

# Multimedia technology integration in teaching junior high school English

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## Abstract

This study aimed to assess the multimedia integration and literacy of teachers in teaching Junior High School English in Masbate Province Division, Ticao Cluster, which is composed of four districts, namely, District of Monreal, San Jacinto, San Fernando and Batuan. It involved 54 teachers or a total enumeration of all English teachers in Ticao Cluster for the SY 2017-2018. This study made use of the mixed qualitative-quantitative methods of research to determine the levels of multimedia technology integration of teachers in teaching Junior High School English, the extent of multimedia literacy, and identified the problems encountered. An action plan was also developed to address multimedia literacy and integration in teaching English. Based on the data obtained, it revealed that majority of the English teachers were on level 1 or entry level in terms of multimedia technology integration or 52%; there were 31% of teachers who were on level 2 adoption level; 13% or level 3 adaptation level; and 4% were on level 0 or non-use. The extent of multimedia literacy of the English teachers was labelled as satisfactory. The top three (3) problems that the English teachers encountered are the *lack of technical expertise and knowledge to set-up, operate and troubleshoot when an error occurs, no or slow internet connectivity, lack of knowledge and awareness in using, manipulating, and implementing multimedia technology, lack of multimedia technology devices, and no or unstable electrical connectivity within the school premises.*

**Keywords:** multimedia, technology, integration, English, junior high school

## Multimedia technology integration in teaching junior high school English

### 1. Introduction

With the legal mandate of promoting the right of all citizens to take appropriate steps in making education accessible to all, the Department of Education (DepEd) through its DepEd Order No. 78, s. 2010 is geared towards the transformation of education through the DepEd Computerization Program (DCP). It aims to provide public schools with appropriate technologies that would enhance the teaching-learning process and meet the challenges of the 21st century. This program shall respond to the computer backlog of public schools by providing them hardware and software, and training on simple trouble shooting. Some of the objectives of the DCP are to provide computer laboratory packages to secondary schools, to integrate ICT in the school system, to raise ICT literacy to learners, students, teachers, and school heads and to reduce the computer backlog in public schools. (DepEd Order No. 78, s. 2009)

The DepEd ICT4E Strategic Plan Research has shown that Information and Communication Technology (ICT) has the power to increase motivation and learner engagement and helps to develop life-long learning skills. As a powerful educational tool, ICT can facilitate the transformation of school education. One of the visions of the DepEd ICT4E Strategic Plan is to completely integrate ICT into the curriculum, which includes the development of multimedia instructional materials, and ICT enabled assessment. The DepEd ICT4E Strategic Plan further states that teachers need to embrace the changes ICT will have on teaching and learning. The teachers' role will shift from the traditional provider of knowledge to the facilitator of learning. To make these changes more easily, they should become habitual users of ICT.

With the advent of technological advancements and the rising demands for 21<sup>st</sup> century skills development, it is of great relevance for a teacher to integrate multimedia technology aimed at improving the performance of students and the teaching-learning process. Multimedia Technology is being considered as a necessary, useful, and adaptable tool for this purpose. According to Gulzar (2014), due to the rapid expansiveness of Multimedia technology and its wide array of uses, the incorporation of Multimedia technology in learning has become a viable and inexpensive option. Technology has a crucial role in developing a curriculum that enables the learners to be globally competitive individuals who embody the 21<sup>st</sup> century skills and become learners for life. Multimedia makes reading dynamic by giving words an important new dimension with sound, pictures, music, and video. Multimedia will help in spreading the information to millions of learners (teachers/students) who have not yet used the computer. Multimedia educational computing is one of the fastest growing markets in the world today.

The Philippines is always referred to as an English-speaking country. However, During the 2008 survey of International English Language Testing System (IELTS), Philippines only hooked the second place. This shows that students' English proficiency is declining. Teaching English language using multimedia technology can help students learn rapidly in an enjoyable and interactive way which might improve students' English proficiency. According to Conde (2006) of Davao City Philippines in his article *Erosion of English Skills Threatens Growth in the Philippines*, the deterioration of English proficiency has been linked to an overall decline in Philippine education. Accordingly, there is a recent government study that shows only seven (7) percent of high school graduates can properly read, speak, or understand English, and poorly trained teachers are partly blame.

Masbate is one of the provinces in Region V, which is comprised of three major islands - Masbate Island, Burias Island and Ticao Island. Among the three islands, Ticao is noted to be a cluster with unstable electrical and Internet connection due to its geographical location, challenging teachers to cope with the demands of the 21<sup>st</sup> century education which is more focused on utilizing technology in instruction. In addition, there are still elderly teachers who have little knowledge on multimedia technology utilization and integration, hence making them

still resort to traditional way of teaching. Since the DepEd's flagship is more focused on the 21<sup>st</sup> century skills and to achieve holistic learning, the researcher is encouraged to evaluate the multimedia literacy and integration of Junior High School English teachers in public secondary schools of Ticao Island. Furthermore, the researcher strongly believes that integration of multimedia in instruction can help reduce curriculum barriers and improve the quality of education.

Teo and Wong (2000) suggest that there is an urgent need to improve the quality of education to bridge the gap between developing nations, and multimedia instruction is considered as a necessary tool for this purpose. However, the presence of multimedia alone will not stimulate significant changes in a school. Teachers are important ingredient in the implementation of multimedia instruction in education. Without the involvement of teachers, most students may not take advantage of all the available potential benefits of multimedia on their own. Teachers need to actively participate in the use of multimedia facilities. They must be trained in the use of multimedia and in its integration in the classroom activities to enhance thinking and creativity among students. They must also learn to facilitate and encourage students by making them responsible for their own learning. Many of the current graduates were found to be lacking in creativity, communications skills, analytical and critical thinking, and problem-solving skills. Moreover, the researcher was motivated to conduct this study to propose for a solution on the said problems relative to multimedia technology integration and literacy. The study would like to provide ways on how to strengthen the DepEd Computerization Program in raising ICT literacy to learners and teachers. This study would like to contribute to the increase of English Proficiency Rate among students and cope with the 21<sup>st</sup> century education.

**Statement of the Problem** - This study aimed to assess multimedia technology integration and literacy of teachers in teaching Junior High School English in Masbate Province Division, Ticao Cluster which is composed of four districts namely: District of Monreal, San Jacinto, San Fernando, and Batuan for the School Year 2017-2018. Specifically, the study sought answers to the following questions: What are the levels of Multimedia Technology Integration of teachers in teaching Junior High School English? What is the extent of Multimedia Literacy of the English teachers? What are the problems that the English teachers encounter in the use of multimedia technology in instruction? What action plan may be developed to address multimedia literacy and integration in teaching English?

## 2. Related Literature

The need for good communication skill in English has created a vast requirement for teaching English around the world. This fact has put a tremendous pressure on curriculum designers to cope with this demand and to attempt to equip teachers with modern teaching methods and approaches. Research has indicated that the use of ICT can support new instructional approaches and make hard-to-implement instructional methods such as simulation or cooperative learning more feasible. Moreover, educators commonly agree that ICT has the potential to improve student learning outcomes and effectiveness (Chang 2012). Inquirer.Net reported that many countries in the Asia-Pacific region have realized the need for providing teachers with training in (ICT) and have launched various professional development initiatives. However, many of the training activities to date have been one-off, crash courses which focus on computer literacy and do not enable teachers to integrate ICT in their day-to-day teaching activities and master the use of ICT as an effective tool to improve teaching and learning. Teachers who have already adapted multimedia-driven instruction must still go through seminars and workshops that will enlighten them on how these innovations can work very well inside the classrooms.

According to De Guia (1987) in her book on the role of human resources in organization, training and development of employees are becoming increasingly important and a necessary activity in any educational institution. She said that the rapidly changing technologies increase quickly today than ever before, and training is indispensable. Matheson and Achteberg (1993) stated that computer technology provides an influential and multifaceted tool that can change the way we teach, and the way students learn. This literature proves how multimedia technology tools can create an interesting and interactive environment among the learners when

properly integrated into the teaching-learning process.

The Department of Education is currently expanding the reach of ICT in public schools to enable Filipino teachers and students to face challenges in the age of technology. Its advocacy in integrating ICT in education can only redound to the benefit of Filipino public-school children as it will make quality education easily accessible to as many learners as possible. This innovation of the DepEd clearly means that the Philippines is now on its way to fully integrate ICT into the curriculum. However, setting standards for this innovation is as important as providing every school with equipment, facilities, and trainings to make it work in the first place.

**Related Studies** - After exhaustive readings and research, the following studies are considered related to the present undertaking. The study of George and Sleeth (1996) found out that technology use in the classroom is capable of motivating students by increasing learning, enjoyment, and interest in the material. Such motivation gives the impression that higher levels of technology help students remember facts along the way to better performance on examinations. Zavala (1999) likewise conducted a study that proved how multimedia technology improves students' performance with the use of a dual coding approach to study reading in a high school population. Zavala concluded that the results supported dual coding because the learners who read the story with pictures outperformed those who did not. The study showed that the text with picture condition offers higher results when compared with text only. The research studies of George and Sleeth, and Zavala prove that with the new teaching strategies and innovations such as the use of audio-visual presentation in classroom instruction, students' retention rate will be elevated.

A study conducted by Kasper (1997) illustrated that teaching English using multimedia such as print, film, video, Internet to students encourage them to write a critical analysis on assignments. They attributed this improvement to the multimedia model that the texts teach them English and provide helpful information in other courses and the film and Internet help them make material easier to understand because they see, hear, and read about the topic. The study of Kasper is related to the present study since it talks about the positive impact of integrating multimedia in English language instruction. While, Galeria (2000) studied on enhancing communicative competence through video-teaching strategies, she focused on the impact of video teaching strategies in the enhancement of communicative competence. Findings revealed that students who were exposed to the video with the use of dialogic approach achieved a remarkably increase in the performance while students under traditional approach achieved fairly. The study of Galeria and the present study both suggested to continuously innovate new teaching methodologies such as the use of multimedia in presenting lessons to students.

Brocales, (2000), in her study on the use of multimedia in teaching literature to high school students recommended that a set of teaching materials using multimedia were utilized since these succeeded in enhancing literary skills of students and that there was a need for teachers to prepare teaching materials through multimedia facilities. According to her, students' difficulties in the inferential and critical level in literary skills can be alleviated by strengthening instruction through multimedia facilities. The study of Brocales and the present study both recommended the use of multimedia technology to strengthen instruction and to meet learning objectives meaningfully. According to Peña, (2000) who made an experimental study on the use of multimedia technology in enhancing English competencies, the utilization of instructional materials in English using multimedia significantly improved the academic performances of grade six pupils among the experimental group. One of her recommendations is for English teachers in elementary to undergo ICT trainings to utilize the ICT resources available effectively and efficiently in the delivery of instruction. The study made by Peña showed the importance of ICT tools in enhancing the English competencies of students and the needs of the English teachers to undergo trainings to effectively make use of the ICT resources. The above literatures are significant to the present study as these show the importance of multimedia technology in attaining English language proficiency.

**Synthesis of the State-of-the-Art** - The literatures and studies reviewed are of great contribution to the conceptualization of the present study. The literatures reviewed focused on the benefits of multimedia technology

in education and how it elevates students' academic performance. The studies of George and Sleeth (1996), Zavala (1999), Kasper (1997), and Matheson (1999) highlighted the motivational factor of computer utilization on pupils' learning. When properly integrated, it can create active engagement, collaboration, interaction, feedback, and connection to the real world. Meanwhile, Brocales (2000), and Galeria (2000) believed that multimedia technology should be integrated in the curriculum to strengthen instruction and attain communicative competence. De Guia (1987) asserted that the rapidly changing technologies increase quickly today than ever before, and training is indispensable. Peña (2012) likewise recommended that to be effective and efficient in utilizing ICT resources, teachers must undergo trainings to be able to meet the demands of the 21<sup>st</sup> century education.

**Gap Bridged by the Study** - In conclusion, the review of literatures shows the vital role of multimedia technology in the 21<sup>st</sup> century education where learners are expected to develop the knowledge and skills and become learners for life. So far, there is no study yet that focused on multimedia technology integration in teaching Junior High School English in Masbate Province Division, Ticao Cluster. Moreover, one of the studies that the researcher has come across focused on the use of multimedia technology in enhancing English competencies. The present study is significantly different as this study will mainly focus on multimedia technology integration in teaching Junior High School English. From those studies that have been conducted, there is no study yet about the multimedia technology integration in teaching Junior High School English in Masbate Province Division, Ticao Cluster. This is the gap that the study bridged.

**Conceptual Framework** - The constructivist view of Hoover (1996) asserts that students' active involvement in classroom instruction is the result of the appropriate multimedia technology integration. This study contends that when teachers integrate multimedia technology in English instruction, it offers a sense of reality and functions very well, which greatly cultivates students' interest and motivation in study and their involvement in class activities that will result to the Mastery of the English language. However, these can only be realized if teachers will have the knowledge and expertise on how to utilize and integrate multimedia technology appropriately in classroom instruction. Professional development provides opportunities for teachers to test their understandings and build new ones. Training that affects student-centered teaching cannot come in one-day workshops. Systematic, long-term development that allows practice and reflection on that practice - is required. It is also useful to remember the educator's maxim, "*Teachers teach as they are taught, not as they are told to teach.*" Thus, trainers in constructivist professional development sessions model learning activities that teachers can apply in their own classrooms.

### 3. Research Design

This study used the descriptive-quantitative method of research. The said method is considered the most appropriate since it aimed to investigate the current practices of Public Secondary English teachers in Masbate Province Division, Ticao Cluster when it comes to multimedia technology integration in teaching Junior High School English. On the other hand, quantitative method is used to quantify the problem by way of generating numerical data or data that can be transformed into usable statistics. It is used to quantify attitudes, opinions, behaviours, and other defined variables – and generalize results from a larger sample population. The result of the study led to the formulation of an action plan on the integration of multimedia technology in teaching Junior High School English and multimedia literacy of the English Teachers.

**Participants** - The data for the study came from two sources: primary and secondary. The primary source of data were the teacher-respondents who made responses on the questionnaire/checklists distributed to them and through unstructured interview conducted while the secondary sources came from the dissertations, theses, Internet sources, books and other materials related to the present study. The main respondents of the study were the 54 total number of English teachers from the 16 schools of Masbate Province Division, Ticao Cluster namely: Cogon National High School, Don Benito Maristela Memorial High School, Gerardo Cardíño Sr. High School, Monreal National High School, Rizal Integrated School, Bagahanglad National High School, Emilio Lee Llacer

Sr. High School, San Jacinto National High School, Andres Clemente Jr. National High School, Buyo National High School, Ipil National High School, Buenavista Integrated School, Burgos National High School, Costa Rica Integrated School, Francisco Alindogan National High School and Antonio Lee Llacer Sr. High School.

**The Instrument** - The main instruments used in the study to gather the needed data were the validated survey questionnaire and unstructured interview guide for junior high school English teachers. With the help of the adviser and chairman, the instruments were modified based on the comments and suggestions of the Jurors who are expert in ICT integration in instruction. The questionnaire-checklist is divided into three parts. The first part consists of the profile; second part is the levels of multimedia technology integration, and the third part is on the extent of multimedia literacy of junior high school English teachers. An unstructured interview was conducted on problems encountered during the retrieval of the questionnaire.

**Data Collection Procedure** - To get the needed data, the researcher followed the sequence in conducting the study. When the entire questionnaires were finished and approved by the adviser for distribution, the proponent asked for permission from the Schools Division Superintendent of the Division of Masbate Province, and to the School Heads of the schools which were the actual respondents of the study. The copies of the questionnaires were distributed personally by the researcher to the English teachers of Masbate Province Division, Ticao Cluster. Days after, the researcher made a personal follow-up for the retrieval of questionnaires and for the conduct of interview to verify some concerns. After the retrieval of the questionnaires, it was followed by tallying of the data for statistical treatment

**Data Analysis Procedures** - To determine the extent of multimedia technology integration in teaching English in Junior High School, the formulated rating scale is adapted from the Likert Scale which is shown below, while the statistical tools that the researcher utilized were frequency count, ranking and weighted arithmetic mean.

SCALE	RANGES	ADJECTIVAL DESCRIPTION
1	1.0-1.49	Never
2	1.5-2.49	Rarely (once a week)
3	2.50-3.49	Sometimes (two to three times a week)
4	3.50-4.49	Very Often (four times a week)
5	4.50-5.0	Always (everyday)

## 4. Findings

### 4.1 Level of Multimedia Technology Integration in Teaching Junior High School English

It can be inferred from the table that relative to integrating text, the respondents assessed the indicator using data downloaded from the Internet with a weighted mean of 3.35 which is described as sometimes while the indicator using digital modules/Curriculum Guide has weighted mean of 3.56 that is interpreted as very often. Similarly, the indicators using text or data used in PowerPoint presentation was given a weighted mean of 2.67 which is described as *sometimes*, and electronic library is rated with weighted mean of 2.07 that is interpreted as *rarely*. On the average, the level of multimedia technology integration along text is described as *sometimes* with an over-all weighted mean of 2.91.

**Table 1A**

*Level of Multimedia Technology Integration Along Text*

Indicators	Weighted Mean	Description
using data downloaded from the Internet	3.35	Sometimes
using digital modules/Curriculum Guide	3.56	Very often
using text or data used in PowerPoint presentation	2.67	Sometimes
electronic library	2.07	Rarely
Average	2.91	Sometimes

The data gathered means that the teachers mostly rely on using digital modules/curriculum guide on multimedia integration along text. On the other hand, electronic library is rarely used by teachers. It only shows that using digital modules is most effective way of English teachers in Junior High School as far as multimedia integration along text is concerned. This could be the most preferred way of teachers since digital modules/curriculum guide are easy to share and read by some android or smart phone application programs and these are available and compatible with file formats such pdf, ppt and docx.

The data result implies that most of the teachers are not fully equipped on multimedia technology integration along text. Likewise, a training and workshop must be conducted to enhance the knowledge and expertise of a teacher in this portion of multimedia technology integration. Also, noted in the unstructured interview are the lack of technical knowhow of the teachers in navigating text in multimedia integration which can greatly contribute to the students' motivation during the teaching-learning process. The finding is supported by the study Chandler & Sweller (1991) in which they asserted that placing text elements next to the corresponding parts of a picture or animation led to better learning results. Also, presenting text and picture simultaneously instead of sequentially improved problem-solving transfer.

Results of the empirical studies of Tabbers (2002) show that preventing split attention is especially effective when two information elements like a text and a picture are presented at the same time, which is mostly the case in multimedia learning. Mayer (2001) also suggests that learners can create a deeper understanding of words when they establish connections between words and pictures than from words or pictures alone. Multimedia has broken through the traditional "blackboard and chalk" teaching style. It has conquered the drawbacks of traditional teaching changing abstract, boring contents into funny, visual, audible, and dynamic ones. Multimedia English teaching combines text, images, audio, and video together making English teaching colourful and interesting so as to attract the attention of students and stimulate students' interest in English learning.

**Table 1B**

*Level of Multimedia Technology Integration along Graphics*

Indicators	Weighted Mean	Description
using photographic images from digital camera/smartphones	2.98	Sometimes
using images processed or created entirely within a computer	2.81	Sometimes
using clipart/ maps	2.70	Sometimes
using illustrations/diagrams	2.93	Sometimes
Average	2.86	Sometimes

From the table above, it can be asserted that the level of multimedia integration along graphics was evaluated by the respondents with an average of 2.86 which is described as sometimes. The indicators using photographic images from digital camera/smartphones and using images processed or created entirely within a computer were given weighted means of 2.98 and 2.81, respectively which are interpreted both as sometimes. In addition, the indicators using clipart/ maps and using illustrations/diagrams have weighted means of 2.70 and 2.93, respectively, which are both described as sometimes. The above data means that using photographic images from digital camera/smartphones was the main preference of Junior High School English teachers in integrating multimedia technology along graphics. Nowadays, it could be noted that smartphones and digital cameras are the most used technologies due to its accessibility and user-friendly features, making it easy and convenient to use by teachers and students.

The data gathered implies that though teachers are knowledgeable enough in some aspect of multimedia integration especially in navigating photographic images, digital images and clip-arts along graphics, their proficiency is not enough as supported by data gathered. In an unstructured interview, there were English teachers in every school who did not undergo competency training along multimedia technology integration in the classroom. Therefore, a seminar and workshop must be provided to enhance the technical knowledge and expertise of the teachers. The finding is supported by the study Wright (2003) as mentioned in *Andrew Wright's Book Picture for Language Learning*, graphics refers to images and pictures, such as chart, diagram, and

photograph, which contain no movement. Graphics can stimulate interesting and motivation, improve understanding ability of language, and offer especial reference object and topic. It plays an especially important role in language teaching process. Zhang (2016) stressed that multimedia is a kind of media which can show a variety of sounds, images, animation, and other effects, firmly grasping the student's interest. It also can stimulate the students' strong desire to study English actively.

**Table 1C***Level of Multimedia Technology Integration Along Audio*

Indicators	Weighted Mean	Description
using downloaded speech	3.00	Sometimes
using downloaded music	3.07	Sometimes
using sound effects /atmospheric background	2.69	Sometimes
using recordings	2.81	Sometimes
Average	2.89	Sometimes

The level of multimedia technology integration along audio as reflected in the table above was rated by the respondents as sometimes with an average of 2.89. The indicator using downloaded speech was seen by them as sometimes with weighted mean of 3.00 while the indicator using downloaded music has a weighted mean of 3.07 which is interpreted as sometimes. Likewise, the indicator using sound effects /atmospheric background was given a weighted of 2.69 that is described as sometimes and the indicator using recordings has a weighted mean of 2.81 which is interpreted as sometimes.

The data gathered means that most of the Junior High School English teachers in Ticao Clusters preferred using downloaded music along level of multimedia integration in audio. This was the main option of the teachers because of its availability. Music downloading and sharing is much easier. Moreover, its readability and compatibility with the several storage mediums like USB flash drive, memory cards, CDs/DVDs are also regarded. This implies that some teachers are integrating multimedia technology during instruction especially audio, others are not. Some respondents preferred the traditional way of teaching and set aside multimedia integration. Most of them resort to the local available resources that they have particularly to those schools that are remote and un-energized. Somehow, they cannot cope with the advances of multimedia technology integration. In the unstructured interview conducted by the researcher, common hindrances noted are the lack of knowledge in manipulating multimedia technology both hardware & software, time consuming to set up and incompatibility of the software and hardware.

**Table 1D***Level of Multimedia Technology Integration along Video*

Indicators	Weighted Mean	Description
using recorded video through digital camera	2.72	Sometimes
using recorded video through mobile devices	2.93	Sometimes
using videos downloaded from the Internet	3.35	Sometimes
using videos created within the computer	2.56	Rarely
Average	2.89	Sometimes

The finding is supported by the study of Zhang (2016), audio is a speech, music, or any other sound that is stored and produced by computers. It has more advantages than tape recorder. In multimedia, teacher can use more vivid and fruitful sound to help students' English learning. To Sad (2008), the utilization of multimedia technology "breaks the monotony of traditional class teaching and is enjoyable and stimulating". For example, the use of PowerPoint template activates students' thinking and the capacity to comprehend the language. Its audio and visual effects help them to transform English learning into capacity cultivation. It creates a positive environment for the classroom activities such as group discussion, subject discussion, and debates, which can offer more opportunities for communication among students and between teachers and students. Thus, multimedia technology encourages students' positive thinking and communication skills in learning the language (Pun, 2013).



It can be deduced from the data that the indicators using recorded video through digital camera, using recorded video through mobile devices, and using videos downloaded from the Internet were assessed by the respondents with weighted means of 2.72, 2.93, and 3.35, respectively, which are described as sometimes. On the other hand, the indicator using videos created within the computer was observed by the respondents as rarely when the weighted mean was 2.56. Overall, the level of multimedia technology integration along video has an average of 2.89 which is described as sometimes. It means that most of the teachers resort to using videos downloaded from the Internet since it is always available online. Making videos from the computer or cell phones may be time consuming and requires more effort. Instead, downloading from the websites such as YouTube using tablets, cell phones and laptops is more practical. Moreover, teachers may have several options to choose from the videos available that may suit to a particular lesson in which they would like to integrate in.

The results of the data gathered may imply that even teachers are starting to integrate multimedia technology along video, other teachers still stick to the old-style of teaching. In this regard, teachers may be provided with technical training and workshop for them to increase awareness on multimedia technology integration. The school must invest into the competency training along technical, software and hardware side. For the teachers to hone the learner’s holistic learning, one must be 21<sup>st</sup> century technologically literate educator first. The finding is supported by the study of Dong and Li (2016) as cited by Barbara (2016) multimedia has been proven to be a golden mean in coping with these problems. *“In the multimedia teaching, with eyes looking, ears listening, mouth speaking, hands writing, brains keeping in mind, students will greatly improve their passion for learning, leading to higher class efficiency”*. Teaching using multimedia makes English class more lively, vivid, and interesting. Multimedia is the factor influencing areas such as: student's interest stimulation, efficiency improvement in the class, and satisfactory effects achievement. As a result, English classes are more interesting, vivid, and lively. By the means of pictures, sound, and animation, multimedia teaching provides many implicit information.

**Table 1E**

*Level of Multimedia Technology Integration along interactive media*

Indicators	Weighted Mean	Description
using web quest	2.37	Rarely
using offline video simulation	2.30	Rarely
using online virtual reality video	2.11	Rarely
using social networking sites	3.17	Sometimes
Average	2.49	Rarely

From the table above, it was shown that the level of multimedia technology integration in terms of interactive media the respondents rated it with an average of 2.49 which is described as rarely. The indicators using web quest, using offline video simulation, and using online virtual reality video have weighted means of 2.37, 2.30, and 2.11, respectively, which are interpreted as rarely. Consequently, the indicator using social networking sites has a weighted mean of 3.17 which is described as sometimes. It means on the level of multimedia technology integration along interactive media, most teachers rely on using social networking sites. Of the above indicators, social networking is the most familiar with the teachers since these are included in their day-to-day activities. Examples are Facebook, Instagram, or Twitter which most students and teachers have an account that they could visit every now and then and publish stories that are related to the classroom activities. It is also the most accessible mediums that are familiar to navigate and operate with.

This implies that even if the teacher utilizes multimedia technology there is a need for them to familiarize other aspects of integration along interactive media not only using social networking sites. They also give emphasis on other aspects such as using web quest, offline video simulation and online virtual reality videos. Thus, these could add more interaction during the teaching-learning process. Teachers should really exert more effort to know more about these mediums. Therefore, a competency training and workshop about this subject matter is highly regarded.

The finding is supported by the study of Motteram (2013), that using multimedia technology in the language classrooms improves teaching contents and makes the best of class time. It breaks the teacher-centered traditional teaching method and fundamentally improves the teachers' teaching efficiency and has become "central to language practice". Pun (2013) explicitly explained that for large classes, it is difficult for the students to have speaking communication, but the utilization of multimedia sound laboratory materializes the face-to-face teaching. The traditional teaching techniques only emphasize on teachers' instruction and provide limited information to the students. But multimedia technology goes beyond time and space and creates more real-life environment for English teaching. It stimulates students' initiatives and economizes class time, providing more information to the students.

**Table 1F***Level of Multimedia Technology Integration*

Level	Description	Frequency	Rank
0	Non-use	2	4
1	Entry level	28	1
2	Adoption level	17	2
3	Adaptation level	7	3
4	Infusion level	0	5.5
5	Transformation level	0	5.5

It can be asserted from the data that there were 28 respondents in level 1 of multimedia technology integration which is described as an entry level in rank 1 then followed by 17 respondents with level 2 or adoption level in rank 2. There were only 7 teachers whose level of multimedia technology integration of level 3 which is described as adaptation level in rank 3. Only 2 respondents belonged to level 0 or non-use level of multimedia technology integration which is in rank 4. Based on The Technology Integration Matrix (2005), the data means that for Level 0 or Non-use, teachers are perceived to have lack of access to technology-based tools (e.g., computers) or a lack of time to pursue electronic technology implementation. Level 1 or Entry Level means that the teacher typically uses technology to deliver curriculum content to students. Entry level activities may include listening to or watching content delivered through technology or working on activities designed to build fluency with basic facts or skills, such as drill-and-practice exercises. In a lesson that includes technology use at the Entry level, the students may not have direct access to the technology. Decisions about how and when to use technology tools as well as which tools to use are made by the teacher.

Level 2 or Adoption Level means that technology tools are used in conventional ways. The teacher makes decisions about which technology tool to use and when and how to use it. Students' exposure to individual technology tools may be limited to single types of tasks that involve a procedural understanding. Level 3 or Adaptation Level entails that the teacher incorporates technology tools as an integral part of the lesson. While the teacher makes most decisions about technology use, the teacher guides the students in the independent use of technology tools. Students have a greater familiarity with the use of technology tools and have a more conceptual understanding of the tools than students at the Adoption level. They can work without direct procedural instruction from the teacher and begin to explore different ways of using the technology tools. At the Infusion level or level 5 denotes that a range of different technology tools are integrated flexibly and seamlessly into teaching and learning. Technology is available in sufficient quantities to meet the needs of all students. Students can make informed decisions about when and how to use different tools. The instructional focus is on student learning and not on the technology tools themselves. For this reason, Infusion level work typically occurs after teachers and students have experience with a particular technology tool. The teacher guides students to make decisions about when and how to use technology.

Lastly, Transformation Level or Level 5 suggests that students use technology tools flexibly to achieve specific learning outcomes. The students have a conceptual understanding of the tools coupled with extensive practical knowledge about their use. Students apply that understanding and knowledge, and students may extend the use of technology tools. They are encouraged to use technology tools in unconventional ways and are

self-directed in combining the use of various tools. The teacher serves as a guide, mentor, and model in the use of technology. At this level, technology tools are often used to facilitate higher order learning activities that would not otherwise have been possible or would have been difficult to accomplish without the use of technology.

This implies that teachers needed intensive trainings and workshops for them to be equipped with knowledge in multimedia technology integration, based on the data gathered, it clearly shows that the teachers are not equipped enough. Most teachers are only on the entry level, which is way too far from infusion or transformation level. Therefore, this should be given much emphasis as far as multimedia technology integration is concerned. Ghanizadeh, et. al. (2015) support this finding as they recommended that to strengthen the effectiveness of using multimedia elements in teaching English, school must provide more workshops and teachers training courses (TCC) to improve teachers' ability in developing multimedia materials for teaching English. They also recommended that curriculum designers and decision makers should equip schools with effective visual and audio aids, wall pictures of lessons, and computers to facilitate teachers' accomplishment of the new strategies in the classes.

#### 4.2 The Extent of Multimedia Literacy of the English Teachers.

**Table 2**

*Extent of Multimedia Literacy*

Indicators	Weighted mean	Description
I am proficient in the use of common input and output devices; I can solve routine hardware and software problems; I can make informed choices about technology systems, resources, and services.	2.67	Satisfactory
I can use technology to locate, evaluate, and collect information from a variety of sources.	3.22	Satisfactory
I can use technology tools and information resources to increase productivity, promote creativity, and facilitate academic learning.	3.13	Satisfactory
I can use content-specific tools (e.g., software, simulation, environmental probes, graphing calculators, exploratory environments, Web tools) to support learning and research.	2.72	Satisfactory
I can collaborate in constructing technology-enhanced models, preparing publications, and producing other creative works using productivity tools.	2.74	Satisfactory
I can use technology tools to process data and report results.	3.13	Satisfactory
I have a strong understanding of the nature and operation of technology systems.	2.78	Satisfactory
I understand the legal, ethical, cultural, and societal issues related to technology.	3.02	Satisfactory
I can use technology resources to facilitate higher order and complex thinking skills, including problem solving, critical thinking, informed decision-making, knowledge construction, and creativity.	2.83	Satisfactory
I can troubleshoot common computer problems.	2.35	Fair
I can use technology in the development of strategies for solving problems in the real world.	2.76	Satisfactory
I have knowledge to discuss health and ethical issues related to technology.	2.81	Satisfactory
I can use technology tools and resources for managing and communicating information (e.g. finances, schedules, addresses, purchases, correspondence).	2.63	Satisfactory
I can evaluate and select new information resources and technological innovations based on their appropriateness to specific tasks.	2.80	Satisfactory
I can use a variety of media and formats, including telecommunications, to collaborate, publish, and interact with peers, experts, and other audiences.	2.69	Satisfactory
Average	2.82	Satisfactory

From the table above, it can be inferred that the indicators I am proficient in the use of common input and output devices; I can solve routine hardware and software problems; I can make informed choices about technology systems, resources, and services, I can use technology to locate, evaluate, and collect information from a variety of sources, and I can use technology tools and information resources to increase productivity, promote creativity, and facilitate academic learning were evaluated by the respondents with weighted means of 2.67, 3.22, and 3.13, respectively, which are described as satisfactory. Meanwhile, the teachers assessed the indicators I can use technology tools and information resources to increase productivity, promote creativity, and

facilitate academic learning, I can collaborate in constructing technology-enhanced models, preparing publications, and producing other creative works using productivity tools, and I can use technology tools to process data and report results with weighted means of 2.72, 2.74, and 3.13, respectively, that are interpreted as satisfactory.

In addition, the indicators I have a strong understanding of the nature and operation of technology systems, I understand the legal, ethical, cultural, and societal issues related to technology, and I can use technology resources to facilitate higher order and complex thinking skills, including problem solving, critical thinking, informed decision-making, knowledge construction, and creativity were given by the respondents with weighted means of 2.78, 3.02, and 2.83, respectively, which are described as satisfactory. On the other hand, the indicator I can troubleshoot common computer problems was given a weighted mean of 2.35 which is interpreted as fair. Moreover, the respondents rated the indicators I can use technology in the development of strategies for solving problems in the real world, I have knowledge to discuss health and ethical issues related to technology, and I can use technology tools and resources for managing and communicating information (e.g., finances, schedules, addresses, purchases, correspondence) with weighted mean of 2.76, 2.81, and 2.63, correspondingly, that are interpreted as satisfactory. Also, the respondents evaluated the indicators I can evaluate and select new information resources and technological innovations based on their appropriateness to specific tasks and I can use a variety of media and formats, including telecommunications, to collaborate, publish, and interact with peers, experts, and other audiences with weighted means of 2.80 and 2.69, respectively, which are described as satisfactory.

The extent of multimedia literacy of English teachers' marks as satisfactory with an over-all weighted mean of 2.82. This is a clear manifestation that English teachers on average are not so much knowledgeable in integrating multimedia in their instruction. This means the level of competence of teacher is satisfactory and they would benefit from further training & development. This implies that to be able to attain excellent level of competency one must be able to integrate multimedia technology in instruction. From the unstructured interview conducted by the researcher, there are several aspects which impedes the integration of multimedia technology. Noted one is the lack of multimedia technology devices in the school such as computer, projector, speakers, and other peripherals. Another problem is on the external factor such as unstable or no electrical connectivity in the school premises. Consequently, it can be denoted how someone learns to utilize, operate, or implement multimedia technology if there is no presence of such kind of multimedia peripheral or electrical connections in the school.

This finding is highly supported by Zhang (2016) as he stressed that to be able to be proficient in multimedia technology integration schools must strengthen teacher training. Multimedia assisted English teaching requires teachers with multimedia computer operating experience. It is a challenge for teachers using multimedia because of heavy preparation work and increasing workload. In the light of the problems the teachers should be trained with the use of modern equipment. They should be familiar with the operation. They should be expert in one thing and good at many. They should know well about modern educational theories and techniques.

#### *4.3 The Problems that the English Teachers Encountered in the Use of Multimedia Technology in Instruction*

Table 3 presents the problems that the English teachers encountered in the use of multimedia technology in instruction. This was the response made by fifty-four (54) respondents. Revealed on the table are the problems encountered by the English teachers in the use of multimedia technology in instruction. Ranking first among the problems encountered is the indicator stating that *lack of technical expertise and knowledge to set-up, operate and troubleshoot when an error occurs*. Fifty-one (51) respondents agreed on this. Forty-five (45) of the respondents admitted that the *lack of knowledge and awareness in using, manipulating, and implementing multimedia technology* and *no or slow internet connectivity* are the second problem that contributes to the difficulties encountered by the respondents. Third among the problem identified are the *lack of multimedia technology devices such as computer, projector, speakers, and other peripherals in the school* and *no and unstable*

*electrical connectivity within the school premises*. From the frequency, there are thirty-nine (39) respondents agreed to consider this as the problems. Thirty-six (36) of them confirmed that *time consuming to set-up multimedia technology devices* is also a problem; it ranks six. Thirty-three (33) of them considered the *incompatibility of hardware to software, vice versa* as one the difficulties; hence, this problem ranks seventh. Furthermore, twenty-eight (28) of the respondents considered that the *unreadable and corrupted file formats and programs* and software are susceptible to malware, viruses and Trojan horses occupies both on rank 8.5. Twenty-seven (27) of them signified *teachers' attitude towards multimedia technology integration*. This problem encountered by them ranks tenth. The *operation manuals are hard to understand by the users and not user-friendly software* ranks last with both only twenty-five (25) frequency count.

**Table 3***Problems Encountered by English Teachers in the Use of Multimedia Technology in Instruction*

Indicators	Frequency	Rank
Lack of technical expertise and knowledge to set-up, operate and troubleshoot when an error occurs	51	1
Lack of knowledge and awareness in using, manipulating, and implementing multimedia technology	45	2.5
Lack of multimedia technology devices such as computer, projector, speakers, and other peripherals in the school.	39	4.5
Time consuming to set-up multimedia technology devices.	36	6
Teachers' attitude towards multimedia technology integration	27	10
Operation manuals are hard to understand by the users	25	11.5
No and unstable electrical connectivity within the school premises	39	4.5
No or slow internet connectivity	45	2.5
Unreadable and corrupted file formats and programs	28	8.5
Software are susceptible to malware, viruses and Trojan horses	28	8.5
Incompatibility of hardware to software, vice versa	33	7
Not user-friendly software	25	11.5

Legend: Rank 1 – Most

Rank 12 – Last

Findings imply that most of the respondents agreed that the major problem encountered by them in using multimedia technology is the lack of technical expertise and knowledge to set-up and troubleshoot when an error occurs. Next to this is the lack of knowledge and awareness in using, manipulating, and implementing multimedia technology. According to the interview conducted by the researcher to the English teachers, most of them are not really equipped to set-up and troubleshoot multimedia technology. They always seek the help and guidance of the school ICT Coordinator, who is knowledgeable about this matter. Teachers also admitted that they have not attended a school-based seminar or workshop spearheaded by the school heads and ICT Coordinator to uplift their knowledge on multimedia technology integration.

The gathered data also implies that schools are lacking multimedia technology devices such as computer, projector, speakers, and other peripherals which suggest that teachers are perceived to have lack of access to technology-based tools (e.g., computers). They always resort to the traditional way of teaching which is more on theories that students may find boring and commonplace. Since Ticao is geographically located in an island, it is hard to establish Internet connections. Some schools especially those located in remote places have no or slow Internet connectivity. Only few schools can obtain H<sup>+</sup> or 3G signal strength. Several schools visited by the researcher opted to pay more such as installing Global Satellite only to establish Internet connectivity, which is a burden for allotting more budget in the school Maintenance and Other Operating Expenses (MOOE). Some schools also suffer from unstable electrical connectivity from the local provider since subsequent power interruptions always happen. Other schools have no electrical connections and dependent only on the generator sets installed in the schools and cannot sustain for the integration of multimedia technology.

The mentioned problems were the hindrances in the use of multimedia technology in instruction. If these problems are not properly addressed and be given significant solutions, it would be difficult for a teacher to infuse multimedia technology in teaching English subject. Moreover, trainings, seminars and workshops are highly regarded. This problem was also noted by Zhang (2016) as he reiterated that most of the teachers are lacking special skills in multimedia technology integration. There are many multimedia teachers who just have

half-baked knowledge. It is a challenge for teachers to use multimedia equipment sometimes. The preparation and workload of teachers increase virtually. And multimedia teaching requires teachers with multimedia computer operation experience. Owing to traditional educational system, many teachers are not good at computers. There are problems unexpected happening in the observation classes. Because of lack of proficient operation of multimedia, some teachers waste certain time in operation the computer, the unskilled operation on computer would affect the instruction flow, which in turn would de-motive students if it happened frequently in class.

#### 4.4 Action Plan

This is the proposal for the conduct of training/seminar/workshop related to multimedia technology integration in teaching Junior High School English. This proposed training will help the English teachers to enhance their knowledge and skills in multimedia technology integration. This may be adapted by other teachers who want to integrate multimedia technology in their subject areas.

#### **RATIONALE**

Multimedia technology has introduced important changes in our educational system and impact the way we communicate information to the learners. The evolution of multimedia technology has made it very possible for learners to become involved in their work. With multimedia technologies, they can create multimedia applications as part of their project requirements. This would make them active participants in their own learning process, instead of just being passive learners of the educational content.<sup>1</sup> However, a study showed that students' academic achievements are noticeably influenced by the teacher's use of technology. A teacher's technological literacy directly affects whether students can incorporate technology into the curriculum to improve students' academic achievements.

The proposed action plan is designed to enhance the level of multimedia technology literacy of teachers. It also provides activities that would greatly help in the successful integration of multimedia technology in the teaching-learning process. Teo believes that the presence of multimedia alone will not stimulate significant changes in a school. Teachers are important ingredient in the implementation of multimedia instruction in education. Without the involvement of teachers, most students may not take advantage of all the available potential benefits of multimedia on their own. Chua likewise believes that the rapidly changing technologies increase quickly today than ever before, and training is indispensable. It is also important to note that 21<sup>st</sup> century education needs 21<sup>st</sup> century teachers, hence seminar-workshop on multimedia technology integration is highly recommended.

#### **OBJECTIVES**

The proposed Multimedia Technology Integration Enhancement Program will be able to:

- Improve the multimedia literacy of teachers.
- Enhance the knowledge and skills of the teachers in multimedia technology integration and
- Produce multimedia technology-aided instructional materials.

#### **TECHNICAL DESCRIPTION**

This training proposal will be conducted in October 2018 from 8:00 am to 5:00 pm during the In-Service Training for Teachers. The lecturers/discussants who are knowledgeable and experienced in multimedia technology will be the District ICT Coordinators of the four municipalities and selected Master Teachers in English. Handouts will be distributed by the lecturers before every session. The speakers will be paid honorarium and the handouts will be shouldered by the training management.

### PERSONS INVOLVED

- Public Secondary Junior High School English Teachers of Masbate Province Division, Ticao Cluster
- Speakers/Facilitators
- Training Management Committee

### TRAINING MATRIX

Time	Day 1	Day 2	Day 3	Day 4	Day 5
7:30-8:00	Arrival and Registration				
8:30-9:00	Opening Program/Training Orientation	Opening Program/Training Orientation	Opening Program/Training Orientation	Opening Program/Training Orientation	Opening Program/Training Orientation
9:00-9:15	Break				
9:15-12:00	Introduction to MS Word Application Program	Introduction to MS PowerPoint Application Program	Introduction to MS Excel Application Program	Discussion on Troubleshooting, Social, Legal, & Ethical Issues	Lesson Planning with the Integration of Multimedia Technology Creation of Multimedia Technology-Aided Instructional Materials
12:00-1:00	Lunch Break				
1:00-4:00	Workshop on MS Word Application Program	Workshop on MS Word Application Program	Workshop on MS Excel Application Program	Introduction to the Internet Web Browsing	Demonstration Teaching
4:00-4:15	Break				
4:15-5:00	Presentation of Output	Presentation of Output	Presentation of Output	Downloading of Online Sources	Open Forum Closing Program

### ESTIMATED EXPENSES

Honoraria of Speakers	Amount
Speaker 1 (ICT Coordinator)	₱2,000.00
Speaker 2 (ICT Coordinator)	₱2,000.00
Speaker 3 (ICT Coordinator)	₱2,000.00
Speaker 4 (ICT Coordinator)	₱2,000.00
Speaker 5 (Master Teacher in English)	₱2,000.00
Speaker 6 (Master Teacher in English)	₱2,000.00
<b>TOTAL</b>	<b>₱12,000.00</b>
Traveling Expenses of Speakers	₱3,000.00
Food & Snacks (All participants, Speakers/Facilitators)	₱24,000.00
Handouts	₱5000.00
Venue, Sound, Internet & Printing Equipment	₱20,000.00
Certificate of Appearance/Participation	₱2,000.00
<b>TOTAL</b>	<b>₱46,000.00</b>

### SOURCES OF FUND

A letter request will be sent to the School's Division Superintendent of Masbate Province requesting that the expenses incurred during the conduct of the training be charged to participants' school MOOE subject to the usual accounting and auditing rules and regulations. Additionally, the proponent can tap potential donors who can finance the honoraria of the speakers/facilitators.

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<sup>1</sup>Zameer Gulzar, *Educational System of J&K in the light of Evolutionary Multimedia Technology: A Case Study*, April 2014

<sup>2</sup>Chang, I.-H. (2012). *The Effect of Principals' Technological Leadership on Teachers' Technological Literacy and Teaching Effectiveness in Taiwanese Elementary Schools*. *Educational Technology & Society*, 15 (2), 328–340.

## 5. Conclusion

Based on the findings of the study, the researcher arrived at the following conclusions:

- The levels of multimedia technology integration of teachers in teaching Junior High School English along text, graphics, audio, and video was described as *sometimes* whereas the level of multimedia technology integration along interactive media described as *rarely*.
- The extent of multimedia literacy of the English teachers was labelled as *satisfactory*.
- The major problems that the English teachers encounter in the use of multimedia technology was the lack of technical expertise and knowledge to set-up, operate and troubleshoot when an error occurs, lack of knowledge and awareness in using, manipulating and implementing multimedia technology, no or slow internet connectivity, lack of multimedia technology devices such as computer, projector, speakers, and other peripherals in the school and no and unstable electrical connectivity within the school premises.
- The action plan must be considered for implementation.

### 5.1 Recommendations

Based on the findings and conclusions, the following recommendations are made:

- The division office thru its ICT (Information and Communications Technology) department and schools should strongly initiate further competency trainings and development so that levels of multimedia technology integration of teachers in teaching Junior High School English along text, graphics, audio, video, and interactive media will be described from *sometimes* to *always*.
- The school heads in collaboration with the ICT coordinators and Junior High School English teacher must work together in the multimedia technology integration to provide more workshops and teachers training courses (TCC) to improve teachers' ability in integrating multimedia technology in teaching English so as the extent of multimedia literacy of the English teachers will be labelled from *satisfactory* to *high*.
- Difficulties encountered and experienced should be given utmost priorities and intervention through (a) provision of multimedia peripherals and equip schools with effective visual (projector and screen) and audio aids (sound system compatible in any form of file format), and computers (tablet PC, desktop or laptop) to facilitate teachers' accomplishment of the new strategies in the classes, (b) trainings and workshop multimedia technology actual operation, hands-on in set-upping and troubleshooting, (c) procurement of global satellites for high-speed internet connections and (d) stable electrical connection within the school premises.
- The proposed action plan must be implemented so that the Junior High School English teachers' level of competence in integrating multimedia technology instruction will become excellent.
- Similar studies on multimedia technology integration from the clustered public secondary schools should be conducted.

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