



**THE EFFECTIVENESS OF TECHNOLOGICAL INSTRUCTIONAL MEDIA
PACKAGE IN DEVELOPING CRITICAL THINKING SKILLS OF GRADE 9
STUDENTS IN ENGLISH**

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ABSTRACT

GAMARCHA, RHEYNELY S., Southern Philippines Agri-Business and Marine and Aquatic School of Technology (SPAMAST) – College of Agricultural Sciences, Matti, Digos City. March, 2017. **“THE EFFECTIVENESS OF TECHNOLOGICAL INSTRUCTIONAL MEDIA PACKAGE IN DEVELOPING CRITICAL THINKING SKILLS OF GRADE 9 STUDENTS IN ENGLISH”**. Master's Thesis.

Adviser: **CINDY B. ROSIL, Ed.D**

This study determined the level of critical thinking skills of Grade 9 students in English. It likewise identified the effectiveness of technological instructional media package in developing critical thinking of the students. The study involved a total of 88 Grade 9 students in Padada National High School. Data were gathered following the pre-post experimental design. The control group used the learning modules prescribed by the Department of Education while the experimental group utilized the technological instructional media package prepared by the researcher. A 40-item exam constructed by the researcher was administered to the participants to determine their critical thinking skills before and after the intervention period.

Pretest results revealed that Grade 9 students in both the Learning

Module (LM) group and Technological Instructional Media Package (TIM) group had average or satisfactory skills in critical thinking. The two groups were found to be comparable as there was no significant differences in their pretest mean scores. However, posttest data showed that there was significant difference in the critical thinking mean scores of the two groups. Mean score of students exposed to the technological instructional media package was greater than the scores of students using the learning modules. Similarly, the mean gain scores of the two groups differed significantly. Students exposed to the technological instructional media got a greater mean gain score compared to those in the learning module group. With this, the technological instructional media package was proven effective in developing critical thinking skills among Grade 9 students in English.

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APPROVAL SHEET

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TABLE OF CONTENTS

PRELIMINARY PAGES	PAGE
ABSTRACT	i
TITLE PAGE	iii
APPROVAL SHEET	iv
ACKNOWLEDGMENT	v
TABLE OF CONTENTS	vii
LIST OF TABLES	ix
LIST OF APPENDICES	xi
 CHAPTER	
I THE PROBLEM AND ITS BACKGROUND	
Introduction	1
Objectives of the Study	4
Statement of the Problem	6
Significance of the Study	7
Scope and Limitations of the Study	9
Definition of Terms	9
 II REVIEW OF RELATED LITERATURE	
Technological Instructional Media	11
Critical Thinking Skills	14
Technological Instructional Media and Critical Thinking Skills	20
Conceptual Framework	24
Hypotheses	25
 III METHODOLOGY	
Research Locale	26
Research Subjects	26
Research Design	27
Sampling Design and Technique	28
Research Instrument	29
Data	31
Data Gathering Procedure	31
Statistical Tools	33

IV RESULTS AND DISCUSSION

Pretest Mean Score Rating in Critical Thinking of Grade 9 Students in the Learning Module Group and the Technological Instructional Media Package in English	34
Posttest Mean Score Rating in Critical Thinking of Grade 9 Students in the Learning Module Group and the Technological Instructional Media Package in English	37
Mean Gain Score Rating in Critical Thinking of Grade 9 Students in the Learning Module Group and the Technological Instructional Media Package in English	38
Significant Difference on the Pretest Mean Score Rating in Critical Thinking of Grade 9 Students in the Learning Module Group and the Technological Instructional Package Group in English	38
Significant Difference on the Posttest Mean Score Rating in Critical Thinking of Grade 9 Students in the Learning Module Group and the Technological Instructional Package Group in English	40
Significant Difference on the Mean Gain Score Rating in Critical Thinking of Grade 9 Students in the Learning Module Group and the Technological Instructional Package Group in English	43

V SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

Summary	46
Conclusion	48
Recommendation	49

LITERATURE CITED

51

APPENDICES

Research Instrument	54
Validation Sheet	72
Summary of Ratings for the Critical Thinking Skills Scale	74
Letter of Request	75
Letter to the School Principal	76

CURRICULUM VITAE

77

LIST OF FIGURES

FIGURE		PAGE
1	Conceptual Framework of the Study Showing Relationship between Independent and Dependent Variables	22

LIST OF TABLES

TABLE		PAGE
1	Number of Grade 9 Students in the Learning Module Group and the Technological Instructional Media Group. SY 2016-2017.	26
2	Pretest Mean Score Rating in Critical Thinking of Grade 9 Students in the Learning Module Group and the Technological Instructional Media Package in English. SY 2016-2017.	36
3	Posttest Mean Score Rating in Critical Thinking of Grade 9 Students in the Learning Module Group and the Technological Instructional Media Package in English. SY 2016-2017.	37
4	Mean Gain Score Rating in Critical Thinking of Grade 9 Students in the Learning Module Group and the Technological Instructional Media Package in English. SY 2016-2017.	38
5	Difference on the Pretest Mean Score Rating in Critical Thinking of Grade 9 Students in the Learning Module Group and the Technological Instructional Package Group in English. SY 2016-2017.	39

6	Difference on the Posttest Mean Score Rating in Critical Thinking of Grade 9 Students in the Learning Module Group and the Technological Instructional Package Group in English. SY 2016-2017.	41
7	Difference on the Mean Gain Score Rating in Critical Thinking of Grade 9 Students in the Learning Module Group and the Technological Instructional Package Group in English. SY 2016-2017.	44

LIST OF APPENDICES

APPENDIX		PAGE
1	Research Instruments	54
2	Validation Sheet	57
3	Summary of Ratings	59
4	Letter of Request	60
5	Letter to School Principal	61

CHAPTER I

THE PROBLEM AND ITS BACKGROUND

Introduction

There is an exigent call for all those in the academe around the world to focus more on the development of critical thinking skills over content-knowledge across academic disciplines and educational levels. This challenge amplified after the Partnership for 21st Century Skills based in the United States of America had identified critical thinking as one of the “four Cs” or essential skills for k-12 education (Lai, 2011). Moreover, empirical studies had confirmed that students who were taught to think critically turned out to be more ready for post-secondary education, employment and for real life (Hove, 2011; Thompson, 2011).

Although there was a consensus among American educators on the recognition of critical thinking as the most important reason for formal education and that performances of their learners were showing deficiency on the skill, there was however uncertainty on how to best achieve this education goal especially for students in high school (Marin and Halpren, 2011). According to them, the problem was primarily caused by scarcity of studies on critical thinking involving high school students. Much of the researches on teaching critical thinking were confined on post-secondary education. The authors then recommended for the conduct of more studies exploring the critical thinking ability of students in the secondary level.

Similarly, Guo (2013) acknowledged that researches on high school students' critical thinking skills in China were very limited and the available data showed that most students failed to develop these skills. In details, Zhou, Jiang and Yao (2015) found out that Chinese students seldom expressed their opinions, supported their points of view with reasonable arguments and verified authenticity of views. They rarely asked questions and corrected unreasonable inferences.

In the Philippines, the call to inculcate and nurture critical thinking among basic education learners had been tolling for many years. However, students' performances in national and international achievement tests and competitions showed that much have yet to be done to realize this goal. Furthermore, findings of a national survey initiated by Presidential Commission on Education Reform (Flores, 2009) revealed that Filipino learners are not taught to think critically. The prescribed curriculum was found out to be more focused on the acquisition of content or factual knowledge. Teachers spent much of classroom time on rote memory learning which is generally, unchallenging, uninteresting, and of lower-order cognitive skills. As a consequence, students did not develop the drive for deep thinking. They tended to escape or withdraw from difficult tasks even if it would mean failing marks.

Developing critical thinking gained a much greater momentum when the Enhanced Basic Education Act or RA 10533 was adopted in the Philippines in 2013. The new K-12 curriculum aims to produce holistically developed learners who possess the 21st century skills with critical thinking at the top of the list. This in turn paved for the inclusion of critical thinking as one of the components of the National Achievement Test (NAT) in 2012.

Results from 2012-2015 revealed that the 42 secondary schools of the Division of Davao del Sur got the average rating of 45.99% in critical thinking. Padada National High School in particular had the average rating of 47.69%. Both of these values were very far from the Dep Ed targeted 75% level of competence. It can also be gleaned from the results that the means on critical thinking were consistently in the bottom compared to other components. The values showed not only the students' deficiency in critical thinking but it also highlighted the absence of attention from school managers and teachers on this equally important skills that learners need to acquire.

In addition to this, classroom observations revealed that most students often avoided activities which required them to analyze, evaluate and problem solve. Participations in class discussions are often limited to those which required them of lower-order thinking skills. Students become passive in class whenever asked to reason out. Turn-in of written and performance tasks which needed deep thinking were very limited too.

These ratings and students' behavior in learning highlighted the need to help students develop their critical thinking skills. This present study then was conducted to determine students' level of critical thinking skills. It likewise investigated the effectiveness of using computer technology as prime instructional media in developing critical thinking skills among Grade 9 students in an English class.

Objectives of the Study

The prime objective of the study was to investigate the effect of technological instructional media on the critical thinking skills of Grade 9 students.

These are the specific objectives:

1. To determine the pretest mean score rating in critical thinking of Grade 9 students in the learning module group and the technological instructional media package in English.
2. To determine the posttest mean score rating in critical thinking of Grade 9 students in the learning module group and the technological instructional media package in English.
3. To determine the mean gain score rating in critical thinking of Grade 9 students in the learning module group and the technological instructional media package in English.
4. To determine significant difference on the pretest mean score rating in critical thinking of Grade 9 students in the learning module group and the technological instructional media package in English.
5. To determine significant difference on the posttest mean score rating in critical thinking of Grade 9 students in the learning module group and the technological instructional media package in English.
6. To determine significant difference on the mean gain score rating in critical thinking of Grade 9 students in the learning module group and the technological instructional media package in English.

Statement of the Problem

This study aimed to determine the effect of technological instructional media on the critical thinking skills of Grade 9 students in English. Specifically, it sought answers to the following questions:

1. What is the pretest mean score rating in critical thinking of Grade 9 students in the learning module group and the technological instructional media package in English?
2. What is the posttest mean score rating in critical thinking of Grade 9 students in the learning module group and the technological instructional media package in English?
3. What is the mean gain score rating in critical thinking of Grade 9 students in the learning module group and the technological instructional media package in English?
4. Is there a significant difference on the pretest mean score rating in critical thinking of Grade 9 students in the learning module group and the technological instructional media package in English?
5. Is there a significant difference on the posttest mean score rating in critical thinking of Grade 9 students in the learning module group and the technological instructional media package in English?
6. Is there a significant difference on the mean gain score rating in critical thinking of Grade 9 students in the learning module group and the technological instructional media package in English?

Significance of the Study

Results of this study would be beneficial to the following:

Dep Ed Officials. This will provide empirical basis which will aid them in designing curriculum frameworks and policies that will optimize K-12 goal on developing critical thinking skills among high school students. These frameworks and policies will

ensure that the educational system of our country truly responds to the challenges set for the 21st graduates.

School Heads and Coordinators. They will be guided in terms of prioritizing resources that will optimize teaching and learning outcomes. They will also be guided in implementing school programs, which will help teachers in developing the critical thinking skills of their students.

Teachers. They will be illumined as to how certain types of instructional materials can potentially help their students acquire the essential critical thinking skills. Thus, teachers will be able to plan and implement lessons rich with the appropriate materials for their students to become globally competitive graduates and significant contributors to nation building.

Parents. They will be directed in helping their children acquire and hone critical thinking skills with the tasks or responsibilities they assume at home. Parental support in terms of providing the financial resource is likewise needed to realize educational goals such as development of critical thinking skills of their children.

Students. They will be informed of their strengths and weaknesses in terms of skills in thinking critically. Hence, their attempts for improvement will be more focused. They will be enlightened as to what learning practices will help them fully develop their critical thinking skills. Students who think critically are found to fare better in academics and in life after school. In school, they are capable of learning independently and in constructing knowledge. After school, they evaluate, challenge and change the structures in society.

Future Researchers. They will be guided and inspired to conduct further studies exploring various dimensions and factors of students' critical thinking skills.

Scope and Limitations of the Study

The main focus of the study was to establish the effectiveness of using technological instructional media in developing the critical thinking skills of the Grade 9 students of Padada National High School. With the experimental design, only two classes of those students enrolled in the main campus were considered.

Other factors which may influence students' critical thinking skills were not explored in this study. The effect was only measured through the student's score in the critical thinking skills exam constructed by the researcher.

Definition of Terms

For better understanding of the study to be conducted, the following terms are defined operationally:

Critical Thinking Skills. This refers to student's ability in clarification, assessment, inferences and strategies.

Grade 9 Students. This refers to the students of Padada National High School enrolled as Grade 9 of the school year 2016-2017.

Technological Instructional Media. This refers to the use of computers as the primary instructional media through which students are able to access teaching inputs by their teacher, individual or group learning activities and evaluation or performance tasks. Tasks shall include watching / making power point presentations and video clips, listening to audio recording, searching the web and constructing graphic organizers.

CHAPTER II

REVIEW OF RELATED LITERATURE

Technological Instructional Media

Instructional material is simply defined in the web as educational resource used to enhance the knowledge, abilities and skills of the students; to monitor their assimilation of information; and to contribute to their holistic development of themselves. One type of instructional materials is technological instructional media. This group of instructional materials includes equipment for transmission and assimilation of information. Cited as examples of materials are projectors, television sets, laboratory machines and computers.

Instructional material plays a very important role in the teaching learning process. It enhances the memory level of the students and makes the teaching – learning process interesting (Nicholls, 2000; Raw, 2003). According to Awolaju's (2015) instructional materials increase the rate of learning, save the teacher's time and effort, enhance interest of students, facilitate retention and reduce stress for both teachers and students. At present, the Philippine education system considered instructional materials as indispensable tools for addressing poor achievements of the learners.

The use of technology as instructional media in school is explicitly stipulated in three of the objectives set in the country's "Information and Communication Technology Plan for the 21st Century": to develop competence among teachers in using technology, in designing, producing and using ICT-based instructional materials; to undertake a curriculum improvement program focused on the integration of technology into

education; and to promote the use of appropriate and innovative technologies in education and training. Highlighted on the plan is the use of computers in the teaching and learning processes. To date, several projects were already initiated by the government through the Department of Education to realize this end.

Technology as instructional media enhances learning rate (Cotton, 2001). Specifically, students who used computers were found to cover much of learning materials in less time than those instructed traditionally. Furthermore, retention of what was learned and attitude were high among students exposed to computers as learning tool.

Gravoso and Pasa (2008) proved that using media and technology enhances achievement of students in one of the universities in the Philippines. They then recommended the use of media and technology in the classroom so as to facilitate student-centered learning. It was also suggested that technologies should be used as means for engaging students to think. Specifically, technologies should be utilized to pose problems for students, provide related cases and information resources, a social medium to support learning through collaboration and interaction. The authors concluded too that technology inside the classroom will help students possess relevant skills to cope with the rapid changes in society and in workplace.

A comparison of the achievement and attitude of students from the University of the East, Manila revealed that students who used computers in learning performed better and their attitude was more positive than those taught in the traditional manner (Ragasa, 2008). The author strongly recommended to optimize usage of computers in instruction.

In Serin's (2011) study, achievement and problem-solving skills of students exposed to computer-based instruction was higher compared to those who were not exposed to computer in the control group. According to the author, the use of technology such as computers in education provides the students with a more suitable environment to learn, serves to create interest and a learning centered-atmosphere, and helps increase the students' motivation. Computers can be used in educational environments to develop audiovisual materials such as animation and simulation, which resulted in the development of the computer-based instruction techniques.

Despite empirical evidences of achievement gains, initiatives and legal mandates for integrating computers in the teaching-learning, computers were not being used effectively by teachers. Bhalla (2013) revealed that very few teachers routinely used computers for instructional purposes, computers were not sufficiently integrated across the curriculum and most importantly, it was used generally for low-level tasks such as presentations, drill and word processing. Hence, Bhalla (2013) recommended that developing countries must not only provide computers, but also provide frameworks for which this tool can be integrated in teaching and learning content in all areas or disciplines.

Critical Thinking Skills

Critical thinking skills had been identified as essential for an individual to succeed in school, workplace and real life. The National Education Association (NEA), one of the founding members of the Partnership for 21st Century Skills in the United States, presented the following rationale why critical thinking is a must have skill.

First, NEA claimed that learning critical thinking leads students to develop skills, such as a higher level of concentration, deeper analytical abilities, and improved thought processing. Students' mastery of these skills had been well-documented to improve their academic achievement across disciplines and educational levels. Based on empirical findings too, the habits of mind such as analysis, interpretation, precision and accuracy, problem solving and reasoning were identified as requisites for successful post-secondary education.

Second, individual citizen must be critical thinker to make comparisons of evidences, evaluations of competing claims and to formulate sensible decisions. Families likewise have to employ critical thinking in sorting through heaps of information concerning finances, health, civic and leisure options to make realistic plans of actions. Critical thinking is also needed in evaluating people, policies, and institutions, which are essential in the process of limiting and resolving social conflicts and problems such as global warming.

Lastly, critical thinking is an important and necessary skill because it is required in the workplace. Seventy-three percent (73%) of business executives identified it as the most important trait of employees as it is will be considered for organizational purposes such as employee development, talent management and succession planning. Employees have to be critical thinkers to better serve customers, develop better products, and continuously improve themselves within an ever-changing global economy.

Developing critical thinking among Filipino learners has been a long time goal of education in the Philippines. Unfortunately, performances of students in school and after school showed that educators have a long way to go in order to meet such goal.

When the k-12 curriculum was adopted through RA 10533 or the Enhanced Basic Education Act of 2013, the drive was tenfold. This k-12 curriculum seeks to develop 21st century skills among its learners. At the top of the list of cognitive skills, which need to be cultivated among learners, is critical thinking.

Definitions of critical thinking presented in the literatures are numerous and varied. It is likewise observed that in conjunction to a general idea of critical thinking, most authors or experts tended to specify observable skills. This highlighted the difficulty of coming up with a consensus on the constructs of critical thinking. To establish a clear conceptualization of critical thinking skills for this study, descriptions and definitions from recent discussions and studies were reviewed.

Paul and Elder (2004) argued that there are two essential dimensions of thinking that students need to master: be able to identify the “parts” of their thinking; and be able to assess their use of those parts in thinking. With these, they suggested the following elements of critical thinking: all reasoning has a purpose; all reasoning is an attempt to figure something out, to settle some question, to solve some problem; all reasoning is based on assumptions; all reasoning is done from some point of view; all reasoning is based on data, information, and evidence; all reasoning is expressed through, and shaped by, concepts and ideas; all reasoning contains inferences by which we draw conclusions and give meaning; and all reasoning leads somewhere, has implications and consequences

Pascarella and Terenzini (2005) offered an operational definition of critical thinking. It is an individual's capability to do some or all of the following: identify central issues and assumptions in an argument, recognize important relationships, make correct inferences from the data, deduce conclusions from information or data provided,

interpret whether conclusions are warranted based on given data, evaluate evidence of authority, make self-corrections, and solve problems.

Instead of giving a general thought for critical thinking, Bok (2006) presented some specific skills expected from critical thinking individuals. The ability to think critically is indicated by asking pertinent questions, recognizing and defining problems, identifying arguments on all sides of an issue, searching for and using relevant data and arriving in the end at carefully reasoned judgments. Critical thinking is also the indispensable means of making effective use of information and knowledge.

Critical thinking is the ability to analyze and evaluate information or thinking (Duron, 2006; Paul and Elder, 2007). Critical thinkers raise vital questions and problems, formulate them clearly and precisely, gather and assess relevant information, use abstract ideas to interpret information effectively, come to well-reasoned conclusions and solutions, test conclusions and solutions against relevant criteria and standards, think open-mindedly within alternative system of thought, recognize and assess their assumptions, implications and practical consequences, and communicate effectively with others. In contrast, passive thinkers suffer a limited and ego-centric view of the world; they answer questions with yes or no and view their perspective as the only sensible one and their facts as the only ones relevant.

From various definitions, Renaud and Murray (2008) identified five elements of critical thinking. These included identifying central issues and assumptions; making correct inferences from data; deducing conclusions from data provided; interpreting whether conclusions are warranted; and evaluating evidence or authority. Many of these elements could be likened to higher order levels of thinking, which attempt to

explain *how* and *why*, as compared to lower order knowledge levels focusing simply on *what*.

In 1997, Bullen categorized the critical thinking stimulating activities into classification of the information available, gathering authentic evidence as well as evaluating it, making inferences and judgments on the basis of the firmly established evidence, and eventually drawing best strategies and techniques as a thinking strategy.

Perkins and Murphy (2006), in a model similar to Bullen's, introduced a four step technique to embed critical thinking stimulating instruction in educational setting comprising clarification, assessing evidence, inference, and strategy building. The first step includes clarification of everything involved, such as describing, and defining the issue. In assessment the students are to be empowered to cover various types of judgment, including the use of the evidence to support or refute judgment. The next step which is making inference contains application of thinking skills such as induction and deduction. In the final step strategies are to be formulated by individuals based on their perceptions of the previous steps including both tactics and planning practical purposes. The authors had also articulated indicators for each of the thinking processes, which were used in this study to measure the critical thinking skills of the students along with the other indicators identified from various definitions.

Ramos, Dollpas and Villamor (2013) investigated the integration of higher-order thinking skills, which are closely linked to critical thinking skills. They strongly recommended for teachers to teach critical thinking skills because it will promote intellectual growth and foster achievement gains. The result of the study revealed that students with higher level of higher-order thinking skills performed better in the subject. It was also revealed that most of the students had below average level in inference.

Valdez (2013) in an experimental study involving third year high school students found out that critical thinking skills were developed through activity-based and cooperative learning strategies.

Technological Instructional Media and Critical Thinking Skills

Technologies such as computers and internet have caused massive transformation of our society. Tinio (2002) declared that the only way to thread all these changes is making use of the very same tools; the computers and internet. Schools, therefore, have to ensure that learners possess the competencies to use this information and communication tools productively. They must be equipped with critical and analytical skills necessary to thrive in this information-saturated environment. Along this line, Tinio (2002) identified three fundamental skills: how to find information; how to determine if what is found is relevant to the task at hand; and how to determine if the relevant information is accurate. With the definitions and conceptualizations of critical thinking skills, these three skills seemed to capsuleate critical thinking.

Dixon, Cassady and Cross (2005) had established that critical thinking skills of junior and senior high school students exposed to computers in the experimental group were better compared to those in the control group. It was likewise established that gender influenced the performance of students. Boys who used computers came out to be better than those not exposed to the technology. Girls on the other hand did not present differences in performances and critical thinking skills.

McMahon (2009) had established that a positive relationship existed between technology-rich learning environment and the development of critical thinking skills

among high school students in Australia. Students who used computers in learning had high level of critical thinking skills. With these findings, he recommended that schools should integrate technology across all of the learning areas. This will allow students to apply technology to the attainment of higher levels of cognition within specific contexts. If students are to apply computer-based technology to their studies they must be given the opportunity to develop appropriate computer skills. As demonstrated by the data, this does not necessarily require the latest model computers. The power of computers in education lies in embedding them in the curriculum and not using them as embellishments.

Technology boosted critical thinking skills of high school students (Duran and Sendag, 2012). Their study involved 47 American students from urban high school who took part in eighteen-month intervention of technology. Baseline revealed that critical thinking skills were low compared to the aggregated national sample. However, after treatment period, gains were higher and homogeneous. This implied that the intervention in the form a technology enhanced program was successful in helping the students develop their ability to analyze, infer, evaluate and reason inductively and deductively.

In summary, literatures highlighted the relevance and the necessity to develop critical thinking among learners. Computers as potent technological tool for teaching and learning process were also backed up by a handful of narratives and studies. However, studies linking the use of computers and student's critical thinking were very few. This study will attempt to fill this gap.

Conceptual Framework

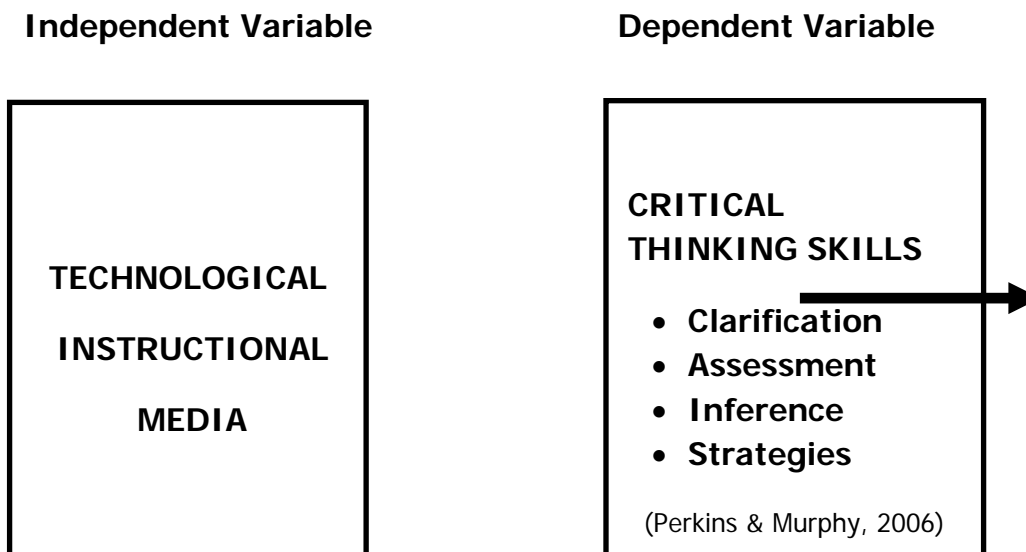


Figure 1: Conceptual Framework of the Study Showing Relationship Between Independent and Dependent Variables.

Hypotheses

The following hypotheses were formulated and tested at 0.05 level of significance.

- H₀ 1. There is no significant difference on the pretest mean score rating in critical thinking of Grade 9 students in the learning module group and the technological instructional media package in English.
- H₀ 2. There is no significant difference on the posttest mean score rating in critical thinking of Grade 9 students in the learning module group and the technological instructional media package in English.
- H₀ 3. There is no significant difference on the mean gain score rating in critical thinking of Grade 9 students in the learning module group and the technological instructional media package in English.

CHAPTER III

METHODOLOGY

Research Locale

The study was conducted at Padada National High School, formerly known as Hagonoy National High School Annex. The school was established in 1994 but was only legislated as Padada National High School in 2007. The main campus is located at Northern Paligue, Padada, Davao del Sur. In 2011, the school had expanded through the establishment of extension classes in two remote barangays of the municipality. At present the school's population has grown significantly close to 1000 with the opening of its senior high school program. It is managed by one principal and 35 permanent teachers.

Research Subjects

The study involved a total of 88 students out of 169 Grade 9 students from the regular classes in the main campus of Padada National High School. There were 49 students in the Learning Module group. Nineteen (19) of these students were female and 30 were male. The experimental group or the technological instructional media group on the other hand was composed of 39 students, 13 of them were female and 26 were male.

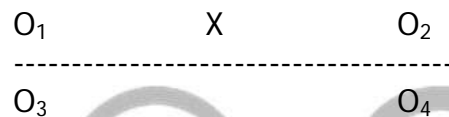
Table 1. Number of Grade 9 Students in the Learning Module Group and the Technological Instructional Media Group. SY 2016-2017.

Groups	Male	Female	TOTAL
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1. Learning Module	30	19	49
2. Technological Instructional Media Package	26	13	39
TOTAL	56	32	88

Research Design

A two-group experimental pre-posttest design was used in this study. The design is illustrated as follows:



where:

- O₁ - experimental pre-test
- O₃ - control pre-test
- O₂ - experimental post-test
- O₄ - control post-test
- X - technological instructional media

According to Padua (2000), while this design is open to internal threats, it is however the best research design to determine the effect of the intervention applied in the experimental group.

Sampling Design and Technique

Based on the number of enrollees, there were four classes for Grade 9 this school year 2016-2017. The pilot class where most high performing students are placed were excluded in this study to ascertain heterogeneity of both the experimental and control groups. Students in the Special Program of the Arts were likewise exempted due to their irregular class schedules. Hence, this study made use of the remaining two intact regular classes. To establish the comparability of these classes, standard deviations were computed and compared using students' English grades in the first grading period. Results showed that students in the learning module group (control) got a standard deviation of .38 while those in the technological instructional media package group (experimental) got .39. Furthermore, assigning of the experimental and control classes was done by tossing a coin.

Research Instruments

One of the instruments used in the study was a 40-item exam constructed by the researcher to measure the level of critical thinking skills of the Grade 9 students. The items of this test were consistent to the categories of critical thinking skills identified in the models of Bullen (1997) and that of Perkins and Murphy (2006). There were four categories of processes in which students engage in critical thinking: clarification, assessment of evidence, inferences, and strategies. For each of these categories, 10 items were constructed. The raw scores of students were converted to percentage score. This tool was subjected to validation by three experts. The average rating was 4.12, which means the tool was excellent. It was also pilot tested to Grade 9 students

in the extension classes to determine how well students would respond to the items and to identify possible problems in the administration of the test. The pilot testing ran smoothly. Students claimed full understanding of the questions.

The descriptive scale below was used to analyze and interpret students' levels of critical thinking skills.

Range of Values	Descriptive Equivalent	Interpretations
84% – 100%	Very High	This means that the critical thinking skills of the students are excellent.
68% – 83%	High	This means that the critical thinking skills of the students are very satisfactory.
52% – 67%	Average	This means that the critical thinking skills of the students are satisfactory.
36% – 51%	Below Average	This means that the critical thinking skills of the students are not satisfactory.
20% – 35%	Poor	This means that the critical thinking skills of the students are very unsatisfactory.

A learning package designed by the researcher was utilized in the experimental group. This package specified tasks, reading materials and performance outputs that Grade 9 students are expected to accomplish in the duration of the study. It followed the same curriculum's learning competencies as that of the prescribed learning modules in English. However, all tasks in the package from the initial activation of prior

knowledge down to application were accessed or presented using the computer as the medium. Activities included having students analyze diagrams on the computer screen, viewing videos and power point presentations and searching the net or web for materials to read and analyze. Students presented most of their output using the computer.

Data

The data, which were gathered included the students' levels of critical thinking skills before and after the treatment period.

Data Gathering Procedure

To realize the objectives of this study, the following procedure were observed:

1. The researcher asked permission from the office of the Schools Division Superintendent, Davao del Sur Division, Reynaldo B. Mellorida to conduct the study.
2. Upon the grant of the permit to conduct the study, approval and support from the school principal, Mr. Emeterio S. Lobitos Jr. was also secured to ensure that the conduct of the study did not affect other classes.
3. With the approval from school principal, random assignment of the experimental and control groups was done through tossing a coin.
4. The researcher personally administered pretests on critical thinking skills using the Likert scale to the students in both the experimental and control groups.
5. The treatment or intervention was implemented for the whole of second grading. For six weeks, classes in the experimental and control groups were handled

by the researcher. The matrix below gives the details on how instruction was specifically carried out in the two groups.

Learning Module (LM) Group	Technology Instructional Media (TIM) Group
<p>Procedures:</p> <ol style="list-style-type: none"> 1. Students in the LM group were taught by the researcher inside their classroom. 2. Students used the learning modules prescribed by the Department of Education. 3. Students performed in sequence the learning tasks prescribed in the module. These included activities for motivation, texts for reading, and other activities set to develop desired skills and the evaluation or performance tasks. None of these said activities required students to use computers. 4. Students were given the opportunity to decide whether to perform their learning tasks in collaborative groups or in an individual setup. 	<p>Procedures:</p> <ol style="list-style-type: none"> 1. Students under the experimental group had all of their learning sessions at the computer laboratory room where each of the students got an opportunity to use a computer. 2. Students used the learning package specially prepared by the researcher. 3. In sequential manner, students accomplished all tasks detailed in the technological instructional media package. They performed activities designed for motivation, development of the desired skills and for evaluation of performance. In contrast to the LM group, each of the activities required students to use a computer. They were asked to view presentations and movies, access reading text in the web, make a power point presentation, write reflections or reactions, listen to audio recordings and construct info graphics. 4. Students were given the opportunity to decide whether to perform their learning tasks in collaborative groups or in an individual setup.

6. After the treatment period, students in both groups were asked to take the posttest on critical thinking skills.

7. The data collected were then tallied, tabulated, analyzed and interpreted.

Statistical Tools

Quantitative statistical analyses were done using the Statistical Package for Social Sciences (SPSS). The following tools in the package were utilized in this study.

Means and Standard Deviations - for descriptive analyses on students' critical thinking skills before and after the treatment period

t-test – to determine difference of means on critical thinking skills between the two groups. According to Key (1997), t-test compares two group means while taking into account differences in group variance and size. The tool will also help determine if the observed difference between two means is greater than the expected from chance.



RESULTS AND DISCUSSIONS

An exam constructed by the researcher composed of 40 items; 10 items each in clarification, assessment, inference and strategies, was administered prior to the start of the experiment to measure the level of critical thinking skills of the Grade 9 students in English. The same instrument utilized in the pretest was used in the posttest to determine the effectiveness of technological instructional media in developing critical thinking skills of Grade 9 students in English.

Pretest Mean Score Rating in Critical Thinking of Grade 9 Students in the Learning Module Group and the Technological Instructional Media Package in English

Table 2 showed the pre-test mean scores of the Learning Module group and the Technological Instructional Media Package group. The results revealed that the students in the Learning Module group had a mean score of 57.67 with a standard deviation of 8.70. The Technological Instructional Media Package students got the mean score equal to 57.63 and a standard deviation of 8.46.

Table 2. Pretest Mean Score Rating in Critical Thinking of Grade 9 Students in the Learning Module Group and the Technological Instructional Media Package in English. SY 2016-2017.

Groups	N	Mean	Std. Deviation	Description
Learning Module	49	57.67	8.70	Average
Technological Inst Media	39	57.63	8.46	Average

The mean values indicated that the critical thinking skills of the students in both groups were within “average” level. This means that at the onset of the study, students in both groups had satisfactory critical thinking skills. The standard deviations reflected homogeneity of students’ scores within each group. These baseline data signified comparability of the two groups. These comparable results mean that the control and experimental groups had commenced at the same footing. This is very essential so that both groups have equal head start.

It was however noted that the above positive findings were contradictory to the consistently observed poor results on critical thinking skills in the National Achievement Test (NAT) of students from Padada National High School.

Posttest Mean Score Rating in Critical Thinking of Grade 9 Students in the Learning Module Group and the Technological Instructional Media Package in English

Based on the data presented in table 3, the students in the learning module group (control group) obtained a mean score of 59.19 and a standard deviation of 9.04. The mean score of the group falls within "average" level. Although there was an increase from their pretest scores, the students' skills remained to be in the satisfactory level.

On the other hand, the posttest mean score of students who used technological instructional media package in the experimental group was 69.14 and is described as "high". The standard deviation of the group's score was 6.25. Descriptively, this means that the students' critical thinking skills had progressed from satisfactory to very satisfactory level.

Table 3. Posttest Mean Score Rating in Critical Thinking of Grade 9 Students in the Learning Module Group and the Technological Instructional Media Package in English. SY 2016-2017.

Groups	N	Mean	Std. Deviation	Description
Learning Module	49	59.19	9.04	Average
Technological Inst Media	39	69.14	6.25	High

Mean Gain Score Rating in Critical Thinking of Grade 9 Students in the Learning Module Group and the Technological Instructional Media Package in English

It can be gleaned from table 4 that the mean gain score (11.52) of students taught using technological instructional media package was greater than the mean gain

score (1.52) of students using the learning modules from the Department of Education. It was evident that the group which used technology in learning had developed more their critical thinking skills compared to students using the learning modules.

Table 4. Mean Gain Score Rating in Critical Thinking of Grade 9 Students in the Learning Module Group and the Technological Instructional Media Package in English. SY 2016-2017.

Groups	N	Mean	Std. Deviation
Learning Module	49	1.52	4.31
Technological Instr. Media	39	11.52	7.78

Significant Difference on the Pretest Mean Score Rating in Critical Thinking of Grade 9 Students in the Learning Module Group and the Technological Instructional Package Group in English

A *t*-test for independent samples with equal variances was used to compare the critical thinking pretest mean scores of students in the Learning Module group with the critical thinking pretest mean scores of students in the Technological Instructional Media group. Table 5 showed the results for the statistical test.

Table 5. Difference on the Pretest Mean Score Rating in Critical Thinking of Grade 9 Students in the Learning Module Group and the Technological Instructional Package Group in English. SY 2016-2017.

Group	N	Mean	SD	<i>t</i> Value	<i>df</i>	<i>p</i> Value	Decision
Learning Module	49	57.67	8.70	.023	86	.981	Accept Null Hypothesis
Technological Instruct. Media	39	57.63	8.46				

The mean was 57.67 for students taught using the prescribed learning modules with a standard deviation of 8.70. On the other hand, students who followed the technological instructional media package designed by the researcher had the mean of 57.63 also and a standard deviation of 8.46. Results revealed that $t=.023$ and $p=.981$ based on a degree of freedom equal to 86 and a 0.05 level of significance.

Since the obtained p value is greater than the set level of significance (0.05), the null hypothesis was accepted. It can be concluded that the critical thinking pretest mean scores of the students in the learning module group did not differ significantly with the critical thinking pretest mean scores of students in the technological instructional media group. It further signified that the level of critical thinking skills for the two groups were comparable.

White and Sabarwal (2014) stressed that in a pre-post experimental design, the control and the treatment groups must be similar or comparable in terms of pre-intervention data. According to them, comparability of groups will eliminate "selection" bias, which is one of the many threats on this type of research. The comparison or control group will show the outcome without the intervention while the experimental group will manifest the effect of the treatment. With the two groups comparable, then it can be concluded that the intervention had caused the difference in the outcomes between groups.

**Significant Difference on the Posttest Mean Score Rating in Critical Thinking
of Grade 9 Students in the Learning
Module Group and the Technological Instructional
Package Group in English**

To compare the critical thinking post-test mean scores of students in the Learning Module group with the critical thinking posttest mean scores of students in the Technological Instructional Media group, *t*-test for independent samples was employed.

At 0.05 level of significance, *t*-test for independent samples yielded the values of $t(86)=-5.09$ and $p=.000$. Since p is less than 0.05, the null hypothesis was rejected. This means that the mean score (59.19) of students in the learning module group differed significantly with the mean score (69.14) of those in the technological instructional media package group.

Students taught using the technological instructional media package had a mean greater than those who used the learning modules. It can therefore be concluded that technological instructional media was effective in developing students' critical thinking skills.

Table 6. Difference on the Posttest Mean Score Rating in Critical Thinking of Grade 9 Students in the Learning Module Group and the Technological Instructional Media Package Group in English. SY 2016-2017.

Group	N	Mean	SD	<i>t</i> Value	<i>df</i>	<i>p</i> Value	Decision
Learning Module	49	59.19	9.04	-6.09	86	.000	Reject Null Hypothesis
Technological Instruct. Media	39	69.14	6.25				

This finding validated Dixon, Cassady and Cross' (2005) claim of positive benefits can be expected when technology is used in the learning processes. The authors were also very specific that technology will not only usher in academic gains but it is also a potent tool in enhancing critical thinking among students.

In a more specific way, claims of Rumpagaron and Darmawan (2007) were supported that using technology such as computers inside the classrooms provides several opportunities for students to develop critical thinking skills. First, using computers will promote active and autonomous learning. When the students are actively engaged in learning and they took personal responsibility on what and how to learn, then teachers will be assured that thinking skills are cultivated among learners. Second, computers increase cooperation among students in accomplishing their learning tasks. Cooperative learning leads to sharing and evaluating ideas and making valid conclusions and decisions. Third, computers assist students to construct their own knowledge and share it to others. Construction of own knowledge involves deep thinking and guarantees lasting effect of learning. Finally, when technologies are made available to students, then teachers will be redirected to their true role as facilitator of learning rather than being the information delivery specialists. Spoon feeding is closely associated with passive learning, which surely impedes critical thinking among students.

**Significant Difference on the Mean Gain Score Rating in Critical Thinking of
Grade 9 Students in the Learning Module Group
and the Technological Instructional Media Package
Group in English**

Tested using t-test for independent samples with unequal variances, the mean gain score ratings of students in both groups obtained a t-value of -7.20 with a p-value of .000, which is less than .05 level of significance (Table 7). This quantitative finding led the researcher to the rejection of the null hypothesis. This indicated that there existed a significant difference on the mean gain scores on critical thinking skills of Grade 9 students exposed to the learning modules and those in the technological

instructional media package in English. The mean gain score rating of 11.52 obtained by those in the technological instructional media package group was significantly higher than the mean gain score rating of 1.52 by those in the learning module group.

This implies that students in the experimental group acquire higher critical thinking skills than the students in the control group. Hence, the technological instructional media package proved to be very effective in developing critical thinking skills of Grade 9 students in English.

The results were consistent with McMahon's (2009) and Duran and Sendang's (2012) findings that technological instructional media are effective to develop the critical thinking skills of high school students.

Table 7. Difference on the Mean Gain Score Rating in Critical Thinking of Grade 9 Students in the Learning Module Group and the Technological Instructional Media Package Group in English. SY 2016-2017.

Group	N	Mean	SD	<i>t</i> Value	<i>df</i>	<i>p</i> Value	Decision
Learning Module	49	1.52	4.31	-7.20	86	.000	Reject Null Hypothesis
Technological Instruct. Media	39	11.52	7.78				

The most important insight gained from this study is that the critical thinking skills of Grade 9 students in English can be developed through the use of appropriate instructional materials. The technological instructional media package designed by the researcher proved to be effective in cultivating critical mind skills among high school students. The results called for teachers to optimize the use of technologies in the students' learning. Teachers need to expand the learning horizons of the students. This can be realized through incorporating technological instructional materials. The study

had shown that using the computers provided the students with a very wide learning venues and resources that somehow made their tasks exciting and thinking driven.

CHAPTER V

SUMMARY, CONCLUSION AND RECOMMENDATION

Summary

The objective of this study was to determine the effectiveness of technological instructional media package in developing the critical thinking skills of Grade 9 students in English. The research questions were answered following the pre-post experimental design. It involved a total of 88 Grade 9 students from two intact classes in Padada National High School. There were 49 students in the control group and 39 students in the experimental group. The students in the control group made used of the prescribed learning modules while those in the experimental group used the technological instructional media package prepared by the researcher.

The researcher constructed a 40-item exam to determine the level of critical thinking skills of the Grade 9 students in English before and after the intervention period.

Mean and standard deviation values were used to describe the pretest, posttest and gain scores of students in the critical thinking skills scale. T-test for independent samples was utilized to determine whether significant differences existed between the students' pretest mean score, posttest mean score and mean gain scores. All values

were generated through the Statistical Package for Social Sciences (SPSS) and level of significance was set at 0.05.

Based on the results, the following findings were drawn:

1. Pretest mean score of Grade 9 students in the learning module group as well as in the technological instructional media package group were within the "average" level of critical thinking skills
2. The posttest mean score of students exposed to the learning modules was in the "average" level, while mean score of those students from the technological instructional media group was in the "high" level.
3. The mean gain score of students using the technological instructional media package was greater than the mean gain score of students who used the learning modules.
4. There was no significant difference in the pretest mean scores of students in the learning module group and the pretest mean scores of students in the technological instructional media package group.
5. There was a significant difference in the posttest mean scores of students in the learning module group and the posttest mean scores of students in the technological instructional media package group. Students taught using the technological instructional package had a greater posttest mean score than those who used the learning modules.
6. There was a significant difference in the mean gain scores of students in the learning module group and the mean gain scores of students in the technological instructional media package group. The mean gain score of

students from the technological instructional media group was higher compared to the mean gain score of students in the learning module group.

Conclusion

Results of this study revealed that contrary to the school's poor NAT results on critical thinking, the Grade 9 students in English were found to have satisfactory skills in critical thinking.

It was likewise evident that incorporating technology in the learning processes helped improved students' critical thinking skills. More specifically, the technological instructional media package made by the researcher was proven effective in developing the critical thinking skills of Grade 9 students in English.

Recommendations

Based on the findings of this study, the following recommendations were made:

1. The DepEd officials may design curriculum frameworks and policies which will serve as specific mandates highlighting the development of critical thinking skills among high school students. These frameworks and policies would likewise need to stipulate the necessity to incorporate technological instructional materials in the students' learning experiences.
2. School Heads and Coordinators shall have to consider the enhancement of critical thinking skills as equally significant curriculum goal as academic performance of the students. This may mean having sufficient resources to ensure that instructional materials will optimize teaching and learning outcome

on students' ability to think critically. This too would call for a clear and functional school program on the use of technology in instruction.

3. Teachers shall need to incorporate technological instructional materials in order to help their students acquire the essential critical thinking skills. To realize this, they may need to redesign the prescribed learning activities for their students in English. Critical thinking skills will ensure that their students can compete globally.
4. Parents may need to extent their support in terms of providing the financial resources. Access to technology would be costly but its impact on the students' critical thinking has to be considered.
5. The students shall have to realize that acquisition of critical thinking skills is very essential for them to be successful in school and in their life beyond school. They need to make the most of the instructional experiences geared towards developing critical thinking. They may have to capitalize on their skills in using technologies in their learning experiences to achieve this end.
6. Future Researchers shall need to explore through research other instructional strategies that may help develop critical thinking skills of high school students.

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Appendix 1. Research Instrument

CRITICAL THINKING SKILLS

Directions: Read each item carefully, and write the letter of the most appropriate answer on your paper. Follow directions as indicated.

CLARIFICATION: *ability that involves focusing on a particular topic or issue and attaining a general level of understanding of the topic/issue.*

Read the paragraph below and answer 1-6

Bill and Lee went camping with their parents at a local park one weekend. The park was very crowded. On Saturday afternoon, their father asked them to pick up some litter and then to go into the woods to cut branches for cooking hot dogs. The two brothers did as their father asked. As they stepped out of the woods, a park ranger stopped them. He looked at their sticks and asked, "Don't you know that in the park you should take nothing but pictures and leave nothing but footprints?" The boys were puzzled by what the ranger had said. They told him that their father had asked them to cut the branches for cooking hot dogs. The ranger walked the boys back to their campsite and talked to their father alone. That evening, the ranger joined the family for dinner. Early the next morning, the family packed up and went home.

1. Why were the boys puzzled?
 - A. The boys had only done what they were asked to do.
 - B. The boys had taken only a few branches from the woods.
 - C. The boys did not understand the ranger's question.
 - D. The boys thought it was okay to cook hot dogs.
2. What is the most likely reason the ranger talked to the father?
 - A. To explain that the boys had cut too many branches
 - B. To explain proper park behavior

- C. To explain why boys should not be alone in the woods
 - D. To explain why people should take pictures in the woods
3. What was the MOST LIKELY reason the family went home the day after the ranger visited?
- A. The ranger had told the family to leave.
 - B. The family had planned to leave that day.
 - C. The ranger had upset the family.
 - D. The family had no more sticks for cooking hot dogs.
4. What did the ranger think when he asked, "Don't you know that in the park you should take nothing but pictures and leave nothing but footprints"?
- A. He thought the boys should have known how to behave in the park.
 - B. He thought the boys should have been taking pictures.
 - C. He thought the boys were going to make a fire in the woods.
 - D. He thought the boys were afraid of getting in trouble.
5. Why might the ranger tell other children this story?
- A. To teach them to pick up litter in the park.
 - B. To teach them to obey their parents while camping.
 - C. To teach them to protect the trees in the park.
 - D. To teach them to be honest with park rangers.
6. Why did the ranger talk to the boys' father ALONE?
- A. To complain about the boys' behavior
 - B. To tell the father the family had to leave the park
 - C. To find out if the boys were really brothers
 - D. To discuss the situation without embarrassing the father

Read the following paragraph and answer questions 7-10.

I always knew I wanted to be a marine biologist. When I was six, my parents took me to an aquarium, and I was hooked. But it was in college, when I got to work on an ocean research cruise that I decided to specialize in oceanography. The trip was sponsored by the Plankton Investigative Service, and our goal was to collect as many different types of the microscopic plants and animals as we could, in order to see what, if any, impact the increased number of people fishing there had on the marine ecosystem. Our group was divided into two teams, each responsible for gathering a different type of plankton. Working with the phytoplankton, especially the blue-green algae, was fascinating. We measured the chlorophyll in the water to determine where, and in what quantity, the phytoplankton was. This worked well because the water was so clear, free of sediment and contaminants.

7. What is phytoplankton?
- A. another name for chlorophyll
 - B. a microscopic plant
 - C. a microscopic animal
 - D. a type of fish
8. The goal of the study group was to investigate whether more people fishing in the area had _____.
- A. positive impact on the local economy.
 - B. depleted the supply of fish.
 - C. made more work for marine biologists.

- D. a negative impact on the health of the surrounding waters.
9. What does the teller mean by his last line?
- A. The task of the team becomes easy because the water is clear.
 - B. The phytoplankton lives in clear water.
 - C. Sediments and contaminants can kill phytoplankton.
 - D. The team has needs to clean the area for sediments.
10. Which of the following questions can be answered based on the selection?
- A. Where did the team started their ocean trip?
 - B. What were the equipment they used to do the survey?
 - C. What was the team's specific task?
 - D. How many persons were there in their team?

***ASSESSMENT:** ability to make decisions about the credibility of sources and observations.*

11. Which statement represents a judgment instead of a fact?
- A. My presentation was excellent. I am sure my boss will promote me now.
 - B. My presentation was excellent. The clients all told me they liked it.
 - C. My presentation was excellent. It won an award from management.
 - D. My presentation was excellent. It was cited as such on my peer evaluation.
12. Which is NOT a sound argument?
- A. Sabrina wanted to be a better figure skater, so she took extra lessons and practiced every day. Her skating improved so much that she entered a competition.

- B. Yesterday, a black cat ran in front of me, and later, I lost my wallet. If I don't see that black cat today, I won't have any bad luck.
- C. We had a storm last night with hurricane-strength winds, and many trees were downed. There was a citywide power outage.
- D. On a clear day, I can see the top of Rizal Monument from my house. If it's clear tomorrow, I'll be able to see the monument.
13. Which scenario best represents a situation that has been decided by emotion alone?
- A. Sue hates the hot weather, so even though she can't afford it, she takes a vacation to the USA.
- B. The school shuts down after a bomb threat.
- C. Third-quarter earnings for Marie's company were much higher than predicted.
- D. Alexis needs a new mixer, so she watches the newspaper ads and buys one when it goes on sale.
14. What should you NOT rely on when making a judgment call?
- A. intuition B. common sense C. gossip D. past experience
15. What is wrong with the following argument? *Philippines—love it, or leave it!*
- A. There is nothing wrong with the argument.
- B. It implies that if you leave the country on vacation, you do not love it.
- C. It does not tell you how to love it.
- D. It presents only two options, when in fact there are many more.
16. Which type of website most likely provides the most objective information about President Marcos?
- A. the home page of a history professor who wrote a book on Pres. Marcos

- B. a confederate group's site on famous presidents, with the most pages devoted to Marcos
- C. the site of a historical preservation group that archives Marcos correspondence
- D. the official site of the presidential library in a university, devoted to telling the life story of the president

17. What is wrong with the logic of the following statement? "How can you believe his testimony? He is a convicted felon!"

- A. The fact that the person testifying was convicted of a crime does not mean he is lying.
- B. A convicted felon cannot testify in court.
- C. The person speaking has a bias against criminals.
- D. The person speaking obviously did not attend law school.

18. Which explanation is weakest?

- A. The steak was overcooked because I cooked it too long.
- B. Jose didn't drive his car today because it was in the shop for repairs.
- C. We don't belong to the country club anymore because we can't afford it.
- D. Gabrielle overslept because she stayed up very late last night.

19. Which is the most important reason for evaluating information found on the Internet?

- A. Authors who publish on the Internet are typically less skilled than those who publish in print.
- B. Web writers are usually biased.
- C. Anyone can publish on the Internet; there is no guarantee that what you are reading is truthful or objective.

D. Information found in print is almost always more accurate than that found on the Internet.

20. What is wrong with the following argument? "We should not change our grading system to numbers instead of letters. The next thing you know, they will take away our names and refer to us by numbers, too!"

- A. The conclusion is too extreme.
- B. There is nothing wrong with the argument.
- C. Students should not have a say in the type of grading system used in their schools.
- D. It does not explain why they want to get rid of letter grades.

INFERENCE: ability to make and judge conclusions.

21. Choose the best conclusion for an argument that begins, "The other members of Philip's swim team ..."

- a. won their events, so Philip will win his event, too.
- b. have been swimming for at least six years, so Philip has been swimming for six years, too.
- c. prefer to swim in outdoor pools, so Philip prefers outdoor pools, too.
- d. wear swim trunks with the school logo on them, so Philip wears them, too.

22. You read a story in the newspaper about salary negotiations with public transportation workers. The workers are threatening to go on strike tomorrow if their demands for higher wages and better benefits are not met. What can you infer from this news story?

- A. Health insurance premiums are very expensive.

- B. The cost of gas will make ticket prices increase in the next few weeks.
- C. People who ride the bus should look for possible alternative transportation.
- D. Employers never like to meet salary demands.

23. Which of these situations does NOT require problem solving?

- A. After you get your new computer home, you find there is no mouse in the box.
- B. When you get your pictures back from being developed, you realize they are someone else's.
- C. Everyone on your team wants to celebrate at the Burger Palace, but you just ate there last night.
- D. You've been assigned to finish a report for tomorrow morning, but it is your son's birthday, and you promised you would take him to the ball game tonight.

24. Which is NOT a likely cause of this situation? "I can't turn on the lamp in the family room!"

- A. The lamp isn't plugged into an electrical outlet.
- B. We just bought a new couch in a color that matches the lamp.
- C. There's a power outage in the neighborhood.
- D. The light bulb in the lamp has burned out.

25. A high school student was caught cheating in one of his subjects during the third quarter exam. What would most likely be the consequence of his action?

- A. He will be asked to take the test again.
- B. His parents will be called to discuss the issue.
- C. He will be refused to continue his studies.
- D. He will have to pay for a new set of exam.

26. Which of these problems is most severe?

- A. Your professor is sick and misses class on the morning you are supposed to take a big exam.
- B. You lose track of your schedule and forget to study for a big exam.
- C. You can't find one of the books you need to study for a big exam.
- D. The big exam is harder than you thought it would be and includes a section you did not study.

27. What can you conclude with this argument? "You think we need a new regulation to control air pollution? I think we already have too many regulations. Politicians just love to pass new ones, and control us even more than they already do. It is suffocating. We definitely do not need any new regulations!"

- A. The person speaking doesn't care about the environment.
- B. The person speaking has changed the subject.
- C. The person speaking is running for political office.
- D. The person speaking does not understand pollution.

Nathan and Sean were in the same English class. Their teacher returned the tests she had graded. When they saw their grades, Nathan smiled, but Sean looked unhappy. The teacher said that many students had received low grades, and she hoped they would study more for the next test.

28. Based on this story, what is MOST LIKELY to be true?

- A. Sean had expected to do better on the test than he did.
- B. Sean did not do as well on the test as he would have liked.
- C. Nathan received a better grade on the test than Sean did.

D. Nathan usually receives better grades than Sean in English.

29. What does the teacher believe?

- A. Studying helps students do well on English tests.
- B. Many students did not study for the test.
- C. None of the students studied enough for the test.
- D. Students cannot do well in English without studying.

People who write books revealing the inner workings of the secret service have usually been dismissed from the service or have retired with a sense of grievance against it. The result is that only the seedy side of the secret service is exposed. This is partly because those who would paint a more favorable picture are unwilling to flout the legal restrictions placed on all who have been employed in the secret service, and partly because the records of the organizations are not available to outsiders.

30. Which of the following is an underlying assumption of the argument above?

- A. The work of the secret service is undervalued as a result of publication of distorted accounts of its working.
- B. The seedy side of the secret service is of minor significance compared with the important work it carries out.
- C. Legal restrictions against revealing the inner workings of the secret service do not apply to those who have been dismissed.
- D. Those who have a grievance against the secret service are either unable or unwilling to give a balanced account of its workings.

STRATEGIES: *ability of using strategies to further clarify or simplify a problem/issue.*

31. Marcy's English teacher gives a quiz every Monday on the 50 pages of reading he assigns on Fridays. His quizzes are becoming harder as the grading period progresses, and Marcy hasn't been doing very well on them. What can she do to troubleshoot the problem and hopefully get better grades on the quizzes?
- A. plan to get to class early on Monday to skim the pages
 - B. look for a new outfit to wear on Monday so she'll be relaxed
 - C. set aside time on Sunday to read and review the new material
 - D. spend an hour on Saturday looking over what she missed on past quizzes
32. You are trying to decide what kind of car to buy. You make a chart to compare a two-seater sports car, a two-door sedan, and a minivan in three categories. Which would NOT be a suitable category?
- A. price
 - B. gas mileage
 - C. tire pressure
 - D. storage capacity
33. To celebrate the latest victory of the school's basketball team, a party will be held in a beach. There are four options for the venue? What must be done to choose the best option?
- A. Call each venue to determine the cost and the distance needed to travel.
 - B. Discuss with the team members their preferences for the venue
 - C. Let the school principal decide on this matter
 - D. Pay a visit to these venues to compare
34. Jean was hurt when she overheard one sidewalk conversation that her best friend is telling lies about her. Which is the best advice for her?
- A. She should tell others how ugly her best friend is.

- B. She needs to go home and tell her parents.
- C. She has to keep it and allow time to heal her pain.
- D. She has to talk to her best friend alone.

35. When would it be better to do research in the library rather than on the Internet?

- A. You are writing a report on recent U. S. Supreme Court decisions.
- B. You want to know the historical performance of a stock you are considering purchasing.
- C. You need to compare credit card interest rates.
- D. You want to find out more about the old trails through the forest in your town.

36. You want to sell your three-year-old car and buy a new one. Which website would probably give you the best information on how to sell a used car?

- A. Auto Trader: get the latest pricing and reviews for new and used cars; tips on detailing for a higher price
- B. Better Business Bureau: provides free consumer and business education; consult us before you get started in your new business!
- C. New Wheels: research every make and model of country's latest offerings
- D. Car Buying Tips: everything you need to know before you shop for your new car.

37. In one of your group tasks in English, you noticed that the terms used by the teacher in the selection were too difficult. What would be the best thing to do?

- A. ask the teacher to change the words used in the selection
- B. solicit ideas from friends in the Facebook
- C. use dictionaries to determine definitions of terms
- D. read others' answers to understand the task

38. Jessa was half listening to the radio when it was mentioned that classes in some schools that day are suspended due to heavy rain. She would like to check if their school is included. To whom should she call?

- A. One of her classmates
- B. the anchor of the radio station
- C. her best friend who lived closed to the school
- D. the administrator of the school

39. As a subject requirement, you are asked to write essay about students' experiences of bullying in school. How will you accomplish this?

- A. read books and journals containing lengthy discussions of what bullying is?
- B. watch movies which featured bullying in urban schools
- C. interview students who had first hand experiences with bullying
- D. ask your parents to write an essay for you

40. Reading research journal is very helpful when you need to

- A. compose a song or a poem for a literary competition
- B. discover the comforts of using rubber shoes in sports
- C. write technical essays for your class in English
- D. plan out a summer getaway with your friends

Appendix 2. Validation Sheet

**Southern Philippines Agri-Business and Marine and Aquatic
School of Technology (SPAMAST)
Matti, Digos City**

VALIDATION SHEET

Name of Evaluator: _____

Degree: _____

To the evaluator: Please check the appropriate box for your ratings.

Points of Equivalent

5	Excellent	3	Good	1	Poor
4	Very Good	2	Fair		

Items	1	2	3	4	5
1. Clarity and Direction of Items The vocabulary level, language, structure and conceptual level of the questions suite the level of participants. The test directions and items are written in a clear and understandable manner.					
2. Presentation and Organization of Items The items are presented and organized in a logical manner.					
3. Suitability of Items The items appropriately represent the substance of the research. The questions are designed to determine the conditions, knowledge, perception and attitudes that are supposed to be measured.					
4. Adequateness of Items per Category The items represent the coverage of the research adequately. The number of questions per area category is representative enough of all the questions needed for the research.					
5. Attainment of Purpose The instrument as a whole fulfills the objectives for which it was conducted.					
6. Objectivity Each item question requires only one specific answer or measures only one behavior and no aspect of the questionnaire suggests on the part of the researcher.					
7. Scale and Evaluation Rating Scale The scale adapted is appropriate for the items.					

Remarks: _____

(Signature over printed name)

Appendix 3. Summary of Ratings

Name	Rating	Qualitative Description
Total		

Appendix 4. Letter of Request

September 26, 2016

REYNALDO B. MELLORIDA, CESO VI
Schools Division Superintendent
Division of Davao del Sur

Dear **Sir**:

I am currently enrolled as a graduate student of SPAMAST, Mati, Digos city with specialization in Language Teaching. As a final requirement of the course, I have to complete my thesis with the title: The Effectiveness of Technological Instructional Media in Developing Critical Thinking Skills of Grade 9 Students in English. This study will involve a total of 88 Grade 9 students of Padada National High School. Results of this research will shed light on the benefits of using computers as primary instructional media in the teaching of English language.

Anent thereto, I seek for your permission to conduct my study this School Year 2016 – 2017. The experimental period will be 6 weeks or one grading period. Arrangement will be made to make sure that classes of other subjects will not be affected.

I hope for your favorable response.

Sincerely yours,

RHENELY S. GAMARCHA

Noted:

CINDY B. ROSIL Ed.D.

Adviser

Approved:

REYNALDO B. MELLORIDA, MPA, CESO VI

Appendix 4. Letter to the School Principal

October 6, 2016

EMETERIO S. LOBITOS JR.

Principal 1

Padada National High School

Dear **Sir:**

I am currently enrolled as a graduate student of SPAMAST, Matti, Digos city with specialization in Language Teaching. As a final requirement of the course, I have to complete my thesis with the title: The Effectiveness of Technological Instructional Media in Developing Critical Thinking Skills of Grade 9 Students in English. This study will involve a total of 88 Grade 9 students of Padada National High School. Results of this research will shed light on the benefits of using computers as primary instructional media in the teaching of English language.

In line with this, I seek your permission to conduct my study involving Grade 9 students in our school for the whole second grading period of this school year. Your support will be much appreciated.

Sincerely yours,

RHENELY S. GAMARCHA

Noted:

CINDY B. ROSIL Ed.D.

Adviser

Approved:

EMETERIO S. LOBITOS JR., MA

CURRICULUM VITAE

Personal Data:

Name	:	RHEYNELY SABIO GAMARCHA
Address	:	Purok 4, Brgy. Southern Paligue, Padada, Davao del Sur
Date of Birth	:	September 2, 1988
Place of Birth	:	Harada Butai, Sulop, Davao del Sur
Sex	:	Female
Height	:	153 cm.
Weight	:	59 kls.
Status	:	Married
Religion	:	Roman Catholic
Nationality	:	Filipino
Tribe	:	Cebuano
Parents		
Father	:	Ricardo Milagrosa Sabio
Mother	:	Elizabeth Rabanez Lascaña
Husband	:	Ericglenn Camuta Gamarcha

Educational Background

Elementary	:	Padada Central Elementary School Padada, Davao del Sur 1995 – 2001
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Secondary : Southeastern College of Padada
Padada, Davao del Sur
2001 – 2005
First Honorable Mention

College : Southeastern College of Padada
Padada, Davao del Sur
2005 - 2009
Bachelor of Secondary Education
With Highest Distinction
Leadership Awardee
Loyalty Awardee
Student Grantee of the Year

Graduate : Southern Philippines Agri-Business
Marine and Aquatic School of Technology
Master of Arts in Education major in
Language Teaching
Digos Campus, Matti, Digos City
2014 - 2017

Eligibility : Licensure Examination for Teachers
April, 2010
75.00%

Professional and Work Experiences:

2009 - 2011	:	Assumption Academy of Peñaplata, Island Garden City of Samal Classroom Teacher
2011-2013	:	PNHS – Piape Extension Classes Piape, Padada, Davao del Sur Classroom Teacher
2013 - Present	:	Padada National High School Padada, Davao del Sur Teacher I

