

EFFECTIVENESS OF VIDEO-ASSISTED INSTRUCTION IN TEACHING GRADE 6 SCIENCE

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Abstract. The study focused on determining the performance of Grade 6 learners in Science in Pasima Elementary School. In the pre-test administered to Grade 6 Science learners, the Traditional Instruction Group obtained a mean of 15.63 and Mean Percentage Score (MPS) of 31.26%. While the Video-Assisted Group obtained a mean of 15.31 and a Mean Percentage Score (MPS) of 30.62% and the last one which is the Combination of Traditional and Video-Assisted Instruction Group obtained a mean of 15.56 and a Mean Percentage Score (MPS) of 31.12%. As to the post-test results, the Traditional Instruction Group earned a mean of 24.94 and Mean Percentage Score (MPS) of 49.88. While the Video-Assisted Group earned a mean of 28.13 and a Mean Percentage Score (MPS) of 56.26% and the last one which is the Combination of Traditional and Video-Assisted Instruction Group earned a mean of 31.22 and a Mean Percentage Score (MPS) of 62.44%. Based from the data gathered, it shows that there is a need to enhance the performance of Grade 6 learners in Science. Video assisted instruction can help teachers to enhance their students' performance but it is best if it is combined by the traditional instruction. Thus, it could be used by the Science teachers in bridging the learning gaps and increasing the mastery level of Grade 6 learners.

Keywords. Video-assisted instruction, grade 6 science, effectiveness

1 Introduction

Instruction is vital to education, as it is the transfer of learning from one person to another. It is any intentional effort to stimulate learning by the deliberate arrangement of experiences to help learners achieve a desirable change in capability (Smaldino, et.al 2015).

Most teachers use the usual and traditional method in teaching their lessons (i.e. "chalk talk and use of manila paper) which results to lack of interest, boredom and minimal learners' participation. As a teacher, he/she can use Vision learning's multimedia/video materials on and off the internet. The teachers can project a computer screen in their class, slowly scrolling through text and clicking on graphics and animations within a lesson. Alternatively, they can work offline with an overhead projector. The overhead pages are formatted to be printed on transparencies for classroom use. Multimedia presentations keep students alert and focused. It would benefit learners immensely if they could hear and see the topic itself. (Sanders, 2009)

Modern world would not be modern at all without the understanding of the wonders of science. With this great impact of science to mankind, many countries are strengthening their Science Curriculum to keep abreast of ever-changing world. (Kangah, 2014)

The teacher plays an important role inside the classroom. To be able to achieve goals, the teachers must be prepared to execute efficiently and effectively the lessons he/she undertakes daily (Sanders, 2009). This requires the ability to provide instructional materials which are tested and proven that can be utilized to promote learning.

However, there is still much to be done in Science that is to play a dynamic role in building the country. One is by tackling the problem plaguing public schools, which is lack of adequate teaching aids and instructional materials including multimedia/videos so that teachers will not report to verbalizing the teaching of Science.

Teaching science to Grade 6 learners is critical for establishing a foundation for further success in science. There is a need for some basic memorization of facts; however, memorization of everything involving science eliminates the inner curiosity students have about the natural world. As technology advances and hardware and software improve, it becomes more feasible to integrate multimedia directly into classroom activities and the core curriculum. Understanding why, when, and where multimedia is appropriate and beneficial is the first step toward successful implementation.

2 Review of Related Literature

The present study is different from other studies reviewed since it has different subjects, locale and research design. On the other hand, the study of Aysegul (2014) and Woolfitt Z. (2015) have similarities with the present study because the mentioned studies integrated multimedia instruction especially video-assisted instruction to determine the effects in teaching learning process. The same is true with the study of Jesse (2015), Abragan (2017), and Dange (2013) because these studies were concerned with the use of technology to improve and enhance the performance of the learners. The discoveries in using traditional and multimedia instructions greatly contributed to the articulation of the present study.

The studies of Nunez, (2017) , Mendoza (2015) and Cabardo (2014) used experimental method as similar to the present study. Though they differ in terms of topic, they also administered pre-test, prior to the use of multimedia instruction and post-test after to gauge the effectiveness of the multimedia instruction. They are all related to the present study because they all compared the use of the multimedia instruction versus the traditional lectures.

3 Research Methodology

3.1 Research Design

The researcher used the quasi-experimental method in this study to determine the effects of video-assisted instruction in teaching Science to Grade 6 learners. It is experimental because the researcher manipulated the teaching strategy variable to control and measure the effectiveness of video-assisted instruction on the learning of Science.

3.2 Population and Sample Size

The study was conducted among the 96 Grade 6 learners in Pasima Elementary School during the school year 2018-2019. The learner - respondents were grouped heterogeneously according to their average grade in their grade five. The researcher administered pre-test and post-test to the ninety-six (96) Grade 6 learners before and after the experiment.

3.3 Statistical Treatment of Data

The data gathered in the pre-test and in the post-test were tallied, statistically analyzed and interpreted according to the requirements of the subproblems. To determine the level of performance along the objectives in Science of each of the three groups based on pre-test and post-test, mean was computed. To determine if there is a significant difference in performance of the three groups in the pre-test and post-test, Analysis of Variance (ANOVA) was used. To compare the mean differences of the scores between the pre-test and the post test of each of the three groups, t - test for correlated means was used.

4 Presentation, Analysis and Interpretation of Data

4.1 Performance of the Grade 6 Learners in Science as Revealed by Pre-test Results

It could be gleaned from Table 1 that the three groups obtained almost the same means in the pre-test administered by the researcher. The Traditional instruction Group got the highest MPS which is 31.26 followed by the Combination of Traditional and Video-Assisted Instruction Group which is 31.12 MPS. While the Video-Assisted Instruction Group got the lowest MPS which is 30.62. The difference between and among the three groups is small. Further, the Mean Percentage Scores (MPS) obtained by the three groups was below the DepEd's prescribed standard level which is 75%.

Table 1. Pre-test Result

Group	Mean	Mean Percentage Score (MPS)
Traditional Instruction Group	15.63	31.26
Video-assisted Instruction Group	15.31	30.62
Combination of Traditional and Video-assisted Instruction Group	15.56	31.12

4.2 Test for the Significance of the Difference in the Performance of Grade 6 Learners in Science in the Pre-test

Table 3 shows the results of the test for the significance of the mean performance of the three groups in the pre-test. It shows that there is no significant difference between and among the performance of the three groups in the pre-test. It can be seen from the table that there is no significant difference among the pre-test results of the three groups as supported by the computed F value of 0.03 which is way below the critical F-value of 3.106 at 0.05 level of significance. This means that before the experiment, the three groups of learners have more or less the same level of competencies in the covered lessons in Science 6.

Table 3. Test for the Significance of the Difference of the Performance of the Three Groups in the Pre-Test

Group	Mean	Computed F Value	Significance	Decision
Traditional Instruction Group	15.63	0.03	Not Significant	Accept H_0
Video-assisted Instruction Group	15.31			
Combination of Traditional and Video-assisted Instruction Group	15.56			

4.3 Comparison of the Three Teaching Strategies

It can be gleaned in the table 7 that there is an increase in the posttest mean of the three teaching strategies wherein traditional instruction gained 9.31, video-assisted instruction obtained 12.82 and the combination of traditional and video-assisted instruction is 15.66. It means that the pre-test and post-test results show that there was indeed improvement in learning acquired but the obtained difference cannot be considered conclusive unless tested statistically. Hence, further analysis was conducted, likewise using t-test for correlated means.

Table 4. Comparison of the Three Teaching Strategies

Group	Pre-test, Post-test, Mean Difference	Computed T Value	Significance	Decision
Traditional Instruction Group	9.31	20.49	Significant	Reject H_0
Video-assisted Instruction Group	12.82	19.58	Significant	Reject H_0
Combination of Traditional and Video-assisted Instruction Group	15.66	16.30	Significant	Reject H_0

Therefore, the null hypotheses associated with the use of the three teaching strategies which states that there is no significant difference in the performance in each group as revealed by the pre-test and post-test results is hereby rejected. The computed t-value which are 20.49, 19.58 and 16.30 are higher than the critical value which is 1.671 became the basis in the rejection of the null hypothesis. It could be deduced further that there is significant improvement in the performance of the learners through the use of these three teaching strategies.

5 Conclusion and Recommendation

There is a significant difference in the performance of the Grade 6 learners in Science after the exposure to the three teaching strategies but the most effective is the combination of the traditional and video-assisted instruction. The video-assisted instruction could enhance the performance of Grade 6 learners in Science. Video-assisted instruction combined with the traditional instruction is the most effective instruction to improve the performance of the learners. There is a significant improvement in the performance of the three groups in their pre-test and post-test results. This suggests that those instructions are all effective with the combination of video-assisted and traditional instructions obtained the highest mean score.

There is a need to enhance the performance of Grade 6 learners in Science. Teachers should evaluate the performance of the Grade 6 learners regularly. Video materials should be recommended for use by other Science teachers. Teachers should use traditional instruction combined with the video-assisted instruction to enhance better the performance of the learners. School administrators should design training programs focused on the use of video-assisted instruction as a teaching strategy.

References

- Abragan, Fernan Q. (2017) " Video-assisted Instruction and Performance in Science and Health of Grade 6 Pupils at Naawan Central School", Mindanao State University, Naawan Misamis Oriental Philippines
- Anderson, T. 2009. *The Learning Process and Program Approaches*. New York: Appletown Publishing Company, Inc.
- Cabardo (2014), "Effectiveness of Enhance Materials in Science for the Open High School Program". Smaldino, et. Al. (2015) "Instructional Technology and Media for Learning; Enhanced Pearson eText with Loose-Leaf Version – Access Card Package, 11th Edition" New York Sanders M. (2009) "STEM, STEM Education, STEMmania" Virginia Polytechnic Institute
- Kangah, A. (2014) "Proposed Computer-aided Insyructional Materials in Science and Health VI" San Carlos College, San Carlos City Pangasinan
- Mendoza, G.L et .al 2015 "Effectiveness of Video Presentation to Students' Learning" College of Nursing, Benguet State University, La Trinidad, Benguet, Philippines
- Woolfitt, Z (2015) in his study "The effective use of video in higher education" Lectoraat Teaching, Learning and Technology