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THE EFFECT OF TECHNOLOGY BASED TEACHING ON ACHIEVEMENT LEVEL OF STD. X STUDENT IN SCIENCE

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Introduction:

Traditional teaching is based on skills of teacher. The teachers are responsible for all subject matter presentation. In traditional teaching, the teaching is done only by the individual teacher and students only listen to the lecture of the teacher. There is very less scope for student to develop their mental ability. For the development of mental ability of students technology is not only the tool of Science but also the change in the process of teaching and learning. So traditional approaches are unable to ensure their present setup educational technology has been increasingly used in various areas at all levels & stages of education. Technology is catalyst for educational change.

Title Research:

The effect of technology based teaching on achievement level of std. X students in Science.

Significance of the Research:

1. Teacher gets an opportunity to use technology and can make the lesson more effective.
2. Technology saves the time and gain lot of satisfaction of teaching.
3. Present is more useful only for the teachers of science.
4. The performance of the students through technology based teaching is more effective than the traditional method of teaching.
5. Technology based teaching will be useful for developing nation with scientific attitude.

Explanation of the problem:

Students of Std. X find it difficult to understand the different scientifically topics like life process as respiration, digestion, Nervous system, circulation, excretion etc. different types of energies, study of periodic table, indicators. Study of elements etc. Student

will understand well if we use technology base teaching for understanding scientific concepts.

Conceptual definitions :

1. **Standard X :**The standard after IX – Authorised by Maharashtra State board.
2. **Science :**The compulsory course designed for Std X by the Maharashtra State board of Secondary & higher Secondary Education, Nashik.
3. **Technology based Teaching :** explanation of the content that is done with the help of
4. new techniques like, LCD Project (PPT) mobile learning, web-based learning etc.

Operational definitions

Standard X Students who have passed Std IV and studying X academic year 20-16-17 in B. V. Joshi Maharashtra highschool, Nashik.

Objective of Research

1. To develop technology based programme for Std. X for Science subject.
2. To check effectiveness of technology based programme in the achievement level of student of Std. X
3. To compare the performance of groups taught through technology based programme and traditional method of teaching.

Assumptions

1. Scientific concepts cannot understand clearlyif traditional method used for teaching.
2. Technology based teaching improves the teaching-learning process.

Hypothesis:

Null Hypothesis – there is no significant difference between the means of achievement by traditional teaching and technology based teaching.

$M_1 - M_2 = 0$

Directive Hypothesis – The effect of technology based teaching on achievement level of Std X students in Science will be higher than that of traditional group.

$M_1 - M_2 \neq 0$

Scope & Limitations :

Scope – present research is useful only for the Std. X Semi-English medium School in Nashik.

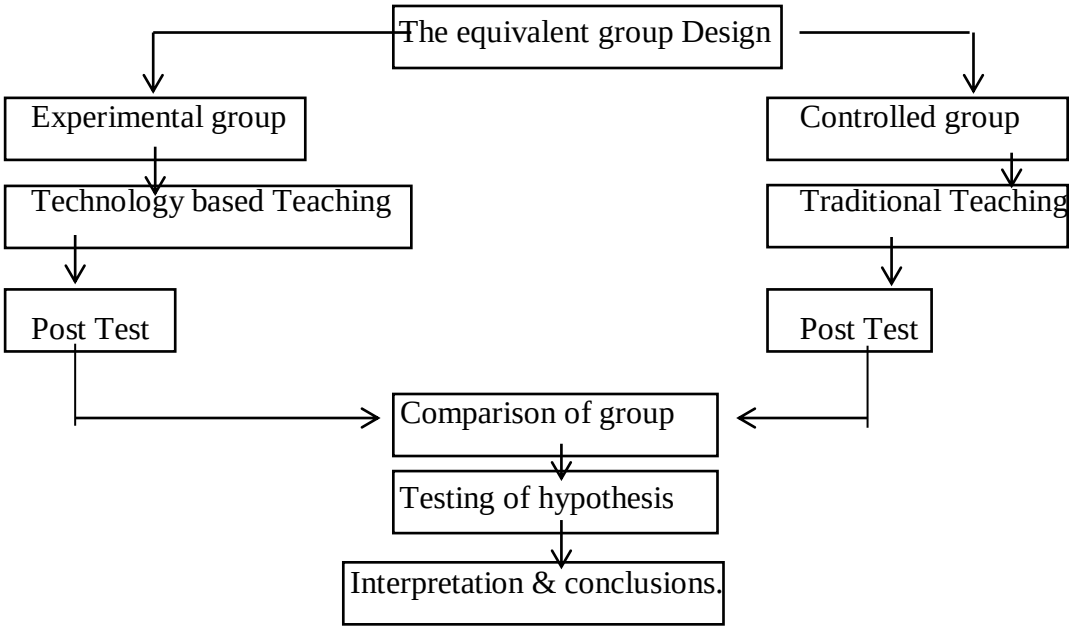
Limitations –

1. Present research study is limited to Std. X
2. It is limited to for Science Subject only.
3. It is limited to Nashik City.
4. It is limited to Semi-English medium schools.
5. It is limited to students admitted in academic year 2015-16.

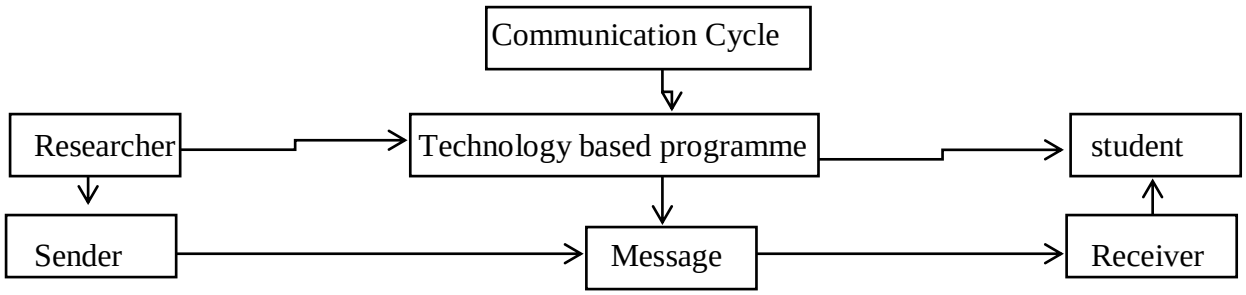
Research method:

Experimental method

Research Design:



Communication Process :-



Population &Sampling:-

1. **Population –**Shri. B. V. Joshi Maharashtra High School, Nashik there is only one section of standard X. Sowhole section of X standard is considered as a population for the research i.e. 50.
2. **Sample –** For present research work a population is very small, therefore 100% population is considered as a sample i. e. 50 students.

Variables :-

Independent variable – Technology based teaching programme

Dependent variable - Academic achievement of student.

Tabulation, Analysis & Interpretation of data :

The researcher collected data for research from the collected data first it is classified & interpreted, Researcher Analysed the classified data. Also the researcher collected various information for the research but it cannot be presented in the research as it is. In present research researcher has collected data for control &experimental group the data has been analysed of interpreted.

Testing of hypothesis :

Researcher used various statistical tools like, mean, standard deviation etc. with the help of these tools techniques researcher tested the hypothesis with the help of 't' test & from the 't' test the value of 't' gives the finding of conclusions.

Achievement of experimental & control group

Sr. No.	Group	Mom	Standard division	Number of students	't' value
01	Control group	10.72	0.92	$M_1 = 25$	t = 3.54
02	Experimental group	13.48	3.82	$M_2 = 25$	

$M_1 - M_2 = 13.48 - 10.72$

$$D = 2.76$$

The above table shows the mean & standard deviation and difference of means. D = 2.76. The 't' value is 3.54. the table 't' value at 0.05 level is 2-06 and 0.01 level it is 2.80. The 't' value obtained in actual calculation is 3.54. Which is greater than 2.06 & 2.80 for the 25 degree of freedom.

Interpretation :

Null hypothesis is rejected & research hypothesis is accepted it means there is significant difference between means scores of both the groups.

Findings :

1) df = N – 1 = 25 – 1 = 24 for 0.05 level the table 't' value is 2.06 and for 0.01 level the table 't' value is 2.80 but the researcher got the actual 't' value is 3.54. Therefore the difference of two means which is 2.76 which is not occurs by chance it is due to experiment means technology based teaching. Hence the difference between the two means is significant.

2) The significant difference has been found between the two groups $M_1 - M_2 = 2.76$ so Null hypothesis is rejected and the research hypothesis is accepted.

3) Teaching with the help of technology methods affects positively in students understanding.

4) Technology based teaching is modern concept it shows effectiveness.

5) Learning objectives can be achieved by students with the help of computer assisted instructions.

6) Teaching done with the help of technology is more impressive & effective than traditional method.

Suggestions :

1) the technology should be made available in the school for teaching.

2) Head master must motivate & guide the teachers to use the technology for teaching.

3) Teachers himself must feel an interest to teach content by using technology.

4) like science subject other subjects should also be taught through technology that creates interest in teaching.

5) Teachers should vary their methods, techniques and ways of teaching according to their students needs & interest.

6) Teachers should be trained for use of CAI.

7) Students should be encouraged to assist their teachers while using CAI.

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