

Research Paper - Education

“ A Study of effectiveness of the Audio-Visual-aids in Teaching and Learning of English at primary Level in Z.P. Primary Schools of Solapur District.”



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Introduction –

Education at present is in a flux. The system of Education at all level has changed, is changing & will continue to change as and when it is required. There is an agreement on all sides that the academic education is to be replaced by practical & dynamic education which is related to life. The main account in modern education is on the awaking of curiosity, the stimulation of creativity, the development of proper interests, attitudes & values & the building of essential skills such as independent study & capacity to think and judge for oneself. In modern education, students are encouraged to explore, to ask questions, to study themselves & to be creative. In this modern education audio-visual aids are more important because in modern teaching-learning process 85% of teaching is related to the audio visual aids. It is now established that audio -visual aids work as potent initiators.

In the past the teacher was considered to be the sovereign as far as the teaching -learning process was concerned. The role of the students was mostly passive. Modern trends have changed the face of educational world. Many progressive methods have come in the wake of these trends. Yet the traditional methods are not being given up altogether, they are “being modified and adjusted to the changed concepts and situations.”

Multimedia Approach & Instructional Development –

Educational Technology can be called systematic approach to problems solving in the educational environment. The National center of programmed Learning, UK(1971) defines Educational Technology as, “The application of scientific knowledge about learning and the conditions of learning to improve the effectiveness & efficiency of teaching learning & training and in the absence of scientifically established principles, it implements empirical testing to improve learning situations.

Audio – visual aids are different types of tools that appeal to the sense of learning & vision and are used in classrooms for presentation of abstract information.

The American Commission has defined the Multimedia Approach as follows-

“Methodology based on that principle that a variety of audio- visual media and experiences corrected with other instructional materials overlap and reinforce the value of each other. Some of the materials may be used to motivate interest; others to communicate basic facts; still others to clear of misconceptions & deepen understanding.”(Erickson 1965)

The term multimedia refers to the use of variety of other materials & techniques in combination. Each of these are chosen because of the particular contribution, it can make to total learning experience.

While using the audio visual aids for teaching in a classroom, the teacher has to follow five basic principles which form the “Matrix of Learning.”

They are – Selection of media, Readiness, setting

proper physical condition, follow-up and evaluation.

Statement of the Problem-

At present studies on teaching of English at primary level is of paramount importance. In the process of teaching & learning of English, the audio-visual technology is used by many schools, so the effectiveness of audio visual technology is unquestionable. In order to establish the effectiveness of the multimedia, the investigator has taken up this study entitled, “ A study of effectiveness of the audio-visual aids in Teaching and learning of English at primary Level in Z.P Primary Schools of Solapur District.”

Need for the study –

Maharashtra Government has been providing the teaching -learning of English from std. I since 2000-2001. The revised syllabus of English for std-V to VIII (upper Primary Level) has been introduced from 2004-2005. The syllabus is skill oriented. It is designed to increase the students' level of achievement in English at the school level. The syllabus committee has made some recommendations & constructed attractive and interesting textbooks relevant to the age group of students. Syllabus committee recommended to use different audio visual aids in teaching & learning of English.

Govt-of Maharashtra has tried to acquaint the classroom teachers with objectives of teaching English under the changed circumstances through MSCERT. MSCERT conducted SMART-PT Training programme at different levels. This programme aimed at a revolutionary transformation in the strategies of learning and the fundamental approach with a view to ensure better learning outcome. There are different resource centers working at different places like.DRG (District Resource Group), BRC(Block Resource Center) & CRC (Cluster Resource Center). All these are helping the teachers in making & using different audio-visual aids in teaching English.

In present set up the situation is different. The trained teachers donot take the audio-visual aids seriously, whatever the efforts have been done by the different institutions and agencies donot seem to have much influence in improving the quality of classroom teaching. It is very necessary to determine which method of presentation is effective in the process of teaching & learning in the classroom. So the relative values of various media should be analysed and teachers should adopt the media which is more effective in the process.

Scope of the Study –

Since this is an experimental study, the investigator has attempted to know the treatment effect of the specific media in teaching learning English experimentation, questionnaire and observations. The findings of the study will definitely help the teachers to be aware to the audio-visual media and the institutions like NCERT, SCERT & DIET can be sensitive the present need of the improvement on educational technology. In this context the results of the study might provide more insight into the existing

knowledge base of educational technology.

Hypothesis of the Study –

1)Specially developed package in English improves the learners ability to learn more in easy way among the primary level students.

2)Pre-recorded compact disc, developed through the expert in the subject as an instructional device using multimedia reaches the learners quietly at the primary level pupils.

3)There is difference between teachers and pre recorded compact disc developed through the subject expert with regard to effectiveness in improving the teaching- learning process.

Objectives of the study –

1)To analyse the development and importance of teaching-learning through multimedia.

1)To study the awareness of teaching- learning of English through multimedia at the primary level teachers and students.

2)To analyse the effectiveness of teaching & learning through audio-visual media among students and teachers at the primary level.

3)To elicit the views of the English teachers over the use of oral and multimedia teaching at primary level.

Methodology –

The investigator chose the geographical area of North Solapur Taluka. The taluka consists of 35 Z.P primary schools. The researcher has chosen 5 schools to conduct the research. A total of 300 students were selected as the sample for this study . 150 of them constituted the experimental group & the remaining 150 students constituted the control group. 20 students each from the standard V,VI,VIII were selected for the study. Before selecting the actual sample for this study, the investigator observed that the students of experimental and control groups had equal entry level abilities for the respective standards and very careful in not violating the assumption of sample selecting. For achieving this, the students of experimental and control groups of respective standards were made match groups. For matching them their marks in the class test were taken into account. The students were made equal in number in all he groups. After the students' selection, 150 students in experimental group and 150 students in control group became the sampling units during the first phase of the sample selection. During the second phase of sample selection, 15 students who are teaching English at primary levels from the 5 schools were selected randomly to participate in the study.

Data gathering Procedure –

a) The Tests –

The investigator planned to study the effectiveness of audio-visual media. For this purpose, 300 students of V,VI & VII std were involved and were taught English by applying the audio-visual media, by the investigator. The investigator taught a total of 4 topics of English for all the standards of students. The specific media was also used while teaching. The investigator took the maximum time of 60 minutes to teach the topics.

The students found the lesson interesting when the devices such such as computers, tape recorder & CD-ROM were used in the teaching- learning. The investigator noticed the 100% attention when the above media were used for teaching. The investigator was able to identify their earnestness & curiosity when the media was used for teaching the subject matter selected for this study.

The investigator took all the efforts in keeping them separate so that mutual sharing could be avoided. The assumption of keeping all other things remain equal except

the treatment of the media for teaching learning English at the primary level was followed by the investigator while gathering data. All the response sheets received from the experimental & control group were carefully evaluated by the investigator and the achievement score of both groups became the data for this study.

Questionnaire –

Questionnaire was administered over the sample of 15 teachers selected from 5 schools teaching English at the primary level. They were requested to answer all the items of the questionnaire leaving no item unanswered. All their opinions were of qualitative nature. Based on the items prepared for the questionnaire all their opinions were carefully collected and placed on record. The opinions of the teachers are qualitatively analyses and interpreted by the investigator.

Observation –

During the investigation carried by the researcher, the observation was also made about the availability of resources in the school, utilization of the available resources, classroom activities of the students , performance of teachers' enrichment programmes to the teachers. The operation of the management of the school was also observed.

Statistical Tools Used –

1) Mean 2) standard Deviation 3) Z-test

Analysis & Findings –

The investigator has analysed the data obtained through the tools used for the study and interpreted the findings.

Analysis and findings on students Test Paper –

Standardwise classification of performance score of the both experimental & control group.

| Intervals Of marks | Standard | | | | | |
|--------------------|---------------|--------------------|---------------|--------------------|---------------|--------------------|
| | V | | VI | | VII | |
| | Control Group | Experimental Group | Control Group | Experimental Group | Control Group | Experimental Group |
| 91-100 | 2(4.00) | 20(40.00) | - | 26(52.00) | 1(2.00) | 24(48.00) |
| 81-90 | 3(6.00) | 9(18.00) | 5(100) | 21(42.00) | 8(16) | 19(38.00) |
| 71-80 | 6(12.00) | 10(20.00) | 9(18.0) | 2(4.00) | 15(30) | 3(6.00) |
| 61-70 | 6(12.00) | 7(14.00) | 11(22) | 1(2.00) | 19(38) | 3(6.00) |
| 51-60 | 14(28.00) | 4(8.00) | 14(28) | | 3(6.00) | 1(2.00) |
| 41-50 | 9(18.00) | - | 4(8) | | 3(6.00) | |
| 31-40 | 6(12.00) | - | 7(14) | | 1(2.00) | |
| 21-30 | 4(8.00) | - | | | | |
| N | 50 | 50 | 50 | 50 | 50 | 50 |
| Mean | 58.30 | 84.50 | 63.00 | 92.30 | 72.80 | 90.80 |
| S.D | 18.34 | 13.75 | 14.57 | 7.09 | 11.57 | 9.33 |
| Min marks | 25 | 55 | 35 | 70 | 40 | 60 |
| Max marks | 100 | 100 | 100 | 100 | 100 | 100 |

Note – figures in parenthesis indicate percentage to N.

The discussion in the table clearly reveals that there was high variation among the performance of the students of control groups. It is true that use of media results in better achievement. This has been proved through the descriptive analysis. To study statistical significance of the difference between the performance of the students in both experimental group and control group, the mean score and the standard deviation of the both groups are given in the following table.

Contingency table of the statistical variation

| Group | | Std-V | Std-VI | Std-VII |
|--------------------|----------|--------|--------|---------|
| Control Group | N | 50 | 50 | 50 |
| | Mean | 58.30 | 63.00 | 72.80 |
| | S.D | 18.34 | 14.57 | 11.57 |
| | Variance | 336.34 | 212.24 | 133.77 |
| Experimental Group | N | 50 | 50 | 50 |
| | Mean | 84.50 | 92.30 | 90.80 |
| | S.D | 13.75 | 7.09 | 9.33 |
| | Variance | 189.03 | 50.21 | 87.10 |

The mean values of the students in all the standards are higher in the experimental group than the controls group. The standard deviation & the variance among the students of the all standards in the study were less in the experimental group than the control group. The findings are _____ -

1)The analysis on the awareness of multimedia among the primary students revealed that nearly – 88% students are not aware of learning through multimedia.

2)In control group , awareness level of students about the multimedia is equal to the awareness level of the students in the experimental group.

3)The maximum of the students get awareness about the multimedia through their teachers only.

4)The analysis of the general performance scores, in frequencies of the control group revealed the fact that the number of high achievers are low and the number of low achievers were high when compared to the performance scores in frequencies.

5)In control group the mean score of the students from the standard Vth is lesser than mean score of the students from the standards VII. This showed that the performance of the students increases when their standard of study increase.

6)The analysis of the general performance score in frequencies of the experimental group revealed the fact that the number of high achievers were very low when compared to the performance score on frequencies.

7)When comparing the mean scores of the experimental group shows that the std-vII students had high score than the students from std-V. The Standard Deviation is also lesser in the std-VII than the standard V.

8)The comparison of frequencies in controls group & experimental group revealed that the performance of the students from the experimental group were better than the performance form the control group for teaching & learning of English.

1)In the experimental group the high achievers i.e- students secured more than 90 marks was 70. But in the control group it was 3 students only. This is because of the effect of the media used in teaching & learning of English. The minimum marks secured by the students from experimental group were greater than the control group.

2)The contingency table revealed that there was high variation among the performance of the students of control group.

3)The statistical significance of the difference between the performance of the students in both experimental group & control group showed that the S.D & variance amount the students of all standards were less in the experimental group than the control group. It is sure that use of media results in better achievement.

Analysis & findings from Questionnaire –

1)Regarding to the educational qualification of the teachers

only 11.42 % of the teachers are English graduates, 47.08% & teachers with PG 13.75 % teachers with B.Ed.

2)40.32 % teachers are having 11to15 years of teaching experience & 27.50 % teachers are having 1 to 5 yrs experience.

3)Every third or fourth year, teachers are changing their work place.

Teachers were asked to order the instructional objectives of using media from the given list of ranking 1 to 6 according to their views. The first rank goes to the objective –'B' i.e- 86.77

1)2nd rank to the objective 'f' i.e.40%, third rank to the objective 'C' & 'E' i.e. 33.3%, fourth rank to the objective 'C' i.e. 60% 5th rank to the objective. 'D' i.e. 60 % and sixth rank to the objective 'B' i.e. 53.3 %

2)28.90 % teachers said that they give the opportunities to the students to watch educational telecast in T.V because they donot have such facility in their school.

3)28.90 % teachers accepted that students are more interested in watching TV programme than the classroom instruction and they agreed that there was improvement on the achievement of the students after the exposure of TV programme.

4)More than 80% teachers have not used CAI but only 20% teachers used CAI. They agree that the students study better than the traditional method of teaching.

5)15% teachers have not used non projected aids. 86.48 % teachers have not used projected aids.

6)Form the study it is found that effectiveness of multimedia over the other approaches in teaching learning of English at primary level revealed the fact that 80% of the teachers accept that av media is that best approach.

7)76.6 % teachers expressed that they need equipment such as computers, compact disks, OHP etc. & funds are needed to finance multimedia equipments and aids preparation.

Analysis & findings from observation –

1)90% schools donot have adequate facilities & there is no separate room for keeping instructional aids.

2)Many of the English teachers were found unable to use the equipments & materials because they are not fully aware of the various projected aids to be used in the classroom.

3)All the teachers used black board, pictures, maps, charts.

4)Supply of educational journals & periodicals were not sufficient.

5)Most of the schools have no provision in the time table for the radio & tv programme.

Recommendations

The technological applications have invaded every field in industry where as the total applications have yet to be realized in the field of education. There are a number of students to prove that application of technology in education improves the achievement of the learner. The present study also reveals that the students perform better through multimedia than the traditional approach.

The results of the study have tremendous implication in the field of education, particularly in the areas of teaching, instructional materials and curriculum construction.

Following are some recommendations-

1)The schools must be oriented with the concept of multimedia approach through multi sensory learning. The schools should follow unique method of teaching to enhancing the overall achievement of the students.

2)Schools having the facility of multimedia can optimize the learning experience of the students through the application of multimedia.

3)Teachers working in schools must be well oriented with the

multimedia approach so that they can improve their own knowledge and thereby making a difference in the learning of the students.

4) There are very few schools more equipped with latest technological devices. The teachers are not aware or they do not have the facility of the latest technological devices. The schools are not aware or they do not have the facility of the latest innovations in education should have a close collaboration with the technology equipped schools.

5) Sharing of resources among schools is important for the efficient use of teaching & learning through multimedia application.

6) There is no doubt that multimedia is a far superior approach. Therefore the orientation of educational institutions should be made at the primary level teachers and learning.

Suggestions for further study –

In light of the experiences gained by the investigator the following suggestions are given-

1) Similar study could be conducted for the all private, aided and govt. schools.

2) A comparative study could be carried on the attitude of the teachers & students over the effectiveness of various media such as audio, visual, tv and multimedia.

Conclusion –

Everyone of us has gone through the various phases of education from the childhood to profession. The educational system has got a tremendous responsibility to transform a child into a leader. The education in the present trend does not mean mere textbooks learning. It aims at giving complete life to the pupils. The experiences have shown that education is ever lasting. Hence the investigator has clearly understood that the mere dumping of materials will not be useful either to the learner or teacher unless it is planned & organized in an effective & purposeful way. From the results of the study the investigator identified by the present study that aids used in the teaching learning process have wide significance from the view points of teachers as well as learner at primary level of education.

Use of video CDs in learning English

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Introduction –

Visual experiences are more effective than verbal experiences. As the combination of sound & vision makes the class dramatic & imaginative, video-CDs are one of the best media for English teaching. Video-CD has the advantage of linear motion, facility of still frames, minimal loss of irrelevant information & information returns. Video CDs offer still pictures, motion, black & white colour & repetition of specific sections. In English teaching, all the demonstrations are not economically efficient which could be lowered by video CDs.

It has been found that video –CD gives results equivalent to or better than conventional, direct teaching especially in subjects such as science & mathematics. Television teaching raises the standard of teaching only by exposing teachers directly & indirectly to new concepts & techniques, at a pace which they are able to maintain & by tactfully offering them badly needed guidance & counsel. Pupils during the video session must be advised not to think of the session merely as a sort of entertainment period. It is important to preview the CDs before showing them to the class & to brief pupils about the lesson before the viewing begins.

Rationale for the study –

The teaching of English presents numerous day to day problems for the teachers of English. Due to the stereotyped methods of teaching the subject is sometimes decried as dull & dry. Students are made to cram & memorize concepts without understanding. To avoid or to minimize this the teachers of English must come forward to use Educational Technology in their teaching. Video CDs help to support & supplement the teacher's work. When video are used the learners are active participants rather than passive observers. Video CDs may be provided in different topic & used by learners at their own pace till they achieve mastery. The aforesaid facts motivated the researcher to investigate the impact of video CDs in learning English among primary students and hence the study.

Objective –

- 1) To test the difference in levels of achievement in pre test & post test of both the control & the experimental groups.
- 2) To test the difference in levels of achievement between the control & the experimental groups that were exposed to the video CDs & the conventional method, respectively.

Methodology –

1) Sample – The sample selected for the experiments was purposive sampling for the present study. Z.P. Primary school Hotgi was selected in which there were 20 students in the std-VI of those 10 were taken as control group & the remaining 10 as experimental group.

2) Tool – to teach the experimental group the VDO-CD on DINOSAURS was made use of. To measure the achievement of the two groups the investigator developed a orienion test carrying 10 objective type questions.

3) Experimentation – The experiment was completed in there

different phases. In the first phase the criterion test was administered on the two different groups to check the previous knowledge of the std-VI student in the topic **DINOSAURS** In the second phase an experimental group was imparted the instructions through video CDs & the control group was taught through the conventional method. Immediately at the end of the instructions the criterion test was administered on the two groups, to obtain the final achievement scores, which were termed as the post test score.

The statistical techniques employed in this study were mean, standard deviation & correlated 't' test.

Data Analysis –

Table No.1
Correlated 't' test between the mean scores of the respondents in the pre-test & post-test

| Category | No | Mean | Standard Deviation | r | t-value | |
|--------------------|------|------|--------------------|------|---------|---------|
| Control Group | Pre | 10 | 5.4 | 2.29 | 0.77 | 2.92(s) |
| | post | 10 | 6.9 | 1.63 | | |
| Experimental Group | Pre | 10 | 5.8 | 2.36 | 0.77 | 2.71(s) |
| | Post | 10 | 7.4 | 2.8 | | |

* s-significant at 0.05 level of confidence

In table1 the calculated 't' values are greater than the table values which suggests that there were significant difference between the performance in the pre test & post test by both the control & experimental group.

Table No.2
Correlated 't' test between the mean scores of control group & experiment group

| Category | No | Mean | Standard Deviation | r | t-value | |
|------------|--------------------|------|--------------------|------|---------|-----------|
| Pretest | Control Group | 10 | 5.4 | 2.28 | 0.078 | 0.385(NS) |
| | Experimental Group | 10 | 5.8 | 2.35 | | |
| Posttest | Control Group | 10 | 6.9 | 2.46 | 0.411 | 0.663(NS) |
| | Experim. Group | 10 | 7.4 | 2.8 | | |
| Gain Score | Control Group | 10 | 1.5 | 1.62 | 0.1 | 0.142(NS) |
| | Experim. Group | 10 | 1.6 | 1.85 | | |

* NS – not significant at 0.05 level of confidence.

In table-2, the calculated 't' value are less than the table values which reveals that there were no significant difference between the performance of the control group & the experimental group both in the pre-test & post test. Even in gain score, there was no significant difference between the two group.

Finding –

1) Both the control & the experimental group showed better performance in the post- test than the pre-test.

2) Both in the pre-test & the post- test, there were no

significant difference in the performance between the control group & the experimental group.

3) In the gain-score also, the control & the experimental group did not show any significant difference.

Educational Implication –

The study indicated that the learning by video CDs is as good as that by the teacher. So a survey may be conducted to know the facility of power, CD player/computer/TV etc. in all the primary schools. The talented primary school teachers may be utilized in the preparation of video scripts, because only they know the actual need of their wards “mobile van” may be provided to the DIETs, so that even the rural students will have better exposure. Every week, two or three periods may be exclusively allotted as video classes in the primary schools for abundant video CDs are available in all the DIETs on almost all the competencies.

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