

# Chapter IV

## **RESULT AND DISCUSSION**

## CHAPTER IV

### RESULT AND DISCUSSION

#### 4.1 INTRODUCTION

This chapter deals with the presentation of data and their analysis to draw the result. The objective wise result and discussion is going to be discussed here.

4.1 To study the effectiveness of multimedia mediated teaching in science achievement of class VII students.

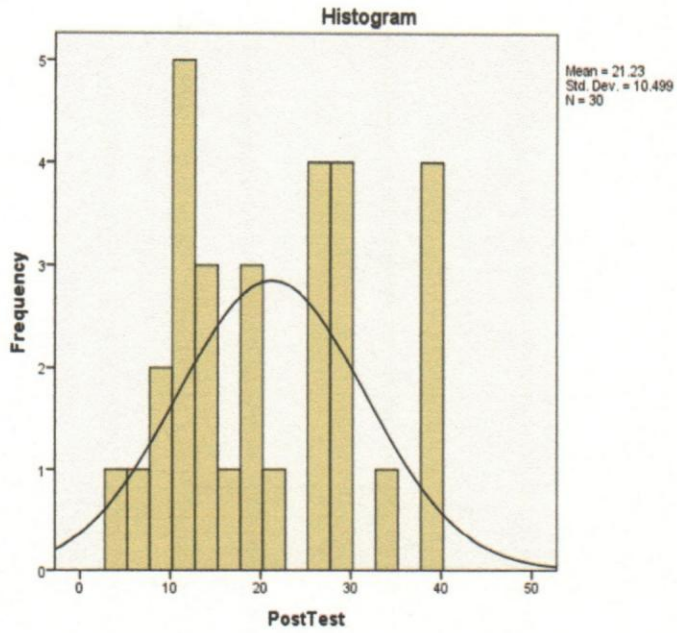
**Table 4.1 Summary for ANCOVA for Achievement in Science**

SOURCES OF VARIANCE	DF	SUM OF SQUARES	MEAN SUM OF SQUARES	F-VALUE
AMONG	1	6.409	6.409	62.837**
WITHIN	62	15246.153	245.906	
TOTAL	63	15252.56	252.315	

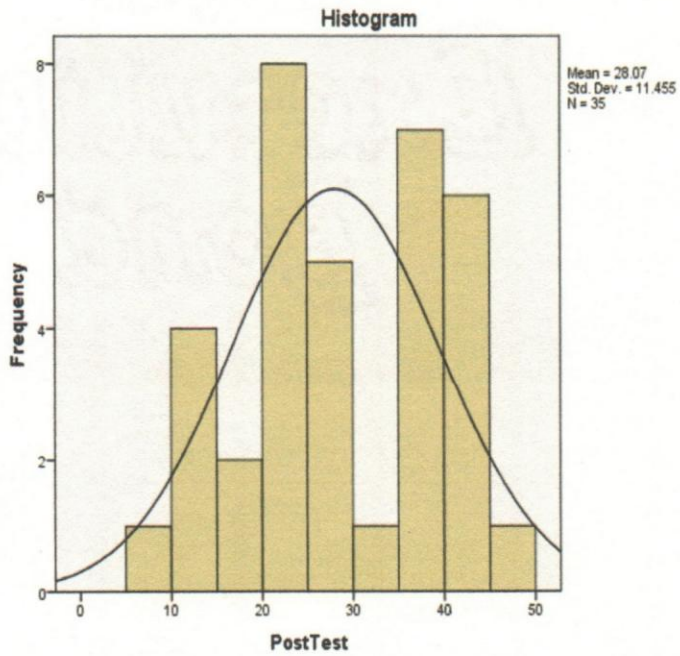
\*\*significant at 0.01 level

**Table 4.2 Mean and SD of the experimental and control groups for Achievement in Science**

GROUPS	Mean	N	Std. Deviation
Control Group	21.23	30	10.499
Experimental Group	28.07	35	11.455
Total	24.92	65	11.465



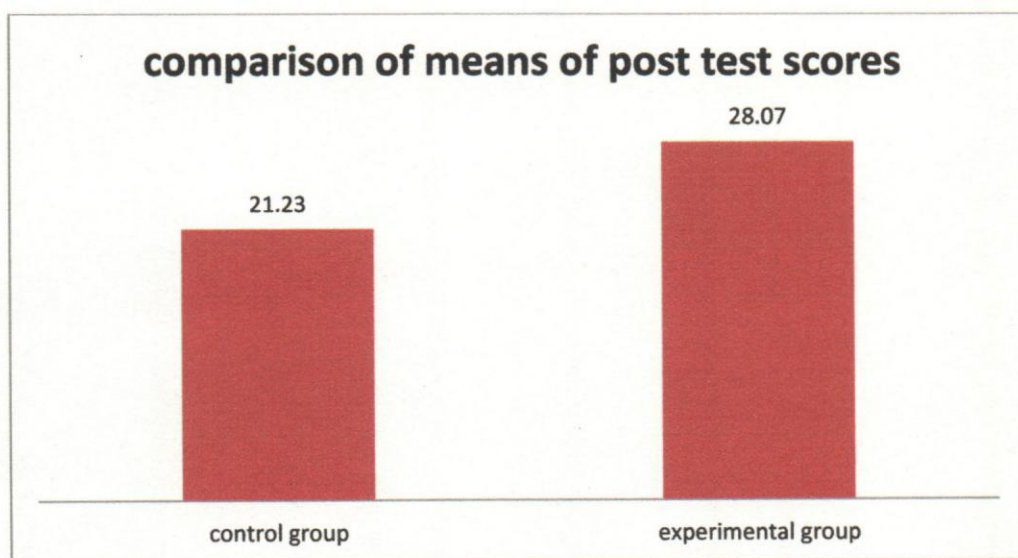
**Figure 4.1** the graph showing the mean posttest score of control group



**Figure 4.2** the graph showing mean posttest score of Experimental group

The objective of the study was 'To study the effectiveness of multimedia mediated teaching in science achievement of class VII students'. The achievement test was developed by investigator the test was administered to both the experimental and control group after the end of the teaching the data were analyzed by ANCOVA.

Table 4.1 indicates that the F-value of 62.837 with df-1/62 is significant at 0.01 level which indicates that the treatment produced a significant effect on the achievement in science. Therefore the directional hypothesis namely. **"Students taught through multimedia mediated teaching will gain significantly higher score as compare to their counter parts in the control group"** is not rejected.



**Figure 4.3** the graph showing the comparison of means of posttests scores of experimental and control group.

Further the Mean achievement score in science of student taught through multimedia approach (28.07 with SD 11.455) is higher than the student taught through conventional approach (Mean 21.23 with SD 10.499). It can be therefore said that the multimedia approach was found to be effective in terms of achievement in science than the traditional approach of teaching.

**Findings:** the multimedia approach (28.07 with SD 11.455) was found to be effective in terms of achievement in science than the traditional approach of teaching (Mean 21.23 with SD 10.499).

## 4.2 Discussion

“Students taught through multimedia mediated teaching gained significantly higher scores as compared to their counter parts in the control group”. Multimedia approach found to be effective than the traditional approach because Utilize multimedia approach which improve class efficiency, increase the active involvement of the students and cultivate their ability of using technology for science learning through exploring, interaction, cooperation etc. Multimedia teaching breaks the traditional teacher-centered way, which shifts the focus to the students, who could obtain the knowledge under guidance of teacher via the interaction between them. During the period of science learning through multimedia, all the senses can be triggered together, and then enthusiasm of students is mobilized furthest. The multimedia approach creates scientific communication scenario, which visualizes the abstract and unfamiliar knowledge, from which students can learn different scientific phenomena very easily with the help of multimedia software’s i.e. virtual space, communication media and electronic dictionary etc. multimedia offers intuitive interface vividly. The students join learning activities delightfully, therefore, their motive and interest is stimulated. It is the most outstanding modern teaching media that owns the incomparable control and man-machine conversation. The modern teaching reflects the themes of our era, with its abundant information. Multimedia assists science teaching, displaying contents actively and intuitively, which makes them talk and communicate the relative concrete content joyfully, also, students obtain perceptual understanding from so vivid and large information, generating distinct image and inspiring their thinking so that to deepen their understanding of learning content within a short time. Multimedia realizes openness, interaction, sharing, cooperation and autonomy of science learning between teachings and learning, which renders all-round sensory stimulation. Simultaneously, it improves input of information overtly and quickens the tempo on the class, also, increases the efficiency. Provide students with opportunities to represent and express

their prior knowledge. Allow students to function as designers, using tools for analyzing the world, accessing and interpreting information, organizing their personal knowledge, and representing what they know to others. Multimedia applications engage students and provide valuable learning opportunities. Encourages deep reflective thinking and create personally meaningful learning.

This finding is supported by the findings of **Singh(2009)**, who conducted pretest and posttest and concluded that, the students learning with the help of multimedia program is better in Biology than the students learning through the traditional method, the multimedia program has helped the students to score more marks in the post test and the traditional method of teaching will not help the students to score more marks in the post test.

Further the finding is supported by the findings of **Jyothi (2007)** who compare the effectiveness of this self-instructional module with conventional teaching method and find that self- instructional module prepared by the teacher through PowerPoint presentation could show immense impact on learning of chemistry. Students are better motivated & interestingly participated in computer based learning. They did not hesitate to clarify their doubts through computer based learning. There were significant difference in score achievement of control & experimental groups.

It is also supported by the finding of **Gaude(2012)** who concluded that the achievement of students taught through multimedia approach got higher score than the students taught through traditional approach. **Padmanabham(2005)** studied the effectiveness of constructivist approach 2005 on the science achievement and problem solving ability in science of VII grade students. Her study shows positive effect on the achievement of student in science

The effectiveness of the multimedia was studied in term of product as well as process. The effectiveness of multimedia approach in terms of product was assessed through the Achievement of the students and the assessment of the process was assessed through the classroom observation was done by teacher after the completion of each lesson

prepared by teacher for experimental group. An observation can be done by investigator consist of some statements that can be observed by the teacher after completion of each lesson. After the lesson teacher observed that, 90% of the students create interest for the subject, 90% of the students generate curiosity, 60% of the student raises open ended question in class, and further 60% students elicit responses, 70% of the student encourages working together, 80% student shows topic interaction, 80% enhancement of student dialogues, 90% Students were motivated, Probing questioning can be done by 70% of students, 80% of the student were successfully explained of concept and definition in their own words, 60% generalized the concept, 80% students clarifies definition, explanation and new labels, 80% Student use previous knowledge as the basis for explaining concepts, 70% Student encourages to apply or extend the concept in new situation. By the above observation we conclude that most of the student's responses significantly better after getting a multimedia approach of teaching.