# **Use of Instructional Games in enhancing Vocabulary Learning among Students**

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#### ABSTRACT

This study aimed at investigating the role of instructional games in the students vocabulary learning in English. The subjects of this study were the eighty (80) grade 10 students at Rufino G. Palabrica Sr. National High School in the District of Dingle, Iloilo. The quasi- experimental design was utilized to find out whether the instructional games would be effective in enhancing the vocabulary learning among students. A standardized vocabulary building test by the Department of Education (DepEd) was given before and after the experiment to measure the students' English vocabulary learning. The experimental group was taught using the Instructional Games Approach, while the control group was taught using the Traditional Approach. The same topics were given to both classes. Descriptive statistics employed were Means and Standard Deviations to determine the mean gain score of students exposed to both approaches. Inferential statistics, t-test that was set at .05 alpha levels was used to determine the mean difference. The study revealed significant difference in the post-test scores of the experimental and the control groups. Significant differences were noted in the vocabulary learning of the students in both groups, with the experimental group having improved better after using instructional games than with the control group taught using the traditional method.

#### Keywords

instructional game, quasi-experimental, instructional game approach, traditional approach, english vocabulary learning

#### Introduction

The K-12 Program covers Kindergarten and 12 years of basic education (six years of primary education, four years of junior high school and two years of Senior High School) to provide enough time for the mastery of concepts and skills, develop lifelong learners, and prepared graduates for tertiary education, middle-level development, skills employment and entrepreneurship. One of the salient features of the K-12 Program is "Making the Curriculum Relevant to Learners (Contextualization and Enhancement). In this feature, students acquired in-depth knowledge, skills, values, and attitudes through continuity and consistency across all levels and subjects through examples, activities or instructional games, songs, poems, stories, and illustrations based on local cultures, history and reality. "If language structure makes up the skeleton of language, then it is vocabulary that provides the vital organs and flesh," (Harmer, 2012). Thus, the magnitude of vocabulary teaching and learning is never too far to be highlighted. For young learners, perhaps it is less difficult to learn vocabulary items for the first time than to consolidate and remember them. Young learners often complain that they keep learning and forgetting. When English language young learners are acquiring new vocabulary, they need concrete methods to collect, store, and retrieve words for retention and future use.

Therefore, it is necessary to find out effective methods to help young learners retain new words in long-term memory. Teaching secondary school students is oftentimes taxing to their teachers. Since they are a little bit older, there is still a need that they should be motivated properly so that they will be encouraged to devote their time in studying. The lessons become easier to them if they have only gain knowledge, understanding, and develop ideas or skills from different subject matters. Vocabulary learning is an area in teaching English subject which students find difficult. The main reason for this is that students are not speakers of English. They do not have ideas about many things or the meaning of words if they are stated in English. It is known in the teaching profession that once students do not understand the words, then they could not tell what the lesson is all about. Many strategies and methods were utilized to help students learn vocabulary words from stories presented to them in order to learn. However, learning using games will eliminate stress and it will be fun and enjoyable for learners. Educational games seem to have been devised for teaching, practicing, and reinforcement of specific skills. These have been found to include elements such as involvement of the learners; personal responsibility of the learner

towards his learning; and organization of learning environment in a manner different from the usual classroom instruction like seating arrangement, educational aids and removal of teacher-student barrier. Games also provide opportunities for classroom interaction. Interaction activities do not only offer students opportunities to be heard but a chance to express themselves naturally and aspire to become a winner (Hamachek, 2014).Learning new scientific concepts in different subjects: Math, Chemistry, Physics and Biology represent serious problem to memorize this big amount of new vocabulary. Vocabulary, however, is the basic element of a language. As "a good command of vocabulary is indispensable in every stage of English language" (Li, 2005 cited in Al-Shaw 2014), memorizing vocabulary is very important for English learning especially in Qatar nowadays where a study of memory strategies for English vocabulary is very necessary to improve scientific English of the secondary school learners. Some remarks have confirmed the weaknesses of the students to memorize new vocabulary throughout conducting survey, questionnaires, interviews and the quizzes. According to the standards adopted by the Supreme of Education Council (SEC) in Qatar which requires to master as much as vocabulary level in different fields. The preuniversity students are required to master a large amount of vocabulary to enable them in the new stage of their education (Al-Shaw, 2014). The researcher, a secondary school teacher for twelve years already, has observed that it is very hard to teach students to comprehend words in their English lessons. She tried to utilize different methods and strategies in the past, yet students still had the same in ability regarding vocabulary learning. She did not give up in trying to make her students learn vocabulary words and so in order to help her students improve their vocabulary learning, she tried to use instructional games as an intervention in vocabulary building among grade ten students, hence, this study.

# **Literature Review**

This process aims at helping students acquire active, productive vocabularies. According to Davies and Pearse (2000), reviewing is "new work on old language", "a challenge, requiring ingenuity and creativity". It produces better results

for teaching and learning vocabulary. In the students reviewing stage, have more "opportunities to use language and receive feedback". Methodologists agree that games and communicative activities are the best ways to help students review vocabulary. Besides, visual aids can make vocabulary revision more interesting and effective. Revision can be done in both individuals and collaboration. Doff (2013) expresses that vocabulary is mainly reviewed through the warm-up step. That means teachers review vocabulary learnt in an earlier lesson. It aims at refreshing students' memories or as a preparation for a new presentation. Based on the study of Rohani and Pourgharib (2003), entitled "Effect of Games on Learning Vocabulary", vocabulary learning has always been a major concern for those who want to learn a second language. The present study aimed at determination of effect of games on vocabulary gain of student. For this, two groups of students were chosen as control and experimental groups. The control group was exposed to textbook teaching between pretest and posttest; however, the experimental group was taught by games. Although both groups made noticeable progress after training program, there was no significant difference between the groups. Another study was conducted determine the Effects to of Instructional Games on Facilitating of Students' Vocabulary Learning (Dolati; Mikaili, 2011). Teaching a new language to the young learners of other languages can be considered as а challenging job while it can be facilitated by applying some instructional games. This small and case study was conducted to identify the role of the games and level of vocabulary learning among 70 female students in the age of 12-13 years old students were selected from Bu-Ali one of the Iranian primary schools in Urmia, Iran. The employment of pretest and posttest instruments allows instructors a single opportunity to empirically evaluate the effectiveness of their instruction and assess the acquisition of course content material by students through formative assessment. After analyzing the pre-test and posttest it was found that applying games has the important and determine role in teaching vocabularies to the language learners, as it was not possible as well as learning with just repetition and memorizing methods. Moreover, game has its

potential as an educational tool for literary training; and can motivate and engage learners especially the quiet and passive ones in the whole learning process. A study on "Educational Games as a Vehicle to Teaching Vocabulary" by Alemi (2010), has found out that one of the most difficult of learning a foreign language aspects (particularly in an EFL context) is the retention of vocabulary. Vocabulary learning plays a major role in English language learner's success. The standard method of presenting up to 20 or more new vocabulary words that students are expected to learn at a given time is not an effective way to help the learners develop vocabulary (Gresten and Baker, 2000). To this end, most ESL/EFL specialists often justify the use of games with reference to the motivation that they can provide for the students. Scholars suggest many techniques for learning, and word game is one of them. Educational games in general and word game specifically as a reinforcing device on improving student's vocabulary knowledge is a topic which needs to be investigated. This study attempted to investigate the role of using word games in expanding the learner's vocabulary. In so doing, an experiment using five-word games, named Twenty Questions, Charades, Definition Game's, Passwords, and Crossword Puzzles respectively was conducted. The participants were selected randomly from a male/ female group of third-grade junior high school students studying at a private school. First, a standardized test was administered to 100 students out of which 60 almost homogeneous students were selected and randomly divided into two groups: experimental and control. Both groups were taught words using traditional methods, however, the experimental group received word games as a treatment at the end of each session. Finally, a vocabulary test was administered to both groups to determine the differences between them. The score obtained from the groups was compared through independent t-test. The calculated exceeded the tcritical value, confirming the positive effect of word games on expanding learners' vocabulary. Efendi (2013) conducted a study on the use of games to improve vocabulary mastery. This article is aims at describing the way of "got it game" and "back to the board game" in improving vocabulary mastery of the seventh-grade students of SMPN 5 Malang. The research design in this

study is classroom action research (CAR) design in which the researcher acts as the teacher leads the teaching activity. The data are required from two major sources: the qualitative and the quantitative. The qualitative is taken from observation checklist and field note while the quantitative is taken from the outcome of preliminary study and the test given in the end of the cycle. The subjects of this study were 29 students of seventh grade students of SMPN 5 Malang of 2012-2013 academic years. The cycle of this study consists of four major steps: planning, implementing, observing, and reflecting. The findings of the study presented that the use of "Got It Game" and "Back to the Board Game" with the topics vocabulary of daily English communication, people's occupation, and personal care and appearance can improve students' vocabulary mastery achievement. This research addresses the problem of memorizing new vocabulary and their definitions in general and motivating students to memorize those scientific vocabularies. This research examines the implementing of games as an effective learning strategy to acquire new vocabulary, solve this problem in an interesting way, and raise the students' awareness to study and to get the maximum results. The outcome of this research showed that it can increase students' ability and motivation to memorize new words. The data extracted from three sources: a questionnaire (designed and used as a tool to collect the data), the researcher observation, and the regular exams. The results of this research demonstrate clearly that using games to practice vocabulary improves learners' ability to memorize the new words effectively. Games provide logical contribution while learners interact in the group, allowing students to clarify the meanings of the words. This strategy also enhanced students' enthusiasm to learn new vocabulary of scientific English (Al-Shaw, 2014). The power of gamification has widely been acknowledged in education to engage and motivate learners when used properly in classrooms (Hammer & Lee, 2011; Muntean, 2011 cited by Sze Lui, 2012). More specifically, games can increase students' level of attention and persistence in learning. In order to win, students typically experience repeated failures when playing games, but through such repeated failures, learning takes place. This is particularly important for vocabulary learning. According to Nation (2001), learning new vocabulary in a second language requires 5 to 16 exposures. In this sense, games help provide such exposures as they involve repeated failures. This study investigated the usefulness of using Web 2.0 games to help students learn vocabulary in a tertiary institution in Macau. In this study, students learned and reviewed vocabulary through two online games, namely "Sling the Teacher" and "Jeopardy". Then an online survey was conducted to collect feedback from 91 freshmen. The aim of the survey was to find out students' opinions and attitudes towards using online games in learning vocabulary and its effectiveness. The results showed that students preferred using technology to learn vocabulary not only because it was more fun and exciting but also because it facilitated vocabulary retention. Gamification improved students' attitudes towards language learning. This study confirms that the appropriate use of gamification can enhance learning (Sze Lui, 2012). The objective of the research was to study the effects of using vocabulary games for improving vocabulary knowledge of Prathom 6 students of Praram 9 Kanjanapisek School. The pre-test and post-test examinations and self-reflection form were the instruments of the study. The samples of the study were the 40 students from a room of five rooms which were chosen by simple random sampling. The procedures began with the class orientation followed by taking pre-test examination, teaching vocabulary through game, taking post-test examination, writing selfreflection form by 3 most-developed, mediumdeveloped and least-developed students and finally analysing data. The experimental period of the study is 6 weeks, 3 periods a week, of the second semester of 2012 academic year, totalling 18 periods. The findings were the post-test score of most students were higher than the pre-test score and the self-reflection forms from the 9 students reflected in the same way. The game helped them to remember more words. Therefore, the students' vocabulary knowledge was improved after they studied through games. The awareness came from students and teacher's experiences such as classroom management, clear instruction and motivation could be mentioned as the tools of successful lessons (Tunchalearnpanih, 2012). From "the study of the effect vocabulary games

on the retention in learning vocabulary of Prathomsuksa five learners of Assumption College Rayong" (Sripramong, 2004), the purpose was to study the effect of using vocabulary games on the retention in learning vocabulary of Prathomsuksa five learners. The sample of the study was Prathomsuksa 5 learners in the second semester of the 2003 academic year at Assumption College Rayong and the period of the study was 24 class periods of 50 minutes each for 6 weeks. The instruments of the study were 12 lesson plans, learning achievement test and questionnaire of learners' opinions on learning vocabulary games. The data of the study was statistically analyzed by percentage, mean, standard deviation and t-test for dependent samples. The findings of the study revealed that the learners' retention in learning English vocabulary games was in high level at the statistical significance of 0.1 and the learners were satisfied with the vocabulary activities was on high as well. Furthermore, from "Learning vocabulary through games the effectiveness of learning vocabulary through games" (Huyen & Nga, 2003), was explored, how and whether the game could help learners learn vocabulary effectively. The researchers began applying games in their classes, observing other teachers' class and interviewing teachers and learners for their reactions and attitudes. The instruments were the post-game surveys and the interview surveys. The findings were revealed in 3 groups, which are attitudes. learners' progress learners' and problems. Learners agree unanticipated that games could help them a lot in vocabulary learning. They could obtain more words and apply them within relaxed and comfortable environment such as games.

Unclear instruction, lack of cooperation of learners and using L1 while playing games were the problems. These were always found while playing games in classes. These could cause also unsuccessful learning languages unless they were managed in an appropriate way.

The subjects of this study were the eighty (80) grade 10 students at Rufino G. Palabrica National High School in the District of Dingle, Iloilo during the School Year 2016-2017.

Humility class, consist of forty (40) students, were the control group and Honesty class, consist of forty (40) students as well were set as experimental group. The control group was scheduled in the morning and was taught using the traditional method, while the experimental group was scheduled in the afternoon and was taught using the Instructional Games. The same topics and lessons were given to both classes.

| Classification     | f  | %   |
|--------------------|----|-----|
| Grade 10- Honesty  | 40 | 50  |
| Grade 10- Humility | 40 | 50  |
| Total              | 80 | 100 |

### Table 1. Distribution of Respondents

The subjects of the study were taken as an entire group and classified according to variables such as sex, socioeconomic status, mother's highest educational attainment, and father's occupation. As to sex, they were categorized as "male" and "female". As to socioeconomic status, they were categorized follows: "Poor" - less than PHP7,890 per month; "Low Income (but not poor)" between PHP 7,890 to PHP 15,780 per month ; "Lower Middle Income" - between PHP 15,780 to PHP 31,560 per month; "Middle Class" - between PHP 31,560 to PHP 78,900 per month. This categorization was based on the 2014 NEDA Distribution of Income and Categorization. As to mother's highest educational attainment, they were categorized as "high school and below;" "college level;" "college graduate and above." As to father's occupation, they were categorized as "employed" and "self-employed and unemployed."

#### **The Advantages of Using Games**

Games play the important part of children's development and learning language (Al-Nafisah cited in Tunchalearnpanih 2012). Instructional games can make the varieties of learners' benefits which range from cognitive aspects of language learning to the co-operative group dynamics (Al-Nafisah; cited in Tunchalearnpanih, 2012). Learning language through games is useful, meaningful, worthwhile and effective. This causes motivation, relaxation, and fun among learners in class. The learners can learn languages fundamentally easilv and through games (Anyuegbu et al. 2012;Obee, 2002; Huyen & Nga, 2003; Jitmuad, 2005; Kumar and Lightner, 2007; Alemi, 2010; Simpson, 2011 cited in Tunchalearnpanih, 2012). Moreover, positive feedbacks from instructors or learners can improve learning better by learners participating within a group or class. These motivate them to the succeeded goal (Kumar and Lightner, 2007; Alemi, 2010 cited in Tunchalearnpanih, 2012). In addition, word games can reflect the learners themselves in their classroom and teachers can assess teaching process by themselves through word games as well (Alemi, 2010).

## **Steps of Teaching Vocabularies through Games**

There are five steps in teaching vocabularies through game. First making motivation by greeting and doing warm-up activity. Strong motivation makes learners be interested in language learning. Next, the presentation of vocabulary is presented through the variety of materials such as pictures, songs or real object and situation. The various materials can attract learners to language learning. Then, skill practice is used for evaluating learners' memorization and understanding. After that, the assessment is started for checking progress of learners' understanding. The assignment is provided to learners as the assessment for checking progress of learners' understanding. The assignment can be worksheet, examination or presentation by learners. Finally, teacher and learners are participation of reviewing the lesson they have learnt (Tunchalearnpanih, 2012).





The study was based on the assumption that there is an effect in using instructional games on the Grade 10 student's vocabulary learning at Rufino G. Palabrica Sr. National High School, Dingle, Iloilo, during the second grading period of School Year 2016- 2017.

Game Based Learning is an interactive pedagogy that has as its foundation in the tenet that games, by their very nature, increase learning through positive emotional experience (Offenholley, 2012). Based on the "Gardner's Seven Levers of Change", all seven levers must be fully utilized in order to effect real change in the attitudes of educational institutions towards the use of games for learning. The establishment of a clear connection between best practices in game design and current learning theories is one more strategy that can be adopted to support the use of games as valuable tools for learning. Arguing that games are pedagogically sound instructional

technology addresses at least some of Gardner's namely: reasoning, levers. resonance. representational, redescription, and resistances. This connection needs to be made explicit, both for the benefit of teachers currently in the classroom, and for the benefit of the academics who ultimately create the programs and curricula that are used to train the next generations of teachers (Becker, 2005). As used in this study, if students have a very high level of motivation on playing instructional game, this may result to high score in the test after the use of instructional games. "Game based learning (GBL) is a type of game play that has defined learning outcomes. Generally, game-based learning is designed to balance subject matter with gameplay and the ability of player to retain and apply said subject matter to the real world". Gamification typically involves applying game design thinking to nongame applications to make them more fun and engaging (Jones, 2013). There were variables such as sex, socioeconomic status, mother's highest educational attainment, father's occupation and English achievement were the assumed causes of the problem on the effect of instructional games on vocabulary learning among grade ten students during the School Year 2016-2017 at Rufino G. Palabrica Sr. National High School.

### Methods

An official letter to the Schools Division Superintendent of Iloilo was sent to request permission to allow the researcher to conduct the study. After proper authorization, the researcher immediately started the study. The researcher performed the experiment in her two English lecture classes. Grade 10- Humility students were exposed to traditional method of teaching and the Grade 10 – Honesty students were subjected to Instructional Games method. The students were given the same topics or lessons to be discussed and included in the Third Grading period.

# **The Experimental Procedure**

The Experimental Stage was on students' knowledge on terms of the topics; Pre-test was determined to each group of subjects following specific guidelines. To ensure uniformity in rating the test papers, checking of papers, checking items at a time for all test papers was done. This process eliminated the carry over effect wherein students' scores in the previous items contaminated the checkers judgment (Stanley as cited by Dedel, 2004). After the scores of students from both groups in the pre-test were recorded, the lessons were introduced to the control and experimental groups. Activities using instructional games were introduced. Instructions on what to do were given. The same topics were also introduced but the learning process was predominantly done by the teacher. During the experiment, the two groups were exposed to the same lessons and references; they differed only in the teaching approach to which they were subjected. In both control and experimental groups, the same topics or lessons were presented with the same content and coverage. The topics discussed the teacher that were by on experimental and control groups were the coverage of their lessons from 1 to 6 of Module 3 which covers the third grading period are as follows: Recognizing the Gift of Nature, Responding to the Natural Phenomena, Working with Nature's Limit, Experiencing the Power of Nature, Harnessing Nature's Potentials, and Being One with Nature. In the experimental classroom, the teacher utilized as teaching aides' instructional materials for games such as: Word rock Box, Vocabulary and Roll Chart. Vocabulary Map for Stretch the Word Game,

Manila Paper, Cartolina, Pentel Pen, and Vocabulary Spinner.

## **The Traditional Method**

In the traditional method of teaching, Humility class was scheduled at 8:15 to 9:15 in the morning and in the Honesty, class was scheduled at 2:00- 3:00 in the afternoon. These schedules were on Monday to Friday. In the traditional classroom, the teacher utilized as teaching aides the textbook, chalk, board, eraser, manila paper and pentel pen. To facilitate instruction, the teacher delivered the lecture for one hour on the scheduled topic for the day. She utilized the chalk, board, eraser, manila paper and pentel pen to discuss the lesson. She also resorted to dictation so the students can take down notes. If ever there were questions raised by the students, the teacher answered them and made some clarifications. The teacher also randomly asked questions to students to encourage them to participate in the class discussion.

After one-and-a-half-months post-test was administered to both groups after the subjects were exposed to two methods of teaching. The test was given to determine their understanding of the concepts.

# Methodology

This chapter presents the research design used in this study, the method, subjects of the study, datagathering procedures, the research instrument used, the intervention, and statistical tools used in this study. The study adopted the quasiexperimental pre-test and post-test design with equivalent groups. The control group has almost the same characteristic as the experimental group. The subjects were selected based on the result of the pre-test. Each group was given a pre-test and was administered then treatment to the experimental group while the controlled group was exposed to the traditional method of teaching vocabulary. After the term, a post-test was given to each group and the test results were analyzed. The respondents of this study were chosen through randomized sampling design for each section. Forty (40) students for experimental group and another forty (40) respondents for control group.

### **Results**

After thorough analysis, the study gave the following results:

1. There was no significant difference that was noted between English

vocabulary learning of the experimental and the control groups was found out prior to the intervention. However, after the intervention, high significant difference was noted.

2. There was a high significant difference noted between the pre-test and the post-test of both groups.

3. There was no significant difference found in the English vocabulary learning of the experimental group when classified as to sex, socioeconomic status, mother's educational attainment, and father's occupation before and after the intervention.

4. In the control group, there was no significant difference found when the students were classified as to sex, mother's educational attainment, and father's occupation; however, a significant difference was found out when they were grouped by their socioeconomic status. It shows that students in lower middle income significantly differed in their English vocabulary learning from the other group.

5. Lastly, a significant difference in the mean gain scores was noted between the experimental and the control group.

#### **Discussions**

The analysis, interpretation and discussion of the results follow the presentation.

Specifically, the following are presented and discussed:

**English Vocabulary Learning of the Grade 10** students in the Control Group as to Pre-test and Post-test when classified as to sex, socioeconomic status. mother's educational attainment, father's occupation and as a whole Table 2 shows the English Vocabulary Learning of the Grade 10 students in the Control Group as to Pre-test and Post-test when classified as to sex, socio-economic status, mother's educational attainment, father's occupation and as a whole. The pre-test result shows that both male and female had "conditional" learning in their English vocabulary with a mean score of 12.64 and 13.00 respectively. Post test showed that male got a higher learning in their English vocabulary with a mean of 19. 86 and interpreted as "satisfactory" compared to female with a mean of 14.94 interpreted as "conditional." This means that male students performed well in their English vocabulary compared to the female in the control group. Referring to the socio-economic status, the pre-test shows that subjects who are poor, lower income (but not poor), and lower middle income - in terms of the socioeconomic status- had a "conditional" learning in their English vocabulary with mean scores of 12.36, 12.60, and 13.50 respectively. On the other hand, subjects who belong to the middle class had a "satisfactory" English vocabulary learning with a mean score of 17.00 in the pre-test. Post-test result shows that subjects who belong to poor and lower income (but not poor) had "satisfactory" English vocabulary learning with a mean of 16.19 and 16.40, while subjects in lower middle income and middle class had mean scores of 22.38 and 22.00

interpreted as "very satisfactory." It means that subjects in lower middle income and in middle class performed well compared to the subjects in poor and lower income (but not poor) after the pre-test. Based on their mother's educational attainment, all subjects in the pre-test had "conditional" English vocabulary learning with mean scores of 12.65, 13.13, and 12.83. In the post test, the result shows that subjects whose mothers are college graduates got the highest mean score of 20.17, followed by 17.13 of college level, and 16.35 for those mothers who finished high school only, but whose learning had the same interpretation as "satisfactory". This means that the subjects have increased their English vocabulary learning of the same level. When classified as to father's occupation, pre-test reveals that students whose fathers are employed, self-employed, and unemployed have mean scores of 13.15, 12.35, and 13.00, respectively, and interpreted as "conditional." On the other hand, post-test result reveals that subjects whose fathers are unemployed got a highest mean score of 22.00 and interpreted as "very satisfactory" compared to the subjects whose fathers are employed and self-employed with the mean scores of 18.50 and 15.88 and interpreted as "satisfactory" only. This means that subjects whose fathers are unemployed performed better than whose fathers are employed and selfemployed in terms of English vocabulary.

| Table 2. English Vocabulary Learning o  | f the Grade 10 Students in the Control Group in the Pre-test and Post-      | -tsta |
|---|---|-------|
| when classified as to Sex, Socio-econom | ic status, Mother's Educational Attainment, Father's Occupation, as a whole | •     |
| Dec toct                                | Doct toot   | -m    |

|     |                           | 26        |             |          |             |            |        | FUSI         | -icsi    |                   |
|-----|---------------------------|-----------|-------------|----------|-------------|------------|--------|--------------|----------|-------------------|
|     | Group                     |           | Ν           | Mean     | SD          | Descript   | tion   | Mear         | n SD     | Description       |
|     | 5ex                       |           |             |          |             |            |        |              |          |                   |
|     | Male                      | 22        | 12.64       | 2.84     | conditiona  | d          | 19.8   | 6 5.46 sa    | tisfacto | ory               |
|     | Female                    | 18        | 13.00       | 2.66     | conditional | 14.94      | 4.52 c | onditional   |          |                   |
|     | Socio-ec                  | сопоп     | nic status  |          |             |            |        |              |          |                   |
|     | poor                      | 16        | 12.36       | 2.53 cor | ditional    | 16.19      | 4.34 s | atisfactory  |          |                   |
|     | lower<br>income           | 15        | 12.60       | 2.67 cor | ditional    | 16.40      | 6.13 s | atisfactory  |          |                   |
|     | lower<br>middle<br>income |           | 8           | 13.50    | 3.16        | conditiona | al     | 22.38        | 4.63     | very satisfactory |
|     | middle<br>class           |           | 1 17.0      | 0        | satisfactor | У          | 22.    | 00 v         | ery sat  | isfactory         |
|     | Mother's                  | s Edua    | rational At | tainmen  | t           |            |        |              |          |                   |
|     | high<br>school            | 20        | 12,65       | 2.48     | conditional | 16.3       | 5 5.57 | satisfacto   | ry       |                   |
|     | college<br>level          | 8         | 13.13       | 2.80 c   | onditional  | 17.13      | 3.31 s | atisfactory  |          |                   |
|     | college<br>graduate       | 12        | 12.83       | 3.27 co  | nditional   | 20.17      | 6.29 s | atisfactory  |          |                   |
|     | Father's                  | Occu      | pation      |          |             |            |        |              |          |                   |
|     | Employed                  |           | 20          | 13.15    | 2.96 con    | ditional   | 18.5   | 0 5.88 s     | atisfact | ory               |
|     | Self<br>employed          | 17        | 12.35       | 2.62 co  | onditional  | 15.88      | 4.20 9 | satisfactory |          |                   |
|     | unemploy                  | ed<br>ole | 3           | 13.00    | 2.00 con    | ditional   | 22.0   | 0 8.66 v     | ery sati | isfactory         |
|     |                           |           | 40          | 12.80    | 2.73 co     | nditional  | 17.65  | 5 5,58 s     | atisfact | tory              |
| and |                           |           |             |          |             |            |        |              |          |                   |

Legend:

26.0-30 Excellent 21.00-25.99 Very Satisfactory 15.00-20.99 Satisfactory 11.00-14.99 Conditional 0.00-10.99 Poor

**English Vocabulary Learning of the Grade 10** students in the Experimental group as to Pretest and Post-test when classified as to sex, socio-economic status, mother's educational attainment, father's occupation, and as a whole. The English vocabulary learning of the Grade 10 students in the experimental group in the pre-test and post-test when classified as to sex, socio-economic status, mother's educational attainment, father's occupation and as a whole is shown in Table 3. In the pre-test, the male and the female in the experimental group had mean scores of 14.16 and 13.95 and the standard deviation =4.31 and 3.25, respectively, and interpreted as "conditional." The standard deviation shows that the two groups have more or less the same spread of scores. In the post test, the male had "very satisfactory" English vocabulary learning with a mean = 22.75 and standard deviation = 5.72. The female had also "very satisfactory" English vocabulary learning with a mean = 20.91 and standard deviation = 5.47. The mean value indicates that both the male and the female performed at the same level after the intervention. The two groups had more or less the same spread of scores as reflected by their standard deviation.

In terms of socio-economic status, the pre-test shows that subjects that belong to poor, lower middle class, and middle class in terms of their socioeconomic status had mean scores of 12.88, 13.40, and 12.50, with standard deviation = 4.06, 4.98, and 0.71, respectively, and had a "conditional" English vocabulary learning. On the other hand, subjects who are in the lower income (but not poor) had a mean = 15.69 with standard deviation = 2.70 which is interpreted as "satisfactory." The mean value indicates that subjects in lower income (but not poor) performed better in the pre-test compared to the other groups.

In the post-test, subjects of poor, lower income (but not poor), and middle class in terms of their socioeconomic status had a "very satisfactory" English vocabulary learning with mean scores of 21.85, 22.38, and 21.50 with standard deviations = 5.93, 4.99, and 10.61, respectively. The lower middle-class group had a "satisfactory" English vocabulary learning with a mean = 20.00 with standard deviation = 4. 99. This means that after the intervention, subjects that belong to poor, lower income (but not poor), and middle class in terms of their economic status performed better than those subjects in the lower middle income. When grouped as to mother's educational attainment the pre-test revealed that subjects whose mothers were in the college level and college level had a "satisfactory" English vocabulary learning with the mean scores = 15.11and 15.67 and standard deviations = 4.37 and 3.08, while subjects whose mothers were in the high school had a "conditional" English vocabulary learning, with standard deviation = 3.57. This means that subjects whose mothers

belonged to the college level and college graduate, had a better English vocabulary compared to those subjects whose mothers belonged to the high school category. After the intervention, subjects whose mother is a high school and college graduate had a higher mean = 22.04 and 24.83, with a standard deviation = 5.79and 5.19, respectively, and interpreted as "very satisfactory", compared to the subjects whose mother is a college level with a mean = 19.11, and interpreted as "satisfactory." This means that subjects whose mothers are high school and college graduate performed better than subjects whose mother is a college level as reflected by their mean scores after the intervention. As to father's occupation, the pre-test results revealed that students whose fathers are employed showed "satisfactory" in their English vocabulary learning with a mean = 15.38, with standard deviation =2.75, while subjects whose fathers are selfemployed, and unemployed had mean scores of 14.00 and 12.22, and interpreted as "conditional" with standard deviations of 4.01 and 3.99, respectively. The mean value indicates that subjects whose fathers are employed had a better English vocabulary learning compared to the subjects in the other group in the pre-test. The post test result shows the English vocabulary learning of the control group after the intervention. The result revealed that subjects performed well at the same level after the intervention since they had all "very satisfactory" English vocabulary learning with the mean scores of 21.85, 21.44, 22.44, with standard deviations of 5.35, 5.03, and 7.43 respectively.

English Vocabulary Learning of the Grade 10 students in the Experimental group as to Pre-test and Post-test when classified as to sex, socioeconomic status, mother's educational attainment, father's occupation, and as a whole. The English vocabulary learning of the Grade 10 students in the experimental group in the pre-test and posttest when classified as to sex, socio-economic

status, mother's educational attainment, father's occupation and as a whole is shown in Table 3. In the pre-test, the male and the female in the experimental group had mean scores of 14.16 and 13.95 and the standard deviation = 4.31 and 3.25, respectively, and interpreted as "conditional." The standard deviation shows that the two groups have more or less the same spread of scores. In the post test, the male had "very satisfactory" English vocabulary learning with a mean = 22.75and standard deviation = 5.72. The female had also "very satisfactory" English vocabulary learning with a mean = 20.91 and standard deviation = 5.47. The mean value indicates that both the male and the female performed at the same level after the intervention. The two groups had more or less the same spread of scores as reflected by their standard deviation. In terms of socio-economic status, the pre-test shows that subjects that belong to poor, lower middle class, and middle class in terms of their socioeconomic status had mean scores of 12.88, 13.40, and 12.50, with standard deviation = 4.06, 4.98, and 0.71, respectively, and had a "conditional" English vocabulary learning. On the other hand, subjects who are in the lower income (but not poor) had a mean = 15.69 with standard deviation = 2.70 which is interpreted as "satisfactory." The mean value indicates that subjects in lower income (but not poor) performed better in the pretest compared to the other groups.

In the post-test, subjects of poor, lower income (but not poor), and middle class in terms of their socioeconomic status had a "very satisfactory" English vocabulary learning with mean scores of 21.85, 22.38, and 21.50 with standard deviations = 5.93, 4. 99, and 10.61, respectively. The lower middle-class group had a "satisfactory" English vocabulary learning with a mean = 20.00 with standard deviation = 4. 99. This means that after the intervention, subjects that belong to poor, lower income (but not poor), and middle class in terms of their economic status performed better than those subjects in the lower middle income.

When grouped as to mother's educational attainment the pre-test revealed that subjects whose mothers were in the college level and college level had a "satisfactory" English

vocabulary learning with the mean scores = 15.11and 15.67 and standard deviations = 4.37 and 3.08, while subjects whose mothers were in the high school had a "conditional" English vocabulary learning, with standard deviation = 3.57. This means that subjects whose mothers belonged to the college level and college graduate, had better English vocabulary а compared to those subjects whose mothers belonged to the high school category. After the intervention, subjects whose mother is a high school and college graduate had a higher mean = 22.04 and 24.83, with a standard deviation = 5.79and 5.19, respectively, and interpreted as "very satisfactory", compared to the subjects whose mother is a college level with a mean = 19.11, and interpreted as "satisfactory." This means that subjects whose mothers are high school and college graduate performed better than subjects whose mother is a college level as reflected by their mean scores after the intervention.

Table 3. English Vocabulary Learning of the Grade 10 students in the Experimental group as to <u>Pre-test</u> and Post-test when classified as to sex, <u>socio-economic</u> status, mother's educational attainment, father's occupation and as a whole

| Pre-test        |      |          |       |                   | Post-test                        |
|-----------------|------|----------|-------|-------------------|----------------------------------|
| Group           | N    | Mear     | SC    | ) Description     | 1 Mean SD Description            |
| Sex             |      |          |       |                   |                                  |
| Male            | 19   | 14.16    | 431   | conditional       | 22.79 5.72 very satisfactory     |
| Female          | 21   | 13.95    | 325   | conditional       | 20.91 5.47 very satisfactory     |
| Socio-ecc       | nom  | ic statu | 5     |                   |                                  |
| poor            | 17   | 12.88    | 4.06  | conditional       | 21.82 5.93 very satisfactory     |
| lower<br>income | 16   | 15.69    | 2.70  | satisfactory      | 22.38 4.99 very satisfatory      |
| lower<br>middle | 5    | 13.40    | 4.98  | conditional       | 20.00 6.16 satisfactory          |
| income          |      |          |       |                   |                                  |
| middle<br>class | 2    | 12.50    | 0.71  | conditional       | 21.50 10.61 very satisfactory    |
| Mother's        | Educ | ational  | Attai | nment             |                                  |
| High<br>school  | 25   | 13.28    | 3.57  | conditional       | 22.04 5.79 very satisfactory     |
| college         | 9    | 15.11    | 4.37  | satisfactory      | 19.11 4.48 satisfactory          |
| college         | 6    | 15.67    | 3.08  | satisfactory      | 24.83 5.19 very satisfactory     |
| Eather's        | 000  | nation   |       |                   |                                  |
| Employed        | 13   | 15.38    | 2.75  | satisfactory      | 21.85 535 very satisfactory      |
| self            |      | 18       | 3 14. | 00 4.01 condition | nal 21.44 5.03 very satisfactory |
| employed        |      |          |       |                   |                                  |
| unemploye       | d    |          | 9 12. | 22 3.99 condition | nal 22.44 7.43 very satisfactory |
| As a who        | e "  | 14.05    | 2.74  | confitional       | 21.80 5.60 vev salidatov         |

26.0-30 (excellent) 21.00-25.99 (very satisfactory) 15.00-20.99 (satisfactory) 11.00-14.99 (conditional) 0.00-10.99 (poor)

As to father's occupation, the pre-test results revealed that students whose fathers are employed showed "satisfactory" in their English vocabulary learning with a mean = 15.38, with standard

deviation = 2.75, while subjects whose fathers are self-employed, and unemployed had mean scores 12.22, and interpreted of 14.00 and as "conditional" with standard deviations of 4.01 and 3.99, respectively. The mean value indicates that subjects whose fathers are employed had a better English vocabulary learning compared to the subjects in the other group in the pre-test. The post test result shows the English vocabulary learning of the control group after the intervention. The result revealed that subjects performed well at the same level after the intervention since they had all "very satisfactory" English vocabulary learning with the mean scores of 21.85, 21.44, 22.44, with standard deviations of 5.35, 5.03, and 7.43 respectively.

### Difference between the Experimental and Control Groups in the Pre-test and Post test

Table 4 shows the t-test for independent sample of the pre-test and post-test of the experimental and control groups. In the pre-test, scores between the experimental and control group did not differ significantly from each other since the p-value = -0.100 and p > 0.05. This shows that the two groups had the same English vocabulary learning prior to the intervention. In the post-test, the experimental group got a highly significantly higher mean than the control group, as shown by the p-value = 0.002 and p < 0.05. Based on the underlying theories that gamification had positive impact in students learning, the following analysis and insights were made. This shows that the experimental group had a higher English vocabulary learning after the intervention. This further shows that in this study, instructional games had more positive effect in increasing the English vocabulary of the students compared to the traditional way of teaching. Therefore, hypothesis that there is no significant difference in the English vocabulary learning of the tenthgrade students using instructional games is not accepted.

This result was supported by Luu Trong Tuan (2012) in his study on Vocabulary Recollection through Games, that there is a significant difference in the post-test of the control and experimental group set at 5% level of significance. Based on the analysis, though both groups increase their scores after the allotted time for experimentation, it still shows based on the result that the use of instructional games in learning vocabulary had a great contribution on the increase of scores of students in experimental group since it shows significant difference after the intervention. Difference in the Pre-test and Post-test of the Experimental and Control groups. Table 5 shows the t-test for paired samples of the English vocabulary learning in the pre-test and post-test of the experimental and control group. The result shows that there is a highly significant difference in the pre-test and post-test of the

Table 4. Difference between the Experimental and Control Groups in the Pre-test and Post test

| Group         | Mean  | Mean Diff. | df | t-value | e <u>sig-value</u> |  |
|---------------|-------|------------|----|---------|--------------------|--|
| Pretest       |       |            |    |         |                    |  |
| Experimental  | 14.05 | 1.25       | 39 | 1.69 🥨  | 0.100              |  |
| Control 12.80 | )     |            |    |         |                    |  |
| Posttest      |       |            |    |         |                    |  |
| Experimental  | 21.80 | 4.15       | 39 | 3.28*   | 0.002              |  |
| Control 17.65 | 5     |            |    |         |                    |  |

Legend: \* p < .05

experimental group as shown by p-value = 0.000and p < 0.01.Likewise, the result shows that there is a highly significant difference between the pretest and post-test of the control group as shown by p-value = 0.000 and p < 0.01. This means that both groups significantly increased their English vocabulary learning with or without the use of instructional games. Therefore, the hypothesis that there is no significant difference in the pretest and post-test of the experimental and control group is rejected. Based on the result, students in groups increased significantly both their vocabulary learning. Since the teachers gave the same set of tests, it is expected that they will increase their scores and can give significant difference. Being familiar of something can

decrease anxiety especially in taking a test. Being instructed before a test will surely give knowledge to something with or without intervention. This was supported by the study on Educational Games as a "Vehicle to Teaching Vocabulary" conducted by Alemi (2010), that there is a significant difference in the pre-test and post-test of the experimental and control group after the period of experimentation.

Table 5. Difference in the <u>Pre-test</u> and Post-test of the Experimental and Control groups

| Group     | Mean     | Mear | Diff. | df t-valu   | ie sig-value |
|-----------|----------|------|-------|-------------|--------------|
|           |          |      |       |             |              |
| Experi    | mental   |      |       |             |              |
| Pre-test  | 14.05    | 7.75 | 39    | 7.69* 0.000 |              |
| Post-test | 21.80    |      |       |             |              |
| Contro    | bl       |      |       |             |              |
| Pre-tes   | st 12.80 | 4.85 | 39    | 6.21*       | 0.000        |
| Post-test | 17.65    |      |       |             |              |
|           |          |      |       |             |              |

Legend: \* p < .05

Difference in the Pre-test and Post-test of the Control and Experimental groups when classified as to sex. T-test for paired sample of male and female in the pre-test and post-test of the control and experimental group is shown in Table 6. Based on the pre-test of the control group, the males do not differ significantly from the female as shown by p-value = 0.681 and p > 0.05. On the other hand, the post test result revealed that the males have a highly significant difference in the English vocabulary learning from the female as shown by the p-value = 0.004 and p < 0.01. This further implies that the males in the control group had a better English vocabulary learning compared to the females. Therefore, hypothesis that there is no significant difference in the English vocabulary learning of the male and female in the post test of the control group is not accepted. Experimental result in the pre-test shows that the males do not differ significantly from the females as shown by the p = 0.865 and p > 0.05. Likewise, the post test revealed that the English vocabulary learning of the males do not

differ significantly from the female as shown by p = 0.294 and p > 0.05. This means that the males and, the females had the same English vocabulary learning before and after the intervention. This further implies that students in the experimental group had the same level of learning because of the intervention whether they are male or female. The findings prove that there is no significant difference in the English vocabulary learning of the experimental group before and after the intervention. This result is supported by Rohani and Pourgharib (2003), that, although both groups made noticeable progress after training program, there was no significant difference in the English Vocabulary Learning between the groups. Based on the analysis, using constructional games in learning vocabulary can regulate learning both male and female since it arouses the interest of every learners that was engage on this kind of instruction.

Table 6. Difference in the <u>Pre-test</u> and Post-test of the Control and Experimental Groups when classified as to Sex

| Grou                          | up Mean                                  | Mean Di | ff.     | df t-v         | value | sig-value |  |
|-------------------------------|--|---------|---------|----------------|-------|-----------|--|
| Con<br>Pre-                   | trol Group                               |         |         |                |       |           |  |
| Mal<br>Fen<br>Posi            | le 12.64<br>nale 13.00<br>t <i>-test</i> | 0.36    | 38 0.42 | <u>e os</u> 0. | 681   |           |  |
| Male<br>Female                | 19.86<br>14.94                           | 4.92 38 | 3.06**  | 0.004          |       |           |  |
| Exp                           | erimental Gr                             | oup     |         |                |       |           |  |
| <i>Pre-</i><br>Male<br>Female | test<br>= 14.16<br>13.95                 | 0.21    | 38      | 0.71 👯         | 0.865 |           |  |
| <i>Post</i><br>Male<br>Female | t- <i>test</i><br>e 22.79<br>20.90       | 1.88    | 38      | 1.07 🛤         | 0.294 |           |  |

Legend: \*p < .05

> Difference in the Pre-test and Post-test of the Control group when classified as to socioeconomic status, mother's educational attainment, and father's occupation. ANOVA result shown in the Table 7 revealed that there was no significant difference in the pre-test of the English vocabulary learning of the subjects in the control group when they are classified as to their socioeconomic status as shown by p-value = 0.394 and p > 0.05. In the post test, the ANOVA

result revealed that there was a significant difference in the English vocabulary learning among the subjects when they are classified according to their socioeconomic status. This means that one or more in the group differed significantly from each other. The finding of the study is in line with the result of some previous investigations done by Farid Ghaemi (2014) in his study "How money matters for young children's development: Parental Investment and Family Processes" that, socio-economic status had main effects on the English vocabulary learning, thus, shows significant difference. Table 7 also shows the pre-test and post-test of the control group when classified as to mother's educational attainment. The pre-test revealed that there is no significant difference in the English vocabulary learning among the subjects in the control group when they are classified as to mother's educational attainment as shown by p=0.920 and p > 0.05. This means that no group differs significantly from each other. Likewise, post test revealed that there was no significant difference in the English vocabulary learning among the subjects as shown by p=0.165 and p>0.05. This further shows that students in the control group had the same learning in terms of their English vocabulary in their pre-test and post-test. Therefore, hypothesis that there is no significant difference in the pre-test and post-test in the English vocabulary learning of the control group when classified as to mother's educational attainment is accepted. This result is supported by Farnaz Farrokh Alaee (2012) that there is no significant difference in the pretest and post-test on the English achievement of the subjects when classified as to mother's educational attainment. The same ANOVA table shows the significant difference in the pre-test and post-test in the English vocabulary learning of the control group when classified as to father's occupation. In the pre-test, the result revealed that there is no group that differs significantly from each other as shown by p = 0.681 and p > 0.05. The post-test also revealed that there was no significant difference in the English vocabulary learning of the control group as shown by p = 0.135 and p > 0.05. This means that subjects in the control group had the same or almost the same English vocabulary learning in their pre-test and post-test. This finding supports the hypothesis that there is no significant difference in the English vocabulary learning among students in the control group when classified as to father's occupation. Of all the researchers identified antecedent variables, socio-economic status only shows significant difference in the control group. It shows that, in this study, socio-economic status is one of the factors that affect the vocabulary learning of the students.

Table 7. Difference in the <u>Pre-test</u> and Post-test of the Control group when classified as to <u>socio-economic</u> status, educational attainment, and father's occupation

|                 |                | SS  | đĘ     | MS                 | F-value | sig-value |
|-----------------|----------------|-----|--------|--------------------|---------|-----------|
| Socio-economic  | status         |     |        |                    |         |           |
| Pre-test        |                |     |        |                    |         |           |
| Between groups  | 25.05          | 3   | 8.35   | 1.13 🥸             | 0.349   |           |
| Within groups   | 265.35         | 36  | 7.37   |                    |         |           |
| Total           | 290.40         |     | 39     |                    |         |           |
| Post-test       |                |     |        |                    |         |           |
| Between groups  | 255.19         | 3   | 85.06  | 3.20*              | 0.035   |           |
| Within groups   | 957.91         | 36  | 26.61  |                    |         |           |
| Total           | 1213.1         | 10  | 39     |                    |         |           |
| Mother's Educa  | tional Attainm | ent |        |                    |         |           |
| Pre-test        |                |     |        |                    |         |           |
| Between groups  | 1.31           | 2   | 0.65   | 0.084 <sup>n</sup> | 0.920   |           |
| Within groups   | 289.09         | 37  | 7.81   |                    |         |           |
| Total           | 290.40         | 39  |        |                    |         |           |
| Post test       |                |     |        |                    |         |           |
| Between groups  | 112.01         | 2   | 56.00  | 1.882 👯            | 0.167   |           |
| Within groups   | 1101.09        | 37  | 29.76  | 5                  |         |           |
| Total           | 1213           | .10 | 39     |                    |         |           |
| Father's Occupa | ation          |     |        |                    |         |           |
| Pre-test        |                |     |        |                    |         |           |
| Between groups  | 5.97           |     | 2 2.98 | 0.388 🥨            | 0.681   |           |
| Within groups   | 284.43         | 37  | 7.65   | )                  |         |           |
| Total           | 290.40         | 39  |        |                    |         |           |
| Post test       |                |     |        |                    |         |           |
| Between groups  | 124.34         | 2   | 62.1   | 7 2.113 👯          | 0.135   |           |
| Within groups   | 1088.77        | 37  |        | 29.43              |         |           |
| Total           | 1213           | .10 | 39     |                    |         |           |

Legend:

© p > 0.05 \*p < 0.05

Difference in the Pre-test and Post-test of the Experimental group when classified as to socioeconomic status, mother's educational attainment, and father's occupation. ANOVA table result shown in table 8 revealed that there is no significant difference in the English vocabulary learning of the students in the experimental group when classified as to socioeconomic status in their pre-test since p = 0.155 and their post-test with p = 0.884 where p-value > 0.05. This means that subjects in experimental group do not differ significantly their English vocabulary learning when they are classified as to socioeconomic status before and after the intervention. This further implies that because of the intervention,

the English vocabulary learning of the students in the group is retained as the same or almost the same with each other. This finding supports that there was no significant difference in the English vocabulary learning of the experimental group when classified as to socioeconomic status before and after the intervention. The same table shows the significant difference in the pre-test and posttest of the experimental group when classified as to mother's educational attainment. In the pretest, the English vocabulary learning of the students in the experimental group do not differ significantly from each other as shown by p =0.239 and p > 0.05. Likewise, post test revealed that there was no significant difference in the English vocabulary learning of the experimental group after the intervention as shown by p =0.144 and p > 0.05. This means that no one or more groups differ significantly from each other before and after the intervention. This further implies that using instructional games in the English vocabulary can give the same or almost the same level of learning whether the level of their mother is a high school graduate/level, college level, or college graduate. The findings supported that there was no significant difference in the pre-test and post-test of the experimental group when classified as to mother's educational attainment. This result is supported by Farnaz Farrokh Alaee (2012) that there was no significant difference in the pretest and post-test on the English achievement of the students when classified as to mother's educational attainment. ANOVA result shown in table 8 revealed that there was no significant difference in the pre-test of the experimental group when classified as to father's occupation as shown by p = 0.150 and p > 0.05. The post-test also revealed that English vocabulary learning of the experimental group does not differ significantly from each other as shown by p = 0.912 and p > 0.05. This means that after the intervention, students have the same learning as with others. This further implies that the use of instructional games in teaching English vocabulary would give the same learning whether their father is unemployed, self-employed, or employed. Therefore, the hypothesis that there was no significant difference in the English

vocabulary learning among students in then experimental group when classified as to father's occupation was accepted. Using the instructional games in the experimental groups shows no significant difference unlike of the control group. This shows and proves that instructional games can regulate the performance of every student in this study despite of their socio-economic status, mother's educational attainment, and father's occupation. Having instructional games as a method of instruction in learning vocabulary helps the teacher to motivate her student's despite on his/her status in life.

Table. 8 Difference in the <u>Protect</u> and Post-test of the Experimental group when classified as to <u>socio-economic</u> status mother's educational attainment, and father's occupation

|                |             |       | SS    | <u>df</u> № | 15 f-value | sig-value |
|----------------|-------------|-------|-------|-------------|------------|-----------|
| Socio-economi  | status      |       |       |             |            |           |
| Pre-test       | ^           |       |       |             |            |           |
| Between groups | 73.00       | 3     | 24.33 | 1.852       | 0.155      |           |
| Within groups  | 472.90      | 36    | 13.14 |             |            |           |
| Total          | 545.90      | 39    |       |             |            |           |
| Post-test      |             |       |       |             |            |           |
| Between groups | 21.68       | 3     | 7.23  | 0.217       | 0.884      |           |
| Within groups  | 1200.72     | 36    | 33,35 |             |            |           |
| Total          | 1222.40     | 39    |       |             |            |           |
| Mother's Educa | tional Atta | inmer | it    |             |            |           |
| Pre-test       |             |       |       |             |            |           |
| Between groups | 40.64       | 2     | 20.32 | 1.488       | 0.239      |           |
| Within groups  | 505.26      | 37    | 13.66 |             |            |           |
| Total          | 545.90      | 39    |       |             |            |           |
| Post-test      |             |       |       |             |            |           |
| Between groups | 121.72      | 2     | 60.86 | 5 2.046     | 0.144      | ł.        |
| Within groups  | 1100.68     | 37    | 29.75 |             |            |           |
| Total          | 1222.40     | )     | 39    |             |            |           |
| Father's Occup | ation       |       |       |             |            |           |
| Pre-test       |             |       |       |             |            |           |
| Between groups | 53.27       | 2     | 26.63 |             | 2.000 👯    | 0.150     |
| Within groups  | 492.63      | 37    | 13.31 |             |            |           |
| Total          | 545.90      | - 39  |       |             |            |           |
| Post-test      |             |       |       |             |            |           |
| Between groups | 6.04        | 2     | 3.02  | 0.092       | 0.912      |           |
| Within groups  | 1100.68     | 37    | 29.75 |             |            |           |
| Total          | 1222.4      | 0 39  |       |             |            |           |

≪p > 0.05 \*p < 0.05

Significant Difference in the Mean Gain Scores of the Control and the Experimental Groups after using the Instructional Games. Table 9 shows the significant difference in the mean gain scores of the control and experimental group after the period of experimentation using t-test for independent samples. The result revealed that the mean gain score of the experimental group differ significantly from the mean gain score of the control group since p = 0.024 and p < 0.05. This means that experimental group gain more score in terms of their English vocabulary learning after the intervention compared to the control group. This further implies that students could increase English vocabularv learning their using instructional games more than of traditional way teaching. Therefore, the hypothesis was of

rejected that there was no significant difference in the mean gain scores in the English vocabulary learning of the experimental and control group. This further implies that students could increase their English vocabulary learning using instructional games more than of traditional way of teaching. Therefore, the hypothesis is rejected that there is no significant difference in the mean gain scores in the English vocabulary learning of the experimental and control group. This result supported by the study on "Educational Games as a Vehicle to Teaching Vocabulary" conducted by Alemi (2010), that there was a significant difference in mean gain score of the experimental and of the control group. This study shows significant difference in the mean gain scores of the control group and experimental group. It is true that gamification can be a strategy in enhancing cognitive aspect of the students.

#### Table 9. Difference in the Mean Gain Scores of the Control and

Experimental Groups after using the Instructional Games

| Group                | Mean | Mear | n Diff. | df t-val | ue <u>sig-value</u> |
|----------------------|------|------|---------|----------|---------------------|
| Experimental         | 7.75 | 2.90 | 39      | 2.355*   | 0.024               |
| Control              | 4.85 |      |         |          |                     |
| Legend:<br>*p < 0.05 |      |      |         |          |                     |

#### **Limitations and Future Studies**

This study determined the use of instructional games in enhancing English vocabulary learning among Grade 10 students of Rufino G. Palabrica Sr. National High School in the District of Dingle, Iloilo for the School Year 2016-2017. This study used quasi-experimental pre-test posttest design with equivalent groups. The subjects in this study were the eighty (80) Grade 10 students in the two sections at RGPSNHS. The Humility class (*consisting 40 students*) served as

the control group of the study and the Honesty class (consisting 40 students) as the experimental group. Four (4) instructional games were used for the experimental group for thirty (30) class days of intervention. The instrument used in data gathering was the standardized vocabulary test of the DepEd for pretest-posttest. The statistical tools used were t-test for independent and paired sample to test the significant difference of the intervention. Analysis of Variance (ANOVA) to test the significant difference of the vocabulary learning when group as to mother's educational attainment, father's occupation and English achievement of both groups. All statistical computations were processed through the Statistical Package for the Social Sciences (SPSS) set at 5% level of significance.

#### Conclusion

In the light of the above findings, the researcher came up with the following conclusions:

Therefore, instructional games increased the English vocabulary learning of the students in this study. It was concluded that, the experimental increased their English vocabulary group compared to the control group after using instructional games as an intervention on this study. The use of instructional games increased the English vocabulary learning of the students of the same level whether they were classified by socioeconomic status, their sex. mother's educational attainment, and by their father's occupation. This shows that the use of instructional games in learning English vocabulary dramatically increased the learning of the students compared to the traditional method of teaching. Having instructional games in English class could have an enjoyable and effective learning.

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