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Effectiveness of Audiovisual-based Pedagogy in Social Studies Instruction

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Abstract

A pretest-posttest based study was conducted to examine the effectiveness of an audio-visual method in teaching Social Studies among the Grade 9 students of Dolores National High School, Dolores, Eastern Samar. The use of the audio-visual method as an experimental treatment was compared against the traditional method of teaching for one month using lessons under *Ang Daigdig sa Klasikal at Transisyunal na Panahon* (The world in classical and transitional period). The data collected among 30-respondents per group were analyzed using mean, mean difference, standard deviation, and t-test for independent and dependent samples at 0.05 level of significance. Findings revealed that the use of the audio-visual method in teaching social sciences minimized extreme performances among the respondents and is statistically more effective than the traditional approach. Hence, the researcher recommends audio-visual instruction, especially among struggling learners and least learned topics.

Keywords: *Audio-visual method, traditional method, teaching pedagogy, pretest posttest design, Eastern Samar, Philippines*

Introduction

The educational system has changed, is changing, and keeps on improving when it is required. Education is a light that shows humankind in the right direction to surge. The intention of education isn't merely to make a student proficient but also to include rational thinking and independence. When there is a readiness to change, there is a promise for progress in any field. Innovations can create, and development benefits both students and teachers. The rattling changes and escalated unpredictability of the current world contribute to new difficulties and demand our country's educational framework.

Ever since the Philippine education system was established, problems have always been a part of its operation. Albano (2019) revealed that the National Achievement Test (NAT) was conducted by the Bureau of Education Assessment (BEA) - Central Office for School Year 2017-2018. The secondary school implied that for the third succeeding year, the national average mean percentage score (MPS) in the Grade 10 NAT Social Studies subject continued its downward direction of 26.36% and MPS results of 26. 39 % for Region 8, which is very far from the 75% goal of the department.

Correspondingly, Dolores National High School is included in this scenario. According to the BEA (2018), Eastern Samar Division, the NAT results of the Social Studies is in a diminishing trend. In the 2017-2018 NAT result, DNHS got the MPS of 34.01% and Grade 12 NAT, and the result dropped dramatically to 15.02%. Comparatively, other secondary schools in the division got a higher MPS compared to DNHS. The Matarinao School of Fisheries got an MPS of 35.05%, and Jipapad National

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High School got 34.37% for Social Studies subject. Accordingly, Albano (2019) disclosed that two DepEd authorities said the decrease in the NAT scores could be because of framing the questions under the K to 12 program's emphasis on 21st-century skills learning.

In an article, The Manila Times issue dated September 9, 2018, "Cheating in National Test Bared by DepEd," Dino disclosed that “the change in the design of the NAT, whereby it specifically tested the 21st-century skills. As opposed to the previous assessment framework, which was profoundly competency-based," was among the components that "most probably contributed to the low MPS." To solve this issue, instructional audio-visual materials (projector, laptop, speaker, etc.) and integrate audio-visual methods in the educating learning process give the premise to improved teaching and learning of a subject. They are designed, produced, and use to achieve the specific instructional goal. O'Neal, Gibson, and Cotten (2017) mentioned that technology plays a significant role in 21st-century learning environments and practices. Using technology as a learning tool, teachers are “engaging students, promoting higher-level thinking, and developing essential skills for the future.

Therefore, the researcher's belief that transformation among teachers from being the traditional teacher to the modern teacher today will achieve by attending training and seminars in different strategies and methods of teaching. Hence, in audio-visual instructional materials, integrating audio-visual teaching methods and enrolling in graduate studies will enhance their teaching skills. Because of the advancement in information technology, teachers need to acquire competence in using different equipment to improve their teaching skills. DepEd geared towards attaining one goal of education, which is to be globally competitive. Therefore, this study will be a good starting point to eradicate our students' poor academic performance.

Literature Review

Methods of Teaching

Audio visual method. Using audio-visual aids and other technologies developed in this modern scientific era to achieve concrete education proves beneficial for teachers, students, and the educational system. It brings diversification in methods of instruction. They are equally valuable at all levels of education. Appropriate use of audio-visual aids in the teaching of English, Geography, History, Science, Languages, Art, Agriculture and many other technical and vocational subjects is increasing day by day.

Also, students should be given the confidence to ask, inquire, explore and be creative and initiators. In effect, an inquisitive mind is the beginning of lifelong learning that indeed leads to success. Before modern education was incorporated, students were passive listeners, and the teacher was an autonomous body of knowledge. But in recent years, the superiority is shifted towards students as Jadal (2011) mentioned the use of audio-visual aids is preferred as they are considered 85% of whole teaching and learning. They keep the individual learner focused on what is being taught by the teacher in the classroom (Olu-Ajayi, 2016).

In one of the studies of Molon (2011), it was revealed that the use of Information Communication Technology (ICT) in teaching could make the teaching process more effective and enhance student's capabilities in understanding concepts. Additionally, faculty use ICT to present lessons or instruction to students and everyone more effectively (e.g. PowerPoint,

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video, recording the lectures, computer-aided instruction, and assessment).

Audio-visual aids make a lesson or a lecture more exciting and memorable experience for students and teachers. Pradran (2017) unveiled its essential role in focusing the attention of individual students towards the teacher or the topic, especially seeing, hearing, and touching, which brings maximum knowledge for the individual.

Traditional method. According to Rahman et al. (2012), the lecture technique should not be confused with the teacher's supplying of information. There are three main reasons to use the lecture format: (1) To transmit information, (2) To create interest, (3) To promote understanding. The lecture method can be an effective method of instruction due to its versatility. Walker (2003) also added that the lecture method is virtually limitless in the application, either to the situation, subject matter, or student age and learning ability. At the same time, it can be one of the least effective methods if improperly used.

Teaching Effectiveness

Audio-visual method. Rasul, Bukhsh, and Batool (2011) disclosed that audio-visual aids are practical tools that "invest the past with an air of reality". Audio-visual aids provide the learners with realistic experience, capturing their attention and understanding the historical phenomena. They appeal to the mind through the visual-auditory senses. A famous Chinese proverb, "one seeing is worth a hundred words," is a fact that we receive knowledge through our senses. Another proverb says, "if we hear, we forget; if we see we remember, and if we do something, we know it,"—this means that the use of A.V aids makes the teaching-learning process more effective.

Likewise, using audio-visual aids in teaching can enhance lesson plans and give students additional ways to process subject information. Audio-visual aids are devices that present a unit of knowledge through auditory or visual stimuli to help and learn. They concretize knowledge to be delivered and help make the learning experience appear natural, living, and vital. They supplement the work of the teacher and help in the study of the textbooks. The great educationist Comenius has well said: The foundation of all learning consists of clearly representing the senses and sensible objects so they can be appreciated easily.

Further, Mayer (2009) supported this contention and explained that viewing, while it may appear to be passive, can involve the high cognitive activity necessary for learning. Furthermore, he described videos as multimedia that conveys information through two simultaneous sensory channels: aural and visual. It often uses multiple presentation modes, such as verbal and pictorial representations in on-screen print and closed-captioning. Multimedia in teaching is an effective educational tool for all students, and its positive effect on special populations of students is gaining greater attention.

Traditional method. The lecture method is more effective when visual aids, models, or group participation are used. Similarly, the discussion and the learning material method, when properly used, can develop students' higher learning skills. It can increase the students' capability for generalization and transfer, a sense of the relevance of learning, and the ability to analyze, synthesize, and apply what is learned. In the study of de Caprariis, Barman, and Magre (2013), they commented that lectures lead to recall facts, but discussion produces higher level comprehension. Student performance in team learning methods, finding positive learning outcomes as compared to traditional lecture methods.

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Conceptual Framework of the Study

The teacher who is designing an environment for learning should consider various models or approaches to teaching. All models and approaches have either explicit or implicit positions on how knowledge is constructed. The appropriate use of each helps the students gain conscious control of learning tools that they can use to verge on particular kinds of learning. Each method or approach is designed to increase certain aspects of the ability to learn.

Cognitive Theory of Multimedia Learning Mayer (2009), known as the "multimedia principle", states that "people learn more deeply from words and pictures than from words alone". The Multimedia principle is a theory studied in depth by Richard Mayer that states that words and graphics are more conducive to learning than just text or graphics alone. The theory is based on the idea that learners learn better when they engage in relevant cognitive pressing such as attending to the lesson's suitable material, mentally organizing the material into a coherent cognitive representation, and mentally integrating the material with their existing knowledge.

This study of teaching Social Studies among Grade 9 students at Dolores National High School compared two teaching models. One is the traditional teaching methods, and the other is the use of audio-visual methods of teaching. Using the experimental process, the study found out that audio-visual teaching methods are more effective than traditional teaching methods in Social Studies instruction. The effect of these two different treatments (teaching methods) was measured using the students' scores from the achievement test that will be administered to them.

Figure 1 summarized the discussions above diagrammatically.

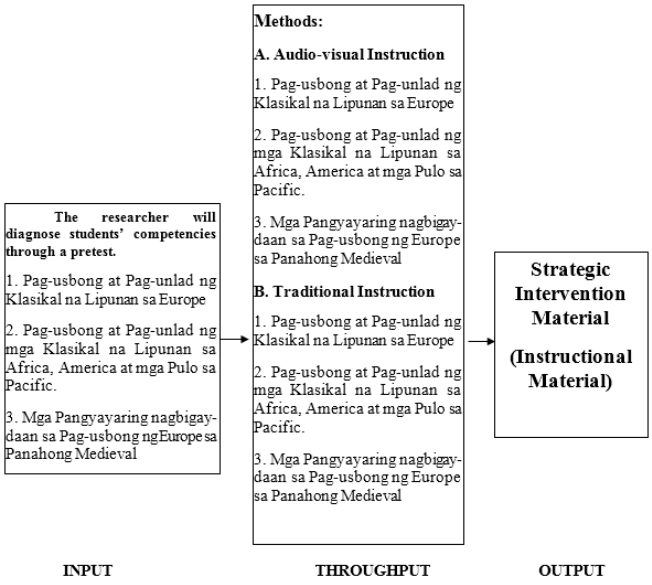

Figure 1. *The Paradigm of the study showing the variables involved and the research environment*

Based on the researcher's experiences in teaching *Araling Panlipunan* concepts among Grade 9, he observed that the traditional approach provides little impact on their learning. Hence, a study was conceived to compare the effect of two approaches, namely audio-visual teaching and traditional methods of teaching, in the performance of selected learners at Dolores National High School. Furthermore, the study results provide teachers in upgrading themselves to be at pace with technology for quality education in our country and eradicate the poor academic performance of our students. This study aimed to answer the following research questions:

1. What is the difference between the pretest mean scores of the students in using audio-visual teaching and traditional methods of teaching Social Studies?
2. What is the difference between the posttest mean scores of the students' performance in using audio-visual teaching and traditional methods?

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3. What is the difference between the students' pretest and posttest mean scores using audio-visual teaching and traditional methods?

Methodology

Research Design

This study followed the static group comparison design of conducting experimental research. Two whole groups of Grade 9 high school students were utilized. Comparisons were made between these two groups of students who received different treatments – instruction using the audio-visual method and instruction using the traditional method. The pretest was given to both groups, which assessed their prior knowledge in the learning skills tested. After a month of observing the instruction of both classes, a posttest was administered to validate the students' learning outcomes.

Sampling Procedure

Simple random sampling was used in which a subset of individuals (a sample) was chosen from a broader set (a population). Every individual was randomly selected by chance, with the end goal that every individual has the same probability of being chosen at any phase during the sampling procedure. Every subset of individuals has the same chance of being selected for the sample as any other subset of individuals. This study used simple random sampling wherein the study population was arranged according to their 2nd quarter General Weighted Average (GWA). Both the experimental and control groups have the same population of 30 respondents.

Data Gathering and Instruments

The researcher sent a letter to the school principal to ask for consent to conduct the study. When the permit was granted, the researcher started administering a 50-item pretest to the students. The content of the pretest was the same as that of the posttest to determine the performance of the experimental group and control group on selected topics from the Social Studies subject.

During the formal instruction, the researcher personally conducted it to the two groups during the original schedule of their Social Studies class. The experimental group was recited during the third period class in the morning, while the control group quoted during the second period of the class in the morning. The two groups were described in two different periods, and this was the schedule for the whole duration of the study. The conduct of this study was made as naturally appearing as possible, so the treatment groups can freely work and elicit their honest response.

Furthermore, the instrument that was used in this study is a Chapter/Unit Test found in the textbook (Cristobal, 2007). The questionnaire is a multiple-choice test consisting of fifty items with four options for each item. The analysis covered all the selected topics in the Third Quarter of Social Studies Grade 9 and served as the study's pretest and post-test. Also, Brief Lesson Plans for both methods were prepared using the topic *Ang Daigdig sa Klasikal at Transisyunal na Panahon* (The World During Classical and Transitional Period).

Data Analysis

After cleaning and organizing the data using Microsoft excel, the researcher run data analysis tool function to derive the mean scores in the pretest and posttest results of the respondents, the mean difference, standard deviation, and t-test for independent and dependent samples at 95% level of confidence.

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Ethical Considerations

To ensure that internationally-accepted ethical standards are considered, including originality in the work, and if the researcher has used the work and words of others that this has been appropriately cited or quoted; letter of consent was secured after the data collection; data were treated with anonymity and confidentiality; parental consent was required for those minor students participating in the study; and the respondents were not forced to respond if they do not want to be involved in the experimentation.

Results and Discussion

Mean Pretest Performance of the Control and Experimental Groups

As shown in Table 1, the mean pretest performance of the control group is at par with the participants who were exposed to the audio-visual method of teaching (AVMT) approach, with a mean difference of 1.5 points. However, the independent t-test result showed that the difference between the two groups is not significant since the computed t-value of -1.18 is smaller than the critical t-value of 2.002, with respect to a .05 level of confidence. Furthermore, the pretest mean score analysis proved that the two groups are equally comparable in terms of learning performance prior to the experimentation.

Similarly, Çibik, Diken, and Darçin's (2008) analysis of the pretest performance of control and experimental groups' performance showed the same result, revealing equal concept knowledge.

Table 1
Mean Pretest Performance of the Control and Experimental Groups

Groups	Mean	Mean Difference	Computed t-value
Experimental (Audiovisual Method)	18.30	1.5	-1.18
Control (Traditional Method)	19.80		

$t_{critical} = 2.002$, $\alpha = .05$

Mean Posttest Performance of the Control and Experimental Groups

Towards the end of the study, the respondents' achievement were evaluated using a 50-item posttest material, which covered *Ang Daigdig sa Klasikal at Transisyunal na Panahon* (The World During Classical and Transitional Period). In contrast to the result in Table 1, the group exposed to the AVMT approach achieved a higher mean score compared to the control group with a mean difference of 4.57. A significant difference between these two groups is observed since the computed t-value is greater than the tabular value (df = 58, t = 2.002). This implies that the approach employed by the experimenter improves the learning of students in the experimental group. The result further implies that audio-visual method of teaching is statistically more effective than the traditional teaching approach. This provides a huge breakthrough in teaching history lessons in a more enjoyable and interesting manner possible.

The result amplifies Rasul et al. (2011) notion about audio-visual instruction as a helpful tool in providing the students with practical experience, which captures their consideration and help in the comprehension of the historical phenomena. Similarly, Abuda and his colleagues revealed a significant difference in the posttest performance of students exposed to Strategic Intervention Material compared to the group who received conventional instruction.

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Table 2

Mean Posttest Performance of the Control and Experimental Groups

Groups	Mean	Mean Difference	Computed t-valu
Experimental (Audiovisual Method)	27.90	4.57	3.63
Control (Traditional Method)	23.33		

$t_{critical} = 2.002$, $\alpha = .05$

Mean Pretest and Posttest Performance of the Control and Experimental Groups

Table 3 shows the analysis made on the mean scores' difference between the pretest and the posttest results of the experimental group and control group, respectively. The t-test for dependent samples indicated that the posttest means of both the experimental and control groups were significantly higher than the pretest means as reported by the minimal probability levels associated with the computed t values. Furthermore, the standard deviation results show that the use of audio-visual method of teaching has a lesser scores' deviation compared to the control group, which implies the capacity of AVMT to minimize extremity of scores between high and low performers.

The t-test for dependent samples results show that the computed t value of 9.61 for the experimental group and 3.29 for the control group both results are both higher than the 1.699 tabular t value which implies significant differences. Thus, the two methods are both effective in teaching Social Studies courses, in which a teacher can still use traditional method of teaching most especially on lessons that requires teachers' guidance.

The results are related to the work of Mayer (2009) on the need to activate learners' prior experience and the implementation of active learning in the classroom. Similarly, Olu-Ayaji (2016) opined that audio-visual aids effectively improved ability level in low ability level Biology students. The findings give a better picture on the complexity of social science instruction, which in turns, provide guidance among classroom managers and administrators to employ various strategies to ensure quality performance among students.

Table 3

Difference Between the Means of the Control and Experimental Groups (Pretest and Posttest)

Group	Pretest Mean	Posttest Mean	Standard deviation of the difference (S_d)	Computed t-values
Experimental (Audiovisual Method)	18.30	27.90	5.43	9.61
Control (Traditional Method)	19.80	23.33	6.37	3.29

$t_{critical} = 1.699$, $\alpha = .05$

Conclusions

Based on the findings of the study, the researcher was directed to conclude that the use of audio-visual method of teaching (AVMT) led to the significant increase of the performance of the students in the experimental group. Likewise, the t-test analysis of posttest scores' difference revealed audio-visual method of teaching (AVMT) as a more effective instructional approach in teaching Social Studies, compared to the traditional method of teaching. Finally, the experiment made showed a lesser deviation of scores observed among those who were exposed to audio-visual method of teaching (AVMT) which provide a significant breakthrough in minimizing extreme scores' performance of learners in every classroom.

Hence, the researcher recommends the use of Strategic Intervention Material (SIM) in some areas in Social Studies, and the utilization of (SIM) in *Ang Daigdig sa Klasikal at Transisyunal na Panahon* (The World During Classical and Transitional

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Period) in other schools to further confirm its effectiveness and to maximum its use. Strategic Intervention Material (SIM) aided instruction in some learning areas may be conducted by future researchers. Moreover, the researcher suggest the inclusion of technology-focused training strands in pre-service programs and in-service training for professional advancement. Finally, this study hopes to open new horizons for other researchers to examine the importance and use of the audio-visual method of teaching on the same lines in other subjects of the curricula taught at different levels of education.

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