DISTRICT INSTITUTE OF EDUCATION AND TRAINING
KRISHNAGIRI, KRISHNAGIRI DISTRICT

RESEARCH PROJECT NUMBER:KGI 01

1.NAME OF THE DIET: DIET- KRISHNAGIRI

NAME AND DESIGNATION OF THE RESEARCHER: Dr.G.ANBUMANI, Senior Lecturer

TITLE: Attitude of Krishnagiri District Teachers Towards Achievement of Learning Outcomes.

1.INTRODUCTION:

Education is essential to everyone. It wipes out ignorance. Education makes good citizens. Good citizens make good nation. It is a well-known fact that education aims to modify human behaviour by making a better citizen. The Kothari Commission Report in respect of the objectives of education has observed, "The most important and urgent reform needed in education is to transform it, to endeavour, to relate it to life needs and aspirations of the people and thereby making it a powerful instrument social, economic and cultural transformation, necessary for the realization of the national goal". For this purpose, the commission has suggested a programme for modernizing the right attitudes and values and building up certain essential skills for life.

2.NEED AND SIGNIFICANCE OF THE STUDY:

The classroom climate which is often times set by the teacher is determined by the teacher's attitude. Attitude as a major determinant of a person's behaviour influences the way a teacher relates with the students and thus affects student's academic performance.

The learning outcomes derived from the curricular expectations and the syllabus are generally treated as assessment standards or benchmarks for assessment. The teacher plays pivot role in the learning outcome of his / her students. Hence it becomes necessary to understand the teachers' attitude towards achievement of learning outcome.

The researcher showed an interest on Attitude of Krishnagiri District teachers towards the achievement of learning outcomes. Learning outcomes is needed for the teachers in order to analyse the various levels of their feedback level data collection. The researcher

chosen this topic because there are hundreds of literatures and studies in the same field. Hence the researcher would like to find out the attitude of learning outcomes among the primary teachers.

3.OBJECTIVES OF THE STUDY:

- To survey the attitude of Krishnagiri district teachers towards achievement of learning outcomes.
- To study significant difference in attitude of teachers towards achievement of learning outcome of students of Krishnagiri district with respect to the variables gender, academic qualification age and teaching experience.

4.HYPOTHESES OF THE STUDY:

1. There is no significant difference in attitude of teachers of Mathur Education District towards achievement of learning outcomes with regard to their gender.
2. There is no significant difference in attitude of teachers of Mathur Education District towards achievement of learning outcomes with regard to their educational qualification.
3. There is no significant difference in attitude of teachers of Mathur Education District towards achievement of learning outcomes with regard to their age.
4. There is no significant difference in attitude of teachers of Mathur Education District towards achievement of learning outcomes with regard to their teaching experience.

5.METHODOLOGY:

a)Method: The study is a normative survey method. The variables of the study were Teaching effectiveness Classroom environment Assessment and feedback professional development and adaptability and student engagement and participation.

b)Sample: The teachers working in primary and upper primary schools of Krishnagiri district were the population of the study. There are 2500 primary school teachers working in 1458 schools. Based on the Purposive random sampling techniques the investigator selected 200 Primary and upper primary school teachers from 10 blocks. The teachers those who are handling classes 4 and 5 were included in the study.

c)TOOL: As the standardized tool was not available to measure the attitude of primary school teachers towards learning outcomes in related to the variables teaching effectiveness

classroom environment assessment and feedback professional development and its adaptability and student engagement and participations. So, the investigator himself developed and attitude scale for the same.

e)Data analysis:

The attitude of teachers in learning outcomes were measured through a questionnaire. It has 46 items. Those items were intended to measure. The collected data were analysed using mean and ‘t’-test.

6.MAJOR FINDINGS:

- Findings from the krishnagiri educational district highlight overall positive responses across various demographics, with some groups showing strongly agree levels than others.
- Findings from the educational district of mathur indicate generally positive responses across various demographics, with some groups indicating stronger agreement than others.
- Findings from the Hosur educational district highlight overall positive responses across various demographics, with some groups showing strongly agree levels than others.
- Findings from the educational district of Denkanikottai indicate generally positive responses across various demographics, with some groups indicating stronger agreement than others.
- Females generally achieve slightly higher learning outcomes than males, with the difference being statistically significant.
- Younger participants tend to have higher achievement scores, but the difference is not statistically significant.
- Higher educational qualifications (PG with B.Ed) are associated with better learning outcomes, with statistically significant differences between qualifications.
- Participants with less than 25 years of experience show significantly higher achievement scores.

- Participants from primary schools (PUPS) have higher achievement scores, though the difference is not statistically significant.
- Rural participants achieve higher learning outcomes compared to urban participants, with a statistically significant difference.

7.CONCLUSION:

- Both male and female teachers exhibit high levels of agree (SA and A) regarding the achievement of learning outcomes. However, female teachers show slightly higher overall effectiveness, indicating a potential area for further gender-focused support and development.
- Teachers below 45 years tend to have slightly higher levels of agree regarding effective learning outcomes compared to their older counterparts.
- Teachers with higher educational qualifications (PG with B.Ed) show the highest levels of agreement on achieving learning outcomes, indicating that advanced education correlates with better teaching efficacy.
- Teachers with less than 25 years of experience show a higher percentage of agreement on achieving learning outcomes compared to those with more experience. This highlights the importance of keeping experienced teachers updated with new teaching methodologies and maintaining their motivation.
- Teachers from PUPS schools reported higher levels of agreement on achieving learning outcomes compared to those from PUMS schools. This disparity indicates a need for targeted interventions in PUMS schools to bridge the gap in teaching effectiveness.
- Teachers in rural areas reported higher levels of agreement on achieving learning outcomes compared to their urban counterparts.

8.EDUCATIONAL IMPLICATIONS:

Professional Development: Continuous and targeted professional development is crucial. Training programs that consider the specific needs and strengths of different groups (based on gender, age, experience, and location) can enhance the overall effectiveness of teaching.

Mentorship and Collaboration: Creating platforms for mentorship and collaboration among teachers of different ages and experience levels can foster the sharing of best practices and innovative teaching methods.

Resource Allocation: Ensuring equitable distribution of resources and support across different types of schools and localities is essential for achieving uniform learning outcomes.

Policy and Practice Alignment: Educational policies should be regularly reviewed and aligned with current research findings to ensure that they address the evolving needs of educators and students.

RESEARCH PROJECT NUMBER:KGI 02

Name of the DIET: DIET, Krishnagiri

Name and Designation of the Researcher: Dr.R. PARVATHI

Senior lecturer

Title: Effect of using Mathematics Laboratory in Teaching Mathematics among High school students.

1.Introduction:

Learning mathematics involves learning ways of thinking. It involves, learning powerful mathematical ideas rather than a collection of disconnected procedures for carrying out calculations. High school Students are capable of learning mathematics with understanding and create new ideas but opportunities to do so is not available. Teachers need training to update their knowledge in content and methodology.

2.Need and Significance:

The purpose of this study is to investigate the effect of using mathematics laboratory in teaching mathematics for High school students. The study focus on the achievement of Control and experimental group after using the mathematics laboratory.

3.Objectives:

- To find out the student's prior knowledge in using mathematics laboratory.

- To develop module for class IX mathematics lab.
- To Organize training program for teachers handling class 9 mathematics.
- To find out the effect of mathematics laboratory in improving the student's achievement of Control and experimental group.
- To find out the effect of mathematics achievement in improving the classroom teaching of Control and experimental group.

4.Hypothesis:

- There is no significant difference between pre test scores on achievement in mathematics for experimental group and control group students for total sample.
- There will be a significant difference between post test scores on achievement in mathematics for experimental group and control group students for total sample
- There will be a significant difference between pretest and post test scores on achievement in mathematics for experimental group and control group for total sample.
- There is no significant difference between pretest and post test scores on achievement in mathematics for experimental group and control group boys and girls.
- There is no significant difference between pretest and post test score scores on achievement in mathematics for experimental group and control group GHS and GHSS students.

5.Methodology:

a) Method: The researcher adopted Quasi-experimental design.

Experimental phase involves following steps:

Pre- test → training → supply of lab material → classroom implication → monitoring→ post-test

Pre- test was conducted for all the 10 schools. Training was given for experimental group teachers. Lab manual consist of following learning out comes.

- To use set language in solving life-oriented word problems.

- ❖ To visualize the real numbers on the number line.
- ❖ To understand the scientific notation
- ❖ Able to draw graph for a given linear equation
- ❖ To understand the properties of quadrilaterals and use them in problem solving.
- ❖ To understand the mid-point formula and use it in problem solving.
- ❖ To understand the usage of trigonometric tables.

b) Sample: The researcher selected 125 students studying class IX as experimental group and 95 students studying class IX as control group as sample of the study.

c)Intervention:

- Traditional method of teaching was adopted for control group schools.
- Lab manual was prepared.
- Training was given to the teachers in experimental schools
- Lab activity was carried out for experimental group schools.
- Worksheet was practiced for experimental group students.

d)Tool: one tool was constructed for both pre-test and post-test for class IX students. This tool was constructed and administered for 10 teachers handling class IX mathematics. This tool was administered before preparing the module. Questionnaire consist of 10 questions each carries 5 marks. Total score is 50.

e) **Data Analysis:**

Descriptive analysis:It involves computing of measures of central tendency such as the mean and the measures of variability such as standard deviation. The computed values are used to describe the properties of the different sub-samples.

Descriptive analysis: 't' test is a technique to find whether the difference between the mean performance of the two groups is significant or not.The investigator used Mean& Variance and 't' test for analyzing the data.

6.Major Findings:

- ❖ The mean score obtained by experimental group Student's achievement in mathematics for pre- test is 27.09 and for post- test is 68.19
- ❖ The mean score obtained by control group student's achievement in mathematics for pre- test is 23.92 and for the post- test is 50.84
- ❖ Mean score of experimental group Student's achievement is higher than control group student's achievement on both pre& post test scores.
- ❖ There is no significant difference between pre test scores on achievement in mathematics for experimental group and control group students for total sample.
- ❖ There is significant difference between post test scores on achievement in mathematics for experimental group(Mean68.19) and control group (50.84) students for total sample(t=5.74)
- ❖ Experimental and control group boys and girls do not differ in their achievement in pre& posttest.
- ❖ Experimental group GHS and GHSS students differ in their achievement in pretest. High mean score is found in GHSS(31.39) compared to GHS(16.44).

7.Conclusion:

- It is concluded that Math lab activity for class 9 was successful in all the experimental schools.
- Traditional method adopted in control group shows low achievement.
- Math lab activity gives active participation for all students.
- Students show interest in learning while doing .
- Students prepared lab materials in groups.
- Students learnt the concept and practiced problems in peer group.
- worksheet gives more practice and able to remember the concept.

8.Educational implications:

- Maths lab is needed in all level of schooling.
- In secondary and higher secondary schools' mathematics lab activity to be incorporated in the classroom transaction.

- In- service training to be given to the teachers.
- Practical mark can be given in common board exam based on math lab performance.

RESEARCH PROJECT NUMBER:KGI 03

1. **Name of the Investigator** : M.MAYILSAMY, Senior Lecturer
2. **Name of the DIET** : District Institute of Education and Training, Krishnagiri
3. **Title** :

EFFECTS OF INNOVATIVE LOW-COST TEACHING LEARNING MATERIAL (ILCTLM) IN TEACHING OF BASIC SCIENCE CONCEPTS AT UPPER PRIMARY LEVEL IN KRISHNAGIRI DISTRICT

4. **Objectives** :

1. To identify the locally available resources that are available related to the science concepts.
2. To plan and develop suitable innovative low cost teaching learning material for Science teaching and learning.
3. To orient the teachers about the importance of innovative low cost materials preparation.
4. To find out the effect of innovative low cost material on students' performance after the training programme.
5. To compare performance of teachers before and after intervention.
6. To assess the impact of Innovative Low-Cost Teaching Learning Materials (ILCTLM) on students' academic performance
7. To examine the effectiveness of ILCTLM in enhancing students' understanding of basic science concepts
8. To gauge the level of engagement and interest among students using ILCTLM

9. To assess the perceptions and experiences of teachers regarding the use of ILCTLM
10. To identify any disparities in learning outcomes based on demographic factors

5. Hypotheses of the study

1. The use of Innovative Low-Cost Teaching Learning Materials (ILCTLM) significantly enhances the comprehension and retention of basic science concepts among upper primary level in Krishnagiri District.
2. Teachers who incorporate ILCTLM in their instructional practices will report a positive perception of its effectiveness in facilitating better understanding of basic science concepts.
3. The introduction of ILCTLM in teaching basic science at the upper primary level will result in increased student engagement and interest in the learning process.
4. Students exposed to ILCTLM will demonstrate higher academic performance in basic science compared to those taught through traditional methods at the upper primary level in Krishnagiri District.
5. There is no significant difference in teaching effectiveness, student engagement, and learning outcomes between teachers who use ILTCM and those who do not use ILTCM in teaching Basic Science concepts at the upper primary level in Krishnagiri District.

6. Methodology

The researcher adopted to employ an experimental method to conduct the research.

a) **Sample:**The researcher selected 50 teachers for the experimental group This assignment took place at the VII Science from 10 blocks in Krishnagiri district, where the experimental groups were established. The researcher utilized purposive sampling techniques to carefully select the sample for this study.

b)Tool: Module and Pre test post test questionnaire (Based on ILTCM) was used in this study

c) Data Analysis

The following statistical techniques are used in the present study

Descriptive Analysis, Differential Analysis, ANOVAand Effect Size

7. Findings

- The post-test scores (79.56) were significantly higher than the pre-test scores (54.08) for ILTCM in teaching basic science concepts, showing a clear improvement in students' understanding.
- The effect size (d=2.75) indicates a large difference between pre-test and post-test scores, suggesting a substantial positive impact of ILTCM on students' learning outcomes.
- There's no significant difference in pre-test scores between male and female teachers regarding ILTCM in teaching basic science concepts.
- There's also no significant difference in post-test scores between male and female teachers regarding ILTCM in teaching basic science concepts.
- There's no significant difference in pre-test scores between rural and urban teachers regarding ILTCM in teaching basic science concepts.
- Similarly, there's no significant difference in post-test scores between rural and urban teachers regarding ILTCM in teaching basic science concepts.
- Teaching experience does not significantly affect pre-test scores for ILTCM in teaching basic science concepts.

  Teaching experience also does not significantly affect post-test scores for ILTCM in teaching basic science concepts.

7.Conclusion:

- The study shows that ILTCM effectively enhances students' understanding of Basic Science concepts, as seen in the significant improvement in post-test scores compared to pre-test scores.
- Integrating innovative and cost-effective teaching materials like ILTCM is crucial for improving the quality of science education at the primary level.

- ILTCM is versatile and inclusive, benefiting students across different demographic backgrounds and teacher characteristics, as evidenced by non-significant differences based on gender, locality, and teaching experience.
- The study's findings have implications for educational practice and policy, suggesting that ILTCM can bridge learning gaps and enhance educational outcomes among primary school students.
- This study contributes to discussions on effective teaching strategies and emphasizes the importance of innovative approaches like ILTCM in enhancing education quality.

8. EDUCATIONAL IMPLICATIONS OF THE STUDY

- The study shows a significant difference between pre-test and post-test scores, indicating the effectiveness of using innovative and low-cost teaching materials in enhancing students' comprehension and learning outcomes in Basic Science at the upper primary level.
- Educators and policymakers are encouraged to integrate similar innovative teaching approaches and materials into the curriculum to improve the quality of science education at the primary level, based on the observed effectiveness of ILTCM.
- The calculated effect size (d=2.75) suggests a substantial impact of ILTCM on students' understanding, highlighting the potential of such interventions to bring about significant improvements in student learning.

RESEARCH PROJECT NUMBER:KGI 04

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5. (Methodology):

- (Induction Method)
- (Deduction Method)

c) (Research Tool):

- (Module)
- – (Pre – Post Test Questionnaire)

d) :

- (One Day Orientation Training/Workshop)

e) (Data Analysis):

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(Statistics Technics Used for The Study)

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