವಿದ್ಯಾರ್ಥಿಗಳಲ್ಲಿ ಸುಮಾರು 20 ವಿದ್ಯಾರ್ಥಿಗಳಲ್ಲಿ ಮಾನವನ ಹೃದಯದ ಚಿತ್ರ ಬಿಡಿಸುವ ಹಾಗೂ ಭಾಗಗಳನ್ನು ಗುರುತಿಸುವುದರಲ್ಲಿ ತಪ್ಪುಗಳನ್ನು ಮಾಡಿರುವುದು ಕಂಡು ಬಂದಿತು.

ಈ ವಿದ್ಯಾರ್ಥಿಗಳ ಗುಂಪನ್ನು ಆಯ್ಕೆ ಮಾಡಿ ತಪ್ಪು ಮಾಡಿರುವ ಸ್ವರೂಪವನ್ನು (ಎಲ್ಲಿಯಾವ ತಪ್ಪು ಮಾಡಿದ್ದಾರೆ?) ಗಮನದಲ್ಲಿಟ್ಟುಕೊಂಡು ವಿವಿಧ ರೀತಿಯ ಚಟುವಟಿಕೆಗಳನ್ನು ಆಯೋಜಿಸಿಕೊಳ್ಳಲಾಯಿತು.

ಈ ಚಟುವಟಿಕೆಗಳಿಗೆ ಕೆಳಕಂಡಂತೆ ಅವಧಿಗಳನ್ನು ನಿಗದಿಪಡಿಸಿಕೊಳ್ಳಲಾಯಿತು.

ಅವಧಿ-1: ಜೀವಶಾಸ್ತ್ರದಲ್ಲಿ ಚಿತ್ರಗಳ ಅವಶ್ಯಕತೆ ಮತ್ತು ಮಹತ್ವ

ಅವಧಿ-2: ಮಾನವನ ಹೃದಯದ ಚಿತ್ರ ಬಿಡಿಸುವ ಹಾಗೂ ಭಾಗಗಳನ್ನು ಗುರುತಿಸಲು ನಿಯಮ ಹಾಗೂ ಚಟುವಟಿಕೆಗಳನ್ನು ನೀಡುವುದು.

- ಶಿಕ್ಷಕರು ತಿಳಿಸಿದ ನಿಯಮದ ಆಧಾರದ ಮೇಲೆ ಪ್ರತಿಯೊಬ್ಬರೂ ಚಿತ್ರ ಬಿಡಿಸುವುದು ಹಾಗೂ ಭಾಗಗಳನ್ನು ಗುರುತಿಸುವುದು
- ವಿದ್ಯಾರ್ಥಿಗಳನ್ನು ಗುಂಪುಗಳಲ್ಲಿ ಕೂರಿಸಿ ಚಿತ್ರ ಬಿಡಿಸಲು ತಿಳಿಸುವುದು to give more practice.

ಅವಧಿ-3: ಮಾನವನ ಹೃದಯದ ಚಿತ್ರದ ಮಾದರಿ ಬಳಸಿ ಬೋಧನೆ ಹಾಗೂ ಚಟುವಟಿಕೆ

- ಮಾನವನ ಹೃದಯದ ಮಾದರಿಯ ಭಾಗಗಳನ್ನು ಬಿಡಿ ಬಿಡಿಯಾಗಿ ಮಕ್ಕಳಿಗೆ ಆಯಾ ಭಾಗಗಳನ್ನು ನಿರ್ದಿಷ್ಟ ಜಾಗದಲ್ಲಿ ಜೋಡಿಸುವಂತಹ ಚಟುವಟಿಕೆ ಮಾಡಿಸುವುದು(ಗುಂಪುಗಳಲ್ಲಿ)
- ಕಂಪ್ಯೂಟರ್ ನಲ್ಲಿ ಸಿ.ಡಿ. ಗಳ ಬಳಕೆ- ಕಂಪ್ಯೂಟರ್ ನಲ್ಲಿ ಸಿ.ಡಿ. ಬಳಸಿ ಮಾನವನ ಹೃದಯದ ಚಿತ್ರ ಹಾಗೂ ಭಾಗಗಳನ್ನು ಪ್ರಾಯೋಗಿಕವಾಗಿ ಮಕ್ಕಳೇ ನೋಡಿ, ಮಾಡಿ ಕಲಿತುಕೊಳ್ಳಲು ಚಟುವಟಿಕೆ ನೀಡಲಾಯಿತು.

ಅವಧಿ-4: ಉತ್ತರ ಪರೀಕ್ಷೆ(Post- Test)

ಪೂರ್ವ ಪರಿಷ್ಕೆಯ ಪ್ರಶ್ನೆಗಳನ್ನೇ ನೀಡಬಹುದು ಅಥವಾ ಪೂರ್ವ ಪರಿಷ್ಕೆಯ ವಿಷಯವನ್ನಾಧರಿಸಿ ಬೇರೆ ರೀತಿಯ ಪ್ರಶ್ನೆಗಳನ್ನು ಕೂಡಬಹುದು.

ಕ್ರಿಯಾ ಯೋಜನೆಯನ್ನು ಕಾರ್ಯಗತಗೊಳಿಸುವುದು:

ತರಗತಿಯಲ್ಲಿ ಕ್ರಿಯಾ ಯೋಜನೆಯ ಪ್ರಕಾರ ವಿಷಯವನ್ನು ನಿಗದಿತ ಅವಧಿಗಳಲ್ಲಿ ಬೋಧಿಸುವುದು ಹಾಗೂ ಉತ್ತರ ಪರಿಷ್ಕೆ ನೀಡುವುದು.

ನಂತರ ಇದರ ಆಧಾರದ ಮೇಲೆ ದತ್ತಾಂಶಗಳನ್ನು ಸಂಗ್ರಹಿಸುವುದು ಹಾಗೂ ವಿಶ್ಲೇಷಣೆ ಮಾಡುವುದು.
ನಂತರ ತೀರ್ಮಾನಗಳು/ ನಿರ್ಣಯಗಳನ್ನು ತೆಗೆದುಕೊಳ್ಳುವುದು.
