"Gearing up Science Instructional Materials with Parental Learning Support System (GSIM PLUS); Its Implication to the Performance and Perception of Junior High School Students"

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ABSTRACT

Blended learning has been the prescribed learning modality of the Department of Education for the first quarter of the school year 2022-2023. As stated in the Basic Education Learning Continuity Plan of Southville 5A Integrated National High School, blended learning will happen through Modular Distance Learning and Face-to-face classes in a one-week scheme. Some of the problems encountered during the school year 2021-2022 in modular distance learning include the low conceptual understanding of learners, incomplete outputs, delayed feedback from teachers on students' work, and late submission of outputs. The main factor fell on the absence of teachers that will guide the learners. In this study, the researchers addressed this factor by tapping the parents as para teachers at home. The researchers improved the student's perception and performance in science by crafting learning tasks with parental learning support. They designed worksheets that involve parents as raters, collaborators, and sources of information. A W value of 0 has proved a significant difference between the pre-test and post-test mean of learners in the use of the GSIM PLUS worksheets. A Cohen's d value of 0.62, interpreted as a "large effect size" supported this finding. The quality of the performance tasks of grade eight learners in terms of the correctness of content,completeness, creativeness, and timeliness are 4.0,4.8, 4.87, and 4.5,respectively. While the mean of the performance task of grade 10 are 4.22,4.23,4.27, and 4.75, respectively. A positive perception on the use of GSIM PLUS worksheets was achieved. It can be seen from the change of perception from moderate to high after the GSIM PLUS worksheets were utilized. Deeper understanding of the concepts occurred because of the planned and organized teaching materials designed with parental support. While the quality of the performance tasks of learners can be attributed to the learning support they received at home. The positive perception of learners is an indication that they appreciate the GSIM PLUS.

Keywords: *Parental Support, Science Performance Tasks, Para teachers*

INTRODUCTION

Southville 5-A Integrated National High School is committed to fulfilling its mandate to provide access, relevant, inclusive, culture-sensitive, and quality education to its learners. Despite the pandemic, the school continues to serve the community by providing education in different modalities that may be suited to each learner. The Department of Education has released DO 034, s. 2022 which prescribed the options of 5 days in-person classes, blended learning modality, and full distance learning until October 31, 2022. In adherence to the above-mentioned DepEd Order, the school applied the Blended Learning Modality for the first quarter of school year 2022-2023 which is a combination of a face-to-face learning modality and modular distance learning modality.

Observations from the previous school year 2021-2022 showed that most of the students under the Modular Distance Learning modality have difficulties in accomplishing their performance tasks at home. From the survey conducted by the school among Students' At Risk of Failing(SARF) in Modular Distance Learning, the following information was revealed: 1.) Students' failure to finish a task is mainly due to lack of knowledge on what to do and how to answer the activity. 2.) No immediate feedback to learners' outputs by the teacher resulting in intentional submission of unfinished works. 3.) Performance tasks do not require creativity among the students and do not require collaboration thus making the task boring and uninteresting. 4.) Submission of the performance task on time was not a priority during the pandemic.

The above-mentioned findings led the researchers to look for a solution to address the students' problem in accomplishing their performance tasks at home. The absence of the teacher as facilitator of learning has been viewed by the researchers as the primary source of the problem. Thus, providing a replacement for the role of the teacher at home through parents as "para teachers" fixed the problem.

Parents are active education partners and stakeholders now more than ever, because learning takes place at home in this time of the pandemic. Parents can become a source of comfort in easing pain and worry as well as in alleviating the anxiety of learners through conversations(Bhamani et.al., 2020).

Education by all means must be served to all learners amidst the threat of COVID-19. This must nurture the mind of the learners holistically. Any threat that may hamper the attainment of this objective must be addressed systematically by the school. Considering the role of the parents in the teaching and learning process may yield to a positive outcome for the learners. This study was conducted to prove that through the parent learning support system, education will become easy and enjoyable for learners.

Parental involvement is the active participation of parents in the educational experience of their children. Sad (2012) explained that parents' support for their children's personality and socio-cultural development, volunteering, and communication with children were found to be significant predictors of pupils' academic achievement. Lara and Saracostti (2019) showed that there are differences in the academic achievement between the parental involvement profiles , indicating children whose parents have low

involvement have lower academic achievement.

The researchers also anchored this GSIM PLUS with the Project MAHOUSESCIE (Maximizing Assistance and Household Opportunities in Uplifting Students' Enthusiasm in Science) of DepEd Biñan City. Identifying the role of the parents in the attainment of educational outcomes improves the disposition of the parents and makes them effective assets of learning. The result of this study will improve the teaching and learning procedures for the blended learning modality.

METHODOLOGY

This action research utilized Descriptive Analysis in interpreting the data. The measure of frequency, central tendency and the use of a 5 point Likert scale were utilized to answer the research questions. Both qualitative and quantitative data were present in this study.

The students from grade eight and grade ten were the focus of this study. Forty students were selected through purposive sampling. This sampling procedure ensured that the participants of the study were a.) Students with a Fairly Satisfactory (75-79) to Satisfactory (80-84) rating from the previous school year; b.) students with poor record of performance tasks in science ; and c.) students with parents/ guardians at home who are willing to cooperate for this study.

The following instruments were used in this study:

- GSIM PLUS worksheets/ activity sheets for the 1st Quarter in Science for grade eight and grade 10.
- Rubric to assess the level of Performance in Science of the learners.
- Survey questionnaire to identify students' perception towards the use of Worksheet/ Activity Sheet in Science.

GSIM PLUS Worksheets/ Activity Sheets were crafted by the researchers, as well as the rubric in assessing the performance tasks. These were validated by a Master Teacher in Science. A survey questionnaire to identify students' perception was crafted and validated. It was administered before the GSIM PLUS Worksheets were used by the participants.After the GSIM PLUS Worksheets for the first quarter were utilized, the rubric in assessing the performance tasks was used in grading the performance of the students in science. The same survey questionnaire to assess the student's perception in science was administered after using the GSIM PLUS worksheets.

The Mean of the scores of the GSIM PLUS Worksheets were computed. The weighted mean per criterion was interpreted using the rubric which determines the quality of the students' outputs. In determining the students' perception in the utilization of the GSIM PLUS Worksheets, the mean of each indicator computed from the 5 point Likert scale was interpreted as 4.20-5.00, Strongly agree with a very high perception;3.40-4.19, Agree with a high perception;2.60-3.39, Moderately agree with a moderate perception; and 1.80-2.59, Disagree with low perception.

Wilcoxon Signed Rank Test was used to determine the difference of the pre-test scores and post test scores of the participants. The effect size was determined using Cohen's d interpretation (1988) such as 0.1 = small effect, 0.3= medium effect, 0.5= large effect. The proficiency level or academic performance at which the students were performing was based on the following criteria (DepEd Order No. 8, s 2015). A grade of 90% and above means Outstanding; 85-89% means Very satisfactory; 80-84% means Satisfactory; 75-79% means Fairly satisfactory; and 74% down means Did not meet expectation.

RESULTS AND DISCUSSION

The W-value for both Grade 8 and Grade 10 Pre-test and Post test results is zero which means that there is a significant difference between the pre-test and post test results. Cohen's d of 0.62 signifies a large effect for both grade levels. These data proved that the students learned the concept of their subject much better when the GSIM PLUS Worksheets were utilized.

An overall mean of 4.0 under correctness of content explains that the outputs of learners contain most of the needed correct information. The mean of 4.8 for completeness indicates that the students submitted outputs which were almost complete, with most of the essential parts of the task present. The mean of 4.87 for creativeness indicates that the outputs were artistically crafted. All outputs were submitted ahead of the deadline as indicated by the computed mean of 5.

The quality of the performance tasks of grade 10 learners can be described using the computed means. The mean of 4.22 for the correctness of content indicates that the submitted outputs contain most of the needed correct information. The 4.23 mean for completeness indicates that the outputs submitted were almost complete with most of the essential parts present. The 4.27 mean of creativeness indicates that the outputs were artistically crafted which added quality to the outputs. The 4.75 mean for timeliness indicates that the outputs were submitted on the set deadline of submission. On the perception of learners before and after the GSIM PLUS Worksheets were utilized, the following were observed. The three indicators such as the level of difficulty, the sufficiency of time, and the learning support were perceived by grade eight students under moderate level before the GSIM PLUS Worksheets were used. This level of perception changed to high after the worksheets were utilized by the students. The grade ten learners on the other hand, perceived level of difficulty and sufficiency of time under moderate level while learning support was regarded as low before the GSIM PLUS Worksheets were used. These perceptions changed into high level after the said worksheets were utilized.

From the comparison of the previous and the current grade distribution among the students it can be seen that 1 student did not meet expectations, 17 students performed under the fairly satisfactory rating, and 22 students performed under satisfactory level at the beginning of the school year 2022-2023. After the conduct of this study, the distribution of the proficiency level of the students improved. There were 7 learners who remained under the Fairly satisfactory rating and 13 learners at the satisfactory level. There were 16 learners who performed under very

satisfactory level and 3 students who reached the Outstanding level.

Summary

The results presented on this paper served as the basis in answering the research questions.

1. What was the pretest and post-test performance of the learners before and after the utilization of the GSIM PLUS Performance Tasks?

The pretest and post test performance of the learners revealed a high difference. A large effect size supported the significant difference established between the pretest and post test performance of learners.

2. What was the quality of the Performance Tasks of students in terms of content, completeness, creativeness and timeliness when using GSIM PLUS worksheets?

The performance tasks of learners were found to contain most of the necessary correct information. These were submitted with the necessary parts. The performance tasks were constructed artistically by the learners, contributing to the quality of their work. These performance tasks were submitted by learners on the set deadline or earlier.

3. What was the perception of the students in answering Performance Tasks in Science in the Modular Distance Learning in terms of the following: a. Level of Difficulty b. Sufficiency of Time c. Learning Support- before and after the GSIM PLUS has been utilized.

Students' perception about the performance tasks was moderate before the conduct of the study in terms of its level of difficulty, the sufficiency of time and learning support. Though the grade 10 learners have a low perception for the learning support they received. These perceptions among learners for the different indicators improved to High after the GSIM PLUS worksheets were utilized in their subject.

4. What were the implications of GSIM PLUS among students' perception and performance in Science?

The high perception of students about the use of the GSIM PLUS Worksheets significantly affected their performance in Science. These can be seen on their post test results and on their proficiency level. Most of the participants of this study attained a higher proficiency level as compared to their previous proficiency level in science.

Conclusions

Based on the findings of the study, the following were concluded: First, the significant difference between the pre-test and post test mean scores was the result of the GSIM PLUS worksheets used by learners in the Modular Distance Learning. Deeper understanding of the concepts occurred because of the planned and organized teaching materials designed with parental support. Second, the quality of the performance tasks of learners can be attributed to the learning support they received at home. Parents who pay attention to the task to be accomplished by their learners can assist and guide their learners to produce best outputs. Third, the participants had shown high perception towards the use of GSIM PLUS worksheets in terms of the level of difficulty, the sufficiency of time, and the learning support which were considered as essential components

to be included in designing teaching materials.

Recommendations

Despite the positive result gathered from this study, the researchers recommend that a careful evaluation of the learners family background must be conducted before employing this teaching innovation. This will ensure that learners will be assisted by their parents/ guardians for the performance tasks that will be crafted for them. It is also recommended that a comparative study be conducted among learners at different levels and age range on the effectiveness of parental support on students' education. Although an introduction to this study might be seen from this research where it has shown that the effectiveness of parental support occurred on both levels- grade eight and grade ten. It is also recommended that this study be conducted at the full face-to-face learning environment to know if it will be as effective as this study conducted for modular distance learning.

Reflection

The COVID-19 pandemic brought challenges to the educational system but through careful planning and designing of teaching innovations, learning will still be possible. This study served as a proof that learning will be more effective if there is a collaborative effort between the teacher and the parent. Parents as the first mentor of learners have a good rapport with them which makes them best candidates for being the para teachers.

Impact of the Study

This study innovates the way teachers design performance tasks of learners. Adding parental support to the teaching materials will be an effective way to engage learners to work with their parents in accomplishing school tasks. Aside from a high possibility of accomplishment, designing activities for students and their parents is a meaningful thing to do. As our educational system focuses not only on learning concepts but also in the development of values among our learners.

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ACKNOWLEDGEMENTS

The researchers would like to extend their heartfelt gratitude to the people who contributed to the completion of this action research.

Special thanks to the School Principal Mrs. Mildred D. Diña for her continuous support and encouragement in the conduct of this action research.

To Mr. Jerico F. Balmes, Master Teacher II and Teacher-In-Charge of BCSHS Timbao Campus, and Mr. Ronaldo P. Bago, Education Program Supervisor in Science for validating the materials and for sharing their expertise.

To Mrs. Rica Grace Jimenez, JHS Research Coordinator for her guidance and valuable insights in the conduct of this action research.