

## **TITLE OF THE STUDY:**

A study on effectiveness of Puzzle games in improving vocabulary in 2nd Language (English) among the class IV students of Mahkhuli LPS of Tinsukia District.

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**Patron: Dr Nirada Devi**

**Director, SCERT Assam**

**Advisory Body: District Research Committee (DRC), DIET, Tinsukia**

**Supervisor: Mrs Sansita Gogoi**

**Principal, DIET Tinsukia**

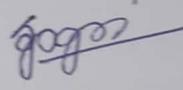
## **Published by:**

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

## Certificate

This is to certify that Chandra Kumar Dahal, Lecturer DIET Tinsukia has worked under my guidance and supervision for her action research "*A study on effectiveness of Puzzle games in improving vocabulary in 2nd Language (English) among the class IV students of Mahkhuli LPS of Tinsukia District.*" This study is an authentic and a bona fide research work.

Date: 01/03/2025

Signature: 

Name: Mrs Sansita Gogoi

Place: Tinsukia

Principal, DIET Tinsukia  
Principal  
District Institute of Education  
and Training, Tinsukia

## ACKNOWLEDGEMENT

At the very outset I owe my deepest regards to Ms. Sansita Gogoi Principal, DIET, Tinsukia for selecting me to conduct this research work. I also offer my sincere gratitude to Research Committee of DIET, Tinsukia for permitting me to carry out the Research study titled "*A study on effectiveness of Puzzle games in improving vocabulary in 2nd Language (English) among the class IV students of Mahkhuli LPS of Tinsukia District.*" I also expressed my gratitude to the Sr. Lecturers/ Lecturers and staffs of DIET, Tinsukia for extending their support and help as desired.

I also like to extend my gratitude to Jyotsna Dowarah Saikia, Head mistress, Mahkhuli LPS for allowing me to conduct the study in her school and extending help and support as and when needed. I am also grateful to Trinity Gogoi Borgohain, Asst. Teacher for providing interventions in desired way and assisting me in evaluation process. I also offer my sincere thanks to all the teaching staff of Mahkhuli LPS for extending their support and help.

I offer my sincere thanks to DTP operator Sujit Deb and Luhit Dutta Proprietor of Duliajan, Offset press, Old bus stand Duliajan for getting the DTP work done and getting spiral binding of this work done.

At the end I apologize for those whom I missed unintentionally to mention in this acknowledgement.

Place: DIET, Tinsukia

  
Chandra Kumar Dahal, Lecturer, DIET, Tinsukia

Date: 27-02-2025

# Chapter-1

## INTRODUCTION:

### 1.1 OVERVIEW

Tinsukia district was initially an integral part of the Boro kingdom, Chuttia kingdom and later on of Motok kingdom. Before the British rule, it was under the rule of the Ahom and the Khamties kingdom. The name Tinsukia is derived from the name of the main pond the historic Tinkunia Phukhuri.

The name of Tinsukia was originally Changmai Pathar. The mighty king Sarbananda Singha established an independent kingdom in 1788 and established its capital Bengmara here after the historic Mayamoria second revolution. The monumental work of the three cornered pond .Tinkuniapukhuri, which was an example of the benevolent work of the Mottock rulers, prompted the presses of the remaining the place as Tinsukia instead of Bengmara.

Tinsukia district is located in the eastern most part in the state of Assam. The river Lohit physically bifurcates the Sadiya sub division from the rest of the district. The southern and the northern boundary is connected by the inner state boundary of Assam and Arunachal Pradesh.

#### **Boundaries:**

East – Arunachal Pradesh

North –Arunachal Pradesh and Dhemaji district

South – Arunachal Pradesh and Dibrugarh district

West – Dibrugarh district

The district is a home of almost all the linguistic and religious group of Assam. The chief components of the population are The Ahom, Moran, Muttak, Tea tribes ,Deori, Missing, Kachari, Chutia, Bodo, Chingpho, Taiphake, Bengali, Punjabi, Nepali, Marowari, Bhojpuri etc. Hence it has a combination of all culture belonging to these communities. Accordingly it bears the multi Lingual quality of these tribes.

Geographically it is large district located in the easternmost part of Assam. Tinsukia district covers an area of 3790 sq.km. the geographical area of Tinsukia district is 3970 sq.km Tinsukia district within the longitude between 95.22'E and 95.38'E and latitude between 27.23'N and 27.48'N. The level of Tinsukia district higher about sea level is almost 147.83 to 148.30m.

## 1.2 NEED OF THE STUDY:

Language is treated to be the very basic step towards learning any subject. It is a universal truth that without acquiring the basic language skills, i.e. listening, speaking, reading and writing one cannot convey even a simple message in an expected way. Though psychologists say language skill in children starts getting developed right from the birth but formal language start developing when they start using it as medium of communication in the social platform.

Primary schooling period of children's life is considered to be the most crucial because, from this age children start using official form of language. From this period they start coding and decoding the language in an official fashion. From our recent visits in the government schools it is understood that children in class IV could not write simple words and read simple sentences comfortably in 2<sup>nd</sup> Language (English) from their text books. Keeping this scenario in mind I have decided to carry out the action research upon the students of class IV in Mahkhuli LP School of Hapjan Education Block, Tinsukia.

## 1.3 PROBLEM AREA:

During my visits in the schools I have come across with the following issues towards learning 2<sup>nd</sup> language (English) -

- a) Unable to read simple sentences correctly
- b) Unable to read with correct pronunciation and intonation
- c) Inability in replying any question in a simple sentence
- d) Inability in finding out an answer to a question put up from the text book
  
- e) Out of all these problems mentioned above I have selected the problem mentioned in (a) Unable to read simple sentences correctly and (b) Unable to read with correct pronunciation and unable to follow dictation to write simple words and sentences. To deal with these issues I have decided to use puzzles, cross words and language games as intervention strategy.

## 1.4 STATEMENT OF THE PROBLEM:

Effectiveness of Puzzle games in improving Vocabulary in 2nd Language (English) among the class IV students of Mahkhuli LPS of Tinsukia District

## 1.5 OBJECTIVES OF THE RESEARCH :

- (i) To enhance reading 2<sup>nd</sup> Language skills through the use of language games, crosswords and puzzles
- (ii) To make students aware on how reading is expected in case of 2<sup>nd</sup> language
- (iii) To make them familiar with the language games, puzzles etc towards learning 2<sup>nd</sup> Language.
- iv) To make the students aware about the pronunciation pattern of English words and sentences and write them correctly.

## **1.6 HYPOTHESIS:**

If the class IV students of Mahkhuli LPS are taught the 2<sup>nd</sup> Language i.e. English through the use of TLMs such as puzzles, cross words, riddles etc. they will be able to read English well.

## **1.7 DELIMITATION OF THE STUDY:**

The study is meant for the class IV level students of Mahkhuli LPS of Tinsukia district. Hence it will cover the issues related to teaching learning of 2<sup>nd</sup> Language(English) in the 4<sup>th</sup> standard of Mahkhuli LPS of Hapjan Block in the Tinsukia district of Assam.

## Chapter-2

### 2.1 PROCEDURE:

a) **Selection of sample** – the class IV students of Mahkhuli LPS are selected as sample group of survey. They are selected through random sampling method.

Initially, a pre-test was held to identify the areas of weakness in the students through a self designed tool. An intervention plan was drawn out on meeting the areas of weakness in the students in learning the 2<sup>nd</sup> Language such as Purpose based TLMs, crosswords, puzzles and other reading and writing techniques suitable on demand of time and situation.

b) **Tools of Data collection-**

- i) Pre-test Questionnaire
- ii) Post-test Questionnaire
- iii) Rating scales

Initially a pre-test was conducted to identify the capability of the students through a questionnaire contained with following items-

- (i) Reading and writing vowels and consonants in jumble up form
- (ii) Reading and writing words using two letters
- (iii) Reading and writing words using three letters
- (iv) Reading and writing words using four letters
- (v) Reading simple sentences using simple words

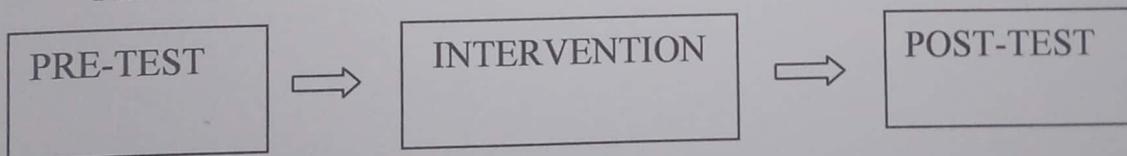
### 2.2 METHODS:

Methodology undertaken during the course of study is very important. It gives a pathway towards smooth conducting a study. The methods largely used in educational research are-

- i) Survey Design
- ii) Experimental
- iii) Quasi-experimental Design

Out of these commonly used methods we have selected the *Quasi-experimental* Design to carry out the survey.

This includes following ways of intervention-



## Chapter-3

### 3.1 DATA ANALYSIS:

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 arriving 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, bar graph and pie diagram used to make clear and analyze 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 analyzed systematically to meet the pre-determined objectives. The steps involved in analyzing data in this study are-

- a) Tabulation of data obtained from pre-test & post test
- b) Categorizing through rating scales
- c) Graphical presentation
- d) Analysis and interpretation of the data

Data are collected through field intervention. They are recorded in a systematic way and reflected through charts bar graphs etc. The change which is noticed after each intervention is shown through a table.

i) **Comparison of Pre-test and Post-test**

**Table – I (Pre-Test Data)**

Sl.No.	Code of students	Marks Obtained	Percentage	Remarks
01	A	13	65	Good
02	B	2	10	Poor
03	C	3	15	Poor
04	D	6	30	Poor
05	E	4	20	Poor
06	F	18	90	Excellent
07	G	2	10	Poor
08	H	4	20	Poor
09	I	13	65	Good
10	J	10	50	Average
11	K	5	25	Poor
12	L	15	75	Very Good
13	M	13	65	Good
14	N	4	20	Poor
15	O	10	50	Average
16	P	5	25	Poor
17	Q	2	10	Poor
18	R	5	25	Poor
19	S	2	10	Poor
20	T	5	25	Poor
21	U	2	10	Poor
22	V	19	95	Excellent
23	W	14	70	Good
24	X	2	10	Poor
25	Y	4	20	Poor

### 3.2 Intervention Procedure

On the basis of findings of Pre-Test the areas of intervention are identified as follows:

1. Need to identify the alphabets well
2. Need to read simple words with proper pronunciation
3. Need to develop writing skill on the basis of identified words being pronounced
4. Need to relate the learned words with other rhyming words
5. Need to relate the learned vocabulary with similar vocabulary

Based on these findings an intervention schedule is prepared as follows which is reflected with result and remarks being observed:

**Table: 2**

Sl. No.	Progress Period	Progress Result	Remarks
1	Progress after 7 days	Students get motivated to learn the language and non-major improvements are seen	Below Average
2	Progress after 14 days	Students are able to somewhat spell and say correct pronunciation of some words and write basic two words	Below Average
3	Progress after 21 days	Students could spell and write basic three letter words	Average
4	Progress after 30 days	Students could somewhat read and write some basic sentences following dictation	Average
5	Progress after 3 Months	Students could read and write some basic sentences following dictation	Average/ Above Average

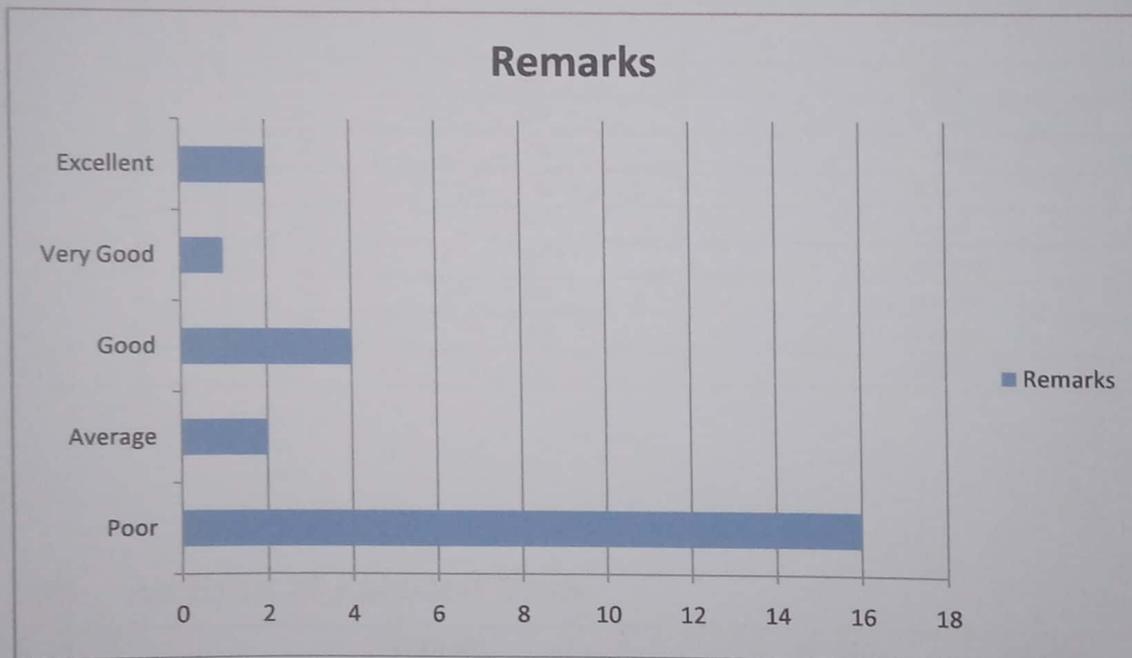
**Table: 3**

**ii) Analysis of Pre-test Data-**

SL. NO.	GRADE	SCALE	NO. OF STUDENTS
1	EXCELLENT (Who could read and write all the items being given)	85% >	2
2	VERY GOOD (Who could read and write most of the items)	70-85%	1
3	GOOD (Who could read and write some of the items given)	55-70%	4
4	AVERAGE (who could utter a few items given to read and write)	40-55%	2
5	POOR (Who could neither utter nor write a single item)	<40%	16

**Figure: 1**

**iii) Graphical presentation of Pre-Test Data**



**iv) OBSERVATIONS-**

While going through the data it is found that there is no child who could score in excellent and very good range. In good range 4 children could be found, 2 in average range. The matter which worries most is the 16 students are found in the below average range. Therefore, there is an urgent need of reviewing the issues and problems behind such poor performance in reading 2<sup>nd</sup> Language(English) by the students. After discovering the causes behind this type of performance there needs to initiate well planned intervention strategies to address the issues. The commonly found issues behind poor performance are-

- i) Lack of planned methodologies in teaching the 2<sup>nd</sup> Language (English)
- ii) Lack of proper attention by the parents (90% of these children are first generation learners)
- iii) Absenteeism in the schools

**Table: 4****v) Mark-sheet of Post-test (Action Research):**

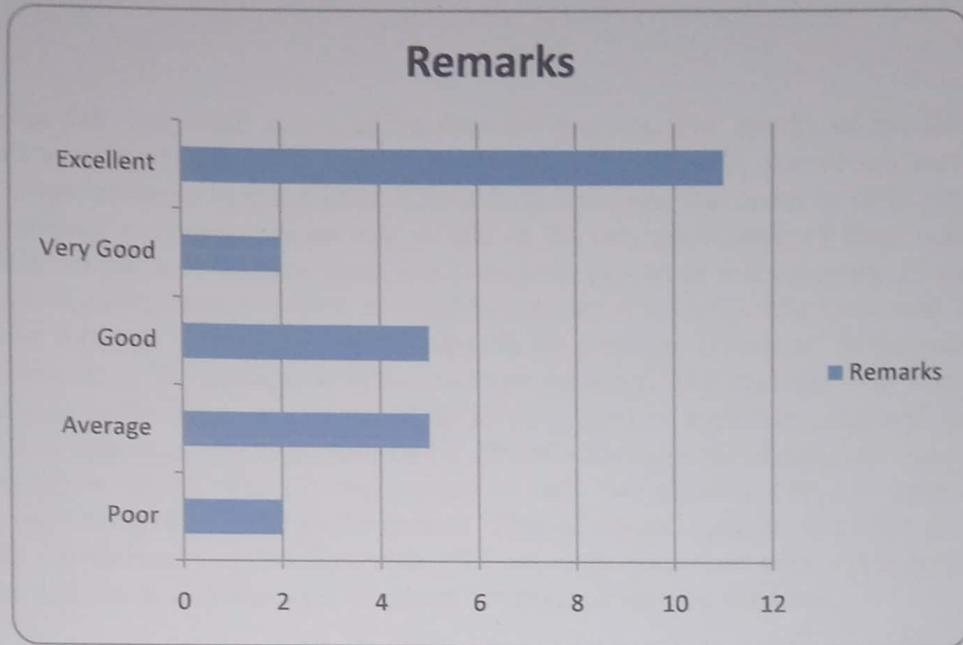
Sl. No.	Name of students	Marks Obtained	Percentage	Remarks
01	A	18	90	Excellent
02	B	13	65	Good
03	C	10	50	Average
04	D	9	45	Average
05	E	9	45	Average
06	F	19	95	Excellent
07	G	12	60	Good
08	H	14	70	Good
09	I	19	95	Excellent
10	J	17	85	Excellent
11	K	14	70	Very Good
12	L	19	95	Excellent
13	M	17	85	Excellent
14	N	17	87	Excellent
15	O	17	85	Excellent
16	P	19	95	Excellent
17	Q	13	65	Good
18	R	14	70	Very Good
19	S	8	40	Average
20	T	6	30	Poor
21	U	13	65	Good
22	V	17	85	Excellent
23	W	18	90	Excellent
24	X	8	40	Average
25	Y	6	30	Poor

**vi) Analysis of Post-test Data-**

SL. NO.	GRADE	SCALE	NO. OF STUDENTS
1	EXCELLENT (Who could read and write all the items being given)	85% >	11
2	VERY GOOD (Who could read most of the items)	70-85%	2
3	GOOD (Who could read some of the items given to read)	55-70%	5
4	AVERAGE (who could utter a few items given to read)	40-55%	5
5	POOR (Who could neither utter nor write a single item)	<40%	2

Figure: 2

vii) Graphical presentation of Post -Test data



viii) OBSERVATIONS-

Figure: 3

Comparison Between Pre-Test & Post-Test



The Post-test data are much encouraging than the pre-test. The results of the intervention strategy are very well reflected in the post-test data. There are 11 nos of students stand in excellent range whereas in the pretest it was 2. It indicates that there is 40% jump in the excellent category in compare to pre-test results. In the very good category there was only not a single child in pre-test but now there are 2 students placed in this category. If we convert this in terms of percentage in pretest it was 2% but now it is in 4% after post-test. The good category was 5 in pre-test and it remained same in the post test. Of course, in the post test this category came from the average or below average category. The students who were in good category range earlier have now climbed up to very good or excellent category. In average category there reported only two children i.e. 8% of entire sample population. Another most significant aspect of this study is the present of only two children (8%) in below average category; whereas it was 80% in the pretest. This of course may be recorded as the most remarkable achievement of the Research. We are optimistic that with more research and proper intervention in future course of action better result may be expected.

## Chapter-4

### 4.1 Findings and recommendations-

There were four main objectives to conduct the study. All of them were related to interventional strategies to be adopted to find out the issues and problems involved behind poor performance of the students in 2<sup>nd</sup> Language (English).

The facts and figures mentioned above obviously state that there are numbers of issues related to teaching – learning of 2<sup>nd</sup> Language (English) in Tinsukia district. The causes and problems related to this field were analyzed well and proper intervention strategies were adapted to deal with this issue. In fact, there is an urgent need to look into the aspects of teaching of 2<sup>nd</sup> Language (English) to the children in Tinsukia district. The causes behind this issue are-

- i) Most of the cases the difference between home language and school language and their consequent effect in 2<sup>nd</sup> Language (English)
- ii) Lack of proper planning to deal with the multilingual character of the students and to relate it to the 2<sup>nd</sup> language.
- iii) Unavailability of adequate games, puzzles and Crosswords to teach 2<sup>nd</sup> Language(English).
- iv) Lack of proper training for the teachers to teach the language.

Lack of well planned and effective remedial measures.

Keeping the above findings in mind it is further recommended for a good quality of training to all the teacher of LP level to teach second language well. It is also recommended that educational functionaries should periodically visit the school and observe the procedure of teaching second language (English) in the school.

Table: 5  
Money Budgeting

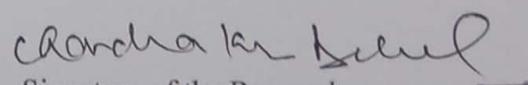
Sl. No.	Area of cost	Quantity	Estimated Cost.
1	A4 Plain Paper Bundle	1 Bundle	350.00
2	Stationary Items (Pen,Pencil,Eraser,Sharpner,Colour Pencil etc.	25 Nos. (each)	1550.00
3	Picture Story Books	25 Nos.	5000.00
4	Printing Cost (Materials)	3 Nos.	1000.00
5	DTP & Binding	3 Nos.	1500.00
6	Xerox	200 Nos.	1000.00
7	Transportation		9600.00
<b>TOTAL</b>			<b>20000.00</b>
<b>Rupees Twenty Thousand Only</b>			

#### 4.2 Conclusion:

It is revealed through the study that students have enough potential to pickup English i.e. 2<sup>nd</sup> Language in class-IV standard the issues behind not acquiring language skills properly by the students are many such as lack TLMs needed for conducting the classes, Lack of proper training to teachers, the influence of mother tongue largely upon the second language etc. Still we are optimistic with proper interventions strategies being adapted in the LP School level we can definitely see some positive changes in the regard. Finally we would like to suggest the followings:

1. Identify the learners language acquisition level through scheduled tools
2. Plan out proper intervention strategies to teach English (Second language)
3. Ensure that joyful learning takes place in English (Second language)
4. Engage the learners through various language games and puzzles to make the classes interesting

At the end if proper intervention is given the 2<sup>nd</sup> Language (English) learning scenario in Tinsukia District can be improved



Signature of the Researcher  
Chandra Kr. Dahal  
Lecturer, DIET, Tinsukia

# Appendix

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## Policy Documents

MHRD Govt of India, National Education Policy Document, 2020  
FLN training module for teachers' SSA, Assam

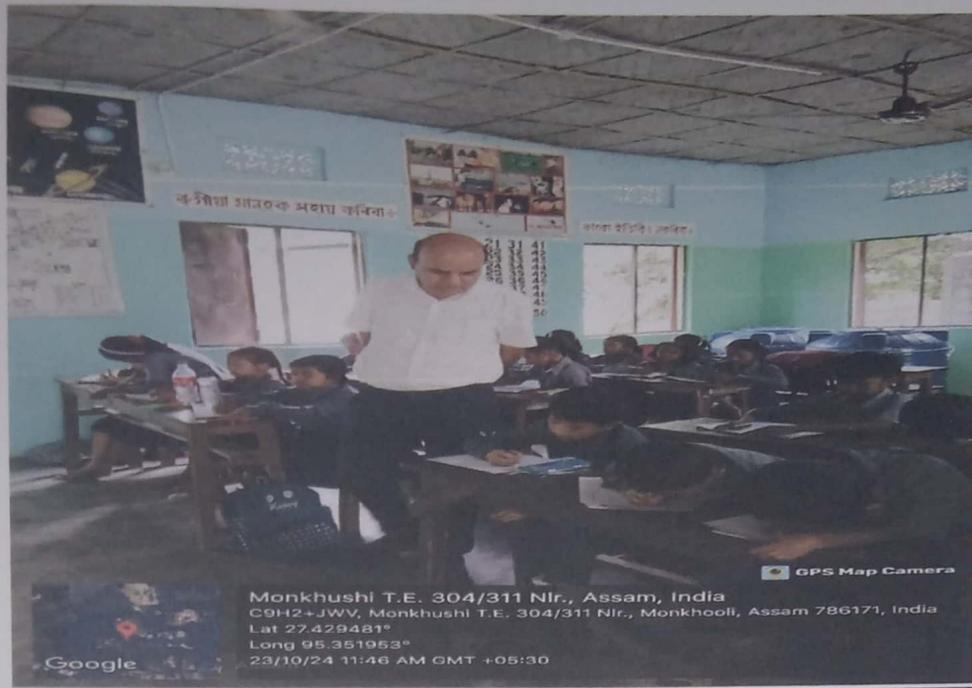
## Websites:

<https://www.education.gov.in/>

<https://tinsukia.assam.gov.in/>

[www.researchgate.net](http://www.researchgate.net)

## Photos of Action Research:



## Commencement of Pre-Test





Post - Test

## Pre-Test Marksheet

Sl.No.	Name of students	Marks Obtained	Percentage	Remarks
01	A	13	65	Good
02	B	2	10	Poor
03	C	3	15	Poor
04	D	6	30	Poor
05	E	4	20	Poor
06	F	18	90	Excellent
07	G	2	10	Poor
08	H	4	20	Poor
09	I	13	65	Good
10	J	10	50	Average
11	K	5	25	Poor
12	L	15	75	Very Good
13	M	13	65	Good
14	N	4	20	Poor
15	O	10	50	Average
16	P	5	25	Poor
17	Q	2	10	Poor
18	R	5	25	Poor
19	S	2	10	Poor
20	T	5	25	Poor
21	U	2	10	Poor
22	V	19	95	Excellent
23	W	14	70	Good
24	X	2	10	Poor
25	Y	4	20	Poor

### 5-point Rating Scale (for pre-test result)

Sl. No.	Codename of students	Poor (Below 40%)	Average (40-55)%	Good (55-70)%	Very good (70-85)%	Excellent (Above 85%)	Remarks
01							
02							
03							
-							
-							
-							
-							
-							
-							
Etc.							
Parameter-wise sub-total of samples		----- Nos.	----- Nos.	----- Nos.	----- Nos.	----- Nos.	

**Parameter-wise percentage of samples:**

1. **Poor:** (Sub-total / total sample) x 100% = -----%

Hints: (6/20) x 100% = 30 %

2. **Average:** (Sub-total / total sample) x 100% = ----- %

3. **Good:** (Sub-total / total sample) x 100% = -----%

4. **Very good:** (Sub-total / total sample) x 100% = ----- %

5. **Excellent:** (Sub-total / total sample) x 100% = ----- %

**Note:** To analyze the pre-test result, now you can draw a graph (Histogram/ Bar-graph/ Pie diagram etc.) using these numerical

## Post Test Marksheet

Sl. No.	Name of students	Marks Obtained	Percentage	Remarks
01	A	18	90	Excellent
02	B	13	65	Good
03	C	10	50	Average
04	D	9	45	Average
05	E	9	45	Average
06	F	19	95	Excellent
07	G	12	60	Good
08	H	14	70	Good
09	I	19	95	Excellent
10	J	17	85	Excellent
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13	M	17	85	Excellent
14	N	17	87	Excellent
15	O	17	85	Excellent
16	P	19	95	Excellent
17	Q	13	65	Good
18	R	14	70	Very Good
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