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VIDEO-ASSISTED TEACHING AND STUDENTS' ACADEMIC PERFORMANCE

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ABSTRACT

This study was geared towards the development and validation of Video-assisted Teaching in English for Academic and Professional Purposes subject as supplemental instructional material to enhance students' academic performance. It was conducted to Grade 11 Technical Vocational Livelihood students at Bambad National High School, Isulan, and Sultan Kudarat. The researcher used an experimental research design to assess the quality of the innovative strategy in teaching and the students' academic performance in terms of their assessment scores. Descriptive-evaluative research design was also used to determine the extent of quality of the educational videos on its content, relevance and acceptability. Findings revealed that the quality of the Educational Videos was rated excellent and has passed the qualities expected by the evaluators. Whereas, academic performance of the control and experimental groups in the pre-test were both rated fairly satisfactory which means that they are comparatively at the same level of academic performance before the initial conduct of the study. In the post test result, the academic performance of the control group was rated very satisfactory and the experimental group was rated excellent. This implies that administering the instructional video material with the integration of visual, auditory, and kinesthetic learning style enhanced the quality of the videos and significantly contributed to the higher post-test results of the experimental group. Thus, it can be claimed that developed educational videos may complement the scantiness of learning materials in English for Academic and Professional Purposes subjects.

Keywords: Video-Assisted Teaching, Academic Performance, Educational Videos, English for Academic and Professional Purposes, Supplemental Instructional Materials and Experimental Research Design

1.0 INTRODUCTION

Using audio-visual materials in the classroom is nothing new. Both the content and the technology have developed considerably increasing the availability and the value of audio-visual materials in the classrooms. Content has been developed from instructional television since the 1950's up to the present which allows the replay of taped lectures through educational videos. It intends to complement classroom instruction to educational standard-based videos designed specifically as supplemental classroom tools. However, the use of technological materials directly affects the listening and viewing instructions in the classroom. Maximizing the effectiveness and quality of technological advanced materials is indeed significant following its elements (Brame, 2016) such as how to manage cognitive load of the video, how

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to maximize student engagement with the video; and how to promote active learning from the video. Short video clips allow more efficient processing and memory recall. The inevitable uses of educational videos and television in classroom have direct relationship between the frequency of use and perceived students achievement and motivation. Among frequent users (teachers who report using TV or video for two or more hours per week), two-thirds find that students learn more when TV or video is used, and close to 70% find that student motivation increases. It is noted that instructional videos is used to reinforce, motivate, meet student needs, demonstrate, and provide authentic contents. It also maximizes instructional time, teacher and student control, multi-modal instruction, and motivation. The cognitive theory of multimedia learning is a theory of how people learn from multimedia messages and defines specific design features that, based on empirical research and improvement of learning (Cruse, n.d). As observed, senior high school teachers greatly experienced scantiness of instructional materials in teaching different subjects. One of these problems was the accumulation of instructional material tailored fit to the needs of the learners and anchored to the Department of Education curriculum guides. More than time consuming, instructional materials' supply, usability and accessibility were constraints for the facilitators. In the midst of this, teachers maximized the use of online sources which eased this scantiness. Pointing out the advantages and drawbacks of the effect of videos in classroom settings, the educational video integration in teaching the applied or specialized subject may outweigh the downsides to happen. It is hard to risk the learning process of the learners because as a researcher, the validity of the educational videos may be challenged. It also determines up to what extent this developed instructional material is acceptable and appropriate for the learners. Hence, due to the perceived problems and research gap, this study which aims to develop educational videos was conducted. Specifically, this study aids the demand of the required curriculum content of English for Academic and Professional Purposes for the improvement of the academic performance of Grade 11 TVL learners at Bambad National High School.

1.1 Conceptual Framework of the Study

This study was anchored on the Computer-Assisted Language Learning (CALL) theory of Stockwell (2012) particularly on using videos in teaching. Technology, especially videos have digitized classrooms through digital learning tools like computers, smart phones, and the likes. Videos serve as the main information delivery mechanism which increases students' engagement and improves learning experiences (Roy, 2019). Additionally, (Hsin and Cigas, 2013) inferred also that video can be a highly effective educational tool. To maximize the effectiveness and quality of the videos; cognitive load, engagement impact and features that promote active learning were integrated for a productive part of students' learning experiences. Thus, in making the video, the researcher included simple motivation, abstraction, and follow up activities to achieve its purpose.

Figure 1 shows the framework of the study showing the mean difference of the academic performance of the dependent and independent variables. The box on the left is the independent variable containing the use of educational videos in Teaching English for Academic and Professional Purposes. While in the right box are the dependent variables which refer to learners' academic performance. This performance level was measured before and after the implementation of the innovative strategy.

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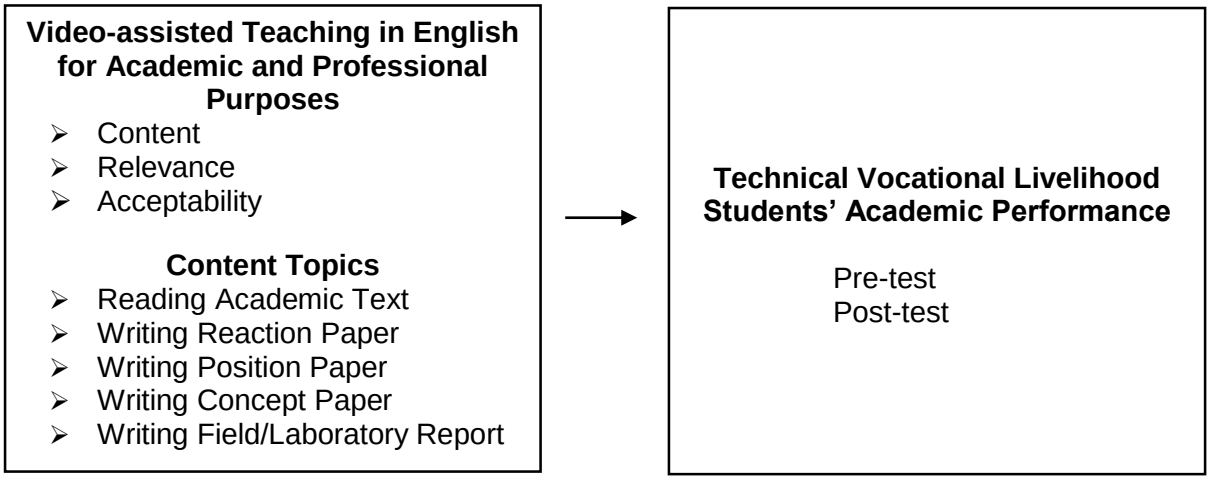

Figure 1. The Conceptual Paradigm of the Study

1.2 Statement of the Problem

This study generally aimed to find out the effectiveness of Video-assisted Teaching in English for Academic and Professional Purposes and students' academic performance.

Specifically, it sought to answer the following questions:

1. What is the extent of quality of the Educational Videos in Teaching English for Academic and Professional Purposes in terms of:

1.1. Content;

1.2. Relevance; and

1.3. Acceptability?

2. What is the level of academic performance of the control and experimental groups during the pre-test result?

3. What is the level of academic performance of the control and experimental groups during the post-test result?

4. Is there a significant difference in the academic performance between the control group and experimental group in the pre-test results?

5. Is there a significant difference in the academic performance between the control group and experimental group in the post-test results?

6. Is there a significant difference in the mean gain scores between the control group and experimental groups?

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1.3 Scope and Delimitation of the Study

This study was limited to the 60 Grade 11 Technical Vocational Livelihood (TVL) Information Communication Technology (ICT) and Cookery learners of Bambad National High School located at Bambad, Isulan, Sultan Kudarat for the School Year 2019-2020 and randomly divided into control and experimental groups.

Reading academic text, writing reaction paper, position paper, concept paper, and laboratory or field report were the content topics of the videos. There were 10 videos used as supplementary materials and aided instructional tools aside from the lecture method employed by the researchers. Meanwhile, the Philippines was struck by a worldwide pandemic of coronavirus disease 2019 (Covid-19) caused by severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2). The increasing number of victims has forced the Philippine government to suspend classes in all year levels starting March 13, 2020 here in Mindanao until further notice will be announced. Due to unexpected suspension of classes, hence, the last topics field and laboratory report were not administered to the respondents. Moreover, the research determined the effectiveness of Video-assisted Teaching in English for Academic and Professional Purposes with topics and sub-topics stipulated in the EAPP Curriculum guide. These topics were taught to Technical Vocational Livelihood learners using the educational videos to the experimental group and conventional style (synthetic visual aids) to control the group for 50 hours which is equivalent to one quarter or one grading period.

2.0 METHODOLOGY

2.1 Research Design

The study used the experimental research design particularly the pre-test and post-test to find out the mean level and effectiveness of the Video-assisted Teaching in English for Academic and Professional Purposes as complement instructional classroom material for Grade 11 Technical Vocational Livelihood senior high school students. It represented two level treatments such as teaching with educational videos (experimental group) and conventional instruction using synthetic visual aids (control group). The descriptive-evaluative design was also utilized to determine the extent of quality of the developed videos in English for Academic and Professional Purposes in terms of its content, relevance, and acceptability aspects. It was organized, described and tabulated to yield answers to the specific questions that were drawn from the statement of the problem.

2.2 Locale of the Study

This study was conducted at Bambad National High School, Bambad, Isulan, Sultan Kudarat. Its Senior High School offers 2 strands namely Academic and Technical Vocational and Livelihood. General Academics, and Science and Technology, Engineering and Mathematics were two tracks for academics. Information and Communication Technology (ICT), Electrical and Installation Maintenance (EIM), Automotive, Beauty Care, Garments, Agriculture, Cookery, and Carpentry in TVL strand. This school has been a recipient of the Bukidnon State University Computer Package and the government-initiated programs which provided the school with computer hardware, internet connectivity, and teachers' training. At present, most classrooms in Senior High School have television sets installed. Since the K to 12 Curriculum

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was implemented in 2016, the Senior High School teachers experienced scarcity of learning materials in the different subjects, most especially in English for Academic and Professional Purposes subject. To accelerate students' performance in the English class, there is a need to develop an innovative strategy that would cater the needs and attention of the students in the teaching and learning process.

2.3 Respondents of the Study

The respondents of the study were 60 Grade 11 Information Communication Technology (ICT) and Cookery Senior High School students of Bambad National High School enrolled during the School Year 2019-2020. The 60 students were divided into two groups, 30 respondents for the Experimental Group and 30 respondents for the Control Group. Total enumeration was used in the study. Moreover, the panel of experts who analyzed, evaluated, and validated the innovative strategy educational videos in teaching English for Academic and Professional Purposes were also considered as respondents of the study.

2.4 Sampling Technique

This study employed total enumeration in Grade 11 Technical Vocational Livelihood students sections Information Communication Technology and Cookery who were enrolled at Bambad National High School in School Year 2019-2020.

2.5 Data Gathering Instrument

The main instrument employed in this study was the developed instructional material called Educational Videos. The contents of the videos were based on the content standard and learning competencies stated in the curriculum guide of English for Academic and Professional Purposes subject focusing on the 4th quarter lessons. To maximize the benefits from educational videos, three key components such as cognitive load, elements that impact engagement, and elements that promote active learning were carefully followed. GIFs and pictures related to the topic were also utilized to enhance the visual effects of the videos. The researchers utilized the television set in the Information Communication Technology classroom as a tool to present the instrument which contributed to the success of the study. The five competent and expert English language teachers and one Information Communication Technology specialist served as evaluators who validated the educational videos. They evaluated the innovative strategy on its effectiveness in terms of content, relevance and acceptability. A survey instrument was adapted from Salipada (2018) and Batcharo (2018). Specifically, paraphrasing of the ideas and topics of the test item questionnaire were modified. A five-point Likert Scale was employed in the study which was shown below:

Rating	Range of Means	Descriptive Rating	Interpretation
5	4:21 – 5:00	Excellent	Meets between 91-100% quality standard
4	3:41 – 4.20	Very Satisfactory	Meets between 75-90% quality standard
3	2.10 – 3.40	Satisfactory	Meets between 60-74% quality standard
2	1.81 – 2.60	Fair	Meets between 35-59% quality standard
1	1:00 – 1.80	Poor	Meets between 34% quality standard

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To evaluate the students' performance, the researchers used the remarks from the E-class Record as the classroom assessment tool adapted from the K to 12 Basic Education Program Curriculum (DepEd Order no.8. s. 2015). The researcher used a rating scale interpreted as follows intended for the performance of the students:

Range of Scores	Remarks
41 – 50	Outstanding
31 – 40	Very Satisfactory
21 – 30	Satisfactory
11 – 20	Fairly Satisfactory
0 – 10	Did Not Meet Expectation

2.6 Statistical Treatment

After the conduct of the study, the data collected were organized, tabulated, analyzed and interpreted. They were analyzed using descriptive and inferential statistics. The following statistical tools were used in answering the statement of the problem. Mean and descriptive statistics were used to evaluate the extent of the quality of the Educational Videos in terms of its content, relevance and acceptability. Moreover, t-test was utilized to test the significant difference between the pre-test and post-test results, and the mean gain scores of the control and experimental groups. Lastly, in the statistical tests, the level of significance was set at a = .05.

3.0 RESULTS

The evaluators assessed the extent of quality of the educational videos in terms of its content, relevance, and acceptability.

Table 1. Summary of Mean Ratings on the Content, Relevance, and Acceptability of Educational Videos in Teaching EAPP.

INDICATORS	MEANS	VERBAL DESCRIPTION
Content	4.43	Excellent
Relevance	4.51	Excellent
Acceptability	4.37	Excellent
GRAND MEAN	**4.43**	**EXCELLENT**

Table 1 reveals the summary of mean ratings on the extent of the quality of educational videos in terms of its content, relevance, and acceptability. The grand mean of the three aspects of educational videos was 4.43 described as Excellent. Among the three indicators, Relevance got the highest mean of 4.46 while, Acceptability got the lowest mean both have similar verbal description as Excellent. This can be concluded that the integration of visual, auditory, and kinesthetic learning style with the inclusion of motivational questions, abstraction, and simple practice activity contained in every video were very useful for the students in understanding the topics and performing the tasks. This simply implies that the developed videos are quality supplemental materials for both teachers and students which can be replayed anytime to complement the scarcity of learning materials in English for Academic and Professional

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Purposes subject in the classroom. In support, Balula (2019) stated that the use of digital devices for learning like videos can be useful for learning English and technical terminology. He further stated that the use of digital technology, particularly videos, have the potential of making allowances for the production of collaborative outputs that require students to apply specific terminology within the scope of their fields, while solving activities by using creative approaches.

Table 2. Level of Academic Performance of the Control and Experimental Groups in the Pre-Test.

GROUP	MEAN	VERBAL DESCRIPTION
Control	18.93	Fairly Satisfactory
Experimental	20.03	Fairly Satisfactory

Table 2 shows the level of the students' performance in the control and experimental groups in their pre-test. The control group has a mean of 18.93 while the experimental group has a mean of 20.03 which both have verbal interpretation of Fairly Satisfactory. The result indicates that since the experimental group got the highest mean yet they have the same interpretation which means that the students have the same academic performance prior to the conduct of the study. Data denote that students have poor background on identifying and writing academic texts. They struggled with understanding the fundamental knowledge, skills and understanding of the topics and tasks to be performed because English for Academic and Professional Purposes subjects requires students to write or develop an academic or professional writing article.

Table 3. Level of the Academic Performance of the Control and Experimental Groups in the Post-Test.

GROUP	MEAN	VERBAL DESCRIPTION
Control	34.97	Very Satisfactory
Experimental	41.13	Outstanding

Table 3 reveals the mean level of the academic performance of the control and experimental groups in the post test. The control group has a mean of 34.97 with a verbal description of Very Satisfactory while the experimental group has a mean of 41.13 described as Outstanding. The scores of the control and experimental group from the pretest to posttest has improved. The traditional method using face to face discussion with synthetic visuals aids as aided materials were useful to enhance students' performance. On the other hand, the experimental group has utilized the video materials as supplementary instructional tools of the teacher in the teaching-learning process. It is noted that developed-videos have captured the interest and attention of the students which resulted in the higher posttest result in favor of the experimental group. This simply implies that students still learned from the traditional lecture method but apparently, the use of computer assisted instruction proved to be more effective in increasing learning as shown in their mean scores in the post-test results.

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It is supported by the statement of Yasar (2020). He posited several reasons for integrating digital technologies into educational environments, technological changes in education, effect of technology use on learning and impact of digital technologies on practice and the persisting issues. He further noted that digital technologies support learning through increasing learners' motivation, developing their minds, providing real-life-like experiences, creating a space where learners put what they learn into practice, promoting communication and collaboration, enabling research, maintaining learning in out-of-school contexts, promoting individual learning by increasing self-management.

Table 4 illustrates the t-test analysis on the pre-test results between the control group and experimental group.

Table 4. Analysis on Pre-test results between the Control and Experimental Groups.

Group	N	Mean	t-Computed	t-Tabular (0.05)	Decision	Interpretation
Control	30	18.93	1.04	2.00	Do not reject Ho.	Not Significant
Experimental	30	20.03				

As indicated on the table, the t-test analysis on pre-test results between the control group and experimental group. The 30 students from the control group had a mean of 18.93 while 30 students from the experimental group got a mean of 20.03. Result reflected that the t-computed value of 1.04 is lower than the t-tabular value 2.00. Hence, the null hypothesis that there is no significant difference in the pretest results of the control and experimental group is not rejected. It is noted that the academic performance of the control and experimental group in reading academic text, writing position paper, review or critique, concept papers, field or laboratory reports have low performance levels described as Fairly Satisfactory. Results denote that students in the control and experimental group have both limited background of the topics in academic writing which simply implies that they struggle with understanding the topics and performing the tasks assigned to them. This implies further that they both are comparatively at the same level of academic performance at the initial stage of the study. Educationalists worldwide work to improve the quality of education by providing appropriate learning resources such as worksheets (Shukha, 2018).

Table 5. Analysis on the Students' Performance in the Post-test between the Control Group and Experimental Group.

Group	N	Mean	t-Computed	t-Tabular (0.05)	Decision	Interpretation
Control	30	34.97	5.09	2.00	Reject Ho	Significant
Experimental	30	41.13				

Table 5 shows the t-test analysis results in the post test between the control group and experimental group. Experimental group mean rating of 41.13 which is relatively higher than

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the control group mean rating of 34.97. It is noted that the t-computed value 5.09 is higher than the t-tabular of 2.00, hence, the null hypothesis that there is no significant difference in the post test result is rejected. Instead, there is a significant difference between the mean scores on the post test of the control and experimental group. The use of traditional methods, specifically synthetic visuals aids utilized by the control group was useful for the students which made their post test result increased. While, video-assisted teaching as supplemental material in addition to the lecture method employed to the experimental group has significantly contributed to the higher posttest results. Data implies that learners in the experimental group have utilized the supplemental instructional material that suits the context of their lessons in the applied subject English for Academic and Professional Purposes. Meanwhile, the result conforms to the study of Herrera (2011) who stated that the efforts to improve students' learning outcomes have suggested the need to embed the use of educational technology in a learner-centered learning environment where students construct their own meanings.

Table 6. Analysis on Significant Difference of the Mean Gain Scores between the Control and Experimental Groups.

Test	Mean	t-computed	t-tabular	Decision	Interpretation
Control Experimental	16.03 21.10	4.94	2.03	Reject Ho	Significant

Table 6 reveals the analysis on the significant difference on the mean gain scores between the control and experimental groups. It is noted that the control group has a mean difference score of 16.03 while experimental has a mean difference score of 21.10 taken from their posttest minus pretest scores. It also reflected the t-computed value is 4.94 is higher than the t-tabular value of 2.03. Thus, the null hypothesis that there is no significant difference in the mean gain scores of the control and experimental group is rejected. Indeed, there is a significant difference in the mean gain scores between the control and experimental group. The result further implies that video-assisted teaching used by the experimental group was effective in capturing the attention and sustaining the interest of the students. The use of visual, auditory, and kinesthetic learning style embedded with simple motivational questions, abstraction and one practice activity in the video ignite their enthusiasm in learning the topics. The developed video enhanced its quality aspects on content, relevance and acceptability which significantly contributed to the higher post-test results of the students in the experimental group. This study also conforms with the findings of Ng (2015, p. 196) who stated that educators of today should scaffold their learners in the use of technology for educational purposes keeping in mind that they prefer activities they take part in actively rather than passive ones such as reading a text or watching a video. He mentioned that through deep thinking and deep learning processes, video instructional tools should be prepared in a way to answer "what content is appropriate for students to learn with the support of technology, which technologies do that best and how would students achieve the learning outcomes by interacting with the technology integrated learning material". He further stated that computers/television and instructional materials being used as both tool and method are effective for students on increasing the concentration on the course, understanding lesson, synthesizing and improving positive thoughts for the course. Instructional materials make the topic clearer and more lasting by making the abstract topics concrete.

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4.0 CONCLUSION

Based on the result of the study, the three key elements such as the integration of student engagement through simple motivational questions, cognitive load through abstraction of the topic, and active learning through practice activities have enhanced the quality of the videos in terms of content, relevance, and acceptability. Students in the experimental group have found to be of advantage in utilizing the supplemental instructional material to maximize instructional time, teacher and students' control, and a great motivation to meet their modality of learning. Further, video-assisted teaching delivers complex information and content which grabs students' attention and motivates them to embrace the knowledge in their own learning process which significantly contributed to the higher post-test results of the students in the experimental group. The educational videos had passed the qualities expected by the evaluators and the students have utilized the developed-videos to complement the scantiness of materials in the applied subject. The students' performance in academic writing was significantly enhanced by the instructional material used by the teacher inside the classroom.

5.0 RECOMMENDATIONS

Based on the findings and drawn conclusion of the study, the following recommendations were made:

1. The use of Educational Videos as supplementing instructional material and innovative strategy in teaching English for Academic and Professional Purposes is recommended for the teachers to enhance their teaching-learning process.
2. The validated educational videos can be used by other Grade 11 English teachers as instructional teaching materials to motivate learners' interest towards the subject matter.
3. The quality of Teaching English for Academic and Professional Purposes through Educational Videos can be utilized by the students to enhance their performance in learning English.
4. The researchers may submit the educational videos to the English Program Supervisor of the Division of Sultan Kudarat to be posted on the DepEd Portal as an added instructional material for senior high school English teachers.
5. There should be activities that promote different learning styles for students in spite of the fact that English for Academic and Professional Purposes subject requires students to write mostly about formal use of languages in academic and professional writing.
6. Supplementary or reinforced materials that enhance students' knowledge and skills on academic writing, position paper, and concept paper for mastery should be provided to students
7. Similar studies developing and using educational videos may be conducted in other subjects so as to validate the findings of this study.

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