ACTION RESEARCH ANALYSIS REPORT

(Session: 2020-2021)

District Institute of Education & Training Tinsukia

Investigators:

Dr. Riswita Sarmah
Ms. Tulumoni Pathak
Ms. Sangeeta Dutta
Mr. Chandra Kr. Dahal
Ms. Nayan Moni Borah
Ms. Lipika Dutta
Ms. Purabi Bora

Published By:

District Institute of Education and Training (DIET) Tinsukia, Tingrai Habi, Assam-786145

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Action Research Report

(Session: 2020-2021)

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FOREWORD

In the DIET Guideline- 1989, three main functions of DIETs are spelt out as follows:

- **Training and orientation** of teachers, Head Masters, members of DBE, VECs, RPs etc.
- **Academic and resource support** to the schools and NEF/AE system in the district.
- **Action Research and experimentation** to deal with specific education related problems and documentation of various socio-cultural aspects of the district.

The Comprehensive Evaluation of CSS on Restructuring and Reorganization of Teacher Education - A Report by NCERT, August, 2009 reveals that as far as research areas are concerned, the common themes that have emerged are:Mid-day meals; Drop-out rates and school retention,SarvaShikshaAbhiyan (SSA) related surveys and studies, Effectiveness of multi-grade teaching and Effectiveness of Teaching-Learning Materials (TLM) etc.

As mentioned in that report, some of the DIET faculties are involved in conducting research including action research. The DIETs are also involved in conducting state level achievement surveys of NCERT.

The report also reveals that eighty percent (80%) DIETs in the southern region have undertaken research project in comparison to 50% DIETs in the Northern region, 58% in North-Eastern, 50% in the Eastern region and 40% in the western region.

Similarly, the report says that in a majority of the DIETs, the faculty does not undertake action research due to workload, lack of research skills and time constraints. Apart from individual efforts, no institutional effort is made by the DIETs in taking up research work. **Samagra Siksha Abhiyan (SSA- launched in 2018)** also in a recently publisheddocument viz.**Teacher Education AWP&B format2022-23 (MoE)** suggests that Research and Evaluation Studies may be undertaken at state, district level and also at the block, cluster and school level in the form of **Action Research / dipsticks** for proving greater insight into **issues and problems** faced in implementation of the various components of the scheme at different levels.

Anyway, finally I would like to express my deep respect to Dr. Nirada Devi,honorable Director of SCERT Assam for her valuable suggestions and advice in enhancing this task. I would also like to express my sincere thanks to all the Coordinators / Investigators of DIET Tinsukia for undertaking these studies to provide greater insight into issues and problems related to school education in Assam, especially in Tinsukia district.

Date: 30th Sep, 2021.
Place: Tinsukia

(NripenSaikia)
Principal, DIET, Tinsukia

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TITLES OF ACTION RESEARCH STUDY

1. A Study on impact of ICT intervention on accurate use of Auxiliaries in English among D.El.Ed Trainees of DIET Tinsukia, Assam.
   Coordinator / Investigator: Dr. Riswita Sarma

2. A study on effect of concept mapping on achievement in mathematics among D.El.Ed Trainees of DIET Tinsukia, Assam.
   Coordinator / Investigator: Ms. Tulumoni Pathak

3. Effectiveness of frequent writing practices in use of behavioral terms in writing instructional objectives of lesson plan in Social Science.
   Coordinator / Investigator: Ms. Sangeeta Dutta

4. Effectiveness of intervention strategy on the use of various graphs in Social Science - a study on D.El.Ed. Trainees of DIET Tinsukia, Assam.
   Coordinator / Investigator: Mr. Chandra Kr. Dahal

5. Effectiveness of map making in Social Science – a study on D.El.Ed. Trainees of DIET,Tinsukia, Assam.
   Coordinator / Investigator: Ms. Nayan Moni Borah

6. Effectiveness of practical activities in Work Education - a study on D. El. Ed. trainees of DIET, Tinsukia, Assam.
   Coordinator / Investigator: Ms. Lipika Dutta

7. A study on inability to understand the concept of Per Capita Income in Social Science and its remedial measure.
   Coordinator / Investigator: Ms. Purabi Borah Saikia

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ACTION RESEARCH REPORT

TITLE OF THE STUDY:

A Study on impact of ICT intervention on accurate use of Auxiliaries in English among D.El.Ed Trainees of DIET Tinsukia

INVESTIGATOR:

Dr. Riswita Sarmah, Lecturer, DIET Tinsukia.
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A study on impact of ICT intervention on accurate use of Auxiliaries in English among D.El.Ed Trainees of DIET Tinsukia

Investigator: Dr. Riswita Sarmah

1. INTRODUCTION:

Trainees pursuing the D.El.Ed course in DIETs are considered to be teachers of tomorrow. It is an imperative that as potential teachers they must become proficient in the subjects they are to teach. English as a second language is one such subject wherein a lot of teachers have issues in understanding both grammatical and communicative aspects of the language.Fluency, accuracy and appropriacy are essential requirements to achieve competence in a language. It is commonly seen that most trainees lack basic conceptual understanding of various grammatical elements in English. The D.El.Ed course thus offers an opportunity to the trainees to develop their abilities to become proficient in this language. This research work hence is an attempt to improve upon their grammatical competence along with collateral development in communicative abilities in English.

2. PROBLEM AREA:

During my interaction with the 4th semester D.E.Ed trainees of DIET Tinsukia, I came across the following issues in second language teaching and learning -

a) Inability to speak in English fluently
b) Unable to spell silent letters correctly.
c) Unable to use punctuation marks correctly.
d) Inability to read with accurate stress and intonation.
e) Unable to use auxiliaries in English accurately.
f) Inability to write a paragraph cohesively and coherently.

Out of all these problems mentioned above I have selected the problem mentioned in e) that is "unable to use auxiliaries in English accurately".

3. STATEMENT OF THE PROBLEM:

A study on impact of ICT intervention on accurate use of Auxiliaries in English among D.El.Ed Trainees of DIET Tinsukia

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4. PROBABLE CAUSES OF THE PROBLEM:

(i) Lack of motivation towards learning English as it is the second language
(ii) Interference of the mother tongue and overgeneralization of rules.
(iii) Faulty and inadequate learning of English grammar and auxiliariesin the lower classes.
(iv) Confusion about the importance of auxiliaries in English.
(v) Lack of sufficient exposure to the language.
(vi) Lack of opportunities to use English grammar appropriately

5. MOST PROBABLE CAUSE:

Faulty and inadequate learning of English grammar and concept of auxiliaries in the lower classes may be the most probable cause.

6. OBJECTIVES OF THE STUDY:

i) To identify the causes of the problem of students inability to use Auxiliaries in English accurately
ii) To find out innovative techniques as remedial measures to the problem being identified(Intervention step)
iii) To evaluate the effectiveness of innovative strategy applied during intervention.

7. ACTION HYPOTHESIS:

If the 4th semester D.El.Ed trainees of DIET Tinsukia are given effective interventionswith the help of ICT in developing grammatical competence in auxiliaries in English then they will be able to use auxiliaries accurately and appropriately.

8. METHODOLOGY:

a. **Sample:**The trainees of D.El.Ed Semester-IV, DIET Tinsukia were selected as sample of the study. Total 20 samples were selected using Random sampling method.

b. **Tools for Data Collection:**Question paper / Test items for pre-test and post-test ; Rating scale for compilation of data (5 point – Below average, average, good, very good and excellent)

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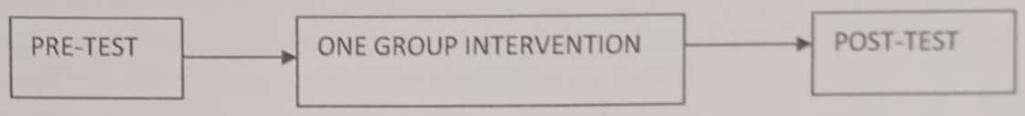
c. **Research Design:**Out of the three types of research design namely Survey design, Experimental design and Quasi- experimental design,the last one was selected for this study. The block diagram of Quasi- experimental design is shown below-



d. **Data Analysis:**Collected data were analyzed in the following two forms

a) Tabular form

b) Graphical form

9. ACTION DETAILS AND TIME CHART:

Sl. No	Name of Action	Tools	Method	No. of Days
1.	Preparation of Pre-test	Test items	Analysis and synthesis	7
2.	Pre-test	Test papers	Written Test (Online)	1
3.	Analysis of Pre-test	Recording	Analysis	7
4.	Preparation of strategies for intervention	Online recording/TLM/Chart/worksheet/ Online resources	Analysis and systematization	7
5.	Intervention	ICT resources/Exemplary notes and resources on accurate usage of auxiliary verbs/Repeated practice/Grammar Practice	Discussion, activity, writing/grammar practice,	26
6.	Recapitulation	Intervention points	Discussion and feedback	5
7.	Post-test	Test paper (Online)	Written test (Online)	1
8.	Analysis of post-test ; comparison And graphical representation of data; Report making	Analyzing using rating scale, writing, data compilation and comparison, DTP. etc	Analysis, simple statistical method	6
			Total No. of days: 60	

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9. PROCEDURE OF INTERVENTION:

After the result of the pre-test, intervention through online mode was provided. As part of the intervention process ICT induced strategies were adopted to impart the understanding on auxiliary verbs, verbs in general and subject-verb agreement patterns. Discussions on the auxiliaries were included with interesting videos and audio content. During the time allotted for intervention the trainees were engaged in effective practice through grammar worksheets to solidify the concept of the auxiliaries in English.

10. ANALYSIS AND INTERPRETATION OF THE RESULT (DATA):

Data analysis is considered as an important step and heart of the research work. After collection of data with help of relevant tools and techniques, the next logical step, is to analyze and interpret data with a view to arrive at empirical solution to the problem. The data analysis for the present study was done quantitatively with the help of percentage. The statistical techniques have been used for analysis of collected data. Tabulation and bar diagram used to make clear and analyze the data to find out the results.

On the basis of the pre-test the following data were received-

TABLE-1: Analysis of data of PRE-TEST

Sl. no	Code name of trainees	Q-1 (6)	Q-2 (4)	Q-3 (5)	Q-4 (5)	Q-5 (5)	Q-6 (5)	Total Marks 30	% of marks	Parameters
1.	A	3	3	5	3	4	3	21	70	Good
2	B	3	3	4	2	3	3	18	60	Good
3	C	3	3	4	3	3	3	19	63	Good
4	D	3	3	3	3	3	3	18	60	Good
5	E	2	2	1	1	1	2	9	30	Below Average
6	F	2	0	1	1	1	2	7	23	Below average
7	G	2	0	1	2	1	1	7	23	Below average
8	H	2	1	1	1	1	1	7	23	Below average
9	I	2	0	1	1	2	2	8	26	Below Average
10	J	2	3	2	3	2	2	14	46	Average
11	K	2	3	2	2	2	2	13	43	Average

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12	L	3	2	2	2	2	2	13	43	Average
13	M	1	2	1	2	3	3	12	40	Average
14	N	4	3	3	3	3	4	20	67	Good
15	O	2	1	1	1	2	2	9	30	Below average
16	P	2	1	1	2	2	2	10	33	Below Average
17	Q	1	0	1	1	2	2	7	23	Below average
18	R	1	3	2	2	2	3	13	43	Average
19	S	3	2	3	3	3	3	17	57	Good
20	T	2	1	3	3	3	3	15	50	Average

On the basis of the post-test the following data were received –

TABLE-2: Analysis of data of POST- TEST

Sl. no	Code name of trainees	Q-1 (4)	Q-2 (4)	Q-3 (5)	Q-4 (6)	Q-5 (6)	Q-6 (5)	Total Marks 30	% of marks	Parameters
1	A	4	4	3	5	5	5	26	87%	Excellent
2	B	4	4	4	5	6	5	28	93%	Excellent
3	C	3	4	4	5	5	4	25	83%	Very good
4	D	3	4	5	5	5	4	26	87%	Excellent
5	E	3	3	3	3	3	3	18	60%	Good
6	F	3	2	3	2	3	3	16	53%	Average
7	G	2	2	3	2	3	3	15	50%	Average
8	H	2	1	2	2	2	2	11	37%	Below Average
9	I	2	2	3	4	3	3	17	57%	Good
10	J	4	3	4	4	4	4	23	77%	Very good
11	K	4	3	4	5	4	4	24	80%	Very good
12	L	4	3	4	5	4	4	24	80%	Very good
13	M	3	3	3	4	4	4	21	70%	Good
14	N	4	4	4	5	5	5	27	90%	Excellent
15	O	4	2	3	4	4	3	20	67%	Good
16	P	4	3	3	4	4	3	21	70%	Good
17	Q	3	3	4	4	4	3	21	70%	Good
18	R	3	4	4	3	3	3	20	67%	Good
19	S	4	4	3	5	4	4	24	80%	Very good
20	T	4	3	4	5	4	4	24	80%	Very good

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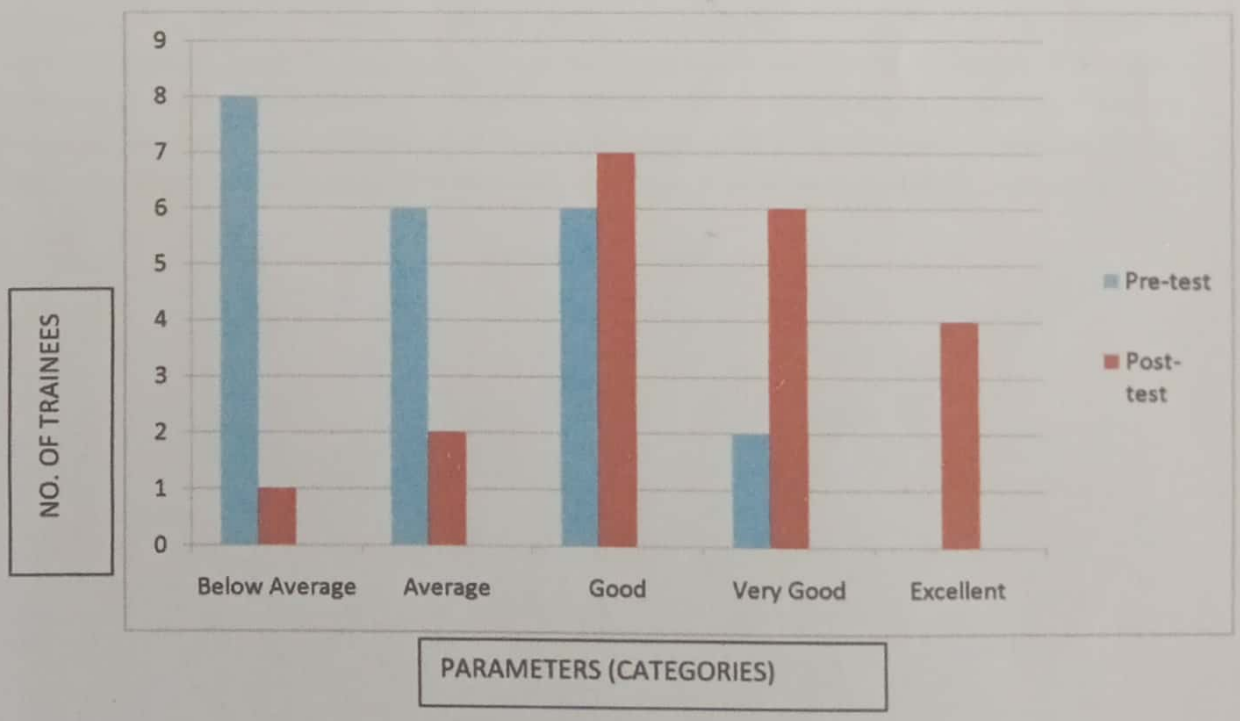
Rating Scale				
Below Average/poor (below 40%)	Average (40-55%)	Good (Above 55-70%)	Very Good (Above 70-85%)	Excellent (Above 85%)

TABLE-3: TABLE FOR COMPILATION OF DATA

SL. NO	PARAMETERS (CATEGORIES)	PRE-TEST RESULTS	POST-TEST RESULTS	REMARKS
1	Below Average	8	1	Better Performance
2	Average	6	2	Better Performance
3	Good	6	7	Improvement
4	Very Good	2	6	Better Performance
5	Excellent	0	4	Positively Increasing
TOTAL TRAINEES		20	20	

TABLE-4: GRAPHICAL REPRESENTATION OF RESULTS



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11. FINDINGS :

a) Positive aspect

On the basis of the result analysis given above we can see that the trainees have improved considerably in the post-test compared to the pre-test. In the pre-test 8 trainees were categorized under BELOW AVERAGE category due to their poor performance. But, after intervention only one trainee remain the same. The trainee will need special care. Similarly, after intervention number of trainees in average category also decreased in post-test. On the other hand, no of trainees in 'Good' category in pre-test was 6 which have increased to 7 after intervention. Four (4) trainees under good category successfully moved to excellent after gaining proper intervention and regular practice.

b) Negative aspect

From the result analysis we have also seen that there are still 1 trainee in below average and 2 in the average category. We can find these probable reasons for their poor performance –

- Irregular attendance of trainees during intervention period
- Lack of attention during classroom transaction

12. CONCLUSION:

It may be concluded that the objectives on which the study was based on are almost fulfilled. As a result the trainees of D.El.Ed 4th semester improved their skill in using auxiliaries in English effectively. The trainees have been able to realize the utility of practice and the importance of the auxiliaries in English. Moreover, it can be suggested that a more extensive and regular grammar practice opportunities wouldfurther enhance their grammatical competence. From the above findings we may conclude that the hypothesis is proved to be successful. So if any teacher adopts this intervention strategy then they will also be able to solve the problem in this manner.

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ACTION RESEARCH REPORT

TITLE OF THE STUDY:

A study on effect of concept-mapping on achievement in mathematics among D.El.Ed students of DIETTinsukia, Assam

INVESTIGATOR:

Ms.TulumoniPathak, Lecturer, DIET Tinsukia

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A study on effect of concept-mapping on achievement in mathematics among D.El.Ed students of DIET Tinsukia, Assam

INVESTIGATOR: Ms.TulumoniPathak, Lecturer

INTRODUCTION

'Concept Mapping' is one of the pedagogical strategythat helps the pupils in elaborating the conceptual understanding of the theory they havealready possessed and especially to recognize and modify those knowledge, structures thatcontains misconceptions, alternative conceptions or framework (Feldsine,1983: Novak andGowin,1984). Concept maps allow students to think deeply about the topic and help them tobetter understand and organize what they learn. Most importantly it helps them to store andretrieve information more efficiently. Students also articulate and challenge their thoughts
when they discuss their maps with each other. In one of the studies led by Pankratiusin (1990) revealed that those students who used concept mapping prior to, during andsubsequent to instruction led to greater achievement than groups that had received standardinstruction. On this background it is quite interesting to explore how the strategy can help inenhancing the academic achievement level of trainees in maths because the study hasmostly yielded success in the science stream.

PURPOSE/ NEED OF THE STUDY

Many at times it is observed that Mathematics has been viewed as a phobia. It is believed to be confined to pen and paper in school. Thus, it is important to explore if the subject could be taught in an effective way asit could change pupils' perception and also students' academic achievement can be improved.Further it is seen that the concept mapping idea is used widely in science subjects only. So inthe present study an attempt is made to promote pupils' understanding in the different concepts of mathematics and also to answer the question that enhances the higher orderthinking ability of analysis and synthesis. Because concept mapping has not only been founduseful in promoting pupils' understanding of science concepts, it also facilitates pupils'abilities to solve problems (Zimmerman et. al, 2011).

STATEMENT OF THE PROBLEM

A study on effect of concept-mapping on achievement in mathematics among D.El.Ed students of DIET of district Tinsukia, Assam

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OPERATIONAL DEFINITION OF THE TERMS USED

Effect: In this study, effect refers to a significant change in pupils' behaviour in terms of their achievement.

Concept Mapping Model: Concept Mapping Model was developed by the AmericanProfessor and researcher Joseph D. Novak and his team from Cornell University in the 1970s.This technique was based on the meaningful learning theory by American psychologist David
Paul Ausubel. He used this for organizing, structuring and presenting knowledge on aparticular subject. In the present study it refers to the diagrammatic & graphical representationof concepts in order to enhance knowledge integration.

Achievement: For the purpose of this study academic achievement means marks scored by trainees in tests taken by the researcher.

Mathematics: Here mathematics is referred as a subject

D.El.Ed trainees: D.El.Ed trainees are students pursuing diploma course to be future teachers

REVIEW OF RELATED RESEARCH AND LITERATURE ON THE STUDY TOPIC

Chandra Dinesh Mayuri (2008) studied the effectiveness of Concept Mapping on scienceachievement of secondary school students and researchers also found the effect of ConceptMapping on scientific Aptitude and problem-solving ability. Researcher found that Concept
Mapping was effective in enhancing the achievement and problem-Solving ability of thestudents.

Joseph (2002) working on using concept maps to aid reading comprehension in a high schoolBiology classroom in Florida reported significant evidence for the effectiveness of concept
mapping among one experimental group (concept mapping group).

Kalaiyarasi (1998) used Concept Mapping as teaching strategy to teach Higher SecondaryStudents in Botany and concluded that Concept Mapping as teaching strategy is effective in
Botany to learn the concepts.

Kharatmal M., Nagarjuna G. (2005) studied the effect of concept mapping as knowledgeorganizer in mathematics and found that for meaningful learning Concept Mapping is aneffective instructional tool.

Kumudha (2000) compared the effectiveness of lecture method and Concept Mappingstrategies in Physics taught to Higher Secondary students and concluded that CM strategy ismore effective than lecture method in teaching Physics. Higher Secondary students learn
concepts more easily through Concept Mapping strategy.

Lakshmi (1997) studied the effectiveness of Concept Mapping in teaching mathematics toninth grade students and Leave concluded that Concept Mapping is effective in learningconcepts in mathematics.

Novak and Gowin (1984) gave the concept maps their present shape and carried extensiveexperiments with Concept Mapping in the school teaching learning process. Since then theScience of Concept Mapping has grown at an exponential pace.

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Ogunji C.V, Lgba D.I and Ogunji Johnny, O (2017) studied the effectiveness of conceptmapping in teaching on the achievement of social studies students found that there was nosignificant difference between the mean score of the students in the controlled group and
experimental group taught through concept mapping. The study also found that there was nosignificant interaction effect of teaching method and gender on students' mean achievement in
Social Studies.
Pongodi (2000) studied the use of Concept Mapping in Chemistry of class ninth students andconcluded that the students of ninth class attain concepts in chemistry more easily andeffectively when taught through Concept Mapping.

OBJECTIVES OF THE STUDY

To compare the mean scores of achievement in mathematics of D.El.Ed trainees before and after teaching through concept mapping models.

HYPOTHESES OF THE STUDY

There is no significant difference between the mean scores of achievement in Mathematics ofstudents before and after teaching through the Concept mapping model.

DELIMITATION OF THE STUDY

1. Out of a total of 90 trainees only 12 trainees were selected for the study as only these 12 opted for mathematics as a subject in the higher secondary classes.
2. The study is limited only to observe the difference in mean scores before and after intervention.
3. Due to pandemic parts of the study was conducted online.

RESEARCH DESIGN

Research Method: The pre-experimental research method is used in the study for studyingeffectiveness of concept mapping in learning mathematics through Pre-testPost-test.

Sample:A group of 12 traineeswere selected based on their prior qualification (those who had Maths as a subject in higher secondary).

Tools for data collection: Achievement test in topics of mathematics following the state text boardfor trainees is developed and standardized by the investigator. The study is conducted on a group which has been already taught the topic through the lecture cum discussion method. Questionnaire was distributed among the trainees to collect the desired data. The research was completed within 2 months.

Topic selected for pre-test: A pre-test has been designed Number system in relation to set theory as follows:

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PRE -TEST PAPER:

DIET NAME:.....

RESEARCHER NAME: TULUMONI PATHAK

NAME:.....

D.El.Ed. SEMESTER:.....

1. What do you like in maths as a subject?
2. Do you think maths is a boring subject? Yes / No
3. Did you receive a clear idea of mathematical concepts in your school days? Yes/ No
4. Which learning technique is useful in maths? Teacher centric method/ Child centric method
5. Did you try to understand some concepts on your own? Yes/ No
6. Did you try to visualise content of lessons after the class? Yes/No
7. Did you try to memorise topics when you did not understood well? Yes/ No
8. Does memorising topics help in long time understanding? Yes/ No
9. Why do you think some topic of maths seems to be hard than the remaining parts? Concepts were not clear /Teacher neglected the topic/ Not as per the level of class

Do you know any other technique which can help in better understanding of maths concepts? (if yes ,specify..... .....) Yes/ No

10. Do you know what concept mapping is? Yes/No
11. Is it possible to understand mathematical concepts more clearly through concept mapping? Yes/No/Maybe
12. Can concept mapping be applied to other subjects also? Yes/No/May be
13. Do you know the difference of flow charts, block charts and concept mapping? Yes/ No
14. Is memorising concepts much beneficial than mapping them? Yes/No

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Given below are some questions related to one of the mathematical concept of numbers and set theory. Please answer the following according to your own knowledge

Q. No.	Answer the following questions with true or false:-	Answers		
			True	False
1	Is every natural number a rational number?	1		
2	All rational numbers are integers?	2		
3	Some rational numbers are Integers?	3		
4	There are more integers than rational numbers?	4		
5	Irrational numbers are part of integers?	5		
6	All whole numbers are rational numbers?	6		
7	There is no number in common between natural numbers and integers?	7		
8	Real numbers does not consist rational numbers?	8		
9	All real numbers are complex numbers?	9		
10	If N represent natural numbers	10		

W represents whole numbers

Z represents integers
Q represents rational numbers
T represents irrational numbers
R represents real numbers
C represents complex numbers

Then,

1. $N \cup W \cup Z \cup Q \cup T \cup R = R$
2. $N \cup W = W$
3. $W \cup Z = Z$
4. $Z \cup T = R$
5. $R \cup W = W$
6. $W \cap N = W$
7. $Z \cap Q = Q$
8. $Q \cup T = R$
9. $T \cap Q = N$
10. $R \cap N \cap W = N$

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ANALYSIS OF PRE TEST RESULT:

A total of 35 questions were posed. Out of which some of the questions are analysed below:

1. Q3. Did you receive a clear idea of mathematical concepts in your school days?

   80% of the students answered that they **did get a clear idea** of the concepts in their school days. This indicates that whether it is teacher centric pedagogy or child centric pedagogy they have acquired a clear idea of concepts of mathematics.

2. Q4. Which learning technique is useful in maths?

   About 30% of the trainees wrote **Teacher centric method is** useful. This implies that in spite of newly advanced technology, children still believe that teachers can make them understand better.

3. Q6. Did you try to visualise content of lessons after the class?

   90% of the trainees replied that they try to visualise the concepts of the lesson taught which implies that they want to understand complex topics.

4. Q9. Why do you think some topic of maths seems to be hard than the remaining parts?

Trainees were given three options out of which 90% of the students pointed out that their concepts regarding that point were not clear.

5. Q11. Do you know what concept mapping is?

About 50 % of the trainees replied that they do not know what concept mapping is.

6. Q12. Is it possible to understand mathematical concepts more clearly through concept mapping?

60% of the trainees replied "**may be**" as most of them do not know about concept mapping

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7. Q13. Can concept mapping be applied to other subjects? Do you know the difference of flow charts, block charts and concept mapping?

30% of the trainees replied **No** that means there was a need of explaining the concept of mapping to them. Also to help them differentiate between block diagrams, flow charts and mapping.

Out of 20 questions posed on Set Theory, a total of 6 students out of 12 (50%) was able to score 80% above. Surprisingly none of the trainee was able to score more than 90%.

Although the topicswere taught through the traditional way, it was seen that there is a need for remedial teaching. Thus, concept mapping was one of the techniques adopted by the researcher to explain the topic again as an intervention.

TREATMENT/ INTERVENTION:

The group was then taught through the concept mapping method. In both cases the researcher herself is associated in teaching the topic. The treatment was for four weeks. The initial part of the study is conducted in face to face mode while the pre test, intervention and post test are conducted in online mode.The duration of each class shall be of 50minutes.

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POST-TEST PAPER:

DIET NAME :.....

RESEARCHER NAME : TULUMONI PATHAK

NAME :.....

D.EL.ED SEMESTER :.....

Answer the following. Ticktrue or false wherever necessary:
Topic: Quadrilaterals

1. All squares are rectangles .....
2. All rectangles are square .....
3. All squares are not parallelograms .....
4. All rhombuses are parallelogram .....
5. All kites are rhombuses .....
6. A rhombus is a parallelogram with all sides equal .....
7. All squares are rhombus .....
8. All rhombuses are kites .....
9. All parallelograms are trapezium .....
10. All kites are quadrilaterals .....
11. Can one map the concept of quadrilaterals? .....
12. Can mind map be used for revision of terminal exams?.....
13. Can mind maps be used for pre-primary students? .....
14. Have you understood the idea of concept mapping?.....
15. Is it applicable for other subjects also? .....
16. Do you know the difference between block diagrams, flow chart and concept maps? .....
17. Can mind map help in improving long time memory?
18. Does mind map improves creativity? .....
19. How does one start mind mapping? .....
20. Can mind maps be used for solving day to day life problems?.....

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STATISTICAL TECHNIQUES FOR DATA ANALYSIS:

Pre test result analysis:
The research analysis is done using mean and standard deviation and percentage.
Total trainees appeared = 12
Total marks of the test = 20
Marks obtained by the trainees: 14, 18, 18, 16, 18, 16, 18, 18, 17, 12, 15, 15

Mean marks of trainees = $\frac{14+18+18+16+18+16+18+18+17+12+15+15}{12}$
= 16.25
Number of students who scored more than 80% = 6
i.e. Only 50% of trainees could score more than 80%.

Post-test result analysis:
After the intervention, the test was again conducted to check the progress of trainees
Total trainees appeared = 12
Total marks of test = 20
Marks obtained by trainees:18, 18, 17, 16, 17, 16, 17, 19, 19, 20, 19, 19
Mean of marks = 17.9 = 18
Number of students scoring more than 80%= 7
Number of students scoring more than 90% = 5

FINDINGS AND CONCLUSION:

1. Eighty (80%) of the students answered that they **did get a clear idea** of the concepts in their school days. This indicates that whether it is teacher centric pedagogy or child centric pedagogy they have acquired a clear idea of concepts of mathematics.

2. About 30% of the trainees wrote **Teacher centric method is** useful. This implies that in spite of newly advanced technology, children still believe that teachers can make them understand better.

3. Ninety (90%) of the trainees replied that they try to visualise the concepts of the lesson taught which implies that they want to understand complex topics.

4. Post-test results revealed that concept maps can be used for better understanding of the concepts as 5 students scored more than 90% and 7 students scored more than 80%

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ACTION RESEARCH REPORT

TITLE OF THE STUDY:

Effectiveness of frequent writing practices in use of behavioral terms in writing instructional objectives of lesson plan of social science.

Investigator:

Ms. Sangeeta Dutta, Lecturer, DIET, Tinsukia.

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Effectiveness of frequent writing practices in use of behavioral terms in writing instructional objectives of lesson plan of social science.

1. INTRODUCTION:

In general, any branch of study that deals with the social life of man and employs scientific methods for its study may be conceived as social science. Students learn life-skills through social science that help them succeed in life in different areas. It is very important to teach this topic as one of the core subjects in teacher education programmes like B.Ed. and D.El.Ed. Since, the teacher in any educational process occupies a key position. With the teachers the quality of instruction is the determining factor in any teacher training programme. Without systematically and properly planned instructional objectives, the teaching learning process will remain ineffective. The teacher training programmes offers an opportunity to the trainees to develop their abilities to find out proper instructional objectives related to a particular text. This research work is an attempt to improve upon the competence of finding instructional objectives of a particular lesson of Social Science of D. El. Ed. course of DIET, Tinsukia.

1. PROBLEM AREA:

During interaction with the fourth semester trainees, D.El.Ed. course, DIET, Tinsukia , I across the following issues in teaching of Social Science subject-

a) Unable to draw scale maps in Geography section.

b) Unable to write instructional objectives using behavioral terms

c) Unable to create interest to memorize chronological dates on History section of social science.

d) Unable to make charts and models related to various topics.

e) Unable to reflect instructional objectives in lesson plan etc.

From the above mentioned problem areas I have selected the problem i.e.,"unable to write instructional objectives using behavioral terms" as the topic of my study.

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2. STATEMENT OF THE PROBLEM:

Effectiveness of frequent writing practices in use of behavioral terms in writing instructional objectives of lesson plans in Social Science – A Study on D.El.Ed., semester IV trainees of DIET, Tinsukia.

2. PROBABLE CAUSES OF THE PROBLEM:

We can list out the followings as the probable causes of this problem-

a) Lack of proper guidance from teaching faculties.

b) Lack of regular practice and writing exercise of instructional objectives.

c) Lack of sufficient concept of Bloom's taxonomy

d) Unable to prepare objective based test items during question paper setting.

From the above probable causes, I have found lack of regular practice and writing exercise of instructional objectives as the most probable cause for this problem.

3. OBJECTIVES OF THE STUDY:

a) To identify the causes of inability to use behavioral terms in writing instructional objectives.

b) To adopt suitable methods and strategies to teach the concept of behavioral terms under three domain viz. cognitive, affective and psychomotor.

c) To evaluate the effectiveness of adopted methods and techniques used in the classroom.

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4. ACTION HYPOTHESIS:

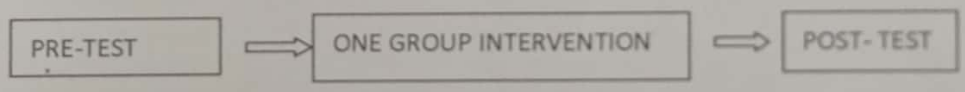
If the teacher teach the concept of behavioral terms in writing under three domains of educational objectives with proper methods and show their uses in writing instructional objectives with examples and provide scope for sufficient practices , then trainees will show better performance.

5. METHOD**OLOGY:**

a. **Selection of Sample:** The trainees of D.El.Ed. semester IV , DIET Tinsukia were selected as sample of the study. Total 21 of samples were selected using random sampling method.

b. **Tools for Data Collection:** Question paper / test items for pre-test and post-test , rating scale for compilation of data (5 point – Below average, average, good, very good and excellent)

c. **Research Design:** Out of the three types of research design namely Survey design, Experimental design and Quasi- experimental Design the last one was selected for this study. The block diagram of quasi- experimental design is shown below-



d. Data Analysis:

Collected data were analysed in the following two forms a) Tabular form b) Graphical form

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5. ACTION DETAILS AND TIME CHART:

Sl. No.	Name of Action	Tools	Method	No. of days
1.	Preparation of Pre-test	Test items	Analysis and synthesis	7
2.	Pre-test	Test papers	Written Test (Online)	1
3.	Analysis of Pre-test	Recording	Analysis	7
4.	Preparation of strategies for intervention	Online recording/TLM/Chart/worksheet/Online resources	Analysis and systematization	7
5.	Intervention	ICT resources/Exemplary notes and resources on using behavioural terms/Repeated practice	Discussion, activity, writing/grammar practice,	26
6.	Recapitulation	Intervention points	Discussion and feedback	5
7.	Post-test	Test paper (Online)	Written test (Online)	1
8.	Analysis of post-test ; comparison And graphical representation of data; Report making	Analyzing using rating scale, writing, data compilation and comparison, DTP. etc	Analysis, simple statistical method	6
			Total No. of days:	60

6. INTERVENTION :

- Declaration of result of pre-test.
- Discussion of Bloom's taxonomy details for 3 days.
- Giving the list of behavioral words used under each domain.
- Provide scope for sufficient practice to write instructional objectives.

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7. ANALYSIS AND INTERPRETATION OF THE RESULT (DATA):

Data analysis is considered as an important step and heart of the research work. After collection of data with the help of relevant tools and techniques, the next logical step is to analyse and interpretdata with a view to arrive at empirical solution to the problem. The data analysis for the present study was done quantitatively with the help of percentage.The statistical techniques have been used for analysis of collected data. Tabulation and bar diagram used to make clear and analyse the data to find out the results.

On the basis of the pre-test the following data were received-

TABLE-1: Analysis of pre-test data:

Sl no	Code name of the students	Q- 1(3)	Q-2(2)	Q-3(15)	Total marks (20)	% of marks	parameters
1	A	2	2	7	9	45	AV
2	B	2	2	6	10	50	AV
3	C	3	2	8	13	65	GOOD
4	D	2	1	4	7	35	B/A
5	E	3	2	5	10	50	AV
6	F	1	1	4	6	30	B/A
7	G	2	2	7	11	55	GOOD
8	H	3	2	7	12	60	GOOD
9	I	3	2	9	14	70	V.GOOD
10	J	3	1	2	6	30	B/A
11	K	2	2	7	11	55	GOOD
12	L	3	2	7	13	65	GOOD
13	M	3	2	6	11	55	GOOD
14	N	3	2	4	9	45	AV
15	O	2	2	4	8	40	AV
16	P	3	1	8	12	60	GOOD
17	Q	3	2	6	12	60	GOOD
18	R	3	2	8	13	65	GOOD
19	S	2	1	6	9	45	AV
20	T	1	1	4	6	30	B/A
21	U	3	2	9	14	70	V.GOOD

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TABLE-2: Analysis of post-test data:

Sl no	Code name of the students	Q- 1(3)	Q-2(2)	Q-3(15)	Total marks (20)	% of marks	parameters
1	A	3	2	8	13	65	GOOD
2	B	3	2	8	13	65	GOOD
3	C	3	2	11	16	80	V.GOOD
4	D	2	2	7	11	55	GOOD
5	E	3	2	8	13	65	GOOD
6	F	2	1	6	9	45	AV
7	G	3	2	9	14	70	V.GOOD
8	H	3	2	10	15	75	V.GOOD
9	I	3	2	13	18	90	EXCELLENT
10	J	3	2	7	12	60	GOOD
11	K	2	2	7	11	55	GOOD
12	L	3	2	9	14	70	GOOD
13	M	3	2	7	12	60	GOOD
14	N	3	2	5	10	55	GOOD
15	O	2	2	4	9	45	AV
16	P	3	2	11	16	80	V.GOOD
17	Q	3	2	7	12	60	GOOD
18	R	3	2	10	15	75	V.GOOD
19	S	2	1	7	10	50	AV
20	T	2	1	4	7	35	B/A
21	U	3	2	12	17	85	EXCELLENT

TABLE-3: Table for compilation of data:

Sl no	Parameters(categories)	Pre-test results	Post-test results	Remarks
1	Below average	4	1	Better performance
2	Average	6	3	Better performance
3	Good	9	10	improvement
4	Very Good	2	5	Better performance
5	Excellent	0	2	Positively increasing
Total trainees		21	21	

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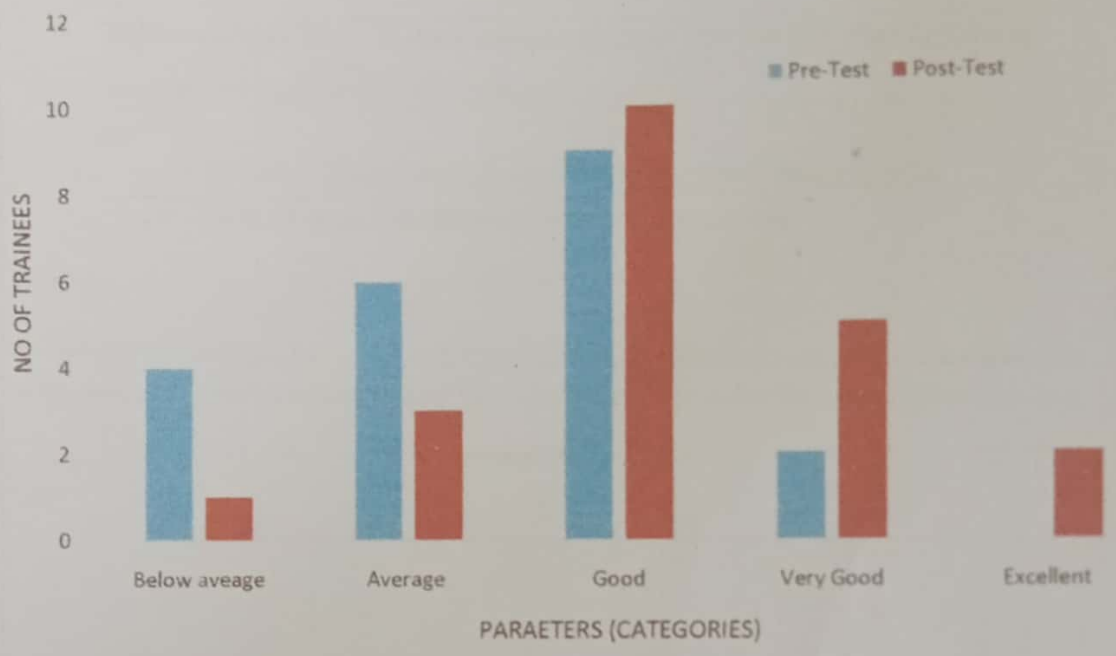
TABLE- 4 : Graphical representation of results:



11.FINDINGS:

a) Positive aspect:

On the basis of the result analysis given above we can see that the trainees have improved more in the post-test than pre-test. In the pre-test 4 students were categorized under BELOW AVERAGE category due to their poor performance. But, after intervention only one trainee remain the same. The trainee will need special care. Similarly, after intervention no of trainees in average category also decreased in post test. On the other hand , no of trainees in Good category in pre-test was 9 which is increased to 10 after intervention. 2 trainees under good category successfully moved to excellent after gaining proper intervention and regular practice.

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b) Negative aspect:

From the result analysis we have also seen that there are still 1 trainee in below average and 3 in the average category. We can find these probable reasons for their poor performance –

- Irregular attendance of trainees during intervention period
- Lack of attention during classroom transaction

12.CONCLUSION:

From the above findings we may conclude that the hypothesis is proved successfully.So, if teachers adopt this intervention strategy they will also be able to solve their problems like this.

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ACTION RESEARCH REPORT

TITLE OF STUDY:

Effectiveness of Intervention Strategy on the use of various graphs in Social Science- a study on D.El.Ed. Trainees of DIET Tinsukia

Investigator:

Mr. Chandra Kumar Dahal, Lecturer, DIET, Tinsukia

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Effectiveness of Intervention Strategy on the use of various graphs in Social Science- a study on D.El.Ed Trainees of DIET Tinsukia

Investigator:Mr. Chandra Kumar Dahal

CHAPTER: I

1. INTRODUCTION

1.1 OVERVIEW

Research is an activity which helps us to generate knowledge. It is a best medium to test existing knowledge and also linking it with the new knowledge. The need for getting more and more knowledge may be justified in the line which states us about satisfying our curiosity and enables us to solve the problems we face in our life. Human beings are curious right from their birth and throughout in life are busy in seeking answers to the questions they face in their life. Research is essentially the process of conducting disciplined inquiry into some of the fundamental problems that human being face in life.

1.2 EDUCATIONAL RESEARCH

Research in the field of education applies the scientific methods for systematic study of educational situations. Since education is one of the social sciences, we find that educational research uses both conceptions of social reality and the methods that are considered appropriate for exploring it. This clearly states us why educational research makes use of approaches used in scientific as well as those used in social science research.

1.3NEED OF STUDY

Data plays an important role in analyzing the study report of any kind of research. A research can be understood well only with the analysis of data. We get raw data being collected from the field; hence, there is a need of analyzing data through proper statistical presentation. Trainees pursuing the D El Ed course in various DIETs are considered to be the teachers of tomorrow. They need to perform various kind of research in their institutions to justify their profession. So realizing the gravity of the need for the part of D El Ed students it has been decided to conduct a action research on using the statistical expressions.

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1.4OBJECTIVES

i) To assess about the understanding of statistical expression among the D El Ed trainees
ii) To help them in overcoming with the problems regarding understanding the statistical expressions
iii) To enhance the knowledge and skills in regard to application of statistical expressions
iv) To assist them in conducting research in future endeavors by using the statistical expressions properly

1.5 PROBLEMS IN THE SUBJECT AREA

i) Unable to arrange historical events chronologically.
ii) Inability in drawing a scale map.
iii) Unable to calculate and present data pertaining to statistical expressions properly.
iv) Inability in drawing various types of graphs related to different topics of social science.
v) Unable to solve mathematical problems related to economics section of social science.

1.6MOST PROBABLE PROBLEM

Out of all these problems I have selected the problem mentioned in iv) Unable to calculate and present data pertaining to statistical expressions properly.

1.7STATEMENT OF THE PROBLEM

Effectiveness of Intervention Strategy on use of various graphical presentation in Social Science- a study on D.El.Ed Trainees of DIET Tinsukia

1.8ACTION HYPOTHESIS

If the D.El.Ed trainees of DIETs are given proper inputs they may use various statistical expressions effectively.

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1.9SCOPE OF STUDY

This study is conducted among the D. El. Ed trainees of DIET, Tinsukia hence basically it is concentrating in this area only. The trainees included in this study are mostly post graduates basically covering the science, arts and commerce stream in graduation level. This has not included any regular in-service teacher or students from any college or university.

CHAPTER: II

2. DATA COLLECTION AND RESEARCH METHODOLOGY

2.1 SAMPLING

Methodology of study is based on primary data. A survey is conducted among the D El Ed trainees of DIET, Tinsukia upon their knowledge of using the statistical expressions through a pre-test. On evaluating the responses of pre-test a 20 number of trainees were selected at random for the study as sample group. The selected group was given interventions towards improving their knowledge and skills in using statistical expressions like Line graph, Bar diagram, pie chart and bar graph etc.

2.2 SAMPLING TECHNIQUE AND SAMPLE

Population selected for the study is the trainees pursuing D El Ed course in DIET, Tinsukia. Out of 46 trainees 20 were selected on random sampling process. They were briefed about the objective of the study. With detailed information a pretest was conducted to test their basic knowledge about the usage of basic statistical expressions.

2.3 TOOLS AND PROCEDURE

Data collected in this study are quantitative. In order to carry out the survey some of the questions were generated and sent to the trainees (Anexure-1). They were asked to prepare different statistical presentations on the basis of given inputs. They were given one week's time to get the same completed and submit it to the researcher.The responses received were evaluated and rated them on the basis of following rating points-

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2.4 FIELD NOTES

Observation by the researcher was recorded as field notes. They were qualitative in nature and treated as tools for study because these notes depicted actual position of the trainees and later on intervention schedule was prepared on its basis.

2.5 STATISTICAL TECHNIQUES:

For compilation of data following statistical techniques were used-

i) Percentage
ii) Tabular Form
iii) Graphical presentation

After coding the responses in terms of poor, average, good, very good and excellent, their percentage regarding each component have been calculated. To make it more clear their percentage have been presented in tabular form and their graphical presentation (pie diagram) has also been made.

Chapter: III

3. Analysis and Interpretation of Data:

Data analysis is considered as an important step and heart of the research work. After collection of data with help of relevant tools and techniques, the next logical step, is to analyse and interpret data with a view to arrive at empirical solution to the problem. It is considered as the process of assigning meaning to the collected information and determining the conclusions, significance, and implications of the findings. Analysis breaks down the complexity of the data into simplest form and throws light on the particular subject.

The data analysis for the present study was done quantitatively with the help of percentage .the statistical techniques have been used for analysis of collected data, tabulation and pie diagram used to make clear and analyse the data to find out the results. Collection of data through various sources is an important component of any research study. Therefore, while developing the tools for data collection, one needs to have clear concept on the aims and objectives of study so that it can be analysed systematically to meet the pre-determined objectives.

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3.1 ANALYSIS OF PRE-TEST DATA

Table-1:

SL NO	CODE OF STUDENT	EVALUATION GRADE	REMARKS			TOTAL	% of marks	REMARKS
		Q-1	Q-2	Q-3	Q-4			
1	A	11	8	12	17	48	48	Average
2	B	15	14	13	17	59	59	Good
3	C	11	11	12	11	44	44	Average
4	D	8	11	10	9	38	38	B/Average
5	E	9	11	13	11	43	43	Average
6	F	18	15	17	15	65	65	Good
7	G	18	17	15	16	66	66	Good
8	H	20	17	17	15	69	69	Good
9	I	14	19	17	16	66	66	Good
10	J	8	7	9	12	36	36	B/Average
11	K	16	14	17	18	65	65	Good
12	L	17	16	18	16	67	67	Good
13	M	22	20	19	23	84	84	Very good
14	N	12	12	16	12	52	52	Average
15	O	15	17	17	18	67	67	Good
16	P	8	7	11	9	35	35	B/Average
17	Q	17	18	16	18	69	69	Good
18	R	9	8	11	10	38	38	B/Average
19	S	11	12	14	13	50	50	Average
20	T'	11	12	13	12	48	48	Average

The received data are presented through Pie-Diagram.

Findings: (i) While going through the list it is found that there are no trainees in the category of scoring excellent grade.

(ii) There are 4 Nos. of trainees (20%) scoring Below Average grade(40%), 6 Nos. of trainees (30%) in Average grade (40-55%), 9 Nos.(45%) in Good (55-70%) grade and 1 Nos. (5%) of trainee in very good (70-85%) grade.

(iii) It states that the trainees had some idea about graphical presentations. If they are given periodical interventions they can develop a sound knowledge in this field. This may enhance them in carrying out further research works.

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3.2 ANALYSIS OF POST TEST DATA

Table-2:

SL NO	CODE OF STUDENT	EVALUATION GRADE(Remarks)						
		Q1	Q2	Q3	Q4	TOTAL	% of marks	Remarks
1	A	18	21	22	19	80	80	Very Good
2	B	21	22	23	23	89	89	Excellent
3	C	22	23	19	24	91	91	Excellent
4	D	19	17	16	17	69	69	Good
5	E	20	21	22	18	81	81	Very Good
6	F	21	22	19	18	80	80	Very Good
7	G	22	14	21	22	79	79	Very Good
8	H	18	17	17	23	75	75	Very Good
9	I	21	19	22	22	84	84	Very Good
10	J	18	19	20	19	76	76	Very Good
11	K	22	21	22	23	88	88	Excellent
12	L	18	19	17	21	75	75	Very Good
13	M	19	21	20	23	84	84	Very Good
14	N	21	22	23	22	88	88	Excellent
15	O	21	19	22	23	85	85	Very Good
16	P	19	22	18	21	80	80	Very Good
17	Q	18	21	17	19	75	75	Very Good
18	R	16	18	18	18	70	70	Good
19	S	22	24	21	22	89	89	Excellent
20	T	23	24	21	22	90	90	Excellent

INTERVENTION: Keeping this view in mind the trainees were selected for remedial measures. They were categorized on the basis of their performance in the pre-test and accordingly intervention plan was prepared. At first performers in the good category were provided intervention through online mode, Next stage performers in very good category were provided intervention. At the end trainees performing all the good, very good and excellent were given a

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common intervention by narrating the purpose of the study. After completing these rounds of interventions a post test was conducted for all the trainees.

3.3 Compilation of Pre Test and Post Test Data

Table-3:

Sl No.	Parameters(Components)	Pre-test (Frequency & %)	Post-test (Frequency & %)	Remarks
1	Below Average (<40%)	4(20%)	0	Better Performance
2	Average (40-55%)	6(30%)	0	Better Performance
3	Good (55-70%)	9 (45%)	2(10%)	Better Performance
4	Very Good (70-85%)	1(5%)	12(60%)	Better Performance
5	Excellent (>85%)	o	6(30%)	Better Performance

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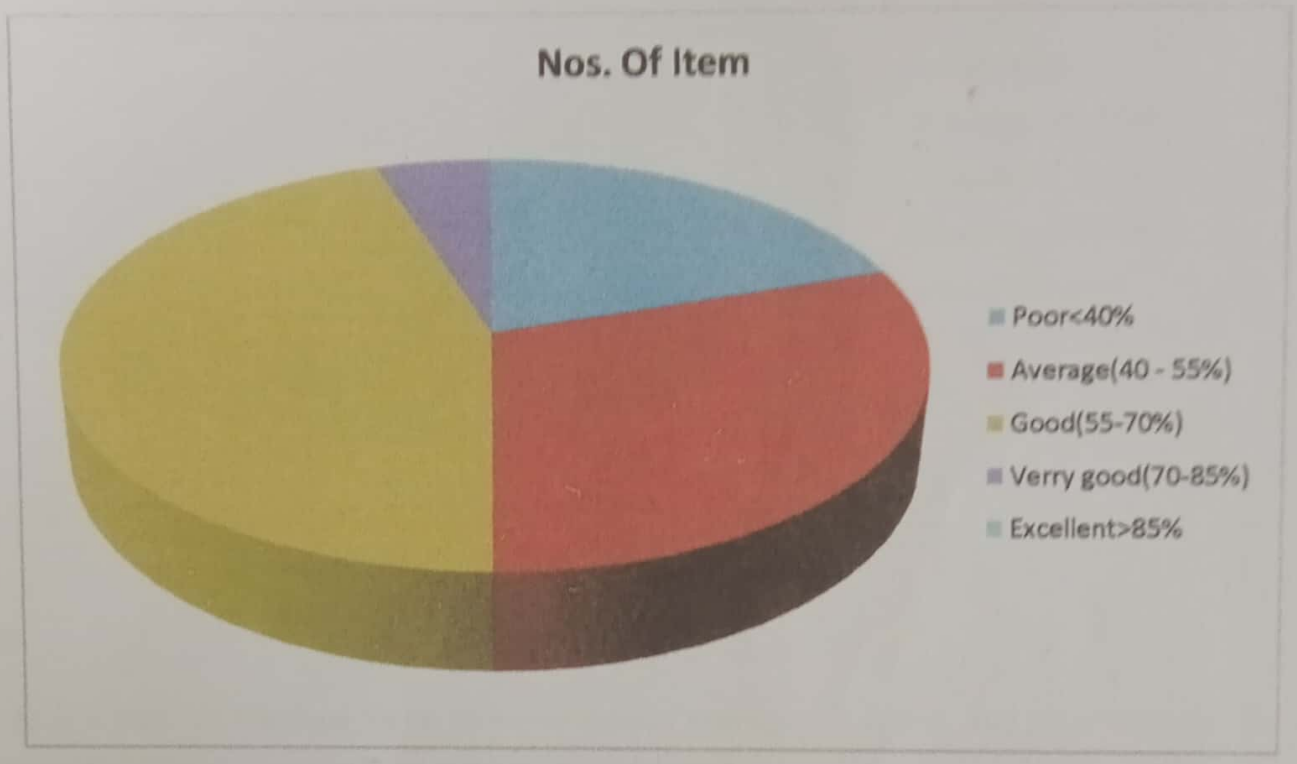
a) Pre-test Data



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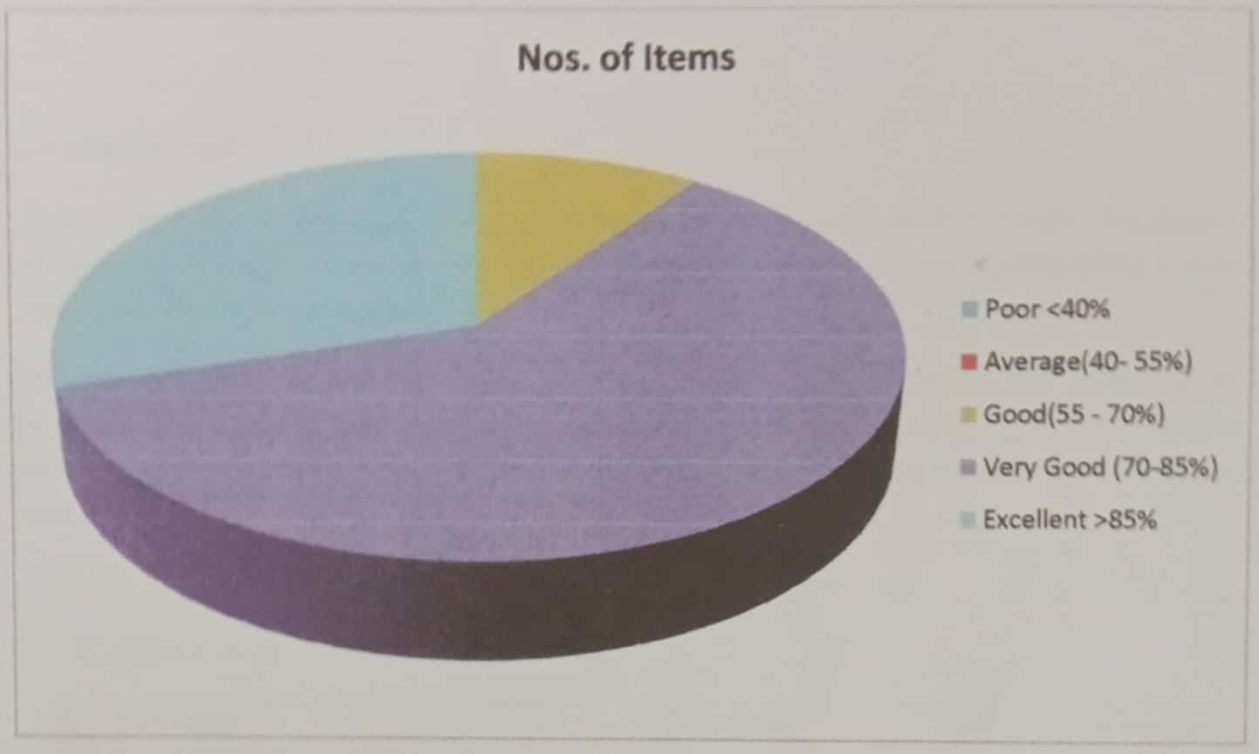
b) Post-test Data



Findings:

(i) In pretest 4 Nos. of trainees were there in below average category. But after rounds of intervention not a single case could be seen in this category.

ii) There were 6 Nos. of trainees scoring average grade but now in post-test not a single case can be seen in this category.

iii) It is seen that the score card had shown better results after providing interventions periodically. After two rounds of intervention provided through online mode their performance had shown much improvement. Now we could see only 2(10%) in good category. That states an improvement of 45% in this category, who have reached next highest grade i.e. Very Good.

(iv) In pre-test, 1 trainee was rated in very good category, but in post-test it has reached 12. It indicates an increase of 55% in this category.

(v) In the excellent category the not a single case was found in pre-test, but the same is counted to be 6(30%).

(vi) Above all, it is seen that there occurred a notable development in all the categories of performance.

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3.4 CONCLUSION:

It was a very rich experience to conduct this action research in my own institution. The process of selection of trainees, conducting pre-test, giving intervention and finally conducting a post-test all were enriching experience.

This type of action research will greatly help the trainees, teachers, students and all the people who are interested to conduct action research. This research has helped our trainees in developing their knowledge about the various statistical expressions to use further in their research and analysis work.

3.5 SCHEDULE OF ACTIVITIES WITH TIME LINE:

Sl. No.	Activities	Duration	Tentative dates
01.	Sharing trainees about the study	1-day	4th week of June,2021
02	Holding of Pre-test (diagnostic test)	1-day	1st week of July,2021
03	Evaluation diagnosis of pre-test	1-day	2nd week of July,2021
04	Intervention planning and execution	20 days (at least 3-days per week)	3rd week of July, 21 to 4th week of July, 2021.
05	Holding of post-test	1-day	1st week of Aug, 2021
06	Data analysis and writing of research report.	5-days	3rd week of Aug, 2021

ANEXURES:

1. Pre-test Questionnaire.
2. Post-test questionnaire.

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PRE-TEST QUESTIONNAIRE

Dear trainees, I am forwarding you some data in tabular format. You are expected to present them in various graphical modes. You can try your level best to present them in the specific form as mentioned. In order to present the same you may take a big chart paper the same may be divided into four equal parts (4nos of A4 size paper may be obtained). After doing so you may present the same in these papers (one in each paper). As some of you may be doing it for first time you need not have to get worried about the accuracy or perfection of the same. We may very well correct them later on. Please remember there is no mark in it. It is for our understanding and enjoyment.

DATA TABLES

1. The following table presents class X board examination result for past four past four years of a particular school. Present these data in **Bar Diagram**.

Sl no	Year	Students pass percentage	Remarks
1	2015	84	
2	2016	93	
3	2017	42	
4	2018	71	

2. The given table contains the data of people above 60 years of age vaccinated with covi shield in last four months. Present the data in a **line graph**.

Sl no	Month	Nos of people vaccinated (in lakhs)	Remarks
1	January,21	4.3	
2	February,21	8.4	
3	March,21	87.4	
4	April,21	21.2	

3. The following table contains the number of Indian families living in small towns who lost their job during corona pandemic from March, 2020 to June,2020. Present the data through **histogram**.

Sl. No.	MONTH	No. OF FAMILIES(in lakhs)	Remarks
1	March,20	6.2	
2	April,20	10.3	
3	May,20	19.4	
4	June,20	26.9	

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4. The given list shows percentage of students enrolled in higher education in Assam for the past 4 years .Present them in the data by a **pie diagram**.

Sl. No.	Year	Percentage of students	Remarks
1	2016	24.2	
2	2017	33.8	
3	2018	22.9	
4	2019	19.1	

POST-TEST FOR ACTION RESEARCH ON STATISTICAL DATA PRESENTATION:

Task-1

Following table provides the data of average coverage of forest area in five states of NE India. Present them with the help of a Bar Diagram.

SL. NO	STATE	COVERAGE OF FOREST AREA IN %
1	ASSAM	34.12
2	NAGALAND	75.31
3	MANIPUR	75.46
4	ARUNACHAL PRADESH	79.63
5	MIZORAM	85.41

Task-2

Given below are the data of covid19 positive patients against per 1000 (one thousand) for a particular period. Convert the data into percentage and present them through a Pie chart-

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SL. NO	DISTRICT	COVID POSITIVE PATIENT PER 1000(Per Thousand)
1	TINSUKIA	126
2	DIBRUGARH	224
3	DHEMAJI	164
4	LAKHIMPUR	273
5	BISWANATH	213

Task-3

The data given in the table provides the pass percentage rate of five schools of Tinsukia District for a particular year. Present the data through a Line Graph-

SL. NO	SCHOOL	PASS PERCENTAGE
1	SENAIRAM H S SCHOOL	69
2	G B CHOUKHANI HS SCHOOL	87
3	MAKUM HINDI HIGH SCHOOL	36
4	NAVAJYOTI HIGH SCHOOL	64
5	BANGIYA VALIKA VIDYALAYA	58

Task-4

Following data presents the literacy percentage of five states of India. Present them through a Histogram-

Sl No	STATE	LITERACY PERCENTAGE
1	KARNATAKA	77.2
2	KERELA	96.2
3	MADHYA PRADESH	73.7
4	MAHARASTRA	84.8
5	ASSAM	72.19

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"সমাজ বিজ্ঞানত মানচিত্ৰ নিৰ্মাণৰ কাৰ্যকৰীতা- ডায়েট তিনিচুকীয়া জিলাৰ ডি.এল.এড শিক্ষাৰ্থীসকলৰ ওপৰত এক অধ্যয়ন (The effectiveness of map making in social science- a study on D.El.Ed. students of DIET, Tinsukia.)"

গৱেষক: নয়ন মণি বৰা
প্ৰবক্তা,ডায়েট, তিনিচুকীয়া

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সূচীপত্ৰ

১.	আৰম্ভণি	১-২
২.	সমস্যাৰ উপস্থাপন।	২-৩
৩.	সমস্যাৰ সম্ভাৱ্য কাৰণসমূহ	৩
৪.	কাৰ্য্য গৱেষণাৰ উদ্দেশ্যসমূহ	৩
৫.	সমাধান প্ৰমেয় গঠন	৩-৪
৬.	কাৰ্যবিধি	৪
৭.	মূল তথ্যৰ উৎসমূহ	৪
৮.	তথ্য সংগ্ৰহৰ বাবে সঁজুলিৰ বাছনি	৪-৫
৯.	পদ্ধতি	৫
১০.	কাৰ্য্যৰ বিৱৰণ আৰু সময় তালিকা	৬-৭
১১.	তথ্যৰ ফলাফল বিশ্লেষণ, বাখ্যা	৭-১১
১২.	প্ৰাপ্তফল আৰু সিদ্ধান্তগঠন	১২
১৩.	গ্ৰন্থপঞ্জী আৰু উল্লেখপঞ্জী	১৩
১৪.	পৰিশিষ্ট।	১৪-১৯

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"সমাজ বিজ্ঞানত মানচিত্ৰ নিৰ্মাণৰ কাৰ্যকৰীতা- ডায়েট তিনিচুকীয়া জিলাৰ ডি.এল.এড শিক্ষাৰ্থীসকলৰ ওপৰত এক অধ্যয়ন"

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গৱেষকৰ নাম: নয়ন মণি বৰা।

প্ৰবক্তা, ডায়েট, তিনিচুকীয়া।

1. আৰম্ভণি (Introduction):

সমাজ বিজ্ঞান পাঠ্যক্ৰমৰ এটা আটাইতকৈ গুৰুত্বপূৰ্ণ লক্ষ্য হৈছে মানচিত্ৰ অংকন কৰি, বিশ্লেষণ আৰু উপলব্ধি কৰাৰ সামৰ্থ্য প্ৰাপ্ত কৰা। সমাজ বিজ্ঞানত মানচিত্ৰ আৰু মানচিত্ৰ ধাৰণাৰ সৈতে সম্পৰ্কিত বহুতো বিষয়বস্তু আছে। যদিও ভৌগোলিক অৱস্থান হৈছে আটাইতকৈ গুৰুত্বপূৰ্ণ বিষয়বস্তু। কেৱল মানচিত্ৰসমূহে সমগ্ৰ সমাজ বিজ্ঞান বিষয়টোক চহকী কৰি ৰখা নাই যদিও মানচিত্ৰ অবিহনে সমাজ বিজ্ঞানৰ কোনো অস্তিত্ব নাই।

শিক্ষাৰ্থীসকলক মুখ্য সামাজিক অধ্যয়ন ধাৰণা আৰু সম্পৰ্ক শিকাত সহায় কৰিবলৈ মানচিত্ৰ ব্যৱহাৰ কৰা। সমাজ বিজ্ঞান বিষয়টো মানচিত্ৰৰ সহায় লৈ শিকোৱাৰ দ্বাৰা শিক্ষাৰ্থীসকলে স্থানিকভাৱে (spatially) চিন্তা কৰিবলৈ - শ্ৰেণীকোঠা আৰু বাস্তৱ পৃথিৱীৰ বিভিন্ন যুক্তি আৰু সমস্যা সমাধানৰ প্ৰসংগত স্ব-বিকাশ কৰিবলৈ সক্ষম হয়।

শিকন হৈছে এটা অত্যন্ত জটিল মানৱ প্ৰক্ৰিয়া। এটা বিষয় গভীৰলৈকে বুজাটো বহু ক্ষেত্ৰত জটিল হৈ পৰে। লগতে বিষয়টোৰ লগত জড়িত দক্ষতাসমূহৰ বিকাশো সহজ নহয়। সমাজবিজ্ঞান বিষয়টোৰ বিভিন্ন শাখা আছে, যেনে ভূগোল, বুৰঞ্জী, ৰাজনীতি বিজ্ঞান ইত্যাদি। ইয়াৰ প্ৰতিটো শাখাই সমপৰিমানে গুৰুত্বপূৰ্ণ হোৱাৰ লগতে যথেষ্ট কৌশলী যাৰ বাবে শিক্ষকজন যথেষ্ট দক্ষতাপূৰ্ণ হোৱাটো অতিশয় প্ৰয়োজনীয়। প্ৰায়েই এই বিষয়বোৰত ছাত্ৰ ছাত্ৰীৰ লগতে শিক্ষকসকলৰো দক্ষতাৰ অভাৱ দেখা যায়, অথবা তেওঁলোকে বিভিন্ন ক্ষেত্ৰত কিছু অসুবিধাৰ সন্মুখীন হোৱা দেখা যায়। তলত

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সমাজ বিজ্ঞান বিষয়টোৰ লগত জড়িত কেইটামান মূল সমস্যাৰ বিষয়ে উল্লেখ কৰা হ'ল:

ক. বুৰঞ্জী শিক্ষকজনে প্ৰায়েই শিকনৰ সঠিক পদ্ধতিৰ নিৰ্বাচনত ভুল কৰা দেখা যায়, যাৰ ফলত ছাত্ৰ ছাত্ৰীসকলে বুজাত যথেষ্ট অসুবিধাৰ সৃষ্টি হয়।

খ.ৰাজনীতি বিজ্ঞান বিষয়টোক শিক্ষকজনে আকৰ্ষণীয় ৰূপত উপস্থাপন কৰাৰ কলা নজনাৰ বাবে এই বিষয়টো ছাত্ৰ ছাত্ৰীৰ বাবে অতি নিৰস আৰু বিৰক্তিকৰ হৈ পৰা দেখা যায়।

গ.অৰ্থনীতি বিজ্ঞানত ছাত্ৰ ছাত্ৰীৰ ব্যৱহাৰিক জ্ঞানৰ অভাৱৰ বাবে বিষয়টো তেওঁলোকৰ বাবে বহু বেছি জটিল হৈ পৰে।

ঘ. ভূগোল বিষয়ত শিক্ষক বনাম ছাত্ৰ ছাত্ৰীসকলে সন্মুখীন হোৱা এটা ডাঙৰ অসুবিধা হৈছে মানচিত্ৰ অৰ্থাৎ মেপ অংকনৰ সঠিক কৌশলৰ অৱলম্বন নকৰা। সেয়েহে,মই কাৰ্য গৱেষণা (Action research) কৰিম বুলি আগবঢ়া বিষয়টো হৈছে:

"সমাজ বিজ্ঞানত মানচিত্ৰ নিৰ্মাণৰ কাৰ্যকৰীতা- ডায়েট তিনিচুকীয়া জিলাৰ ডি.এল.এড শিক্ষাৰ্থীসকলৰ ওপৰত এক অধ্যয়ন"

" (The effectiveness of map making in social science- a study on D.El.Ed. students of DIET, Tinsukia.)"

2. সমস্যাৰ উপস্থাপন (Statement of the problem):

মানচিত্ৰ অংকনৰ দক্ষতা ভূগোল শিক্ষাৰ এক মূল বিষয়বস্তু। যদিও ই ভূগোল বিষয়ৰ এক এৰাব নোৱাৰা বিষয়বস্তু, কিন্তু শ্ৰেণীকোঠাত মানচিত্ৰ অংকনত প্ৰায়েই বৰ বেছি প্ৰাধান্য দিয়া দেখা নাযায়। তদুপৰি, অধ্যয়নসমূহে স্পষ্ট কৰে যে শিক্ষক প্ৰশিক্ষণপ্ৰাপ্ত শিক্ষাৰ্থীসকলক ভৌগোলিক স্থান প্ৰতিনিধিত্ব কৰিবলৈ আৰু এখন মানচিত্ৰ উপস্থাপন কৰিবলৈ ক'লে যথেষ্ট অসুবিধাৰ সন্মুখীন হয়।

মানচিত্ৰ এখন অংকন কৰাটো ইয়াৰ ব্যৱহাৰ কৰাতকৈ অধিক চাহিদাপূৰ্ণ তথা প্ৰয়োজনীয়। মানচিত্ৰসমূহে জটিল তথ্য সৰল কৰে কিন্তু মানচিত্ৰ অংকনৰ সঠিক

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কৌশল নাজানিলে মানচিত্ৰ অংকন অতি জটিল হৈ পৰে। প্ৰাৰম্ভিক ত্ৰুটি হ'লে অংকন কৰাটো জটিল হৈ পৰে।

3. সমস্যাৰ সাম্ভাব্য কাৰণসমূহ (Probable Causes of the Problem):

i. মানচিত্ৰ অংকনৰ সঠিক পদ্ধতি বিদ্যালয়ত সৰলকৈ শিকোৱা নহয়।

ii. মানচিত্ৰ অংকনৰ দক্ষতা অনুশীলন কৰিবলৈ শ্ৰেণীত পৰ্যাপ্ত সময় ফিয়া নহয়।

iii. কিছুমান শিক্ষাৰ্থীয়ে সৰল মানচিত্ৰ আঁকিবলৈ আৰু সেই মানচিত্ৰ ব্যাখ্যা কৰিবলৈ সক্ষম হয় কিন্তু তেওঁলোকে মানচিত্ৰখন আঁকিবলৈ সঠিক কৌশল আৰু সূত্ৰ ব্যৱহাৰ কৰিবলৈ অক্ষম হয়।

4. কাৰ্য্য গৱেষণাৰ উদ্দেশসমূহ (Objectives of Action Research):

a. পৰিৱেশ বিজ্ঞানত পাঠ্যপুথি সম্পৰ্কীয় নক্সা আঁকিবলৈ আৰু ব্যাখ্যা কৰিবলৈ শিক্ষাৰ্থীসকলৰ অক্ষমতাৰ মুখ্য কাৰণবোৰ বিচাৰি উলিওৱা।

b. সমাজ বিজ্ঞানত মানচিত্ৰ অংকন আৰু ব্যাখ্যা কৰাৰ দক্ষতা বৃদ্ধিৰ বাবে উপযুক্ত পদ্ধতি, কাৰ্য্য পৰিকল্পনা অৱলম্বন কৰা।

c. শ্ৰেণীকোঠাত শিক্ষকে মানচিত্ৰ অংকনৰ বিকাশৰ বাবে গ্ৰহণ কৰা পদ্ধতি আৰু অভিনৱ কাৰ্য্য পৰিকল্পনাৰ কাৰ্যকৰীতা/ সফলতা মূল্যায়ন কৰা।

5. সমাধান প্ৰমেয় গঠন (Action Hypothesis):

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যদি D. L. ED. ৰ শিক্ষাৰ্থীসকলে সমাজ বিজ্ঞানৰ মানচিত্ৰ অংকন আৰু ব্যাখ্যা কৰিবলৈ উপযুক্ত পদ্ধতি, কৌশল আৰু সঠিক ৰণনীতি গ্ৰহণ কৰে তেনেহ'লে শিক্ষাৰ্থীৰ অংকন আৰু ব্যাখ্যাৰ দক্ষতা বিকশিত হ'ব আৰু তেওঁলোকে এক উন্নত প্ৰদৰ্শন দেখুৱাব।

6. কাৰ্যবিধি (Procedure):

ক) নমুনা বাছনি: তিনিচুকীয়া জিলাৰ ডায়েটৰ D. L. ED. শিক্ষাৰ্থীসকলক অধ্যয়নৰ নমুনা হিচাপে বাছনি কৰা হ'ব। প্ৰয়োজন হ'লে, নমুনাটো বাছনি কৰিবলৈ যাদৃচ্ছিক নমুনা পদ্ধতি (Random Sampling) প্ৰয়োগ কৰা হ'ব।

খ) গৱেষণা নক্সা বাছনি:

3 টা গৱেষণা পদ্ধতিৰ ভিতৰত যেনে **ক. জৰীপ পদ্ধতি (Survey method) খ. পৰীক্ষামূলক পদ্ধতি (Experimental Method) গ. অৰ্ধ পৰীক্ষামূলক পদ্ধতি (Quasi Experimental Method)** অনুসন্ধানকাৰীয়ে অধ্যয়নটোৰ বাবে অন্তিমটো Quasi Experimental Method বাছনি কৰিছে।

7 .মূল তথ্যৰ উৎসমূহ (Sources Of Baseline Data):

ডায়েট, তিনিচুকীয়া জিলাৰ ডি. এল. এড. ৰ 2021 বৰ্ষৰ ছাত্ৰ ছাত্ৰী সকলৰ মানচিত্ৰ অংকনৰ কিছু বিসংগতি শ্ৰেণীকোঠাত আৰু লগতে গৃহ কৰ্মত শিক্ষক শিক্ষয়িত্ৰী সকলে দেখা পাইছিলআৰুসেইবাবেএইবিষয়টোগৱেষণাৰবাবেনিৰ্বাচনকৰাহ'ল।

8. তথ্য সংগ্ৰহৰ বাবে সঁজুলিৰ বাছনি (Selection Of Tools):

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অধ্যয়নটোৰ বাবে, নিম্নলিখিত সঁজুলিবোৰ ব্যৱহাৰ কৰাহৈছে:

a. সমস্যাটো নিৰ্ণয় কৰাৰ বাবে প্ৰাথমিক অভিক্ষাৰ (pre test) প্ৰশ্নকাকত।

b. কাৰ্যকৰীতা মূল্যাঙ্কন কৰাৰ বাবে ব্যৱস্থা গ্ৰহনৰ পাছৰ অভিক্ষাৰ প্ৰশ্নকাকত।

c. ডাটা সংকলনৰ বাবে এটা 5 পইন্ট ৰেটিং স্কেল।

9. পদ্ধতি (Methodology):

ক. নমুনা (Sample): ডি.এল.এড ছেমিষ্টাৰ চতুৰ্থ, ডি.এ.টি. তিনিচুকীয়াৰ প্ৰশিক্ষাৰ্থীসকলক অধ্যয়নটোৰ নমুনা হিচাপে বাছনি কৰা হৈছিল। নমুনাৰ মুঠ সংখ্যা আছিল 16

খ. তথ্য সংগ্ৰহৰ বাবে সঁজুলি (Tools for data collection): প্ৰাক-পৰীক্ষা আৰু পৰীক্ষাৰ পিছত প্ৰশ্নকাকত / পৰীক্ষাৰ সামগ্ৰী, ডাটা সংকলনৰ বাবে ৰেটিং স্কেল (5 পইন্ট – গড়ৰ তলত, গড়ৰ তলত, ভাল, অতি ভাল আৰু উৎকৃষ্ট)

গ. গৱেষণা ডিজাইন (Research Design): জৰীপৰূপাঙ্কনৰা ডিজাইন (Survey Design), পৰীক্ষামূলকৰূপাঙ্কনৰা ডিজাইন (Experimental Design) আৰু অৰ্ধ-পৰীক্ষামূলকৰূপাঙ্কনৰা ডিজাইন (Quasi-Experimental Design) নামৰ তিনি প্ৰকাৰৰ গৱেষণা ডিজাইনৰ ভিতৰত, অন্তিমটো অৰ্ধ পৰীক্ষামূলক ৰূপাঙ্কন বা ডিজাইন (Quasi-Experimental Design) এই অধ্যয়নৰ বাবে বাছনি কৰা হৈছিল।

ঘ.তথ্য বিশ্লেষণ (Data analysis): সংগ্ৰহ কৰা তথ্য নিম্নলিখিত দুটা প্ৰকাৰত বিশ্লেষণ কৰা হৈছিল

ক) টেবুলাৰ প্ৰপত্ৰ (Tabular Form)

খ) গ্ৰাফিকেল প্ৰপত্ৰ (Graphical Form)

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10. কাৰ্য্যৰবিৱৰণআৰুসময়তালিকা (Action details and Time Chart):

ক্ৰমিক নম্বৰ	কাৰ্যৰনাম	সঁজুলিসমূহ	পদ্ধতি	দিনৰ সংখ্যা
1.	প্ৰাথমিক অভিক্ষাৰ প্ৰস্তুতি (Preparation of pre-test)	পৰীক্ষাৰ সঁজুলি সমূহ	বিশ্লেষণ আৰু সংশ্লেষণ	5
2.	প্ৰাক-পৰীক্ষা (Pre-test)	পৰীক্ষাৰ কাকতসমূহ	লিখিত পৰীক্ষা (অনলাইন যোগে)	1
3.	প্ৰাথমিক অভিক্ষাৰ বিশ্লেষণ(Analysis of Pre-test)	ৰেকৰ্ডিং	বিশ্লেষণ	7
4.	নতুন ব্যৱস্থাৰ বাবে ৰণনীতি প্ৰস্তুত কৰা (Preparation of strategies for Intervention)	অনলাইন ৰেকৰ্ডিং/টিএলএম/চাৰ্ট/ৱৰ্ক শ্বীট/অনলাইন সম্পদ	বিশ্লেষণ আৰু প্ৰণালীকৰণ	10
5.	নতুন ব্যৱস্থা (Intervention)	সঠিক স্কেল আৰু পদ্ধতি ব্যৱহাৰ কৰি মানচিত্ৰ অংকন কৰাৰ ব্যৱহাৰিক জ্ঞান	আলোচনা, কাৰ্যকলাপ , লিখন/ মানচিত্ৰ অঙ্কনৰ অনুশীলন	30

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6.	সংক্ষিপ্তকৰন(Recapitulation)	নতুন ব্যৱস্থাৰ মূল বিন্দুসমূহ	আলোচনা আৰু প্ৰতিক্ৰিয়া	7
7.	ব্যৱস্থা গ্ৰহনৰ পাছৰ অভিক্ষাৰ (Post - test)	পৰীক্ষাৰ কাকতসমূহ	লিখিত আৰু ব্যৱহাৰিক পৰীক্ষা (অনলাইন যোগে)	1
8.	ব্যৱস্থা গ্ৰহনৰ পাছৰ অভিক্ষাৰ; তুলনা আৰু তথ্যৰ গ্ৰাফিকেল প্ৰতিনিধিত্ব; প্ৰতিবেদন প্ৰস্তুত কৰা (Analysis of post-test ; comparison And graphical representation of data; Report making)	ৰেটিং স্কেল, লিখনি, তথ্য সংকলন আৰু তুলনা ব্যৱহাৰ কৰি বিশ্লেষণ কৰা, ডিটিপি ইত্যাদি	বিশ্লেষণ, সৰল পৰিসাংখ্যিক পদ্ধতি	9
9.			মুঠদিনৰ সংখ্যা	70

11. তথ্যৰ ফলাফলৰ বিশ্লেষণ আৰু ব্যাখ্যা (Analysis and interpretation of the result):

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তথ্যৰ ফলাফলৰ বিশ্লেষণক গৱেষণাৰ এক গুৰুত্বপূৰ্ণ পদক্ষেপ আৰু গৱেষণাটোৰ হৃদয় হিচাপে গণ্য কৰা হয়। প্ৰাসঙ্গিক সঁজুলি আৰু কৌশলৰ সহায় তথ্য সংগ্ৰহ কৰাৰ পিছত, পৰৱৰ্তী পদক্ষেপটো হ'ল সমস্যাটোৰ অভিজ্ঞতামূলক সমাধানত উপনীত হোৱাৰ লক্ষ্যৰে তথ্য বিশ্লেষণ আৰু ব্যাখ্যা কৰা। বৰ্তমানৰ অধ্যয়নৰ তথ্য বিশ্লেষণ শতাংশৰ সহায়ত পৰিমাণগতভাৱে কৰা হৈছে।পৰিসাংখ্যিক কৌশলেৰে তথ্য বিশ্লেষণ কৰা হৈছে। ফলাফলবিলাক স্পষ্টৰূপত প্ৰকাশ আৰু বিশ্লেষণ কৰিবৰ বাবে সমুচিত তালিকা প্ৰস্তুত আৰু বাৰ নক্সাৰ ব্যৱহাৰ কৰা হৈছে।

তালিকা 1:

প্ৰাথমিক অভিক্ষাৰ আধাৰত তলৰ তথ্যসমূহ লাভ কৰা হ'ল:

ক্ৰমিক নম্বৰ	শিক্ষাৰ্থী সকলৰ সাংকেতিক নাম	প্ৰশ্ন-1	প্ৰশ্ন-2	প্ৰশ্ন-3	প্ৰশ্ন-4	প্ৰশ্ন-5	মুঠ নম্বৰ (100)	নম্বৰৰ শতাংশ (%)	মন্তব্য
1	ক	9	7	11	8	10	45	45%	
2	খ	10	7	10	10	13	50	50%	
3	গ	11	12	9	10	10	52	52%	
4	ঘ	13	14	10	13	12	62	62%	
5	ঙ	7	5	8	7	7	34	34%	
6	চ	13	15	13	10	12	63	63%	
7	ছ	15	16	16	12	15	74	74%	
8	জ	5	7	8	8	10	38	38%	
9	ঝ	10	10	8	11	10	49	49%	
10	ঞ	9	9	7	9	10	44	44%	
11	ট	7	6	7	8	8	36	36%	
12	ঠ	10	15	17	14	15	71	71%	
13	ড	8	9	11	10	7	45	45%	
14	ঢ	8	7	10	10	10	45	45%	
15	ণ	15	17	14	14	16	76	76%	

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16	ত	5	5	7	5	8	30	30%	

তালিকা 2:

নতুন ব্যৱস্থা গ্ৰহণৰ পাছৰ অভিস্কাৰ তথ্যসমূহ:

ক্ৰমিক নম্বৰ	শিক্ষাৰ্থী সকলৰ সাংকেতিক নাম	প্ৰশ্ন-1	প্ৰশ্ন-2	প্ৰশ্ন-3	মুঠ নম্বৰ (50)	নম্বৰৰ শতাংশ (%)	মন্তব্য
1	ক	9	15	18	42	84%	
2	খ	8	8	11	27	54%	
3	গ	10	18	16	44	88%	
4	ঘ	9	17	16	42	84%	
5	ঙ	8	12	12	32	64%	
6	চ	9	18	18	45	90%	
7	ছ	10	16	17	43	86%	
8	জ	8	12	14	34	68%	
9	ঝ	9	14	14	37	74%	
10	ঞ	9	15	14	38	76%	
11	ট	7	13	12	32	64%	
12	ঠ	10	18	19	47	94%	
13	ড	9	15	15	39	78%	
14	ঢ	9	14	16	39	78%	

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15	ণ	10	18	18	46	92%	
16	ত	7	11	8	26	52%	

তালিকা3:

প্ৰাথমিক অভিক্ষা আৰু ব্যৱস্থা গ্ৰহনৰ পাছৰ অভিক্ষাৰ ফলাফলসমূহৰ সংকলন:

ক্ৰমিক নম্বৰ	পৰীক্ষা	গড়ৰ তলত (40%ৰ তলত)	মধ্যম (41% ৰ পৰা 55%)	ভাল (56% ৰ পৰা70%)	অতি ভাল (71% ৰ পৰা 84%)	উত্তম (85% ৰ ওপৰত)	মন্তব্য
1.	প্ৰাথমিক অভিক্ষা	04	07	02	03	-	
2.	ব্যৱস্থা গ্ৰহণৰ পাছৰ অভিক্ষা	-	02	03	06	05	আগতকৈ ভাল পৰিবেশন

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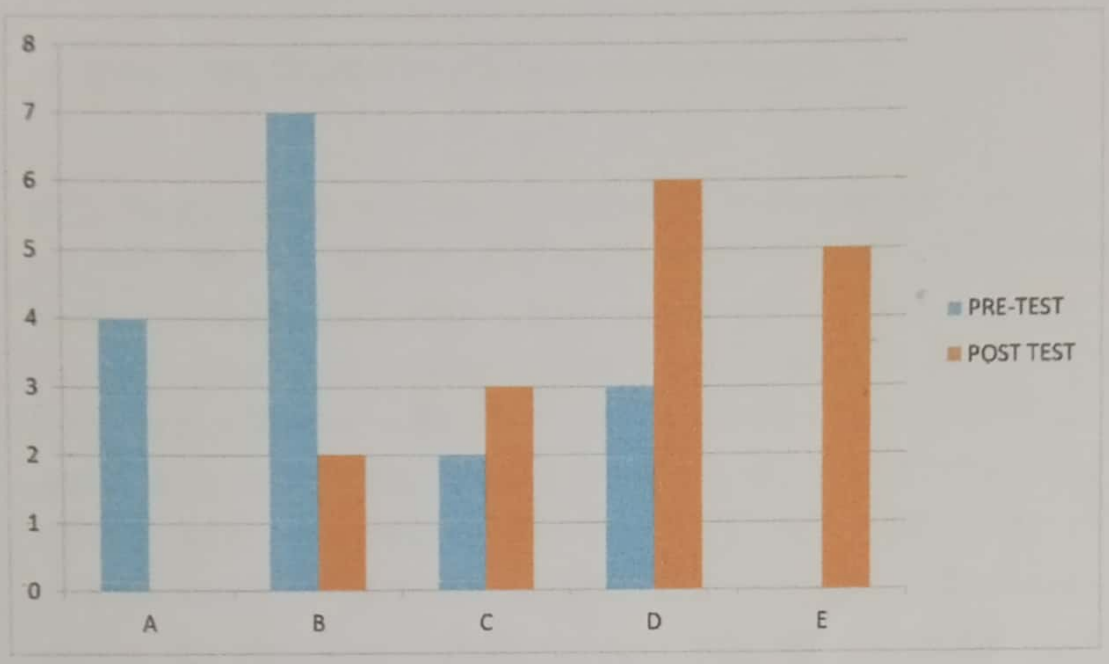

মানসমূহ

A-গড়ৰ তলত

B-মধ্যম

C-ভাল

D-অতি ভাল

E-উত্তম

ওপৰৰ এই ফলাফল বিশ্লেষণৰ আধাৰত, এইটো সিদ্ধান্তত উপনীত হ'ব পাৰি যে প্ৰশিক্ষাৰ্থীসকলে পৰীক্ষাৰ পিছৰ পৰীক্ষাতকৈ যথেষ্ট উন্নতি কৰিছে।

সেয়েহে প্ৰমেয় (Hypothesis) - প্ৰতিষ্ঠিত হয়।

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12. প্ৰাপ্তফল আৰু সিদ্ধান্ত গঠন (Findings and Conclusion):

এইটো সিদ্ধান্তত উপনীত হ'ব পাৰে যে অধ্যয়নটোৰ ওপৰত আধাৰিত উদ্দেশ্যবোৰ প্ৰায় সফল হৈছে আৰু ফলস্বৰূপে নিৰ্দিষ্ট ছেমিষ্টাৰৰ প্ৰশিক্ষাৰ্থীসকলে মানচিত্ৰ অঙ্কনৰ দক্ষতা কাৰ্যকৰীভাৱে উন্নত কৰিব পাৰিছে। মানচিত্ৰ অংকন কৰিবলৈ শিকোৱাত বিসংগতি, সময়ৰ অভাৱ, ব্যৱহাৰিক জ্ঞানৰ ওপৰত বিশেষ গুৰুত্ব প্ৰদান নকৰা, সেই বিষয়ত ছাত্ৰ-ছাত্ৰীসকলৰ অনীহা আদি কাৰণত তেওঁলোকে সঠিকভাৱে মানচিত্ৰ অঙ্কনত অক্ষম হৈ ৰয়। শিক্ষাৰ্থী সকলক মানচিত্ৰৰ গুৰুত্ব বুজাই দি সঠিক পদ্ধতি, ৰণিনীতি অবলম্ব কৰি মানচিত্ৰ আঁকিবলৈ শিকালে তেওঁলোকে শুদ্ধকৈ মানচিত্ৰ আঁকিবলৈ সক্ষম হ'ব। এই বিষয়ত ব্যৱহাৰিক জ্ঞান দিবৰ বাবে যথেষ্ট সময়ৰো আৱশ্যক হয়। শিক্ষকসকলে উদ্ভাৱনীমূলক ধাৰণা প্ৰস্তুত কৰি এই বিষয়ত কৃতকাৰ্যতা লাভ কৰাত সক্ষম হ'ব।

ঋণাত্মক স্বৰূপ:

কোভিড-19 মহামাৰীৰ বাবে লকডাউন হৈ থকাৰ সময়ছোৱাত যিহেতু এই কাৰ্য্য গৱেষণা কৰা হৈছে ,সেইবাবে খুব কম শিক্ষাৰ্থীয়েহে এই গৱেষণাত অংশগ্ৰহণ কৰিবলৈ ইচ্ছা প্ৰকাশ কৰিছিল আৰু সক্ষম হৈছে। যিহেতু সকলোবোৰ অনলাইন যোগে ক্ৰীড়া হৈছিল গতিকে পৰ্য্যাপ্ত সময় আৰু সম্পদ ব্যৱহাৰ কৰা সম্ভৱপৰ ন'হল।

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গ্ৰন্থপঞ্জী আৰু উল্লেখপঞ্জী (Bibliography and References):

1. Prem Patel–"India through Maps"
2. Rashid Yasin and Ranjan Singh–"Map Entries"
3. K. Siddhartha and S. Mukherjee - "Geography through maps"
4. B.G. Hennessy and Peter Joyce–"The once upon a time Map book"
5. Google.com
6. https://developer.here.com/products/platform/studio

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পৰিশিষ্ট (Appendices):

প্ৰাথমিক অভীক্ষাৰ প্ৰশ্নকাকত:

Question no 1. Draw a Municipality map of Tinsukia town district using proper scale .

Marks:20

Question no 2. Draw a map Development Block (where your home is) using proper scale.

Marks: 20

Question no 3. Draw a map of Tinsukia district using proper scale and mark the following

a. Dibru- Saikhowa National park
b. Doomdoma
c. Sadiya
d. Dehing patkai wildlife Sanctuary

Marks: 20

Question no 4. Draw a political of Assam using proper scale .

Marks: 20

Question no 5. Draw an outline map of India using proper scale and mark the following:

a. Indira Col
b. River Kaveri
c. Delhi

Marks: 20

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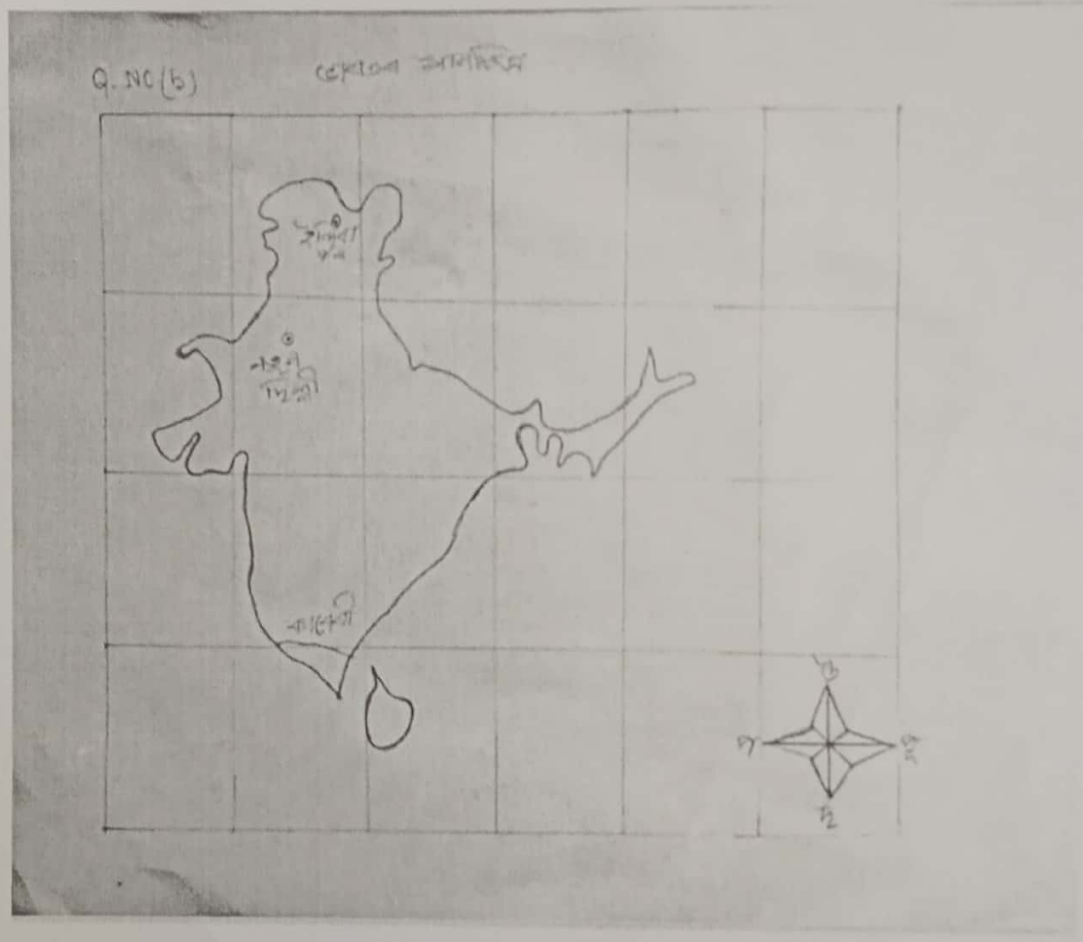
প্ৰাৰম্ভিক অভিজ্ঞাত ছাত্ৰ- ছাত্ৰীয়ে অংকন কৰা কেইখনমান মানচিত্ৰ:



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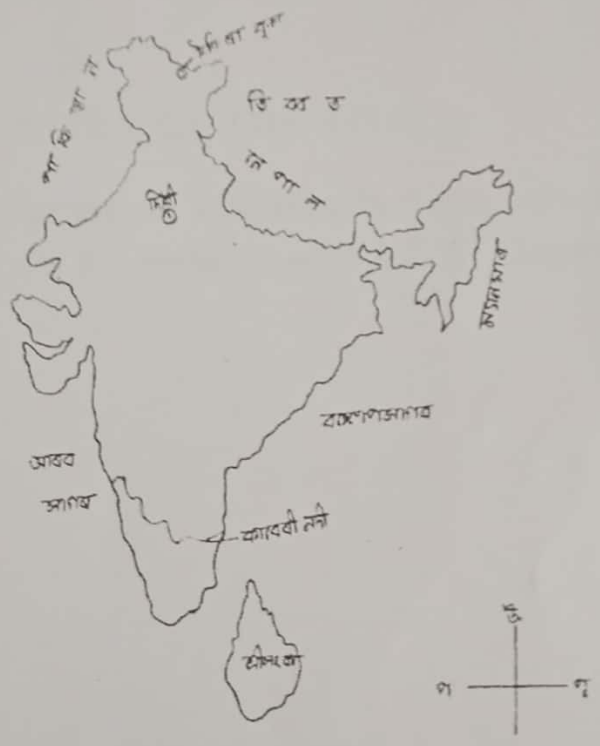
Q. Ans no 5:



নতুন ব্যৱস্থাগ্ৰহনৰ বাবে অনলাইনযোগে লোৱা কিছু পদক্ষেপ:

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ACTION RESEARCH REPORT

TITLE OF THE STUDY:

Effectiveness of practical activities in work Education-A study on the D. El. Ed trainees of D.I.E.T, Tinsukia

Investigator:

Ms. Lipika Dutta, Lecturer, DIET, Tinsukia

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Chapter: 1

1.1 Introduction:

One of the most important concerns all over the World is 'Education'. Education enables a person to facilitate one's duties and responsibilities to oneself, to the family, to the society and to the Nation and help to live a successful and meaningful life. Education is basically a man making process that inspires and guides the younger generation. It is an absolute necessity that every child should get, irrespective of caste, creed, religion, class etc. It develops one's personality to the fullest extent possible and contributes to progress and prosperity of the community and to the country as a whole.

1.2 Work Education:

Work is an activity which requires physical as well as mental labour and to be a work it must be productive, innovative and creative one to fulfill our responsibilities towards self, society and even for the welfare of humanity. And if we talk about work education, it is an inseparable part of education which emphasizes on including knowledge, understanding and practical skills in educational activities. The concept of work education has come from the early Vedic period when the children lived in ashrams and did every kind of work, which are needed for their survival as well as developing mind. History says Mahatma Gandhi who was the first to propose basic education system, or known by name buniyadishikshavyavastha during wardha submits in October 1937 emphasizing the practice of doing work with education or to teach the children through the medium of handicraft. Mahatma Gandhi insisted on developing the '3 H' of our children i.e. hand, head and heart (Dayakishan, 2017).

Work education concept which is optional by education commission (1964-66) is similar to the concept of philosophy of basic education that emphasizes to introduce work education as an important part of all section of education. The national policy on education (1986) concluded work education as meaningful work which results into goods and services that are beneficial to the people. Work education includes of performance consisting of services, food, clothing, social services and leisure according to the mental level and skill of the children on the basis of accessibility of the local resources. NCF (2000) has given a new term work education in its place of earlier name work experience making it integral part of education. For the last forty years or

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so there is an increasing demand to include work education with regular syllabus, at every stages of education. Work education includes core as well as elective area and mostly emphasizing on practical aspect. Practical activities, being an important aspect of work education help in skill development of the child which is the need of the hour. Skill development of any child helps any individual in standing on his/her own feet's after completion of their education. As our present education system leading us to a place after which an individual is not able to fulfill his bread and butter aim so we should have to develop a educational system which will work to develop our all the six sense organ so that after completion of education students will be able to stand on their own feet.

1.3 Effectiveness:

Effectiveness is the capability of producing a desired result or the ability to produce desired output. When something is deemed effective, it means it has an intended or expected outcome. Effectiveness in practical activities means perfection, the optimum level of efficiency and productivity on the part of doing practical task in work education. It refers to the knowledge and skill to successfully perform the practical activities as expected.

1.4 Significance of the study:

Practical work or activity is a prominent and distinctive feature of work education. Our system of education should be based on the practical aspect of life instead of assessing the retention of memory by the child so that it reflects the level of learning and also brings some changes to discover the talents of the students wisely and help them in cherishing their inner power to the fullest. At present New Education policy 2020 has also emphasized on educating children through work. Despite the widespread use of practical work as a teaching and learning strategy in work education, seen that it is one of the most deserted subjects in the schools where practical activities of WE subjects are not compulsory and therefore less value is given. And most of the students often can't perform practical activities as we hope they would do. Because students are not alert about the importance of pursuing this subject with interest and as such this has led some educators to question the contribution of practical work to learning work education and its effectiveness in developing students' knowledge and skills. The study for this purpose has been

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stated as "The Effectiveness of Practical Activities in Work Education- A study on D. El. Ed trainees of D.I.E.T, Tinsukia."

1.5 Statement of the problem:

A study on the problem of performing practical activities methodically in work Education by the D. El. Ed. Trainees and its remedial measures.

1.6 Objectives:

I. To investigate the causes of poor performance of D.El.Ed trainees in practical activities of work education

II. To chalk out and plan a suitable intervention strategy as remedial measure.

III. To evaluate the effects of innovative practices.

1.7 Action hypothesis:

If a subject teacher adopts appropriate method, strategy and skills of doingpractical activities of work education with due interest then the students will show better performance.

1.8 Research Methodology:

1.8.1 Research Design: A Quasi-experimental Design has been used for carrying out this study.

1.8.2 Sèlection of samples: In this study, purposive sampling technique has been used in selecting the class/ semester as the paper 'Work Education' is in the curriculum of D.El.Ed first semester. Simple random sampling technique has been employed to select the sample. Out of total 44 trainees of D. El. Ed 1st semester, 50 per cent i.e., 22 trainees have been randomly selected.

1.8.3 Sources of baseline data: The sources of baseline data are Gunotsav report of the Tinsukia district, classroom observation, checking home assignments (EVS) books etc.

1.8.4 Selection of tool (for data collection): Tools are nothing but the instruments that help the researchers to gather data. The selection of tools depends upon the design of the study and the types of respondents we intend to cover. There are large number of

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tools and techniques available for data collection in research such as- Interview schedule, observation, questionnaire, case study, focus group discussion etc. To achieve the desired objectives, the respective action research has been conducted with the help of two major tools of data collection i.e. one test items/questionnaire for Pre-test and post- test and observation method.

1.8.5 **Methods of Analysis of data:** In this study collected data have been arranged in according to their nature and characteristics. On the basis of objectives of the study the collected data have been interpreted and analyzed through tabulation and graphical representation.

1.9 Limitation of the Study: The study is subjected to certain limitations-

i. Although there are many practical areas of WE, this study is restricted to handicraft and horticulture work as the area of study due to time constraint.
ii. The study is confined to first semester D.El.Ed trainees of DIET, Tinsukia.

Chapter: 2

2.1 Analysis and Interpretation:

Before practical work is implemented, the test items for pre-test were used to measure students' effectiveness in performing practical activities. The investigator examined their activities and on the basis of their performance, intervention given based on their problem areas like pedagogical approach. And then Post test was conducted to identify their effects after intervention.

The 5-point Rating scale coded as poor (below 40%), average (40-55) %, good (55-70) %, very good (70-85) %, excellent (above 85%) was used to measure their effectiveness. In this study, the investigator has arranged the data, collected from the questionnaire given to the trainees in Tabular form and has represented the data as clearly as possible.

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Table-I: Analysis of Pre-test data:

Sl. No.	Codename of students	Q1	Q2	Q3	Q4	Q5	Total Marks	Percentage (%)
1	A	5	6	6	6	6	29	58
2	B	6	5	6	5	6	28	56
3	C	5	5	6	6	6	28	56
4	D	5	6	6	4	5	26	52
5	E	6	6	6	3	5	26	52
6	F	4	4	4	3	4	19	38
7	G	5	4	4	4	4	21	42
8	H	5	5	3	4	5	22	44
9	I	6	4	3	5	5	23	46
10	J	4	6	5	5	6	26	52
11	K	5	4	5	5	6	25	50
12	L	6	6	6	6	5	29	58
13	M	6	5	3	4	4	22	44
14	N	5	5	5	5	4	24	48
15	O	4	5	6	3	6	24	48
16	P	4	3	6	5	6	24	48
17	Q	5	5	4	5	6	25	50
18	R	5	5	4	6	5	25	50
19	S	5	3	5	6	5	24	48
20	T	3	3	3	4	4	17	34
21	U	4	4	4	3	4	19	38
22	V	4	6	5	5	5	25	50

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Table –II: Analysis of Post test data:

Sl. No.	Code name of Trainees	Q1	Q2	Q3	Q4	Q5	Total Marks	Percentage(%)
1	A	7	8	7	6	8	36	72
2	B	8	7	6	8	8	37	74
3	C	4	8	7	6	8	33	66
4	D	5	8	8	6	7	34	68
5	E	6	7	8	5	7	33	66
6	F	5	6	6	5	5	27	54
7	G	5	5	7	5	5	27	54
8	H	6	5	5	5	5	26	52
9	I	5	6	6	5	5	27	54
10	J	4	8	7	8	7	34	68
11	K	5	6	7	8	7	33	66
12	L	6	7	8	8	7	36	72
13	M	6	7	5	6	6	30	60
14	N	5	7	7	7	5	31	62
15	O	4	7	8	5	8	32	64
16	P	4	8	8	6	8	34	68
17	Q	5	8	6	7	7	33	66
18	R	5	8	6	7	7	33	66
19	S	6	7	8	8	7	36	72
20	T	4	3	4	4	4	19	38
21	U	8	8	7	8	6	37	74
22	V	7	8	7	8	6	36	72

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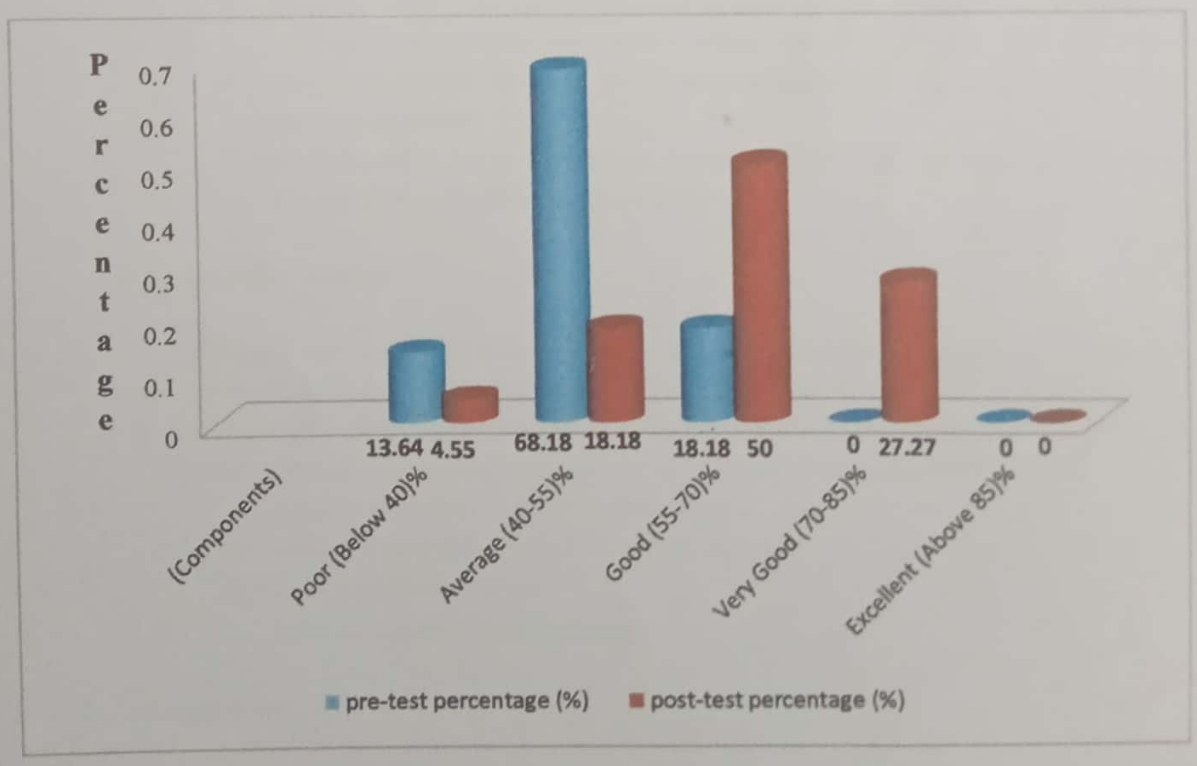
Table 3: Compilation of Pre-test and Post-test data

Sl.No	Parameters (Components)	Pre-test results No(s)	Pre-test results (%)	Post-test results No(s)	Post-test results (%)
1	Poor (Below 40)%	3	13.64 %	1	4.55 %
2	Average (40-55)%	15	68.18 %	4	18.18 %
3	Good (55-70)%	4	18.18 %	11	50 %
4	Very Good (70-85)%	0	0	6	27.27 %
5	Excellent (Above 85)%	0	0	0	0
Total		**22**	**100 %**	**22**	**100 %**

Diagram 1: Graphical Representation of data



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Chapter 3
Findings and Conclusion

3.1 Findings of the study:

Data collected with the help of questionnaire have been analyzed and then investigator took some interventions to improve the problem of doing practical activities prevalent among the trainees selected for the study. At the end, a final test i.e. post test was administered to students, where interventions were applied to see if there is any marked change. Some of the improvements that were noticed among the trainees during the operation were-

3.1.1 Positive Aspects:

- Among the total trainees (22), 13.64 per cent showed poor performance in pre-test which decreased to 4.55 per cent during post-test.
- In the table 3 it is noticed that among the total trainees (22), 68.18 per cent showed average performance in pre-test which decreased to 18.18 per cent during post-test.
- From the Table 3 it is seen that most of the trainees i.e. 50 per cent showed good performance after intervention which was 18.18 per cent during pre-test.
- Among the sample trainees, 27.27 per cent performed very good which was 0 per cent in pre-test.
- From the table 3 it is seen that no one showed excellent performance in both pre and post-test which is not satisfactory.

3.1.2 Negative Aspects:

Although the hypothesis stated as 'If the subject teachers teach appropriate skills and methods of doingpractical activities of work education with due interest then the students will show better performance' is proved still it has not attained near 100 per cent as because there are some negative aspects which are mentioned below-

- Lack of attention of a few sample trainees
- Irregular attendance of a few sample trainees
- First generation learner
- Lack of interest among trainees

3.2 Conclusion:

Although Work education isviewed as an essential component at all stages ofeducation, to be provided through well-structured and well-graded programme, the implementation of it in

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schools is still far from achievingthe objectives. For effective and successful execution of work education trained teachers should be recruited in the schools so that correct guidance can be given to students, the school should follow the activities according to the guidelines of NEP andSchool laboratory should be equipped with different equipment so that studentshould do the work with their need and interest and with the enjoyment ofwork they should learn dignity, respect to that work.

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কাৰ্যভিত্তিক গৱেষণা

বিষয় ঃ সমাজ বিজ্ঞান বিষয়ৰ এটি জটিল ধাৰণা অৰ্থাৎ জনমুৰি আয়ৰ ধাৰণা ছাত্ৰ-ছাত্ৰীয়ে আয়ত্ব কৰিবৰৈ টান পোৱাৰ কাৰণসমূহ আৰু ইয়াৰ সমাধানৰ উপায় সম্পৰ্কে অধ্যয়ন

প্ৰস্তুতকৰ্তা ঃ

শ্ৰীমতী পূৰবী বৰা
প্ৰবক্তা, জিলা শিক্ষা আৰু প্ৰশিক্ষণ প্ৰতিষ্ঠান, তিনিচুকীয়া, অসম

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বিষয় ঃ সমাজ বিজ্ঞান বিষয়ৰ এটি জটিল ধাৰণা অৰ্থাৎ জনমুৰি আয়ৰ ধাৰণা ছাত্ৰ-ছাত্ৰীয়ে আয়ত্ব কৰিবলৈ টান পোৱাৰ কাৰণসমূহ আৰু ইয়াৰ সমাধানৰ উপায় সম্পৰ্কে অধ্যয়ন

(ক) আৰম্ভণি (Introduction) ঃ

কাৰ্যভিত্তিক গৱেষণা হ'ল এজন বৃত্তিজীৱিৰ আত্ম উপলব্ধিৰ ভিত্তিত হোৱা এক অন্বেষণ। যেতিয়া এজন বৃত্তিজীৱিয়ে তেওঁৰ কৰ্মক্ষেত্ৰত সন্মুখীন হোৱা সমস্যাসমূহ সমাধান কৰিবৰ বাবে তেওঁৰ পূৰ্বৰে পৰা চলি থকা কৰ্মপন্থা সংশোধিত কৰিবলৈ গৱেষণা হাতত লয় তেতিয়া তাক কাৰ্যভিত্তিক গৱেষণা বুলি কোৱা হয়। এজন শিক্ষকে তেওঁৰ শ্ৰেণীকক্ষত পোৱা বিভিন্ন সমস্যা বা এজন প্ৰশাসকে তেওঁৰ ক্ষেত্ৰখনত পোৱা সমস্যাসমূহ সমাধান কৰিবৰ বাবে কৰা গৱেষণাই তেওঁৰ শিক্ষাদান কাৰ্য বা প্ৰশাসনিক কৰ্ম অধিক ফলপ্ৰসু কৰি তোলে। কাৰ্যভিত্তিক গৱেষণা কেৱল নিৰ্দিষ্ট কাৰ্যক্ষেত্ৰখনতে সীমাবদ্ধ থাকে।

(খ) মোৰ কাৰ্যভিত্তিক গৱেষণাৰ ক্ষেত্ৰ কি আৰু কিয় বাচি ল'লো ?

শিক্ষক হিচাপে যেতিয়া আমি শ্ৰেণীকক্ষত এশ এবুৰি সমস্যাৰ সন্মুখীন হওঁ তেতিয়া আমি সেই সমস্যাসমূহৰ সমাধানৰ পথ বিচাৰি হাবাথুৰি খাওঁ আৰু নিজকে এবাৰ মূল্যায়ন কৰি চোৱাৰ আগ্ৰহ জন্মে। মইও এগৰাকী শিক্ষক হিচাপে প্ৰাথমিক শিক্ষাৰ ডিপ্লমা (D.El.Ed) পাঠ্যক্ৰমৰ প্ৰশিক্ষাৰ্থীসকলক প্ৰশিক্ষণ প্ৰদান কৰোতে সমাজ বিজ্ঞান বিষয়ত প্ৰায়ে বহুবিধ সমস্যাৰ সন্মুখীন হৈছিলো। মোৰ উপলব্ধি হৈছিল যে প্ৰশিক্ষাৰ্থীসকলৰ সমাজ বিজ্ঞানৰ কিছুমান মূল অৱধাৰণাৰ সম্যক জ্ঞান নথকাৰ বাবে পৰৱৰ্তী পৰ্যায়ত পোৱা কিছুমান জটিল ধাৰণা আয়ত্ব কৰিবলৈ অপাৰগ হৈছিল। উদাহৰণ স্বৰূপে - "জনমুৰি আয়"ৰ ধাৰণাটো বোধগম্য নোহোৱাৰ বাবে প্ৰশিক্ষাৰ্থীসকলে পৃথিৱীৰ উন্নত, অনুন্নত বা অনগ্ৰসৰ দেশসমূহৰ প্ৰকৃত ছবিখন অনুধাৱন কৰিব পৰা নাছিল। সেয়ে মই মোৰ কাৰ্যভিত্তিক গৱেষণাৰ অধ্যয়নৰ ক্ষেত্ৰ হিচাপে সমাজ বিজ্ঞান বিষয়টোকে বাচি লৈছিলো।

সাধাৰণতে সমাজ বিজ্ঞান বিষয়ত তলত উল্লেখ কৰা সমস্যাসমূহ দেখা যায়। সমাজ বিজ্ঞান বিষয়ত ছাত্ৰ-ছাত্ৰীয়ে সন্মুখীন হোৱা সমস্যাসমূহ ঃ

১। স্কেল বা দ্ৰাঘিমা অক্ষ ব্যৱহাৰ কৰি শুদ্ধকৈ মেপ অংকন কৰিব নোৱাৰে।

২। সমাজ বিজ্ঞানৰ অৰ্থনীতি খণ্ডৰ লগত জড়িত গাণিতিক সমস্যাসমূহ সমাধান কৰিবলৈ টান পায়।

৩। সমাজ বিজ্ঞানৰ বুৰঞ্জী খণ্ডৰ চন, তাৰিখবোৰ ক্ৰম অনুসাৰে মনত ৰাখিবলৈ টান পায়।

৪। সমাজ বিজ্ঞানৰ কিছুমান জটিল ধাৰণা যেনে - জনমুৰি আয় আদি সম্পৰ্কে ধাৰণা আয়ত্ব কৰিবলৈ টান পায়।

৫। সমাজ বিজ্ঞান বিষয়ৰ লগত জড়িত বিভিন্ন লেখচিত্ৰ অংকন কৰিবলৈ টান পায়।

উল্লেখিত সমস্যাসমূহৰ মাজৰ পৰা তলত উল্লেখ কৰা সমস্যাটো অধ্যয়নৰ বিষয়বস্তু হিচাপে গ্ৰহণ কৰা হৈছে।

(গ) সমস্যাৰ নিৰ্দিষ্ট উক্তি (Statement of the Problem) ঃ

সমাজ বিজ্ঞান বিষয়ৰ এটি জটিল ধাৰণা অৰ্থাৎ জনমুৰি আয়ৰ ধাৰণা ছাত্ৰ-ছাত্ৰীয়ে আয়ত্ব কৰিবলৈ টান পোৱাৰ কাৰণসমূহ আৰু ইয়াৰ সমাধানৰ উপায় সম্পৰ্কে অধ্যয়ন।

(ঘ) উদ্দেশ্য (Objectives) ঃ

১। জনমুৰি আয় সম্পৰ্কে বোগম্য নোহোৱাৰ সম্ভাব্য কাৰণসমূহ চিনাক্ত কৰা।

২। সমস্যা সমাধানৰ তথা নিৰাময়ৰ বাবে অভিনৱ কাৰ্যব্যৱস্থা গ্ৰহণ।

৩। অভিনৱ কাৰ্যপন্থাসমূহে ছাত্ৰ-ছাত্ৰীৰ ওপৰত পেলোৱা প্ৰভাৱ আৰু প্ৰতিক্ৰিয়াৰ সঠিক মূল্যায়ন কৰা।

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(ঙ) সম্ভাব্য সমাধান সূত্র (Action Hypothesis) ঃ

যদি ছাত্ৰ-ছাত্ৰীসকলক জনমুখি আয়ৰ লগত জড়িত উপাদানসমূহৰ সঠিক ধাৰণা আৰু বিভিন্ন দেশৰ অৰ্থনীতিৰ তুলনামূলক তথ্য অভিনৱ কাৰ্যপন্থাৰে বিশ্লেষণ কৰি শিকোৱা হয় তেতিয়া এই ধাৰণা আয়ত্ব কৰিব পাৰিব।

(চ) সীমিতকৰণ (Limitations) ঃ

নমুনা ঃ নমুনা হিচাপে তিনিচুকীয়া জিলা শিক্ষা আৰু প্ৰশিক্ষণ প্ৰতিষ্ঠানৰ D. El. Ed পাঠ্যক্ৰমৰ দ্বিতীয় ষান্মাসিকৰ ৪৪ জন প্ৰশিক্ষাৰ্থীৰ পৰা ২০ জন প্ৰশিক্ষাৰ্থীক যাদিচ্ছিকভাৱে বাচনি কৰা হৈছিল।

(ছ) তথ্য সংগ্ৰহৰ আহিলা (Tools of Date Collection) ঃ

তথ্য আহৰণৰ আহিলা হিচাপে তলত উল্লেখ কৰা আহিলাসমূহ প্ৰয়োগ ঘটোৱা হয়।

(ক) প্ৰাক্ অভীক্ষা প্ৰশ্নকাকত

(খ) অন্তিম অভীক্ষা প্ৰশ্নকাকত

(গ) প্ৰাক্ অভিক্ষাৰ নম্বৰ তালিকা

(ঙ) তথ্য সংক্ষিপ্তকৰণৰ কাৰণে five point rating scale ।

(চ) সংলগ্ন পত্ৰ (১ ৰ পৰা ৫ নং) লৈ।

(জ) সময়ৰ পৰিসৰ (Time Line) ঃ

২ মাহ (১ ছেপ্তেম্বৰ, ২০২১ - ৩১ অক্টোবৰ, ২০২১)

(ঝ) গৱেষণাৰ নক্সা (Methodology) ঃ

এই অধ্যয়নত Quasi Experimental Design প্ৰয়োগ ঘটোৱা হয়।

প্ৰাক্ অভীক্ষা

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অন্তৰ্বৰ্তী কাৰ্যব্যৱস্থা

|

অন্তিম অভীক্ষা

(ঞ) তথ্য বিশ্লেষণ (Data Analysis) ঃ

তালিকাকৰণৰ দ্বাৰা বিশ্লেষণ। (Data analysis by tabulation)

তালিকা - ১ (Table - 1) ঃ প্ৰাক্ অভীক্ষাৰ ফলাফলৰ তথ্য (Data of Pre-test result)

Sl. No.	Code name of students	Q 1	Q 2	Q 3	Q 4	Q 5	Q 6	Q 7	Q 8	Q 9	Q 10	Q 11	Q 12	Q 13	Q 14	Q 15	Etc.	Total marks	% of marks
1	A	1			1	1	1	1	1	1	1	1	3	1	1	1		15	50
2	B	1				1		1	1		1	1		1	1	1		9	30
3	C	1				1	1	1	1	1	1	1	3	1	1	1		14	47

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4	D	1				1	1	1	2	1	2	2	4	2	1	1		19	63
5	E	1				0	1	1	1	1	1	1	1	1	1	1		11	37
6	F	1				1	1	1	1	2	1	2	3	1	1	1		16	53
7	G	1				1	1	1	1	1	1	1	1	1	1	0		11	37
8	H	1				0	1	1	1	1	1	1	3	1	1	1		14	47
9	I	1				1	1	1	1	1	1	1	0	1	1	0		10	33
10	J	1				0	1	1	1	2	1	2	3	2	1	2		17	57
11	K	1				1	1	1	1	0	1	1	0	1	1	0		9	30
12	L	1				1	1	2	2	2	2	2	4	2	2	1		22	73
13	M	1				1	1	2	2	2	1	2	4	2	1	1		20	67
14	N	1				1	1	1	1	1	1	1	0	1	1	1		11	37
15	O	1				1	1	1	1	1	1	1	4	1	1	1		15	50
16	P	1				1	1	1	1	1	1	1	3	1	1	1		14	47
17	Q	1				1	1	1	0	1	1	1	0	1	0	0		8	27
18	R	1			1	1	1	2	1	2	2	2	4	1	1	1		20	67
19	S	1				1	1	1	1	2	1	2	4	1	1	1		17	57
20	T	1				1	1	1	1	1	1	1	0	1	0	1		10	33

তালিকা -২ (Table-2) : অন্তিম অভীক্ষাৰ ফলাফলৰ তথ্য (Data of Post Test Result)

SL. NO	Code name of students	Q 1	Q 2	Q 3	Q 4	Q 5	Q 6	Q 7	Q 8	Q 9	Q 10	Q 11	Q 12	Q 13	Q 14	Q 15	Etc	Total marks	% of marks
1	A	1			1	1	2	1	1	2	2	2	3	1	1	1		19	63
2	B	1			0	1	1	1	1	1	1	1	0	1	1	1		11	37
3	C	1		1	1	1	2	1	1	1	1	1	3	1	1	1		17	57
4	D	1			1	1	1	1	1	2	2	2	4	2	1	1		20	67
5	E	1			0	1	1	1	1	1	1	1	1	1	1	1		12	40
6	F	1			1	1	1	1	1	1	2	2	4	2	2	1		20	67
7	G	1		1	1	1	1	1	1	1	1	1	3	1	1	1		16	53
8	H	1		1	1	1	1	1	1	1	1	1	3	1	1	1		16	53
9	I	1			1	1	1	1	1	1	1	1	0	1	1	1		12	40
10	J	1			1	1	1	1	2	1	2	2	3	2	2	1		20	67
11	K	1		0	0	1	1	1	1	1	1	1	0	1	1	1		11	37
12	L	1		1	1	1	2	2	2	2	2	2	4	1	2	2		25	75
13	M	1		0	0	1	2	2	2	1	2	2	4	2	1	1		21	70
14	N	1			1	1	1	1	1	1	1	1	2	1	1	1		14	47
15	O	1			1	1	1	2	2	1	1	1	4	1	1	1		18	73
16	P	1		1	1	1	1	1	1	1	1	2	3	1	1	1		17	57
17	Q	1		1	1	1	1	1	1	1	1	1	0	0	0	0		10	33
18	R	1		1	1	1	1	1	1	2	2	2	4	2	1	1		21	70
19	S	1			1	1	1	1	1	1	1	1	4	2	2	2		19	63
20	T	1			1	1	1	1	1	1	1	1	0	1	0	1		11	37

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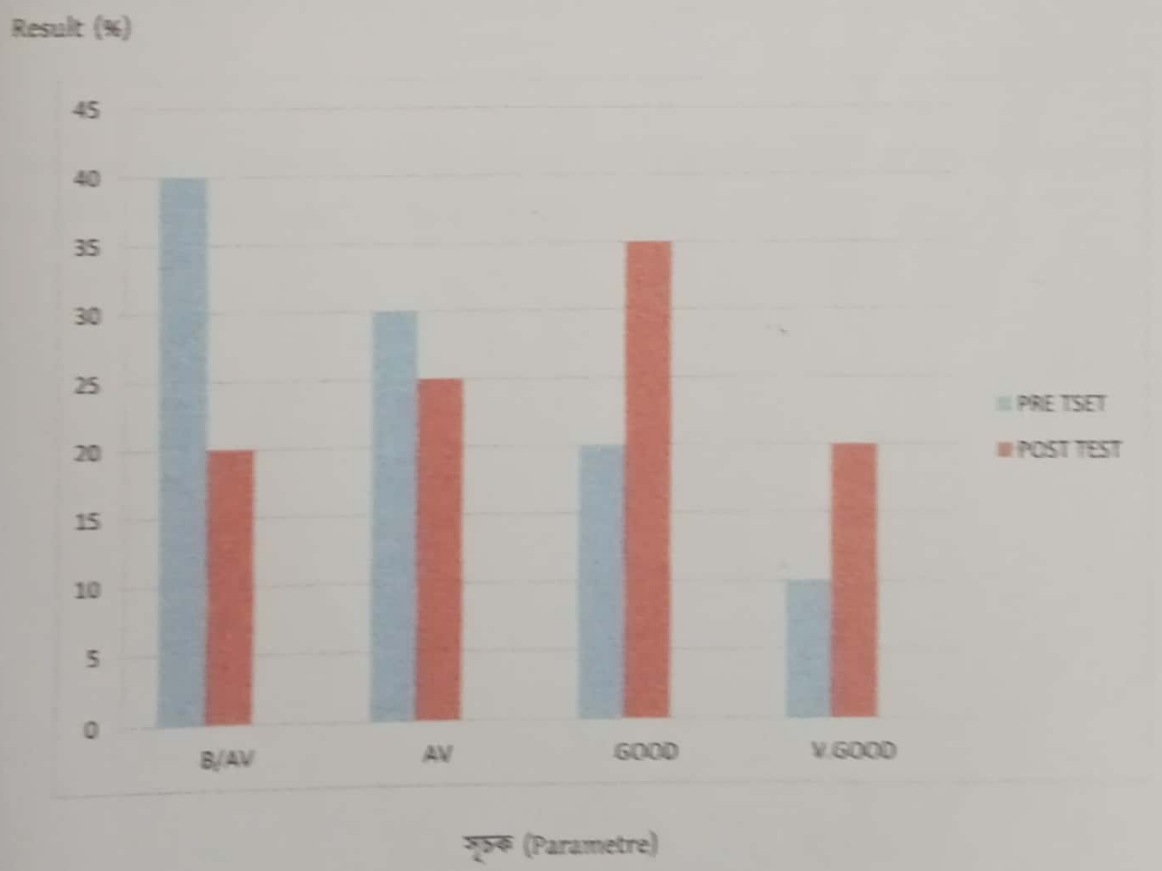
তালিকা- ৩ (Table-3): প্ৰাক অভীক্ষা আৰু অন্তিম অভীক্ষা তথ্য বিশ্লেষণ (Data analysis of Pre-test and Post-Test Result)

ক্ৰ: নং	সূচক (Parametre)	প্ৰাক্ অভীক্ষাৰ ফলাফল (নমুনাৰ সংখ্যা)	প্ৰাক্ অভীক্ষাৰ ফলাফল শতকৰা হাৰ(%)	অন্তিম অভীক্ষাৰ ফলাফল (নমুনাৰ সংখ্যা)	অন্তিম অভীক্ষাৰ ফলাফলৰ শতকৰা হাৰ (%)
1	Below Acerage (40%)	8	40%	4	20%
2	Average (40-55)%	6	30%	5	25%
3	Good (55-70)%	4	20%	7	35%
4	Very Good (70-85)%	2	10%	4	20%
5	Excellent (<85)%				

তালিকা-৪ (Table-4) : লেখ চিত্ৰৰ দ্বাৰা তথ্য বিশ্লেষণ (Data Analysis by Graph Diagram)



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(ট) ফলাফল (Findings):- প্ৰাক অভীক্ষা আৰু অন্তিম অভীক্ষাৰ ফলাফল পৰ্যবেক্ষণ কৰি দেখা গ'ল-

(১) প্ৰাক্ অভীক্ষাত ৪০%, প্ৰশিক্ষাৰ্থীয়ে ৪০ % ৰ তলৰ নম্বৰ পাইছিল। কিন্তু অন্তিম অভীক্ষাত কেৱল ২০% প্ৰশিক্ষাৰ্থীয়েহে ৪০% ৰ তলত নম্বৰ পাইছিল।

২) প্ৰাক অভীক্ষাত ৩০% প্ৰশিক্ষাৰ্থীয়ে (৪০-৫৫)%ৰ ভিতৰত নম্বৰ পোৱাৰ বিপৰীতে অন্তিম অভীক্ষাত ২৫% প্ৰশিক্ষাৰ্থীয়ে (৪০-৫৫)% ৰ ভিতৰত নম্বৰ পাবলৈ সক্ষম হ'ল।

৩) প্ৰাক অভীক্ষাত কেৱল ২০% প্ৰশিক্ষাৰ্থীয়ে (৫৫-৭০)% ভিতৰত নম্বৰ পাবলৈ সক্ষম হৈছিল। আনহাতে অন্তিম অভীক্ষাত দেখা গ'ল- ৩৫% প্ৰশিক্ষাৰ্থীয়ে (৫৫-৭০)% ৰ ভিতৰত নম্বৰ লাভ কৰিবলৈ সক্ষম হ'ল।

৪) প্ৰাক অভীক্ষাত ১০% প্ৰশিক্ষাৰ্থীয়ে (৭০-৮৫)% ভিতৰত নম্বৰ পোৱাৰ বিপৰীতে অন্তিম অভীক্ষাত ২০% প্ৰশিক্ষাৰ্থীয়ে (৭০-৮৫)% ৰ ভিতৰত নম্বৰ লাভ কৰিবলৈ সক্ষম হ'ল।

এই কাৰ্য্যভিত্তিক গৱেষণাৰ আটাইতকৈ লক্ষ্যণীয় ফলাফল এই যে প্ৰশিক্ষাৰ্থীসকলৰ সমাজ বিজ্ঞান বিষয়টিৰ প্ৰতি থকা দূৰ্বল মানসিকতাৰ বহু পৰিৱৰ্তন ঘটিল। প্ৰশিক্ষাৰ্থী সকলে সমাজ বিজ্ঞানৰ জটিল ধাৰণাসমূহ সহজে আয়ত্ত্ব কৰিবলৈ শিকিলে, তদুপৰি বাস্তৱ ক্ষেত্ৰখনত এই ধাৰণা সমূহৰ গুৰুত্ব সম্বন্ধে বুজি পোৱাৰ লগতে লেখ চিত্ৰ অংকনৰ জৰিয়তে তথ্য সমূহ প্ৰকাশ কৰিব পৰা হ'ল।

(ঠ) মন্তব্য (Remarks):- এই কাৰ্যভিত্তিক গৱেষণাৰ দ্বাৰা প্ৰমাণ হ'ল যে উপযুক্ত শিক্ষন-শিকন পদ্ধতি আৰু অভিনৱ কাৰ্যপন্থাৰ দ্বাৰা সমাজ বিজ্ঞানৰ জটিল ধাৰণাসমূহ ছাত্ৰ-ছাত্ৰীক সহজে আয়ত্ব কৰাব পাৰি।

প্ৰস্তুতকৰ্তা

পূৰবী বৰা, প্ৰবক্তা

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