Research Paper

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Video Assisted Instructional Strategy to Improve Academic Achievement in Zoology Among Xi Standard Students

Education

KEYWORDS: Video Assisted Instruction, Academic Achievement, Innovative teaching practice

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ABSTRACT

The present study highlights the Video Assisted Instructional Strategy to improve the academic achievement in Zoology among XI standard students. In this study Video Assisted Instructional Package was prepared on the selected units of XI standard Zoology subject. After administering achievement Package was implemented for a period of 3 months. The effect of the package was assessed with the post achievement test. The study result shows that the Video Assisted Instruction was effective. Thus, an innovative teaching practice which involves educational technology will improve academic achievement of students is proved in this study

INTRODUCTION

The Indian Education Commission (1964-66) says that education ought to be related to life, needs, and aspiration of the people and thereby made powerful instrument of social, economic and cultural transformations. It brings about desirable changes in the socio economic cultural political spheres of life of the people. Education is defined as bringing upon the inherent potentialities in a pupil. Broadly speaking, education refers to any act or experience that has a formative effect on the personality of an individual. Swami Vivekananda proclaims that "education is the manifestation of the perfection already in man". It is the process of helping the child to adjust to this changing world. Such an adjustment is not a "somehow" one but superior adjustment. In modern world due to the scientific inventions and technological invasion students are choosing science as their career.

NEED FOR THE STUDY

It has been observed that there are some defects or disadvantages in conventional classroom method of teaching and learning. In this type of teaching students have to observe classroom under tight control and rigid supervision. It is highly laborious and time consuming. Many types of diversion occur due to various factors such as poor performance of the student, inadequate classroom climate excess class strength, noisy situation etc. Teaching through audio and visual materials will be very effective for teaching and learning. The students can learn at their own convenience without any external disturbances in learning. Thus it has been found that video instruction is a very much suitable method for the teaching and learning. Video instructions represent a natural way for learning to take place involving maximum number of senses. It can accelerate learning. Sensory forms of experience are the foundation of intellectual activity within any formal school situation and learners differ in the effectiveness of their sense reception. Instruction has the advantage of appealing to the learners by arousing interest in readiness.

Jeyalakshmi (1992), Basu (1991), Vardin (1993), Mensn(1994), Ramar (1994,1995,1996,1997) have conducted various studies to establish the efficacy of video instruction in instructional process at various levels . According to Eric Asbhy (1967), mankind is now in the midst of the fourth revolution in education the age of electronic media which comprises radio, television, audio/ video recorder, computer, and so on. Goodman (1996) stated, "The power of technology is unleashed when students can use it in their own hands as authors of their own work and use it for critical inquiry, self-reflection, and creative expression" (as quoted in Hobbs, 1998,). Media literacy necessarily entails "writing" as well as "reading" the media (Buckingham, 2005). As Hofer and Swan (2005) wrote, "The engaging and flexible nature of digital moviemaking projects offers great potential to ground the use of technology in discipline-specific content and processes". Research done by cobun (1968) indicated that 1 % from the sense of taste, 1.5 % from the sense of touch, 3.5 % from the sense of smell, 11 % from the sense of hearing, 83 % from the sense of sight. Higher achievement and more positive attitudes were observed in a high school biology course that was "computer-loaded" (Hounshell & Hill, 1989). Scientific reasoning skills were found to be enhanced using a microcomputer-based curriculum (Friedler, Nachmias, & Songer, 1989). Specialized computer programs were found helpful to develop inquiry skills while also increasing scientific knowledge even when strong "misconceptions" were present at the start (Shute & Bonar, 1986). Baskar (1990) studied and effectiveness of teaching social concepts to working children through video method. But only limited number of studies has been taken up to study their efficacy in teaching Zoology at higher secondary level. Study of internal mechanism of an animal and human can be effectively taught when we use video presentation than through just lecture method. The central nervous system of human, digestive system of an animal, respiratory system, and parts of eye and ear etc., will be easily understood when they were presented in the form of video. Studies related to this are very scant and an attempt to know the effectiveness of video instruction was under in the present study.

STATEMENT OF THE PROBLEM

"VIDEO ASSISTED INSTRUCTIONAL PACKAGE TO IMPROVE ACADEMIC ACHIEVEMENT IN ZOOLOGY AMONG XI STANDARD STUDENTS"

Objectives of the Study

1. To find out the pretest scores of Control and Experimental group academic achievement of XI standard students in Zoology
2. To develop and apply video instructional programme to teach zoology among XI standard students.
3. To find out the post test scores of Control and Experimental group taught through video instructions in teaching Zoology for XI standard students.
4. To find out effectiveness of video instruction in teaching Zoology to the XI standard students.

HYPOTHESES

- √ There is no significant difference between the pre-test mean scores of the control group and experimental group students
- √ There is a significant difference in post-test mean scores of the control group and the experimental group students taught through video instructions.
- √ There is a significant difference between pre-test and post-test mean scores of experimental group students taught through video instructions.
- √ There is no significant difference between pre-test and post-test mean scores of control group students.

METHODOLOGY

Experimental method was adopted in the present study.

RESEARCH DESIGN

Pretest- Posttest Two equivalent group design was adopted in the study.

TOOLS USED IN THE STUDY

1. An achievement test to assess the academic achievement of XI standard students.
2. Develop and implement video assisted package on human anatomy for XI Standard

SAMPLE OF THE STUDY

The total sample consists of 40 students, studying in XI standard from Thampithottam Higher Secondary School in Dindigul.

Results and Discussion

The pre test and post test scores were subjected to appropriate statistical analysis. Mean and standard deviation was computed. T- test was employed to know the significant difference between control group and experimental group. Analyzed data were tabulated and interpreted.

TABLE-1: Pre-test Mean Scores, Standard Deviation and the calculated t - Value of Control Group and Experimental Group

Pre Test	Number of students	mean	SD	't' value
Control group	20	50.6	12.89	0.043
Experimental group	20	50.4	15.9	

From the above table, the obtained t-value is not significant which shows that there is no significant difference in pre-test achievement scores between control group and experimental group. The stated hypothesis 'there is no significant difference between the pre-test mean scores of the control group and experimental group students' is accepted. Thus statistically, the two groups are homogenous in their academic achievement before treatment.

TABLE-2: Post-test Mean Scores, Standard Deviation and the calculated t - Value of Control Group and Experimental Group

Post Test	Number of students	Mean	SD	't' value
Control group	20	57.35	13.76	4.458
Experimental group	20	80.35	18.59	

The above table 2 evinced that the obtained t- value 4.458 is significant at 0.01 level. Thus the stated hypothesis 'There is a significant difference in post-test mean scores of the control group and the experimental group students taught through video instructions' is accepted. When the mean scores are compared experimental group (80.35) is found to be higher than the control group (57.35). Therefore when students are taught through video presentation they can understand and excel academically rather than teaching through chalk and board method. Jeyalakshmi (1994), Basu (1991), Ramar (1994,1995,1996,1997) have also established the efficacy of video instruction in instructional process at various levels. The present study also showed that video instruction is effective in teaching learning process.

TABLE – 3: Pre test and Post-test Mean Scores, Standard Deviation and the calculated t - Value of Control group

Control Group	Number of students	Mean	SD	't' value
Pre test	20	50.6	12.82	1.6071
Post test	20	57.35	13.76	

From the above table, the obtained t-value is not significant which shows that there is no significant difference in pre-test and post-test achievement scores of control group. The stated hypothesis 'there is no significant difference between the pre-test and post-test mean scores of the control group students' is accepted.

TABLE – 4: Pre test and Post-test Mean Scores, Standard Deviation and the calculated t - Value of Experimental group

Experimental Group	Number of students	Mean	SD	't' value
Pre test	20	50.4	15.92	5.54
Post test	20	80.75	18.59	

The obtained t – value 5.54 is found to be significant at 0.01 level. Thus the stated hypothesis 'there is a significant difference between pre-test and post-test mean scores of experimental group students taught through video instructions' is accepted. The above result is in line with the previous research. Specialized computer programs were found helpful to develop inquiry skills while also increasing scientific knowledge even when strong "misconceptions" were present at the start (Shute & Bonar, 1986). Baskar (1990) studied and effectiveness of teaching social concepts to working children through video method. Thus video instruction was found to be effective in teaching various subjects. Teachers have to be encouraged to use such innovative multimedia based teaching approach to improve students' academic achievement.

EDUCATIONAL IMPLICATIONS OF THE STUDY

A few educational implications for the present study as follows,

1. The results of the study have proved that video package is more effective than the traditional method in teaching zoology subjects to standard XI students. It will be equally effective for the students at all levels and for teaching all subjects.
2. Even though commercial video and CD packages are available it will not suit to the individual students' need and hence the teachers of middle schools and high schools should be given orientation on how to develop video package materials making use of the resources locally available to teach various subjects to their students of all categories (Above Average, Average, Below Average, Slow learners and low achievers).
3. All educational Bodies such as DIET, SCERT, NCERT and NCTE should encourage teachers to use innovative technology in their teaching learning process

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