

Virtual Differentiated Instructions: Effects on English Language Proficiency of Grade 9 Students

Mark Anthony C. Pasubillo¹, John Mark R. Asio^{2*}

¹Department of Education, Olongapo City, ²Gordon College, Olongapo City

Corresponding Author: John Mark R. Asio asio.johnmark@gmail.com

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ABSTRACT

The objective of this study is to determine the English language proficiency level and effects of virtual differentiated instruction to Grade 9 students from a Science high school in Olongapo City, Philippines. This study used a quasi-experimental (pretest-posttest) design to 143 purposively selected Grade 9 students. Then, the study used a paired t-test to analyze the data gathered. The study provided a substantial evidence that virtual differentiated instruction has significant effect on the English language proficiency of the students. Hence, the utilization of virtual differentiated instructions to improve the English proficiency of the respondents is effective and beneficial

INTRODUCTION

At the on-set of the COVID-19 pandemic, the traditional educational setup is disrupted and leads to all the stakeholders to immediately adapt in order to keep up with the drastic changes brought by the pandemic (Child Hope Philippines, 2021). One of the changes is the implementation of the distance learning wherein the Department Education provided various learning modalities as their way to be responsive to the emerging educational needs as brought by the pandemic. The modalities include the following: online digital modules, offline digital modules, TV + radio + printed modules, printed modules, TV + radio + digital + printed modules, and home schooling (Department of Education, 2020). In addition, Erarslan (2021) also mentioned that the sudden changes created challenges in teaching and learning English. Although a change in teaching methodology may provide a positive effect on enhancing students' English language skills such as writing and speaking (Arslan, 2020). Subjects like English, specifically, in language, Science, and distance learning adopted blended learning. As the Department of Education proposed to use of different modalities in order to address the learners' needs, the teachers conduct of professional development is also vital (Tupas & Linas-Laguda, 2020).

The United Nations Children's Fund (UNICEF, 2021) conducted a survey regarding the learning losses per country amidst the pandemic. One of the results revealed that low-income countries lag in terms of their use of even the most basic steps to ensure that students return to school. This finding is applicable to the current situation in the Philippines wherein the fast transition from traditional classroom to virtual classroom poses numerous concerns. To ensure a continuous and active engagement with the students, most schools use remote learning strategies and technologies suited to their given context; hence, the provided learning modalities by the Department of Education serve as the options where a school may choose some from these that they can cater for their students. However, despite a generous amount of remote learning modalities, strategies, and technologies, there is still some challenges on the part of the teachers (Caratiquit & Caratiquit, 2022). Learning remotely definitely has its own merits and demerits as Esteron (2021) described. It can be efficient, affordable, and flexible but sometimes learners develop negative implications like academic dishonesty or fraud.

Hence, this study employed eight (8) virtual differentiated instructions during synchronous classes of the target respondents who were the Grade 9 students in English at a Science High School located in Olongapo City, Philippines. The study aimed to determine if the virtual differentiated instructions can increase the interest of the learners in the virtual classroom especially their English proficiency level. Finally, at the end of this study, the proponents seek to determine the effects of the employed differentiated instructions to the English proficiency of the students.

The result of this study can contribute to the ever-growing literature of differentiated instruction as well as to English or Language teachers who are teaching in the different levels of education system. At the same time, the

students, the school, and the stakeholders can also benefit to some extent since the English language is an international language.

LITERATURE REVIEW

There are three major themes identified by Ledesma and Toledo (2022) with regards to the “new normal” of instruction. They include the virtual classroom environment, the teaching pedagogy, and the drive and motivation for both the teachers and the students. There is a need for the teachers to come up with various remote learning classroom activities which may equalize the abilities of their learners. In a related study by Wong and Moorhouse (2021), their study highlighted how language teachers tried to respond to the educational and linguistic needs of their students especially in the online environment. This idea is to address the student’s diverse needs of learning especially in a virtual environment (Maaliw, 2021). There are also available mobile applications for English language teaching and they emphasized vocabulary and language competencies (Rafiq et al., 2021).

Thus, differentiated instructions may be the feasible solution for it provides learning opportunities to students with various academic needs (Ford, 2011). It also has several benefits like convenience, safety, personal technological development, flexibility, accessibility, creativity and focus (Entegro, 2022). Suwastini et al., (2021) also mentioned that differentiated learning facilitates students’ differences allowing them equal chances to achieve learning goals through a variety of curriculum. In addition, a national survey also revealed that few language educators reported experiences with or positive perceptions towards teaching online (Moser et al., 2021).

The introduction of differentiated instructions in the virtual classroom may be effective in terms of creating more entertaining, engaging, effective, and collaborative practices compared to convention practice (Guvenc, 2021). Vargas-Parra, Rodriguez-Orejuela & Herrera-Mosquera (2018) stated that the usage of differentiated instruction approach in a virtual learning environment can constitute a valuable pedagogical alternative for the benefit of students. Based on the two studies, it is concluded that virtual differentiated instructions may improve the quality of instruction delivery amidst the current learning modalities. In addition, Zhou (2020) also indicated that differentiated instruction is vital in helping students to reach higher levels of proficiency. Now in order to verify its efficiency, a feedback provision is a significant part of learning system and framework since students and teachers do not see each other during the learning process, feedback becomes a compulsory tool (Hussin et al., 2022). Nevertheless, students still need to be essentially prepared and ready for such learning process. The promotion for desire for learning for younger students is important (Lee et al., 2017) as well as a well-organized training program for differentiated instructions for teachers (Owens-Cunningham, 2021).

METHODOLOGY

Research Design

The study employed a quasi-experimental research design wherein the proponents aimed to evaluate a particular intervention. In the case of the current study, the virtual differentiated instructions among Grade 9 students in their English subject. The proponents also employed a pretest-posttest design in order to achieve the main objective of the study. The pretest-posttest design involves measuring a dependent variable both before and after a treatment or intervention. While this design allows researchers to examine changes in the dependent variable over time, it does not control for other variables that may be affecting the outcome.

Respondents of the Study

Table 1 presents the distribution of gender groups of Grade 9 English students at a Science high school located in Olongapo City. It showed that there was a total of 143 respondents, where 67 or 47.0% are males and 76 or 53% are females. The table also presents those female respondents are higher than the male.

Table 1. Distribution of Gender Groups of Grade 9 Students

| Gender | Frequency | Percentage |
|---------------|------------------|-------------------|
| Male | 67 | 47 |
| Female | 76 | 53 |
| TOTAL | 143 | 100 |

The researcher utilized purposive sampling technique. The purpose of this sampling technique is focused on particular characteristics of a population that are of interest. The technique is often used due to the fact that the processes used to choose units for insertion in a sample are more relax, faster and cheaper when associated with probability sampling. This is especially the case for convenience sampling.

This study utilized an assessment form identifying the multiple intelligences of the learners per class. Then, in order to check if there will be changes in the performance of the respondents, the researcher prepares a pre-test and post- test questionnaires which content are subject and verb agreement and tenses of the verb. The questionnaires will also be used to measure the English proficiency level of the students.

Instruments

This study utilizes an assessment form in order to check if there will be changes in the performance of the respondents, the researcher prepares a pre-test and post- test questionnaires wherein the contents were subject and verb agreement and tenses of the verb. The questionnaires also used to measure the English proficiency level of the student respondents. For the validity of the questionnaire, the proponents submitted them to a panel of evaluators which comprised of a Master Teacher, a Head Teacher in the English Department, and an Education Program Supervisor in English. The revision of the questionnaires was on the basis of the comments and suggestions of the evaluators. Prior to the

actual data gathering, the questionnaire also underwent pilot-testing in order to verify any misunderstood or vague provisions of the questionnaire. Finally, for the reliability of the questionnaire, the overall Cronbach Alpha result was .862. The result is very reliable and acceptable within the standards.

Data Collection Procedure

The researchers first sent a letter to conduct the study to the school principal of the involved school. Then the proponents explained the purpose and process of the experiment. Then, the proponents provided a brief overview of the course work or plan of activities in order for the students to prepare ahead. After the retrieval of the form for a day, there was a 20-point quiz for the initial assessment for the subject verb agreement and tenses of the verb. Then, after 3-4 days of discussion for two weeks, the proponents again administered the same test to analyze if there is an improvement in their proficiency level using differentiated instructions.

Data Analysis

The study used a paired-t test in order to determine if there is a significant improvement in the proficiency level of the student-respondents using virtual differentiated instruction. The proponents first collected, tabulated, the data and then analyzed, interpreted using the Statistical Package for the Social Sciences (SPSS) 20 with the guidance of statistics expert.

The proponents also employed a 20-point Likert scale to determine the proficiency level of the respondents as shown below:

- 18.2-20 = Proficient
- 16.3-18.1 = Advancing Proficient
- 14.4-16.2 = Developing Proficient
- 12.5-14.3 = Advanced Average
- 10.6-12.4 = Intermediate
- 8.7-10.5 = Developed
- 6.8-8.6 = Developing
- 4.9-6.7 = Advanced Beginning
- 3.0-4.8 = Beginning
- 1.0-2.9 = Non-Proficient

Ethical Considerations

The researcher should make sure that NO student will be forced to do an activity if he/she is not comfortable of participating in a group. He or she will be given a different task in order for her to cope up with the lessons. Second, NO collections will be made for the instruments to be used. Third, English classes are only the classes to be used for the purpose of research as this study will be incorporated during the used of prescribed competency for the day or week based from the curriculum guide. Lastly, materials (instruments) and other expenses must be shouldered by the researcher alone or maybe upon the discretion of the department of education (Schools Division Office of Olongapo City) if in accordance to the constitution may deem necessary to fund this research is just or fair.

RESULTS AND DISCUSSION

The following tables below include the result of the data gathering for the study. In order to attain the main objective of the study, the proponents provided the following information below for a clearer discussion and explanation of the process.

Table 2 shows that the 143 respondents are from the four (4) different sections in Grade 9 curriculum; namely, Section A, Section E, Section G, and Section N. Based on the table, there are 38 or 27% who are from Section A, 35 or 24% from Section E, 36 or 25% from Section G, and 34 or 24% from Section N. The table also showed that Section A has the most number of respondents whilst the least is from Section N.

Table 2. Distribution of Grade 9 Students Per Section

| Section | Frequency | Percentage |
|----------------|------------------|-------------------|
| Section A | 38 | 27 |
| Section E | 35 | 24 |
| Section G | 36 | 25 |
| Section N | 34 | 24 |
| TOTAL | 143 | 100 |

Table 3 presents the computed mean results from the pre-test and posttest scores of all the 143 respondents and its' aligned interpretation based on the given 20-point Likert Scale produced and formulated by the proponents. As presented in the table, in terms of the pre-test, the respondents produced a mean score of 12.84, in general, this score corresponds to an "advanced average" level in English proficiency before the proposed intervention occurred.

On the other hand, after the intervention and utilization of the virtual differentiated instruction for two weeks, the students generated a mean score 16.85 which translates to an "advancing proficient" level in English proficiency. Based on the gathered scores, one can determine that there is a substantial increase in the score after the proposed intervention.

From a previous study, by Sapad and Caballes (2019), they showed that their student-respondents scored "below average" in reading/ writing test in their pretest, and substantially improved to "above average" in their posttest. However, another past study by Quijano and Legaspi (2020) revealed that the English proficiency of their respondents were "low" which contradicts the current result of the study which was even better or higher.

Table 3. Proficiency Level of the Grade 9 students

| Scores | Mean Score | SD | Interpretation |
|---------------|-------------------|-----------|-----------------------|
| Pretest | 12.84 | 1.864 | Advanced Average |
| Posttest | 16.85 | 2.435 | Advancing Proficient |

Table 4 shows the results of the test of difference or paired T-Test used by the researcher to analyze if the differentiated instructions have any effect towards the English proficiency of the Grade 9 students. Results revealed that the scores

after the intervention ($M = 16.9, s = 2.43$) is higher than the scores before the intervention ($M = 12.8, s = 1.86$). The table also shows that the pre-test had a mean of 12.8 whereas the post-test had a mean of 16.9. Using these data, it is observed that the post-test had significant difference for it is larger than the pre-test. In addition, the computed p-value that is 0.001 is lower than the level of significance that is 0.05; hence, these data reveal that there is a significance difference between the conducted pre-test and post-test. This result coincides with the investigation of Sanchez et al. (2020) wherein they found significant difference between pretest and posttest scores between two groups of students which used differentiated teaching strategies. Ocampo (2018) also revealed a similar result from his study regarding reading comprehension level with the use of differentiated instruction approach. Differentiated instruction also outperformed the traditional instruction from a foreign-based study done by Yavuz in 2020.

Table 4. Paired T-Test Result of the Pre-Test and Post-Test Scores of the Respondents

| | Score | N | SD | t | df | Sig |
|----------|-------|-----|-------|----------|-----|------|
| Pretest | 12.84 | 143 | 1.864 | -18.558* | 142 | .000 |
| Posttest | 16.85 | 143 | 2.435 | | | |

Note: * $p < .05$

CONCLUSIONS and RECOMMENDATIONS

Based on the findings, the proponents made the following conclusions:

1. There are 143 respondents from the four (4) sections in the Grade 9 curriculum; where the female respondents are higher at 53% whilst the male are at 47%. Moreover, in their pre-test proficiency level, the respondents were "advanced average" in English language. On the other hand, after the virtual differentiated instructions' implementation, the posttest proficiency level of the respondents arose to "advancing proficient." The sudden increase and change of level of English language proficiency was due to the proposed intervention implored by the study.
2. The paired t-test result also provided a substantial proof that there was a change in the level of English language proficiency among the respondents. There was a significant difference between the pretest and posttest results for the level of English language proficiency among the respondents.
3. From the observations made by the researcher and from the data gathered, the effects of employing virtual differentiated instructions are evident on the improving grammar skills of the respondents wherein the students are being more able to construct grammatically correct sentences by applying appropriately the subject-verb agreement rules and verb tense-aspects combinations. Thus, the virtual differentiated instructions do not only promote increased collaboration amongst the respondents, but also beneficial in teaching grammar in Grade 9.

4. The virtual differentiated instructions may be more effective when there will be a combination of two multiple intelligences upon conducting group works as it can promote more diversity in collaboration.

Based on the conclusions, the researcher recommends the following:

1. The study recommends to the secondary English teachers consider having longer time to integrate the virtual differentiated instructions by merging more multiple intelligence (MI) groups.
2. The secondary English teachers as well as pre-service teachers may consider using virtual differentiated instructions in teaching other language skills, like reading, to increase the collaboration amongst the students.
3. The curricular implementors may consider using virtual differentiated instructions to promote personalization in learning of the students, especially those in the virtual or blended leaning modalities.
4. The future researchers may consider using correlational research as their research design to investigate the relationship of using virtual differentiated instructions and the English proficiency of the target respondents. Using this, the future researchers may strengthen more the conclusions made on this study that state the effectivity of utilizing virtual differentiated instructions in improving the English proficiency of the respondents.

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