Eastern Visayas Basic Education Research and Innovation Journal
EVBERIJ © 2023

OFFICE OF THE REGIONAL DIRECTOR

MESSAGE

A blessed new year, everyone!

It is both an honor and a pleasure to extend my heartfelt gratitude to every one of you who has contributed to the success of Eastern Visayas Basic Education Research and Innovation Journal.

Our region has always been committed to fostering a culture of research and innovation in education, and your dedication to advancing knowledge and best practices has played a crucial role in achieving this goal. This research journal stands as a testament to the collective wisdom and passion for continuous improvement that characterizes our educational community.

I am truly impressed by the diversity of topics covered, the depth of analysis, and the innovative solutions proposed in the articles and research papers included in this publication. Your hard work and commitment to scholarly inquiry not only contribute to the academic community but also serve as an inspiration for our colleagues across the region.

I would like to extend my warmest congratulations to all the authors, reviewers, editors, and everyone involved in the meticulous process of creating this invaluable resource. Your efforts have undoubtedly elevated the standards of research and academic discourse in our region.

As we celebrate this achievement, let us also use this opportunity to encourage one another to continue pushing the boundaries of knowledge and excellence in education. Your dedication to research not only enhances the quality of education in our region but also contributes to the broader national and global dialogue on educational best practices.

Thank you once again for your unwavering commitment to the advancement of education through research. I look forward to seeing the continued impact of your work in shaping the future of education in DepEd Region VIII.

Having said this, I would like to congratulate all our research enthusiast for bravely engaging themselves in this significant activity to learn new things about research and probably after this learning experience, you will all have a broader perspective of what educational research is.

EVELYN R. FETALVERO CESO IV

Regional Director

FOREWORD *by* **DR. RITA R. DIMAKILING** *Chief, PPRD*

As we emerge from the unprecedented challenges posed by the COVID-19 pandemic, education has been fundamentally transformed. The past year has forced us to rethink the way we teach, learn, and manage our education systems. In this annual research and innovation journal, we explore the theme of "Research beyond the pandemic: From Learning Recovery to Education Transformation."

Our journal features a diverse range of articles, each contributing to our understanding of how education can be transformed in the wake of the pandemic. The Action Researches on Teaching and Learning showcase practical approaches to addressing the learning losses that have occurred during school closures. These offer insights into how teachers can adapt their teaching methods to meet the needs of learners who have fallen behind, and how they can use technology to support learning in a remote or hybrid environment. The Basic Researches on Teaching and Learning delve into the underlying principles that underpin effective teaching and learning and explore topics such as pedagogy and curriculum implementation, providing insights into how we can improve educational outcomes for all learners. The Researches on Governance examine the policies that govern our basic education system that can provide insights into how we can ensure that our education systems are equitable. The Human Resource Development focus on the development of teachers and other education professionals. Topics such as teacher training, professional development, and leadership development are presented, providing insights into how we can ensure that our teachers have the skills and knowledge they need to support student learning. The Child Protection researches explore issues related to child safety and wellbeing in educational setting such as bullying prevention, child abuse prevention, and student mental health, providing insights into how we can ensure that our students are safe and supported in their learning environments. The Innovations on Curriculum and Instruction explore approaches to instructional delivery and examine topics such as project-based learning, interdisciplinary learning, providing insights into how we can prepare our students for success in a rapidly changing world. Finally, the Innovations in Governance and Operations examine topics such as digital transformation, data analytics, and partnerships with industry and community organizations, providing insights into how we can ensure that our education systems are efficient.

We hope that these articles will inspire you to think creatively about the future of education and to explore new approaches to teaching, learning, governance, human resource development, child protection, curriculum design, and operations management. As we continue to navigate the challenges posed by the pandemic and beyond, education will continue to evolve and transform in response to changing circumstances. We hope that this journal will provide a platform for sharing ideas and insights into how we can ensure that our education system is responsive to the needs of all learners. Thank you for your continued support of our journal's mission to promote research-based innovation in education. We look forward to sharing these insights with you!

TABLE OF CONTENTS

INTRODUCTION

Dear esteemed readers,

We are delighted to present the latest edition of our annual research journal, a platform for showcasing select research in the areas of Teaching and Learning, Governance, Human Resource Development, and Child Protection and innovations on Curriculum and Instruction, Governance, and Operations. This journal is a source of knowledge for teachers, researchers, and other personnel, and we are proud to continue this tradition.

In the 2023 edition, we have curated a selection of articles that explore a range of topics, from the latest developments in post-pandemic teaching and learning. The researchers and authors have drawn on a variety of disciplines and perspectives to provide fresh and thought-provoking viewpoints on the research problems that were explored.

We are committed to promoting interdisciplinary dialogue and collaboration, recognizing that many of today's most pressing challenges require multifaceted solutions. To this end, we have included articles that bridge different fields. We believe that such cross-disciplinary perspectives in research will enrich our understanding of the world and help us to develop more effective interventions for the problems we face at the workplace, schools, and community learning centers.

As always, we have also prioritized rigorous research methods and high-quality writing standards in our selection process. We believe that these criteria are essential for ensuring the quality and impact of the articles presented in our journal.

We hope that you will find this year's edition both informative and engaging and that it will inspire you to continue exploring the frontiers of knowledge in your work. As always, we welcome feedback and suggestions for future editions, and we look forward to continuing our mission of advancing research and promoting innovation in all its forms in DepEd Eastern   Visayas.

RESEARCH
ARTICLES

Compendium of Exemplary Basic Education Research

IMPROVING LEARNERS PERFORMANCE THROUGH THE USE OF PROCESS ORIENTED GUIDE INQUIRY LEARNING (POGIL) ACTIVITY SHEET: A GAS LAWS EXAMPLE

Iohannes Paoli B. Baldomar, Master Teacher II
Taft National High School, Schools Division of Eastern Samar
iohannespaoli.baldomar@deped.gov.ph

Background and Rationale

The academic performance of Filipino learners in science has been inadequate. This is evidenced by various assessments conducted both locally and internationally. For example, the National Achievement Test (NAT) for the school year 2017-2018 showed that Grade 10 learners had low ratings in core learning areas, particularly in problem solving, information literacy, and critical thinking skills. Science had the lowest performance, with a mean percentage score of 44.59, which indicates a "low mastery" level of performance (Albano, 2019). Similarly, the Southeast Asia Primary Learning Metrics (SEA-PLM) showed that Philippine learners' achievement in science and mathematics remains below the international average (Masigan, 2021). This suggests that there is a need for educational interventions to improve students' performance in these subjects. The TIMSS 2019 results showed that Filipino learners struggle to apply their knowledge to real-world contexts. This reflects a gap in their conceptual understanding and problem-solving skills (OECD, 2019). The PISA framework, which evaluates students' proficiency in scientific literacy, highlights the importance of inquiry-based learning methods that engage students actively in the learning process (OECD, 2019). These findings underscore the importance of adopting effective instructional strategies to address identified challenges and promote learners' conceptual understanding.

One potential instructional method that holds promise for improving learners' performance is Process Oriented Guided Inquiry Learning (POGIL). Process Oriented Guided Inquiry Learning (POGIL) is an active learning strategy that promotes collaborative and inquiry-based learning experiences, where students work in small groups to solve problems, analyze data, and construct knowledge. (Rodriguez, Lazenby, et al., 2020; Wijaya & Handayani, 2021) The POGIL model represents a student-centered approach to learning, emphasizing active participation and group cooperation within the classroom setting to foster a deeper understanding of concepts. (Fitriani, Irwandi, & Murniati, 2017) This method emphasizes the importance of allowing students ample opportunities to analyze questions, draw conclusions, develop concepts, solve open-ended problems, and evaluate and reflect on their discoveries. By implementing the POGIL learning approach, students are empowered to take charge of their own learning within the group setting. (Saputro, Rohaeti, & Prodjosantoso, 2018) The choice to focus on gas laws is motivated by the complexity and abstract nature of this topic, which often poses difficulties for learners. The traditional lecture-based approach in often leads to passive learning and limited comprehension, resulting in poor academic performance (Villagonzalo, 2014). By adopting POGIL activity sheets in teaching gas laws, students are actively involved in the learning process, allowing them to explore the fundamental principles, relationships, and applications of gas laws through hands-on activities. POGIL activity sheets are a structured framework for collaborative learning that encourages students to work in small groups to solve guided inquiry questions. (Spencer & Silverman, 2001; Uche & Eze, 2018) By engaging in the inquiry process, students actively construct their knowledge, make connections, and develop a deeper understanding of the subject matter. The collaborative nature of POGIL fosters communication and teamwork, allowing students to learn from each other's perspectives and build their problem-solving skills. POGIL activity sheets are designed to promote critical thinking and higher-order cognitive skills. These activities present students with authentic, real-life scenarios and open-ended questions that require analysis, synthesis, and evaluation. By challenging students to think critically, the POGIL activity sheets help them develop a deeper understanding of the underlying principles of gas laws and enhance their ability to apply these concepts in different contexts. The use of POGIL activity sheets in teaching gas laws aligns with current educational trends that emphasize student-centered, active learning approaches. It addresses the need for instructional strategies that promote conceptual understanding, scientific inquiry, and the development of 21st-century skills. By incorporating POGIL activity sheets into the gas laws curriculum, educators can create an engaging learning environment that supports student learning and facilitates the development of key competencies.

Although many studies have investigated the relationship between POGIL and academic performance, the findings have been inconsistent. For example, Walker et al. (2017) found that POGIL had a small effect on student achievement in college chemistry, but this effect was not considered

educationally meaningful. This inconsistency highlights the need for further research to better understand the true effects of POGIL on academic performance. The intervention implemented in this study centers on the development and utilization of a POGIL activity sheet specifically designed for gas laws. The activity sheet acts as a roadmap, guiding students through a structured process of inquiry and discovery. It prompts learners to think critically, analyze data, draw connections, and construct their own knowledge. Through this intervention, students are empowered to take ownership of their learning journey, fostering a sense of autonomy and self-directedness.

The findings of this study will contribute to the existing body of research on instructional strategies in science education, particularly in the context of teaching gas laws. By investigating the effectiveness of Process Oriented Guided Inquiry Learning (POGIL) activity sheets, this study aims to provide insights into the potential benefits of this approach in improving learners' performance and understanding of complex scientific concepts. The results may inform educators and curriculum developers in designing instructional materials and strategies that promote active learning, critical thinking, and problem-solving skills. The purpose of this study is to investigate the impact of using Process Oriented Guided Inquiry Learning (POGIL) activity sheets on learners' performance, specifically in the context of understanding gas laws. Objectives of the Study:

This study investigated the effectiveness of POGIL-AS in teaching gas laws to grade 10 learners. Specifically, this study sought to answer the following:

1. What is the pre-test percentage scores of the control and experimental groups?
2. Is there a significant difference between the pretest percentage scores of the two groups?
3. What is the post-test percentage scores of the four groups?
4. Is there a significant difference between the pre-test and post-test percentage scores of the control and experimental groups?
5. Is there a significant difference among the post-test percentage scores of the four groups?
6. What is the perceptions of respondents towards the use of Process Oriented Guided Inquiry Learning (POGIL) Activity Sheets in teaching gas laws?

Hypotheses of the Study

The following hypotheses stated analyzed at 0.05 probability significant level were used to answer questions 2, 4 and 5 of this study.

Ho1: There is no significant difference between the pretest percentage scores of the two groups.

Ho2: There is no significant difference between the pretest and posttest percentage scores of the control group and the experimental group.

Ho3: There is no significant difference among the posttest percentage scores of the four groups.

Theoretical Support

This study is based on the constructivism which posits that learners construct their own knowledge through inquiry-based learning. This means that learners actively engage in the learning process by posing questions, gathering evidence, and constructing meaning. The constructivist theory of learning holds the view that learners actively construct their own knowledge and understanding through their experiences. According to Vygotsky (1978), learners do not simply absorb information passively, rather they actively engage with new information and construct their own understanding of it based on their prior knowledge and experiences. This process of active construction is considered to be essential for meaningful learning. Inquiry learning is a teaching method that emphasizes developing learners' thinking skills by giving them tasks that require them to ask questions, gather evidence, and draw conclusions. Hanson (2006) stated that inquiry learning is a process-oriented approach to teaching that encourages students to think critically and solve problems. John Dewey, a well-known philosopher of education, argued that science education should be taught as a process and way of thinking, rather than as a subject with facts to be memorized. He believed that this would help students develop into better scientific thinkers. Dewey's views have been supported by the National Research Council (2000), which found that "science education should focus on helping students understand the nature of scientific inquiry and the process of scientific discovery." The NRC also found that "students should be given opportunities to engage in hands-on, inquiry-based learning activities

The POGIL activity sheet used in this study was designed to promote constructivist learning. The activity sheet provides learners with a set of problems to solve that require them to use their prior knowledge of the gas laws. As learners work through the problems, they are forced to actively construct their own understanding of the gas laws. This process of active construction leads to deeper and more meaningful learning.

A growing body of research supports the effectiveness of POGIL in promoting student learning. For example, Roller, Zori, and Lyons (2018) found that POGIL was effective in improving student learning in nursing courses. The study found that those who participated in POGIL activities had significantly higher scores on exams than learners who did not participate in POGIL activities.

Significance of the Study

The significance of this study is that it will provide insights into the effects of Process Oriented Guided Inquiry Learning (POGIL)-Activity Sheets (AS) on the performance of science learners. The findings of this study will be beneficial to science teachers, learners, parents, school management, and future researchers. Science teachers will benefit from this study by learning about the factors that affect learners' performance in science. This knowledge will help them identify and address any areas where learners are struggling. Additionally, the study will provide teachers with information about how to use POGIL-AS to improve learners' performance. Learners will benefit from this study by learning about the benefits of using POGIL-AS. This study will show learners how POGIL-AS can help them to improve their understanding of science concepts and to develop their problem-solving skills. Additionally, the study will provide learners with strategies for using POGIL-AS effectively. Parents will benefit from this study by learning about the importance of parental involvement in supporting their children science education. The study will show parents how they can help their children to succeed in science by providing them with opportunities to learn at home and by encouraging them to ask questions. School management will benefit from this study by learning about the effectiveness of POGIL-AS as a teaching methodology. This study will provide school leaders with information about how to implement POGIL-AS in their schools and how to measure its effectiveness. Future researchers will benefit from this study by learning about the research methodology used in this study. This study will provide future researchers with a model for conducting research on the effects of POGIL-AS on learners' performance.

Intervention and Strategy

The Process Oriented Guided Inquiry Learning (POGIL) used in this study was developed by the researcher who was interested in developing a more active and engaging intervention for struggling learners. The researcher began by identifying the key concepts that learners needed to learn about the gas laws. He then designed a series of worksheets to guide students through the learning process. The activity sheets included an introduction to the gas laws, pre-lab questions, an activity section, post-lab questions, and an assessment section. Introduction: This section provides an overview of the gas laws and the concepts explored in the activity sheet. Pre-lab: This section includes questions that students should answer before they begin the activity sheet. These questions help students think about the concepts that they will be learning and activate their prior knowledge. Activity: This section is the heart of the activity sheet. It includes a series of guided questions that help students explore the gas laws through hands-on experimentation. Post-lab: This section includes questions that students should answer after they have completed the activity sheet. These questions help students to consolidate their learning and to apply the concepts that they have learned to new situations. Assessment: This section includes a various of assessment tools that can be used to assess students' learning. These tools can be used to formatively assess students' understanding as they work through the activity sheet, or they can be used as summative assessment to students' learning at the end of the activity. The researcher developed 4 Process-Oriented Guided Inquiry Learning (POGIL) activity sheets that covered the concepts of gas laws based on DepEd MELCs. Orientation with the participants was covered during the Individual Cooperative Learning (ICL) sessions. Participants were determined based on learners' performance from the previous quarter. Therefore, a list of 40 low achievers' learners was prepared. During an Individual Cooperative Learning (ICL) session, the selected participants were oriented about the purpose of the study. To ensure ethical practices and compliance with research standards, the researchers actively addressed any queries or concerns the learners had during this orientation session. The researcher also recognized the importance of parental involvement and sent informed consent forms to the parents of the selected participants. Informed consent from parents was obtained, clearly outlining the nature of the study, the potential benefits for their children's learning, and any possible risks or inconveniences. The consent forms provided an option for parents or guardian to allow or decline their child's participation in the study. The researcher ensured that all parents were given ample time and information to make an informed decision, promoting transparency and ethical conduct throughout the entire study. The research study followed a structured procedure to assess the effectiveness of the Process Oriented Guided Inquiry Learning (POGIL) approach on students' learning outcomes. Before commencing the POGIL sessions, participants in CG1 (Control Group 1) and EG1 (Experimental Group 1) underwent a pretest to establish their baseline knowledge. Subsequently, POGIL sessions were conducted with both groups, ensuring that students engaged in collaborative learning and guided inquiry. Upon completion of the POGIL sessions, all four groups, including CG1, CG2 (Control Group 2), EG1, and EG2 (Experimental Group 2), were given a posttest. This allowed researcher to measure the learning outcomes and compare the effectiveness of the two teaching methods. The posttest helped determine if the POGIL approach led to significant improvements in learning compared to the conventional instructional method.

After answering the posttest, the learners were instructed to answer the survey form about their views of using POGIL activity sheets.

Methodology
Research Design
This study used a quasi-experimental approach with matched subjects to select 40 grade 10 learners as participants. Fraenkel and Wallen (2000) describe this type of design as one in which individuals are paired on the basis of specific variables to establish group equivalence and mitigate any potential impact on the study. Random assignment was not possible in this study because the subject groups were intact (i.e., classes). Educational authorities typically prohibit the disbandment and reconstitution of classes solely for research purposes, making the chosen research method the only viable option. To address the research questions, the study used a Solomon Four-Group Design (Campbell & Stanley, 1966). This study involved four groups: two experimental groups and two control groups. One control group had a pretest, while the other control group did not. In the Experimental Groups, one experimental group had a pretest, and the other experimental group did not receive a pretest. After the pretest, all four groups received instruction, with the experimental groups using POGIL activity sheets, and the control groups using conventional instructional methods. Finally, a posttest was administered to all groups to assess their learning outcomes. In addition, a survey questionnaire was used to gather the learners' views about using Process Oriented Guided Inquiry Learning (POGIL) Activity Sheets in teaching gas laws.

Research Participants
The research participants included a total of 40 Grade 10 participants from Taft National High School for the school year 2022-2023. The participants were divided into four groups for the study. The first group, referred to as CG1, consisted of the Amethyst section learners and served as the control group with a pretest. The second group, CG2, comprised learners from the Pearl section and also served as a control group, but without a pretest. The third group, EG1, consisted of learners from the Jade section and was assigned as the experimental group with a pretest. Finally, the fourth group, EG2, comprised learners from the Diamond section and served as the experimental group without a pretest.

The participants in this study were identified as struggling learners, indicating that they faced difficulties in their academic performance. Each group consisted of 10 participants, resulting in a total of 40 learners participating in the research. By including learners from different sections and assigning them to specific groups, this study aimed to assess the impact of the Process Oriented Guided Inquiry Learning (POGIL) activity sheet on learners' performance in the context of gas laws. Before being included in the study, parental consent was required from all participants. All forms of participation occurred within the context of in-person classes.

Research Instrument
Process Oriented Guided Inquiry Learning Activity Sheet. The researcher developed Process Oriented Guided Inquiry Learning (POGIL)-Activity Sheets (AS) to teach gas laws in Science 10. The researcher believed that POGIL-AS would help students with their difficulty in solving science problems and address the lack of instructional materials. The POGIL-AS was a teacher-made instructional material designed to help learners master a competency-based skill that they were not able to develop in the self-learning modules. The POGIL-AS was designed to meet the learning needs of the learners. Five Science Master Teachers validated the POGIL-AS based on five indicators: objectives, content, format and language, presentation, and usefulness.

Teacher-Made Test
The researcher constructed a pretest and posttest consisting of 20 multiple-choice items with four options each, covering competencies in Gas Laws. To ensure the content validity of the test, a table of specifications was created. The test was first submitted to science teachers that were experts in the field for their feedback. Their suggestions for improving the test were noted.

The first draft of the assessment test was administered to 10 students per strata or group based on their academic performance. The students' responses were scored as "0" for every incorrect answer and "1" for every correct answer for each test item. The internal consistency method was used to determine the reliability of the final draft of the assessment questionnaire. This method was considered the most appropriate since the test consisted of two distinct results—the examinee either passed or failed in an item. The Cronbach Alpha coefficient was computed to determine if the instrument had the right internal consistency or if the instrument was acceptable (George & Mallery, 2003). This meant that if the correlations were lower than 0.3, an item might have been problematic and had to be removed to make the questionnaire reliable. Respondents' Feedback on the use of POGIL in the Teaching Gas Laws Survey

The researcher developed a survey questionnaire to assess students' perceptions of POGIL. The survey included questions about students' understanding of gas laws, their satisfaction with the POGIL activities, and their perceived

effectiveness of POGIL in helping them learn gas laws. The survey questionnaire was validated by master teachers in the science department and one English master teacher.

Data Analysis

The researcher calculated the percentage scores for both the control and experimental groups in the pretest and posttest. He then converted these percentage scores into transmuted grades using the guidelines outlined in DepEd Order No. 8, s. 2015. To analyze the data, the researcher used a variety of statistical tests. First, a t-test was used for independent groups to determine whether there was a significant difference in the percentage scores between the control and experimental groups during the pretest phase. This test would help them determine if the two groups were similar at the outset of the study. Second, he used a t-test for dependent samples to determine if there was a significant difference in the percentage scores of the control and experimental groups between the pretest and posttest phases. This test would help them understand the effectiveness of the intervention.

Finally, the researcher used a one-way analysis of variance (ANOVA) and a Tukey HSD post hoc test to examine whether there was a significant difference among the percentage scores in the posttest across all four groups. This test would help them identify any potential differences in performance among the different groups after the intervention.

To determine learners' perceptions the use of Process Oriented Guided Inquiry Learning (POGIL) Activity Sheets, the researcher used mean and standard deviation. Mean is the average of a set of data, while standard deviation is a measure of the spread of the data.

Results and Discussions

The results of the data collected from both the POGIL groups and Non-POGIL groups are presented in the following sections.

Table 1. The percentage scores in the pretest of the control and experimental Groups

Groups	PS	TG	Description
Control Group 1 (CG1)	17.5%	64%	Did Not Meet Expectations
Experimental Group (EG1)	16.5%	64%	Did Not Meet Expectations

The pretest results for Control Group 1 (CG1) and the Experimental Group 1 (EG1) are presented in Table 1. Both groups scored 17.5% and 16.5% on the Percentage Score (PS), respectively, and both received a Transmuted Grade (TG) of 64%. Both groups' performance in the pretest was categorized as "Did Not Meet Expectations." The similarity in the pretest results between the two groups indicates that they have similar baseline knowledge before the

experiment began. This similarity is crucial when subjecting the two groups to an experiment because it helps establish a fair and justifiable comparison between them. Having similar pretest scores means that any differences in the post-test scores or outcomes observed during the experiment can be more confidently attributed to the intervention being studied, rather than to existing disparities in the participants' initial abilities. This minimizes the possibility of confounding variables influencing the results.

Table 2. Difference between the percentage scores of the two groups in the pretest

t critical value	t computed value	Level of Significance	df	Decision on H_{o1}	Interpretation
2.101	1.2231	0.05	18	Fail to reject the null hypothesis	Not significant

Table 2 compares the pretest results of two groups, focusing on the difference between their percentage scores. Statistical analysis involved calculating the critical t-value and the t-computed value. The critical t-value, at a significance level of 0.05, is 2.101. The t-computed value obtained from the analysis was 1.2231. When the t-computed value is compared to the critical t-value, we see that the absolute value of the t-computed value (1.2231) is smaller than the absolute value of the critical t-value (2.101). As a result, the decision on the null hypothesis (H0) is to fail to reject it. The "not significant" interpretation indicates that the observed difference between the percentage scores of the two groups could have occurred due to chance variation rather than a genuine effect of the treatment or intervention. Therefore, based on the pretest results and statistical analysis, we can conclude that there is no statistically significant difference between the two groups' performance in the pretest. In Table 2, the pretest results of two groups are compared, and the focus is on the difference between the percentage scores of these groups. The statistical analysis involves calculating the t critical value and the t computed value. The critical t-value, at a significance level of 0.05, is 2.101.

Table 3. The percentage scores in the posttest of the four groups

Groups	PS	TG	Description
Control Group 1 (CG1)	61	76	Fairly Satisfactory
Control Group 2 (CG2)	55	73	Did Not Meet Expectations
Experimental Group1 (EG1)	80	88	Very Satisfactory
Experimental Group 2 (EG2)	78	86	Very Satisfactory

The results of the study were assessed based on the percentage scores in the posttest of four different groups: Control Group 1 (CG1), Control Group 2 (CG2), Experimental Group 1 (EG1), and

Experimental Group 2 (EG2), as shown in Table 3. Control Group 1 (CG1) achieved a percentage score of 61, and their posttest performance was rated as "Fairly Satisfactory" with a transmuted grade of 76. CG1 served as the control group with a pretest. Control Group 2 (CG2) attained a percentage score of 55, and their posttest performance was labeled as "Did Not Meet Expectations" with a transmuted grade of 73. CG2 served as another control group, but without a pretest. Experimental Group 1 (EG1) obtained an impressive percentage score of 80, and their posttest performance was deemed "Very Satisfactory" with a transmuted grade of 88. EG1 was assigned as the experimental group with a pretest. Experimental Group 2 (EG2) achieved a percentage score of 78, and their posttest performance was also rated as "Very Satisfactory" with a transmuted grade of 86. EG2 served as the experimental group without a pretest. The study found that using Process-Oriented Guided Inquiry Learning (POGIL) activity sheets had a positive impact on learners' performance, as indicated by the higher posttest scores in the experimental groups (EG1 and EG2) compared with the control groups (CG1 and CG2). The pretest given to the experimental group (EG1) also suggested that POGIL activity sheets may be more effective when accompanied by an initial assessment of learners' prior knowledge and skills. This study provides valuable insights into the benefits of incorporating POGIL-based approaches in educational settings, particularly for enhancing learners' understanding of gas laws concepts. The results of this study are supported by previous research on the effectiveness of POGIL as a teaching method. Walker and Warfa (2017) found that the POGIL pedagogy, which provides students with opportunities to develop their process skills through guided inquiry activities, can improve student outcomes in both small and medium classroom environments. They found that students in POGIL classrooms had higher passing rates and lower failure rates than those in standard lecture classrooms. The authors concluded that POGIL can be an effective way to improve student learning. Kimmel et al. (2020) found that students who participated in POGIL instruction outperformed those who received traditional instruction on both conceptual and procedural knowledge measures. In addition, the POGIL group reported being more engaged in the learning process and having a more positive attitude toward science.

Table 4. Difference between the percentage scores in the pretest and posttest of the control group and experimental group

Group	df	t critical value	t computed value	Decision on H_{02}	Interpretation
Control Group	9	2.262	8.641665	Reject the null hypothesis	Significant
Experimental Group	9	2.262	18.502132	Reject the null hypothesis	Significant

Table 4 shows the results of the statistical analysis, which focuses on the difference between the percentage scores of the pretest and posttest for both groups. The table also includes the degrees of freedom (df), critical t-value, computed t-value, decision on the null hypothesis (H0), and interpretation.

The computed t-values for both groups are well above the critical t-value of 2.262. This means that the difference between the pretest and posttest scores in both groups is statistically significant. Therefore, the null hypothesis (H0) is rejected for both the control and experimental groups. The rejection of the null hypothesis indicates that the POGIL activity sheets had a significant positive impact on learners' performance. The higher t-value for the experimental group (18.502132) compared with the control group (8.641665) suggests that the effect of the POGIL activity sheets was even more pronounced in the experimental group.

These results imply that incorporating Process Oriented Guided Inquiry Learning (POGIL) activity sheets into the gas laws instruction can lead to improved learning outcomes. POGIL promotes active learning, critical thinking, and collaborative problem-solving, which likely contributed to the observed performance gains in the experimental group.

Table 5. Test among the percentage scores (ANOVA) in the posttest of the four groups

Source	df	MS	F critical value	p-value	F Computed value	Decision on H_{03}	Interpretation
Posttest	36	104.1667	2.866	<.00001	14.752	Reject the null hypothesis	Significant

ANOVA = analysis of variance.
Computed using alpha = .05.

The ANOVA results in Table 5 shows that there were significant differences in the posttest scores among the four groups. The computed F value of 14.752 was greater than the critical F value of 2.866, which indicates that the null hypothesis (no significant differences among the groups) was rejected. This means that there were indeed significant differences in the posttest scores among the four groups.

The p-value of < 0.00001 further supports the conclusion that the differences in the posttest scores were statistically significant. A p-value of < 0.00001 means that there is less than a 0.00001% chance that the observed differences in the posttest scores could have occurred by chance.

The results of the ANOVA suggest that the four different learning methods had a significant impact on the posttest scores. However, the specific nature of these differences is not clear from the ANOVA results alone. To further investigate the differences in the posttest scores, the researchers

would need to conduct post-hoc comparisons between the different groups.

The finding conforms to the study by Allen et al. (2017), which found that POGIL (Process Oriented Guided Inquiry Learning) was more effective than traditional teaching methods in terms of student achievement, conceptual understanding, and problem-solving skills. POGIL is a student-centered learning approach that engages students in active learning through inquiry-based activities. The study found that POGIL was particularly effective for students who were struggling in chemistry, and this is also supported by DeGale and Boissele (2015), who conducted a study of 120 undergraduate chemistry students and found that those who participated in a POGIL-based learning module had significantly higher exam scores than those who received traditional lecture-based instruction.

The Post-hoc Tukey HSD comparisons in Table 6 would determine which groups differed significantly from each other. This information would be helpful in understanding which learning method was most effective in improving the posttest scores.

Table 6. Post -hoc Tukey HSD (beta) of the percentage scores in the posttest of the four groups

Pairwise Comparisons		$HSD_{.05} = 12.2928$	$Q_{.05} = 3.8088$
$CG_1:CG_2$	$M_1 = 61.00$ $M_2 = 55.00$	6.00	$Q = 1.86\ (p = .55993)$
$CG_1:EG_1$	$M_1 = 61.00$ $M_3 = 80.00$	19.00	$Q = 5.89\ (p = .00103)$
$CG_1:EG_2$	$M_1 = 61.00$ $M_4 = 78.00$	17.00	$Q = 5.27\ (p = .00357)$
$CG_2:EG_1$	$M_2 = 55.00$ $M_3 = 80.00$	25.00	$Q = 7.75\ (p = .00002)$
$CG_2:EG_2$	$M_2 = 55.00$ $M_4 = 78.00$	23.00	$Q = 7.13\ (p = .00008)$
$EG_1:EG_2$	$M_3 = 80.00$ $M_4 = 78.00$	2.00	$Q = 0.62\ (p = .97145)$

To assess the effectiveness of the intervention, the researchers conducted a posttest after implementing the POGIL activity sheets. Table 6 presents the results of the post hoc Tukey HSD (Honest Significant Difference) analysis of the percentage scores in the posttest for the four groups. The HSD value at α=0.05 (significance level) was found to be 12.2928, and the critical Q value was 3.8088.

Four groups were analyzed: CG1 and CG2 as control groups, and EG1 and EG2 as experimental groups. The mean posttest score for CG1 was 61.00, and for CG2, it was 55.00, with a non-significant difference of 6.00 (p > 0.05).

When comparing CG1 with EG1, the experimental group showed significantly higher scores (M3 = 80.00) compared to CG1 (M1 = 61.00), with a significant difference of 19.00 (p < 0.05). Similarly, comparing CG1 with EG2, the experimental group had significantly higher scores (M4 = 78.00) than CG1, with a difference of 17.00 (p < 0.05).

The comparison between CG2 and EG1 indicated that EG1 had significantly higher scores (M3 = 80.00) than CG2 (M2 = 55.00), with a difference of 25.00 (p < 0.05). Lastly, comparing CG2 with EG2 revealed that EG2 had significantly higher scores (M4 = 78.00) than CG2, with a difference of 23.00 (p < 0.05).

Several studies have found that POGILs, or Process-Oriented Guided Inquiry Learning, can be an effective way to improve student learning in a variety of subject areas. POGILs are a student-centered approach to learning that allows students to actively engage in the learning process by asking questions, working through problems, and discussing their findings with their peers. This active learning approach can help students to develop a deeper understanding of the concepts being taught. For example, a study by Verlinden et al. (2020) found that students who participated in a POGIL-based course had significantly higher mean examination scores than those who participated in a traditional lecture-based course. Additionally, students in the POGIL group reported more positive perceptions of the teaching strategy. Another study, by Kurniati et al. (2021), found that students who participated in a POGIL-based course on chemistry concepts had significantly better understanding of the concepts than those who participated in a traditional lecture-based course. Additionally, the POGIL group reported being more engaged in the learning process. Similarly, a study by Utami et al. (2022) found that students who participated in a POGIL-based course on biology concepts had significantly better understanding of the concepts than those who participated in a traditional lecture-based course. Additionally, the POGIL group reported being more interested in the learning process. These studies suggest that POGILs can be an effective way to improve student learning in a variety of subject areas.

Overall, the research on POGILs suggests that they can be an effective way to improve student learning in a variety of subject areas. POGILs are a student-centered approach to learning that allows students to actively engage in the learning process. This active learning approach can help students to develop a deeper understanding of the concepts being taught. In conclusion, the results of the study indicate that the use of Process-Oriented Guided Inquiry Learning (POGIL) activity sheets has a positive impact on learners' performance in understanding gas laws. Both experimental groups (EG1 and EG2) achieved significantly higher posttest scores compared to both control groups (CG1 and CG2). This suggests that implementing POGIL-based teaching approaches can be effective in enhancing students' learning outcomes in the context of gas laws, as evidenced by the statistically significant differences in posttest scores

Table 7. Respondents' feedback on the use of POGIL in teaching gas laws

Indicators	Mean	SD	Interpretation
1. POGIL activity sheets in Gas Laws have significantly helped me learn the lessons more easily.	4.32	0.27	Strongly agree
2. The use of POGIL activity sheets has provided sufficient repetition of learning through examples and activities, making it easier for me to understand the lessons.	4.09	0.32	Agree
3. POGIL activity sheets have given me a better way to understand the lessons in Gas Laws compared to traditional methods.	4.21	0.25	Strongly agree
4. The incorporation of POGIL activity sheets has improved my knowledge and skills in Science.	4.13	0.29	Agree
5. The use of POGIL activity sheets has made me more aware of the expected outcomes of the study, clarifying what I should achieve from the lessons.	4.05	0.31	Agree
6. POGIL activity sheets have successfully aroused my interest and attention in Learning Science, particularly in Gas Laws.	4.27	0.26	Strongly agree
7. I have been able to enjoy Science more while learning through the engaging POGIL activity sheets.	4.17	0.28	Agree
8. POGIL activity sheets have been helpful in facilitating retention of the concepts learned in Gas Laws.	4.24	0.27	Strongly agree
9. The POGIL activity sheets present the lessons to be learned in a clear and structured manner.	4.29	0.25	Strongly agree
10. The POGIL activity sheets offer valuable guidance for learning Gas Laws, making the process more structured and understandable.	4.31	0.24	Strongly agree

Table 7 shows respondents' Feedback on the use of POGIL in Teaching Gas Laws. All of the mean scores are in the "Agree" or "Strongly agree" range, indicating that students generally found the POGIL activity sheets to be helpful in learning Gas Laws. The highest mean score was for the statement "POGIL activity sheets have significantly helped me learn the lessons more easily," with a mean of 4.32. This suggests that students found the POGIL activity sheets to be very effective in helping them learn the material. The next highest mean score was for the statement "POGIL activity sheets have given me a better way to understand the lessons in Gas Laws compared to traditional methods," with a mean of 4.21. This suggests that students found the POGIL activity sheets to be a more effective way to learn Gas Laws than conventional methods. The findings conform the study by White et al. (2022) found that learners in the POGIL group had more positive perceptions of POGILs than learners in the traditional lecture group. The learners in the POGIL group reported that they found POGILs to be more engaging, more challenging, and more helpful for learning.

There are several reasons why teachers should consider using POGIL Activity Sheets in their classroom instruction. First, POGIL activity sheets promote active learning. This means that students are actively engaged in the learning process, rather than simply passively listening to lectures or reading textbooks. Active learning has been shown to be more effective than passive learning for a variety of reasons. For example, active learning helps students to retain information better, to develop deeper understanding of concepts, and to be more able to apply what they have learned to new situations.

Second, POGIL activity sheets promote critical thinking. This means that students are encouraged to think critically about the material, to ask questions, and to challenge their own assumptions. Critical thinking is an essential skill for students to develop, as it will help them to be successful in college and in their careers. Third, POGIL activity sheets promote collaborative problem-solving. This means that students work together to solve problems, which helps them to develop teamwork skills and to learn from each other. Collaborative problem-solving is also an essential skill for students to develop, as they will often need to work with others to solve problems in the real world.

Conclusions

The pretest percentage scores of the Control Group 1 (CG1) and the Experimental Group 1 (EG1) indicate similar baseline knowledge, supporting a fair comparison during the experiment.

The pretest percentage scores reveal that there is no significant difference between CG1 and EG1

Posttest results demonstrated that the use of Process-Oriented Guided Inquiry Learning (POGIL) activity sheets resulted in higher posttest scores for the experimental groups (EG1 and EG2) compared to the control groups (CG1 and CG2).

Statistical analysis showed a significant difference between the pretest and posttest percentage scores in both the control and experimental groups.

The study's findings demonstrate that the use of POGIL activity sheets positively affects learners' understanding of gas laws. Both experimental groups (EG1 and EG2) showed significantly higher posttest scores compared to the control groups (CG1 and CG2), indicating the effectiveness of POGIL-based teaching approaches in enhancing students' learning outcomes in this context.

POGIL activity sheets were an effective way to help learners learn Gas Laws. The activity sheets helped learners to learn the material more easily and in a more meaningful way than traditional methods.

Recommendations

Incorporate Process-Oriented Guided Inquiry Learning (POGIL) activity sheets in teaching gas laws. These activity sheets have shown to positively impact learners' understanding and lead to higher posttest scores. Teachers should adopt POGIL-based teaching approaches to enhance students' learning outcomes in this subject.

Teachers should adopt active learning methodologies like POGIL. These approaches involve students in the learning process, promoting critical thinking, problem-solving, and collaboration among

students, leading to improved academic performance. Teachers should regularly monitor and analyze students' progress throughout the POGIL-based instruction. This will help identify any potential challenges or adjustments needed to optimize the learning experience. Analyzing both pretest and posttest percentage scores can provide valuable insights into the effectiveness of the POGIL approach.

Provide opportunities for educators to undergo professional development workshops or training on implementing POGIL-based teaching methodologies. By equipping instructors with the necessary skills and knowledge, they can effectively integrate POGIL activity sheets into their teaching practices and optimize students' learning experiences.

Evaluate the effectiveness of POGIL activities. It is important to evaluate the effectiveness of POGIL activities in order to ensure that they are meeting the needs of learners. This evaluation can be done using a variety of methods, such as pre- and post-tests, surveys, focus group discussion, and interviews.

The study's findings indicate positive outcomes for learners using POGIL, but it's essential to replicate the study in different contexts and with larger sample sizes to validate the results further. Additionally, conducting further research on the effectiveness of POGIL in different subjects and educational settings can contribute to the broader understanding of its impact on learning outcomes.

References

Albano, J. (2019). The performance of Filipino students in science: A review of the literature. International Journal of Science Education, 41 (10), 1327-1347.

Allen, M. J., Duch, E. K., & Grotzer, M. J. (2017). The POGIL method: A meta-analysis of findings. Journal of Chemical Education, 94(10), 1423-1430.

Bodner, G. M. (1986). Constructivism: A theory of knowledge. Journal of Chemical Education, 63 (10), 873-878.

Campbell, D. T., & Stanley, J. C. (1966). Experimental and quasi-experimental designs for research. Rand McNally.

DeGale, P., & Boissele, M. (2015). The effectiveness of process-oriented guided inquiry learning (POGIL) in undergraduate chemistry education: A comparison with traditional lecture-based instruction. Journal of Chemical Education, 92(1), 102-107.

DepEd Order No. 8. (2015, April 1). Policy Guidelines on Classroom Assessment for the K to 12 Basic Education Program. Retrieved from www.deped.gov.ph.

Fitriani, R., Irwandi, & Murniati, S. (2017). The implementation of POGIL in improving students' understanding of chemical bonding concept. Journal of Education and Learning, 6(1), 1-10. doi:10.5281/zenodo.1069343

Fraenkel, J. R., & Wallen, N. E. (2000). How to design and evaluate research in education (6th ed.). McGraw-Hill.

George, D., & Mallery, P. (2003). SPSS for Windows step by step: A simple guide and reference 11.0 update (4th ed.). Boston, MA: Allyn & Bacon.

Hanson, D. R. (2006). Inquiry in education: On the uses of research in understanding teaching and learning. New York, NY: Teachers College Press.

Halimah, S. N. (2016). Penerapan Model Inkuiri Terbimbing dalam Meningkatkan Motivasi Belajar dan Penguasaan Konsep Peserta didik pada Materi Larutan Elektrolit dan Non-Elektrolit.

Henson, K., Thompson, D., & Bell, J. (2019). The impact of process-oriented guided inquiry learning on student achievement in physics. Physical Review Physics Education Research, 15 (2), 020121.

Kimmel, E., Lemke, J. L., & Nelson, T. H. (2020). The effects of process-oriented guided inquiry learning (POGIL) on conceptual and procedural knowledge, engagement, and attitude in introductory biology. CBE—Life Sciences Education, 19(1), 1-10.

Kurniati, N., Utami, R., & Utami, A. (2021). The effectiveness of process-oriented guided inquiry learning (POGIL) in teaching chemistry concepts to high school students. International Journal of Science and Mathematics Education, 19(1), 1-17.

Liu, C. H., & Matthews, M. R. (2005). Constructivism in science education: A review of the literature. International Journal of Science Education, 27(1), 13-38.

Masigan, J. A. (2021). The performance of Filipino students in science and mathematics in the Southeast Asia Primary Learning Metrics (SEA-PLM): A comparative analysis. Asia Pacific Education Review, 22(1), 1-15.

National Research Council. (2000). Inquiry and the National Science Education Standards: A guide for teaching and learning. Washington, DC: National Academies Press.

Organisation for Economic Co-operation and Development (OECD). (2019). PISA 2019 results: Science, reading, math and more: Volume I. Paris: OECD Publishing. Programme for International Student Assessment (PISA). (2019). PISA 2019 Results. Retrieved from https://www.oecd.org/pisa/publications/pisa-2019-results.htl. Programme for International Student Assessment FOR DEVELOPMENT PISA for

PRELIMINARY VERSION. (n.d.). https://www.oecd.org/pisa/pisa-for-development/PISA-D-Assessment-and-Analytical-Framework-Ebook.pdf

Rodriguez, A., Lazenby, J., & Jones, C. (2020). Process-oriented guided inquiry learning (POGIL): A systematic review of the literature. Journal of Chemical Education, 97(9), 2540-2551. doi:10.1021/acs.jchemed.0c00523

Roller, M. C., Zori, S., & Lyons, E. (2018). The impact of process-oriented guided-inquiry learning (POGIL) in fundamental and medical surgical nursing 11 courses. Nursing Education Research Conference 2018 (NERC18). https://stti.confex.com/stti/nerc18/webprogram/Paper89314.html

Saputro, S., Rohaeti, E., & Prodjosantoso, H. (2018). The effectiveness of POGIL learning model on students' chemistry learning outcomes. International Journal of Environmental and Science Education, 13(16), 11255-11266. doi:10.12973/ijese.2018.1316.197

Spencer, R. J., & Silverman, L. M. (2001). POGIL: The power of group investigation learning. Journal of College Science Teaching, 31(1), 48-53.

Thomsen, D. J., Thomas, S. R., & Hall, S. O. (2020). The impact of process-oriented guided inquiry learning on student understanding of chemistry concepts. Journal of Chemical Education, 97(2), 255-263.

Uche, O. C., & Eze, C. C. (2018). The effectiveness of POGIL strategy in teaching and learning of gas laws in secondary schools. International Journal of Education and Research, 6(11), 200-210.

Utami, A., Utami, R., & Kurniati, N. (2022). The effectiveness of process-oriented guided inquiry learning (POGIL) in teaching biology concepts to elementary school students. Journal of Baltic Science Education, 21(1), 13-24.

Verlinden, N., Kruger, N., Carroll, A., & Trumbo, T. (2020). Process-oriented guided inquiry learning strategy enhances students' higher level thinking skills in a pharmaceutical sciences course. Pharm Med, 24(2), 131-138.

Villagonzalo, M. A. (2014). The effectiveness of POGIL activity sheets in teaching gas laws. Journal of Chemical Education, 91(1), 140-144.

Vygotsky, L. S. (1978). Mind in society: The development of higher psychological processes. Cambridge, MA: Harvard University Press.

Walker, L., & Warfa, A.-R. M. (2017). Process oriented guided inquiry learning (POGIL®) marginally effects student achievement measures but substantially increases the odds of passing a course. PLOS ONE, 12(10), e0186203. https://doi.org/10.1371/journal.pone.0186203

Wijaya, D. P., & Handayani, W. (2021). The effect of POGIL learning on students' critical thinking skills and conceptual understanding in chemistry. International Journal of Science and Mathematics Education, 19(1), 1-17. doi:10.1007/s10763-020-10040-3

White, J., Smith, D., Jones, L., & Brown, M. (2022). The effectiveness of POGILs in college biology courses. Journal of Biological Education, 56(1), 1-10.

CODE-SWITCHING IN TEACHING MATHEMATICS: EFFECTIVENESS ON THE ACADEMIC ACHIEVEMENT OF GRADE 10 LEARNERS

Ma. Danna S. Balbuena, Master Teacher II
ESNCHS, Schools Division of Borongan City
madanna.balbuena@deped.gov.ph

Introduction

The Philippine education ranked 102nd out of 129 countries in the latest 2019 Global Innovation Index. In terms of mathematics education, the latest Trends in Mathematics and Science Study (TIMSS) participated by the Philippines in 2003 showed that the Philippines ranked 42nd out of 46 participating countries for Grade 8 and 23rd out of 25 countries for Grade 4. The country's education system, particularly mathematics education is visibly lagging behind its neighboring Asian countries.

Concurrent with the dismal quality of education in the country, Eastern Samar National Comprehensive High School, one of the top secondary schools in the province of Eastern Samar, is facing huge challenges in terms of low mean percentage scores (MPS) in Mathematics, a large number of non-numerates at 49% of the total population as well as a large number of students who belong to frustration reading level and non-readers. Having this number of students who belong to frustration reading level, mathematical problems that target the development of critical thinking and

problem-solving skills have become much more difficult due to its use of a language hardly comprehensible by the students.

Several studies have shown that academic performance in Mathematics is highly linked with reading and comprehension skills. This suggests that reading and comprehension skills must also be developed to attain a good academic performance in Mathematics considering that English is its medium of instruction. This makes learning of mathematical knowledge more challenging as it depends heavily on students' ability to interpret and understand the language used in instruction.

Ensuring effective communication and interaction is important to facilitate the transfer of learning. Jegede (2011) claimed that the medium of instruction or the language in which education is conducted has far-reaching consequences in all educational systems. The language used in instruction plays a great deal in whether learning will take place.

In a study about the implications of Mother Tongue-Based – Multilingual Education (MTB-MLE), Malone (2007) cited UNESCO (2003) that the choice of language is a recurrent challenge in the development of quality education.

While teachers and students try their best to use English in class sessions in compliance with the mandate of using English as the medium of instruction, some teachers find it necessary to use more than one language in explaining problems or ideas that cannot be understood by learners. This practice of shifting from one language to another in a speech is called code-switching. Code-switching makes use of some mother-tongue words and/or Filipino words together with the English language in one speech to better explain words or sentences that students find difficult to understand.

Uys and Dulm (2011) identified specific uses of code-switching, namely (i)to explain and clarify subject content; (ii) to assist learners in understanding and interpreting material;(iii) as a tool of teaching in confirming understanding and encouraging participation;(iv) classroom management such as maintaining learners' attention, reprimanding disruptive behavior; and (v)social functions, such as humor and marker of bilingual identity.

Some studies support that code-switching will not only be beneficial in teaching mathematics but also in terms of reading comprehension. Studies by Nilsen (n.d.) and Dente, et. Al (2016) showed that code-switching is a great aid in vocabulary development and comprehension skills.

This study aimed to investigate the effectiveness of using code-switching as a teaching strategy in Mathematics 10 of Eastern Samar National Comprehensive High School for the school year 2019 - 2020. Code-switching has become a prevalent classroom practice and is usefully considered as a teaching strategy (Cook, 1989; 1991 cited in Yusob, 2018 and Uys, 2011). The issue of the choice of language used has long been established and recognized as crucial in constructing mathematical knowledge within the classroom, asserting further, that although mathematical language can be considered universal, the language of "doing mathematics in the classroom" cannot be generalized into one language as it is far from being universal (Gorgorio and Planas, 2002).

This study focused on the use of code-switching as a strategy in the mathematics classroom where the teacher can freely shift from the use of one language to another to explain difficult words or terms. The students, however, followed the English Only Policy where all forms communications, both oral and written, will be done in English to allow students to practice English as second language.

The use of a language easily understandable by learners is an important pedagogical concern. A study suggested that code-switching has a positive influence on generating mathematical understanding (Webb and Webb, 2008). Furthermore, it increases learner participation and lesson comprehension (Mokgwathi and Webb, 2013).

Zabrodskaja (2007) found out in his study that code-switching in the university classroom is both inevitable and necessary. Zabrodskaja (2007) further stated that it has been established that teachers may code-switch at the elementary level except for those grade levels where teachers are expected to use only the native language of the child. All these only affirm the necessity of employing code-switching at the secondary level.

In a study on Code-switching as a teaching and learning strategy in mathematics classes, Molotoja (2008) asserted that schools that used code-switching performed better compared to schools that did not apply code-switching. The use of the home language was further suggested in learning mathematics.

Yusob, Nassir, and Tarmuji (2018), in a study about code-switching in mathematics classrooms, confirmed the findings of several previous studies that code-switching is regarded as advantageous by students and that code-switching is highly correlated with their learning satisfaction. It was emphasized that students believed that code-switching could facilitate their learning process.

Dente, et.al (2016) concluded that teachers, being the ones who know more about the student's weaknesses and strengths, must be given the freedom to choose whether to code-switch or not. Additionally, it was determined that the code-switching strategy should be used because some students find it difficult to participate in class

discussions because they are uncomfortable speaking in a foreign language. Moreover, there are also students who cannot understand the words in English because they do not know their equivalent or translation in their native language. The same study also recommended that teachers be allowed to use code-switching in explaining difficult words while students will be obliged to use English only as a medium of instruction.

This study then sought to determine the effect of code-switching on the academic performance of students in Mathematics 10 of Eastern Samar National Comprehensive High School. Furthermore, this study sought to answer the following research questions:

1. Is there a significant difference in the pre-test results between the experimental group and the control group?
2. Is there a significant difference in the post-test results between the experimental group and the control group?
3. Is there a significant difference between the level of academic achievement in Mathematics of the students whose teachers code-switch in class and the level of academic achievement in Mathematics of the students whose teachers do not code-switch in class?
4. From the stated research questions, the following hypotheses were formed:

H_{o1}: There is no significant difference between the pretest scores of the control and experimental group.

H_{o2}: There is no significant difference between the post-test scores of the control and

H_{o3}: There is no significant difference between the level of academic achievement in Mathematics of the students in the control and in the experimental group.

Methodology

A quasi-experimental research design, particularly two-group pre-test post-test design, was employed in this study utilizing the two (2) Grade 10 Science, Technology, and Engineering (STE) classes. In the experimental group, the mathematics teacher used code-switching in the delivery of the lessons while students communicated using only English. In the control group, the teacher and students strictly used English as the only medium of instruction.

The subject of this study is the Grade 10 STE classes of Eastern Samar National Comprehensive High School. The school implements heterogeneous groupings for classes belonging to the same program. A sample of 35 students was taken from the experimental group and another 35 students from the control group. The sampling size was determined

using Slovin's formula following stratified random sampling in determining the respondents.

The pre-test scores and post-test scores of the control group and experimental group served as the basis for measuring academic achievement in Mathematics. Both groups were taught the same lessons by the same teacher using the same set of learning activities for the specified module. Furthermore, both groups were given the same pre- and post-tests. The module's pre-assessment for Measures of Position found in the learner's material was utilized for the conduct of pre-test and post-test which underwent an interrater test on reliability.

The academic achievement of students was based on their post-test results. Pre- and post-test results were utilized to determine the academic achievement of students before and after the implementation of the proposed strategy. The significant difference between the pre-test scores of the control group and the experimental group was tested using two-sample independent t-tests. Similarly, the two-sample independent t–test was used to determine if there is a significant difference between the level of academic achievement in Mathematics of the students whose teacher code-switched in teaching and the level of academic achievement in Mathematics of the students whose teacher did not code-switch in class. To determine whether the experimental group performed better than the control group, the gain scores of both groups were analyzed using one-way Analysis of Variance (ANOVA) and Cohen's d to determine its effect size. Table 1 shows that the pre-test and post-test scores of the two groups follow a normal distribution since both have a p-value greater than the significance level of 0.05, thus, failing to reject the null hypothesis that the scores are normally distributed. This fulfills one of the assumptions in utilizing T-tests and analysis of variance (ANOVA).

Results and Discussions

Table 1. Kolmogorov-Smirnov Normal Test

	Null Hypothesis	Test	Sig.	Decision
1	The distribution of PreTest is normal with mean 4.30 and standard deviation 1.89851.	One-Sample Kolmogorov-Smirnov Test	.051ᵃ	Retain the null hypothesis.
2	The distribution of PostTest is normal with mean 10.91 and standard deviation 1.90151.	One-Sample Kolmogorov-Smirnov Test	.060ᵃ	Retain the null hypothesis.

Asymptotic significances are displayed. The significance level is .050.

Table 2 shows that the pre-test scores of the two groups have statistically unequal variances as seen on the Levene's Test p-value of 0.01. Moreover, t-value (.564) is lesser than the t-critical value at 68 degrees of freedom. This reveals that there is no

Table 2: Independent Samples T-Test on Pre-Test

		Levene's Test for Equality of Variances		t-test for Equality of Means		
		F	Sig.	t	df	Sig. (2-tailed)
PreTest	Equal variances assumed	6.803	.011	.564	68	.575
	Equal variances not assumed			.564	58.851	.575

Computed using alpha = .05

Table 5. Gain Scores Descriptive Statistics

Group	Mean	Std. Deviation	N
control	6.0857	2.02007	35
experimental	7.1429	2.04570	35
Total	6.6143	2.08718	70

significant difference between the pre-test scores of the control group and the experimental group with p>0.05 and thus, the null hypothesis of statistically equal pre-test means should not be rejected. Therefore, the control group and the experimental group have statistically equal pre-test means.

Table 3: Independent Sample T-Test on Post-Test Scores

		Levene's Test for Equality of Variances		t-test for Equality of Means		
		F	Sig.	t	df	Sig. (2-tailed)
PostTest	Equal variances assumed	.341	.561	-2.619	68	.011
	Equal variances not assumed			-2.619	66.894	.011

Computed using alpha = .05

In Table 3, Levene's Test suggests that post-test scores are also assumed to be statistically equal. The calculated t-value (-2.619) is greater than the t-critical value at 68 degrees of freedom. Furthermore, having a p-value less than 0.05 shows that the academic achievement of the experimental group statistically significantly differs from the academic achievement of the control group. Hence, rejecting the null hypothesis that the post-test test scores are not statistically significantly different between the two groups.

Table 4: One Way Analysis of Variance (ANOVA) on Gain Scores

Source	df	Mean Square	F	Sig.	Partial Eta Squared	Noncent. Parameter	Observed Power[b]
Corrected Model	1	19.557	4.732	.033	.065	4.732	.573
Intercept	1	3062.414	741.007	.000	.916	741.007	1.000
Group	1	19.557	4.732	.033	.065	4.732	.573
Error	68	4.133					
Total	70						
Corrected Total	69						

a. R Squared = .065 (Adjusted R Squared = .051)

b. Computed using alpha = .05

Table 4 shows the results of the analysis of variance (ANOVA) with a p-value of 0.033 which furthermore reveals that the gain scores between the two groups are statistically significantly different and that the experimental group performed better than the control group.

It is shown in Table 5 that the control group has an average gain score of 6.09 while the average gain in the scores of the experimental group is 7.14. Therefore, as suggested in Table 4 and Table 5, the gain scores of the experimental group are statistically significantly higher than the gain scores of the control group, thereby failing to reject the null hypothesis that there is no significant difference between the level of academic achievement in Mathematics of the students in the control and in the experimental group.

Based on the descriptive statistics of the gain scores, the effect size using Cohen's d is calculated and turned out to be 0.520011 which is considered a medium effect size. The Cohen's d and the results on gain scores ANOVA convey that there is a statistically significant, considerable difference between the gain scores of the two groups.

Further analysis of the findings of this study revealed a positive effect of code-switching on the academic achievement of students. This supports the findings of Molotoja (2018) that students performed better where code-switching was applied. The findings of the current study also confirmed, indirectly, the findings of Yusob, et.al (2018) which showed that students have a positive attitude towards code-switching and that there is a positive correlation between student's attitude and their learning success.

On the other hand, the results of this study do not support the findings of Mahofa (2014) who asserted that code-switching could not be easily used in a way that enhances learning. However, it should be noted that the findings of Mahofa (2014) is limited to the use of code-switching in learning mathematical word problems alone.

Mentioned studies (Yusob, et.al, 2018 and Mahofa, 2014) agree that teachers must be careful in ensuring that the use of code-switching would not be abused for it may be detrimental to learning language and language acquisition. Yusob,et.al. (2018) also stated that too much use of code-switching can bring negative effects also as it can cause confusion due to different words and meanings used in different languages. These previous studies stressed the importance of exercising caution in using code-switching in the classroom.

Based on the results of the study, it can be concluded that there is an increase in the academic

achievement in Mathematics both in where teachers teach using English as medium of instruction and in where teachers code-switch in teaching. However, of the two groups, the group whose teacher used code-switching in class had a much higher gain in scores compared to the group who used English as the only medium of instruction. Thus, students who were taught with the use of code-switching performed better than the ones who were taught using English as the medium of instruction.

The outcomes of this action research showed that translating some words or phrases to learners' home language helps them grasp concepts and that there should be considerations relating to the use of English as the only medium of instruction in teaching Mathematics especially since English is not the learners' native language.

References

Dente, Rhea et.al (2016). Code Switching and Its Implications for ESL Learning (Vol. 4, Issue 1, pp:241-248, Month: January - March 2016) International Journal of Social Science and Humanities Research. http://www.researchpublish.com/download.php?file=Code%20Switching%20and%20Its-2702.pdf&act=book

Global Innovation Index 2019 Report. https://www.wipo.int/publications/en/details.jsp?Id=4434

Gorgorio, N., & Planas, N. (2001). Teaching Mathematics in Multilingual Classrooms. Educational Studies in Mathematics, 47(1),7-33. https://wwww.jstor.org/stable/3483251

Jegede, Olusegun. 2011. Code Switching and Its Implications for Teaching Mathematics in Primary Schools in Ile-Ife, Nigeria. Journal of Education and Practice. 2(10): 41-54. https://pdfs.semanticscholar.org/087c/66e973f9d32201b7d1afb9b3e0ac4bc0bbee.pdf

Mahofa, Ernest (2014) Code Switching in the Learning of Mathematics Word Problems in Grade 10. http://etd.cput.ac.za/bitstream/handle/20.500.11838/1950/211280526_mahofa_e_med_2014.pdf?sequence=1&isAllowed=y

Malone, Susane (2007). Mother-tongue based multilingual education: Implications for education policy. SIL International. https://www.sil.org/sites/default/files/files/mtbmle_implications_for_policy.pdf

Mokgwathi, Tsaona & Webb, Vic (2013). The educational effects of code-switching in the classroom-benefits and setbacks: A case of senior secondary schools in Botswana, Language Matters, 44:3,108-125, DOI: 10.1080/10228195.2013.839734

Molotoja, Tsebe Wilfred (2008). Code-switching as a teaching and learning strategy in mathematics classes: a case of Sekgosese East Circuit schools. http://hdl.handle.net/10386/321

Nilsen Jon (n.d.) Investigating the effect of codeswitching and L2 exclusive instructional strategies on learning and retention of L2 vocabulary. University of Birmingham. https://englishagenda.britishcouncil.org/sites/default/files/attachments/mda2017_university_of_birmingham_john_nilsen.pdfUys, David & Dulm, Ondene van(2011) The Functions of Classroom code-switching in the Siyanda district of the Northern Cape, Southern Africa Linguistics and Applied Language Studies, 29:1,67-76, DOI: 10.2989/16073614.201.583159

Webb, Lyn & Webb, Paul(2008). Introducing discussion into multilingual mathematics classrooms: An issue of code-switching?. Pythagoras. 67.2632.10.4102/pythagoras.v0i67.71

Yusob, Khairul Firhan, Nassir, Asyura Abd & Tarmuji, Nor Habibah (2018). Code-Switching in Mathematics Classroom: Relationship between Students' Attention and Attitude and their Learning Success. LSP International Journal, Vol. 5, Issue 1, 2018, 59–69, Universiti Teknologi Malaysia E-ISSN 2289–3199 / ISSN 0128–732X

Zabrodskaja, Anastassia(2007). Russian-Estonian code-switching in the university. Arizona Working Papers in Second Language Acquisition and Teaching. Vol. 14 from https://journals.uair.arizona.edu/index.php/AZSLAT/article/view/21268

Zazkis, Rina (2000). Using Code-Switching as a Tool for Learning Mathematical Language. For the Learning of Mathematics. FLM Publishing Association. Vol. 20, No. 3 (Nov., 2000), pp. 38-43 http://www.sfu.ca/sfublogsarchive/people/zazkis/uploads/2010/05/code-switching. pdf

TRI-MODAL APPROACH IN BRIDGING NUMERACY GAPS THROUGH PROJECT NUMERASAVE (SKILL ADVANCEMENT BY VALUING ENHANCEMENT)

Julius R. Garzon , Master Teacher II
Ibarra National High School
Schools Division of Maasin City
julius.garzon@deped.gov.ph

Introduction

Early mathematical abilities and numerical literacy are fundamental prerequisites for advancing to more complex mathematical concepts, and they play a vital role in determining future academic achievements. Vilorio (2014) emphasizes that these skills go hand in hand with language development and critical thinking, making them essential for all learners to cultivate. If students lack a strong foundation and adequate support, they are likely to face difficulties in comprehending mathematics, especially at the secondary school level. However, amid the pandemic, numeracy has become a pressing concern. The study claims that prioritizing and enhancing numeracy interventions could prove to be an effective strategy for addressing the challenges in learning numerical concepts during the COVID-19 situation.

Educators can address the learning gap caused by pandemic disruptions by prioritizing the enhancement of numeracy skills. Research conducted over time (Aubrey & Godfrey, 2003; Aunio et al., 2015; Jordan et al., 2009) has consistently demonstrated a strong link between mastering basic numeracy skills and future mathematical proficiency. The acquisition of numerical understanding constitutes a crucial component of higher-order principles in mathematical learning, predicting mathematical outcomes beyond traditional intelligence measures (Baroody et al., 2006; Locuniak and Jordan, 2008). Numeracy, being the foundation of formal mathematical thinking, encompasses a wide range of abilities that significantly influence the development of mathematical cognition (Jordan et al., 2010; Stock et al., 2010). This includes grasping fundamental arithmetic operations like addition, subtraction, multiplication, and division, as well as the capacity to reason and apply basic numerical concepts (Brooks & Pui, 2010). Proficiency in numeracy and the level of engagement in numerical practices are two interconnected aspects of this skill set (Jonas, 2018). By focusing on nurturing these abilities, educators can help students build a solid foundation for future mathematical success.

Despite numerous studies emphasizing the significance of numeracy skills (Aunio et al., 2015; Clerkin & Gilligan, 2018; Jordan et al., 2009), addressing learners' difficulties and knowledge gaps in numeracy has not been adequately strengthened in the tend to undervalue numeracy tests, leading to slow progress in their numeracy abilities. At Ibarra NHS, approximately 40% of the student population during the 2020-2021 school year were identified as lacking numeracy skills, showing only a marginal decrease from the previous quarter. This indicates the urgent need for intensive efforts to improve the numeracy profile of all learners, ensuring that numeracy challenges do not persist as they progress in their education.

This study proposed a school-based project, named **"Project NumeraSAVE"** (Numeracy Skill Advancement by Valuing Enhancement), with the aim of helping learners improve their low numeracy skills. The project's primary goal is to enable students to better comprehend new concepts that incorporate basic numeracy. To achieve this, the initiative focuses on implementing tri-modal approaches, providing a variety of learning activities and illustrative examples to address learning gaps and misconceptions. The ultimate objective of NumeraSAVE is to support non-numerate students and reduce conceptual gaps among them by using learner-centered strategies. By doing so, these students will acquire the necessary skills for future academic success, even during the pandemic. The project focused on addressing issues related to numeracy learning and aimed to implement effective interventions that would help students overcome difficulties in performing arithmetic processes, thereby reducing the number of non-numerate individuals. To achieve this goal, the project provided differentiated activities designed to engage learners in exercises and intensive practice, enabling them to master numeracy concepts and processes. These activities were organized into three distinct approaches. First, the *"NumeraThon" involved weekly drills and exercises using printed materials like worksheets, window cards, flashcards, and simplified Strategic Intervention Materials (SIM). Second, the "NumeraShare" approach fostered collaboration, pairing highly numerate students with identified non-numerate individuals to provide support and guidance. Lastly,*

the "NumeraSee" approach maximized the use of audio-video (AV) explainers, offering systematic discussions on adding, subtracting, multiplying, and dividing numbers. Math teachers were responsible for supervising the non-numerate students under their care, as well as preparing the deliverables for each implementation of numeracy assessments, particularly in the context of the new normal. Additionally, learners *of the three approaches. Additionally, they were capacitated to manage the project's activities, adhere to timelines, and provide monitoring and feedback throughout the implementation process.*

In line with the project NumeraSAVE, this study generally aimed to reduce non-numerates by quantity and cater learning gaps via tri-modal approaches of the said project. Specifically, this sought answers to the questions namely: (1) What is the percentage of non-numerates before and after Project NumeraSAVE?; and (2) To what extent project NumeraSAVE able to bridge conceptual gaps in numeracy learning?

Methodology

This study was carried out during the School Year 2022-2023 at Ibarra National High School to address the issue of non-numeracy among its students. The participants in the study were all non-numerates, and they were identified using the complete enumeration method. The diagnostic test revealed that there were approximately 61 non-numerates spread across different junior high school levels. Specifically, Grade 7 had 44 non-numerates, Grade 8 had 20, Grade 9 had 15, and Grade 10 had 12. These non-numerates were selected as the target recipients for an initiative project aimed at improving their mathematical skills. To ensure the success of the initiative, the four math teachers of Ibarra NHS actively participated in its implementation. Additionally, to provide support and assistance to the non-numerates, thirty highly numerate learners were chosen as buddy tutors. These buddy tutors were tasked with helping their non-numerate peers bridge the gap in their mathematical understanding. By involving both teachers and capable students in the project, it was hoped that the non-numerates' mathematical abilities would improve significantly.

Before initiating the Project NumeraSAVE, an initial step involved identifying individuals without strong numerical skills through diagnostic tests. These tests helped identify potential candidates who could benefit from the program. Similarly, for the NumeraShare approach, the diagnostic results were used to select highly numerate learners as mentors. To determine which of the non-numerate learners lacked home-learning facilitators to support them in numeracy activities, data was collected from the Principal's Office. The highly-numerate learners

were then assigned as tutors, considering the convenience of the pairing, with preference given to those who were neighbors or from the same location/cluster as the client, always with proper consent from parents and adhering to ethical guidelines. On the other hand, math teachers came together for project orientation and to clarify their roles and responsibilities as implementers. During this gathering, they received guidance on project preparation and were equipped with strategies for handling each stage of the project delivery. Additionally, the teachers conducted an analysis of errors to identify any conceptual gaps among the learners. Ensuring the effectiveness of the project, they diligently prepared instructional materials and learning tasks aligned with the project's objectives, and these were reviewed and approved by the School QA Team. The math teachers were also diligent in maintaining comprehensive records of their students' progress and assignments, ensuring proper documentation.

To monitor both the learners' progress and the overall success of the project, regular follow-ups were conducted. These efforts demonstrated their commitment to the project's success and the advancement of their students' learning. The numeracy results of non-numerates based on their outputs served as baseline and reference for finding common errors, misconceptions, and other gaps in order to trace the extent that project able to address them after the implementation. There was a post-

Table 1. *Percentage of Non-numerates before and after Project NumeraSAVE*

Grade Level	Before Implementation		After Implementation	Remarks
	f	%	*f*	
7	44	48%	1	
8	20	22%	1	
9	15	16%	0	
10	12	13%	0	
Total	91	28%	2	

Note: *Population by Grade: G7 (N=68), G8 (N=95), G9 (N=80*

numeracy assessment using the revised standard numeracy tool validated by the EPS in Math of SDO-Maasin. This was given to the participants after the implementation of the Project NumeraSAVE. To ensure objectivity of output and authenticity of post-assessment results, it was the math teachers who conducted the test in face-to-face manner .

The study presented descriptive results obtained from a diagnostic test conducted before the project's implementation (Table 1) and a post-assessment carried out for comparison. The findings demonstrated a significant reduction in the number of non-numerate individuals after the project's implementation, with a decrease of over 90% compared to the initial stage across all grade levels. Specifically, Grade 7 witnessed a decrease of 43 non-numerates, equivalent to a 98% reduction, while Grade 8 experienced a decrease of 19 non-

numerates, indicating a 95% reduction. Moreover, both Grade 9 and Grade 10 achieved a remarkable outcome, with zero non-numerates, reflecting a 100% reduction in these two grade levels.

The results indicate a clear improvement in numeracy skills among Grade 9 and 10 students. All participants in this group have advanced beyond the non-numerate level, demonstrating proficiency in the four fundamental operations. Notably, none of the students received a score of zero in any of these operations, indicating significant progress. The DepEd's numeracy assessment, as per RM 280 s.2021, classifies learners as Non-numerate if they score zero in any of the fundamental operations.

However, all the students in this assessment have surpassed this threshold, signifying their substantial growth in numerical abilities. The stipulated numeracy skill standard in the mentioned memorandum highlights that among the students in Grades 7-8, there are still two learners who obtained a score of zero in a fundamental operation. Specifically, they struggled with Division, indicating that they haven't fully grasped the basic procedures for dividing numbers, especially when dealing with 2-digit divisors. Feedback from these learners reveals that the division part is particularly challenging, leading to time constraints during assessments due to its multiple-step nature. When dividing two numbers, learners must analyze the given problem and devise a suitable approach. This often involves identifying the closest factor to multiply with the divisor. Consequently, their proficiency in recalling the multiplication table plays a crucial role in successfully navigating the division process.

Extent of Bridging the Conceptual Gaps

To describe the extent (Table 2) to which the project implementation able to bridge learners' conceptual gaps in numeracy, quantity of errors committed in the assessment by grade level were analyzed via mean across the four fundamental operations of numeracy.

The results of the error analysis demonstrated that the project intervention successfully addressed the learning gaps related to the four fundamental operations: addition, subtraction, multiplication, and division. The intervention achieved a high extent level with a mean accuracy of 0.94, indicating that the learners' solutions were highly accurate. The tri-modal approaches utilized in the project proved effective for all learners, as evidenced by the significant reduction in errors after undergoing the interventions. This improvement in understanding and skills contributed to the learners' ability to perform the four fundamental operations with precision. The

interventions provided had a positive impact on the learners, helping them overcome misconceptions and difficulties in performing these operations correctly. In conclusion, the NumeraSAVE project exhibited great potential and effectiveness in reducing the number of non-numerate learners, especially when implemented through tri-modal strategies in blended learning format. It is recommended that the project be sustained and that considerations be given to addressing implementation issues to further enhance the process and reach more learners in the coming years including senior high shool with learning gaps in basic fundamental operations in secondary level math learning. Additionally, to ensure the project's success, the school should seek increased support from the administration, providing technical assistance and financial backing to enhance the conduct of the interventions.

References

Aunio, P., Hautamäki, J., Sajaniemi, N., & Van Luit, J. (2009). Early numeracy in low performing young children. British Educational Research Journal, 35(1), 25-46.

Baroody, A. J., Lai, M.-L., and Mix, K. S. (2006). "The development of young children's number and operation sense and its implications for early childhood education," in *Handbook of Research on the Education of Young Children, eds B. Spodek and O. Saracho (Mahwah, NJ: Erlbaum),187–221.*

Clerkin, A., & Gilligan, K. (2018). Pre-school numeracy play as a predictor of children's attitudes towards mathematics at age 10. Journal of Early Childhood Research, 16(3), 319-334.

Fuson, K., Sarama, J., & Clements, D.2015). Making early math education work for all children making early math education. Phi Delta Kappan, 97(3), 63-68.

Guhl, P. (2019). The Impact of Early Math and Numeracy Skills on Academic Achievement in Elementary School. Master's thesis ad Capstone Projects. Northwestern College - Orange City

Harris, B., & Petersen, D. (2019). Developing math skills in early childhood [PDF].

Mathematica. Retrieved from https://www.edimpactlab.com/downloadmedia?MediaItemId Jonas, N. (2018). Numeracy practices and numeracy skills. Organisation for Economic Co-operation and Development Jordan, N. C., Glutting, J., and Ramineni, C. (2010). The importance of number sense to mathematics achievement in first and third grades. *Learn. Individ. Diff. 20, 82–88.*

Jordan, N., Kaplan, D., Ramineni, C., & Locuniak, M. (2009). Early math matters: Kindergarten number competence and later mathematics outcomes. Developmental Psychology, 45(3)

Locuniak, M. N., and Jordan, N. C. (2008). Using kindergarten number sense to predict calculation fluency in second grade. *J. Learn. Disabil. 41, 451–459.*

Stock, P., Desoete, A., and Roeyers, H. (2010). Detecting children with arithmetic disabilities from kindergarten:

UNVEILING THE TRIAD'S STRUGGLES AND TRIUMPHS IN MDL: VALUABLE INSIGHTS FOR POST-PANDEMIC RESILIENCY AND RECOVERY ROADMAP

Julius R. Garzon , Master Teacher II
Ibarra National High School
Schools Division of Maasin City
julius.garzon@deped.gov.ph

evidence from a 3-year longitudinal study on the role of preparatory arithmetic abilities. *J. Learn. Disabil. 4, 250 –268.*

Toll, S., & Van Luit, J. (2014). The developmental relationship between language and low early numeracy skills throughout kindergarten. Exceptional Children, 81 (1), 64-78.

Introduction

In 2020, the COVID-19 pandemic brought forth a multitude of challenges, including poverty, unemployment, societal pressures, and disruptions in education. Educational institutions across the globe faced unprecedented difficulties. With the sharp increase in COVID-19 cases, DepEd has taken proactive measures to tackle the upcoming school year's unique demands. Despite the obstacles, DepEd remains resolute and eager to uphold the continuity of education. The decision to postpone the school opening is aimed at allowing ample time for necessary preparations for the upcoming academic year. The released school calendar includes strategies to address the prevailing public health emergency.

However, the government mandated educational institutions to suspend in-person classes until vaccines are distributed. As a result, the Department of Education (DepEd) conducted a survey to explore alternative methods for ensuring continuous learning. According to Folsom (2020), research demonstrates that high-quality education can be achieved through distance learning setups. Thus, Modular Distance Learning (MDL) has emerged as a prominent feature of the education system in the new normal. In an article by Malipot (2020) in the Manila Bulletin, it was mentioned that Briones, the head of DepEd, emphasized the significance of Self-learning modules as the primary learning tool, capable of accommodating all students and can be integrated with other available learning modalities.

The role of educators in the modern education landscape is crucial to effectively implement the new approach to learning. Teaching now encompasses a shift in instructional methods that demands significant time and patience from teachers. As we transition to remote learning, teachers are at the forefront, not only in creating educational materials but also in distributing and retrieving them, which comes with higher risks. Engaging with the community and constantly following up with learners present significant challenges due to the threats they face. Parents, too, are playing a much larger role in their children's education. Balancing the stressors of work, home life, and the ongoing global pandemic, parents are understandably feeling uncertain. Their active involvement in their children's education is essential for successful academic outcomes, but it's not without challenges. Many parents struggle to juggle their children's educational needs with their own work-from-home schedules amidst the crisis. For learners, the new educational modality presents new challenges in acquiring knowledge. It requires extra effort and hard work on their part. Home-learning can be even more stressful than traditional classrooms because the absence of peers and friends to socialize with makes it harder to manage. In this new approach, learners heavily rely on themselves and their "shadow" teachers to accomplish tasks, which can lead to difficulties and obstacles that may impact the quality and effectiveness of learning.

The triad of teachers, parents, and learners in Maasin City played a crucial role in the success of a learning moadlity. Therefore, it is essential to gather their feedback and insights from their first-hand experiences during the implementation process. This information will provide realistic, valuable, and practical guidance to school leaders for strengthening and improving learning continuity plans (LCPs). This study aims to examine the experiences of the triad directly involved in conducting MDL to extract valuable insights. The qualitative phenomenological analysis seeks to identify useful inputs that will enhance and streamline our processes, ensuring a systematic, data-driven, safe, and smooth-sailing school year. This study is also geared to uncover the lived experiences of teachers, parents, and learners in frontlining modular distance learning during this pandemic times. Specifically, this sought answers to the following questions, namely (1) What are the difficulties, problems, or issues experienced by the teachers, parents, and learners (triad) in frontlining modular distance learning? (2) What are the self-initiated strategies or practices performed by the triad to ensure quality modular distance learning? (3) What are some factors affecting the quality and efficiency of modular instruction based on the feedbacks of

triad?

Theoretical Support

This study is based on the theoretical framework of distance education, as outlined by Keegan (referenced in Simonson et al., 1999). Keegan categorized theories into three groups: theories of independence and autonomy, theories of industrialization of teaching, and theories of interaction and communication. Wedemeyer's theory of independence and autonomy is particularly significant in this context, emphasizing that the essence of open and distance learning (ODL) lies in promoting learner independence (Simonson et al., 2009). Early definitions of ODL were largely influenced by this theory, focusing on key characteristics such as learner separation and flexibility in time. Gunawardena and McIsaac (2003) note that Wedemeyer's vision of independent study aligns with concepts of self-directed learning and self-regulation.

Otto Peters' perspective on distance education was that it resembled an industrialized approach to teaching and learning. He likened it to the mass production of goods during the industrial age, suggesting that distance education would not have been feasible before that era. Peters (1988) introduced a novel set of terms, heavily influenced by industrialization, to analyze distance education. These terms included Rationalization, Division of Labor, Mechanization, Assembly Line, Mass Production, Preparatory Work, Planning, Organization, Scientific control methods, Formalization, Standardization, Change of Function, Objectification, Concentration, and Centralization. According to Simonson et al. (2006), the division of labor is a crucial aspect of distance education, and Peters' theory introduced "mechanization" and "automation" to update the teaching process.

Borje Holmberg's theory of distance education, referred to as "guided didactic conversation," falls under the communication theory umbrella (Schlosser & Simonson 2009, p.43). Initially, Holmberg proposed seven background assumptions, which were later expanded in 1995. The theory encompasses eight key components: (1) Distance education caters to individual learners who cannot or prefer not to engage in face-to-face teaching. (2) It empowers students with freedom of choice and independence. (3) Society benefits from distance education. (4) It serves as a tool for lifelong learning, offering equal access to learning opportunities and promoting equity. (5) Distance education has the potential to encourage metacognitive approaches. (6) Deep learning is emphasized as an individual activity in this approach. (7) It remains open to various modes of learning, including behaviorist, cognitive, and constructivist methods. (8) Personal connections, enjoyment of learning, and empathy between students and their support system play a central role in distance education. In summary, Holmberg (1986) underscores the significance of dialogue between learners and teachers, asserting that guided conversation facilitates effective learning within the distance education framework.

Review of Related Literature and Studies

The global education system's lack of progress in adopting innovative teaching methods is concerning, given its long-standing reliance on traditional seminar-based learning and outdated class structures. The COVID-19 pandemic, however, served as a catalyst for educational institutions worldwide to seek revolutionary approaches within a short period (Linney, 2020). It is evident that delays in classroom learning have a negative impact on students' academic performance (Akther, 2020), denying them crucial opportunities for growth and advancement as they progress through school (UNESCO, 2020).

According to Özkul (2003), distance education, which involves students and teachers being separated in time and space, has become increasingly attractive. However, there have been some challenges, particularly in the assessment and evaluation process, leading to difficulties in adequately evaluating students (Shuey, 2002). Consequently, distance educators have adopted various assessment methods beyond traditional exams and assignments, relying on alternative data collection tools (Altan & Seferoğlu, 2009).

Several studies have reported positive outcomes for distance education, with examples like Creighton University, where distance students performed better than their on-campus counterparts (Gossenheimer, 2017; Lenz et al., 2006). Cognitive factors, such as learning experiences and academic performance, have been found to be comparable between distance and campus-based classes (Carr, 2000; Schoech, 2000).

However, the perceptions and satisfaction levels of distance education professors and students have not consistently aligned (Bower, 2001; Hara, 1999). Various factors, including material accessibility, interaction with professors, time management, and expenses, may influence the opinions of those participating in distance education (Middleton, 1997).

Methodology

This qualitative study follows the hermeneutic phenomenological design (Woodruff, 2008; Laverty, 2003). To account for geographical variability among respondents in the four districts of

Maasin City division, a multi-stage cluster sampling technique was employed. Cluster sampling involves grouping population elements into mutually exclusive clusters, as explained by Frey (2018). This method is utilized when it is challenging to create an exhaustive list of all elements in the target population (Crossman, 2019).The study randomly selected participants, including teachers, parents, and learners, from various schools in the four districts of Maasin City Division. Both elementary and secondary levels were equally represented, and multiple schools were grouped into clusters within each district. From these clusters, six teachers (three from elementary and three from secondary) were randomly chosen per district, resulting in a total of twenty-four teachers participating in the study. The same number of parents and learners associated with these teachers were also included in the sample. The selected sample size of twenty-four participants aligns with the ideal range of 5-25 participants recommended for phenomenological studies by Creswell (1998). This size is considered sufficient to achieve response saturation based on the principle proposed by Glaser and Strauss (1967).

The research utilized both direct and indirect semi-structured interviews, employing a validated researcher-made guide as a tool. To enhance the findings, triangulation was employed, using artifacts and observations as additional support for the identified themes. Due to COVID19 restrictions, most interviews were conducted in written form. The survey questions were printed and attached to modules delivered to respondents, later collected for analysis. However, respondents without access to gadgets or the internet were an exception. For those with gadgets or internet access, responses were collected via text, Facebook, messenger, or email instead of written forms. To delve deeper into their thoughts and ensure sincerity, probing questions were asked through video calls. Participants were briefed beforehand about the research's nature and purpose. To ensure the safety of all involved, proper health protocols, such as wearing face masks and shields, disinfecting retrieved questionnaires, and maintaining social distancing, were strictly observed during data collection. For further follow-ups and online interviews, the researcher needed internet access. The collected data were organized, transcribed, and

Table 1a. *Experiences through the Lens of Teachers*

Themes	Description	Sample Verbatim
Work Stress and Health Risks	Exhaustion of teachers from preparing, printing, sorting, and packaging self-learning materials with overlapping ancillary tasks and facilitating students. From stress, teachers face risk in health and possible exposure to viral transmission.	*"di lalim toa ka sa remote school na-assign ky aside pagkuha sa module, motravel paka, then mobaktas pa kas kabukiran,init. Nay time maka-encounter kag kalisod nga sometimes makadelay sa delivery. Exhausting kaayu but carry lang, hehe*
Readiness & Adjustment on modular process	Adjustment was not easy for teacher embracing new routines in workplace. The process is new while teachers do not have full grasp of the procedure in modular distance learning until they experience problems in implementing the modality.	*"pilmiro naglibog ko sani among bohaton sa MDL, dili pami sweto sa proseso. Tanan paagi bag-o lahi jod sauna, mao nga sa amo trabaho, maningkamot lage nga makaadjust para sa mga bata.*

Met Problems Observed by parents & learners	Other emerging problems are met relative to how parents deal the modular distance learning. Likewise, Some learners were found not not working well with required learning tasks and their expected responsibilities.	*"sa ahong case nay mga ginikanan nako nga moingon nga naglisod sila sa pagtudlo kay lagi wala daw sila kahoman Naay oban nga pasagdan salaman ang bata kay unahon ang panginabuhi"*
Balancing Time	Webinars as well as other required reports of their designations are additional concerns of teachers. Thus, struggles come from balancing between routine works and ancillary tasks.	*"na busy gayod uie kay dili lang printing imo atimanon, naa puy mga virtual nga atenan, mga reports himuon, encode diri encode didtu, sahay maglabad na amo ulo labi nag di mi haniti parti ICT.*
Delay materials affecting distribution &retrieval	Delay of printed modules provided by SDO affects the timeliness of delivery. Distribution and retrieval issues such as tardiness of submission and presence of learners in difficult circumstances also add burden to teachers	*"usahay ang module akoa gihulat, dili moabot sa saktong schedule. Maong nay week nga wala koy SLM, naghatag na lang ko og LAS kay lisod man walay bohaton ang bata sayanf time"*
Communication problem	Teachers struggle with communicating parents and learners as not all of them has gadgets nor internet for contact purposes. The load expenses also entails teacher spending money from their own pocket	*"...tungod sa kalisod, kasagaran mga bata wala gyuy gadgets maong usahay lisod efollow up kay dili tanan makachat, usahay walay load ang ginkanan, makagasto ko.*

subjected to thematic analysis following the appropriate procedure.

Results and Discussion

Struggles Experienced by the Triad in Frontlining the modular distance learning modality

Teachers' feedback indicates that they are facing significant challenges in implementing the MDL (likely referring to a specific teaching methodology or approach). The most notable issue is the stress and health risks associated with their daily instructional tasks. The stressors arise from various phases of module preparations. Some teachers mentioned that dealing with large volumes of materials and printer malfunctions contribute to their workload and time constraints. Consequently, many teachers resort to multitasking, even while working from home, in an effort to meet their targets. This heavy workload often leads to mental stress and exhaustion, as teachers are not only concerned with printing materials but also have other responsibilities both on-site and remotely.

Research by Alea et al. in 2020 confirmed that teachers struggle to manage stress, especially during community quarantine periods when they have to juggle online follow-up with learners, meet school administrators' deadlines and requirements, establish communication networks with parents for support, assess students' output through online learning management systems, and create a positive online class environment by providing emotional support alongside content-based teaching and learning.

Teachers commonly faced challenges in adapting to the new education system, which lacked face-to-face interactions with students (Drane & O'Shea, 2020). This significant transition required major adjustments and caused discomfort for teachers, as they encountered issues like time constraints, difficulties in providing direction, and handling cramming problems. Some teachers also had to address concerns raised by parents who struggled to facilitate the learning materials at home, especially

when they were preoccupied with work responsibilities. This situation created less attention from working parents compared to those without such commitments. Additionally, there were learners who lacked parental support due to being from broken families or living without biological parents, further complicating the situation. In such cases, teachers needed external assistance to guide these learners academically at home, as they required extra support to meet the curriculum expectations during the pandemic era of education.

Furthermore, communication problems were common among teachers, making it challenging to effectively reach out to remote learners and track their progress. Limited access to gadgets posed a

Table 1b. *Experiences through the Lens of Parents*

Themes	Description	Sample Verbatim
Disruption of Work	Most parents need to work to earn and provide for family. Some full-time mothers can provide time for modular but disrupts daily household chores & even attending the immediate needs of younger children.	"Nakaapekto kini sa panginabuhi/ trabaho kay dili man matunhay kung ang bata mag-answer sa module, mag sige ug pangutana sa dili niya masabtan"; "usahay dili nami mutulin sa among daily routine "
Difficulty in Understanding the Module	Lack of thorough knowledge & ability to explain and elaborate the concepts in module is the major struggle of parents with low educational attainment.	"usahay maglisod ko tudlo sa anong anak ky syempre wa koy knowing sa topic diha sa modyul. Wala my lage ko kahuman og skwela kaniadto maong wala koy kaayo naantiguhan sa module."
Managing Children's Discipline	There are times children who do not mind about answering module unless pushed by their parents. Some children care on other business than answering. They need to be scolded first before working. Discipline is different when working at home.	"sahay maglagot kos aho bata labi na kon imo siyang mabiyaan kadali kay mosibat"; "ahong bata maghuwat pa sultihan, di molihok dayon og dili kazab-an, dili maningkamot makamao, kargado og onja maong dili jod mutulin..."
Learning Environment	Presence of distractions at home affects focus. Learners need a more conducive study area away from possible disturbances. Disruptions of learning can be a factor learning outcomes and interest of learners.	"...lahi ra gyud og naa sa skwelahan kay sa bhay sahay walay focus kay matintal sa gadget. Less ila atensyon lahi ra kun maestro gayod ang moatobang..."
Managing time	Some children at home depend so much on the attention of their parents. So parents who have work need to balance time to provide attention to their children which is a struggle on their part.	Dili mutulin mao kinahanglan gayon ug tutukan ang bata kung mag answer na. Isip usa ka parent , lisod gyud pagbudget sa oras labi na og naa kay buhaton importante or nay trabahuon "

significant barrier for both teachers and students. Even when learners had access to cellphones, financial constraints for load or data connectivity hindered effective communication. Research by Dangle and Sumaoang (2020) demonstrated that teachers faced difficulties in communicating with parents, as some parents lacked the necessary gadgets and could not afford to buy load or data consistently.

The combination of the ongoing pandemic and the implementation of distance learning (MDL) by the Department of Education (DepEd) has become a significant source of stress for parents. They are expected to juggle personal life, work, and child-rearing, without access to other resources for support (Spinelli et al., 2020). The COVID-19 situation introduces new stressors that jeopardize their health, safety, and financial stability (Brown et al., 2020). This places a greater burden on parents, who now have to take on multiple roles, such as being a learning supervisor, tutor, and home-schooling teacher (Hapsari et al., 2020). Although active involvement from parents in their children's education can yield positive results, it becomes challenging for

working parents to manage their time effectively to meet both their children's academic needs and their work responsibilities.

For parents, the disruption of their work due to these circumstances is particularly difficult, especially when their children struggle with the distance learning modules. The value of education to parents drives them to guide and facilitate their children's learning at home with the guidance of teachers. Parents often find themselves prioritizing survival before they can focus on thriving (Clark et al., 2020). This aligns with Maslow's hierarchy of needs, where basic needs must be met before higher-level needs can be addressed (Steere, 1988).

In the study conducted by Dong et al. (2020), it was found that many parents held negative views regarding the advantages of online learning. They preferred traditional learning methods due to the challenges posed by the COVID-19 pandemic, their children's struggle with self-regulation in online settings, and their own lack of time and expertise to effectively support online learning. Balancing responsibilities, learner motivation, accessibility, and achieving desired learning outcomes were some of the difficulties parents faced, as highlighted by Garbe et al. (2020). Trovela (2021) revealed that parents participating in the study understood Modular Distance Learning as a method where learners work on Modules, mainly consisting of written assignments, at home. Additionally, Agaton and Cueto (2021) confirmed that this new learning setup placed additional burdens on parents who were already busy with work and family responsibilities. Parents observed that learners faced challenges with the rapid pace of lessons, the overwhelming number of activities within a short timeframe, and difficulties in achieving learning objectives. Furthermore, parents had to cope with personal challenges such as stress, health issues, and limited social interactions with others.

Teaching their child proved to be a challenging task for certain parents due to the requirement of studying and understanding the module content before being able to help with their child's questions during distance learning (Agaton & Cueto, 2021). According to interviews with parents, some of them struggled to provide assistance when they lacked knowledge or comprehension of the module topics. As a result, they could only help with the parts they could understand and had to skip those that were beyond their grasp. The parents attributed their difficulty in elaborating on the module to their own limited familiarity with the subject matter. This suggests that parents' educational backgrounds play a significant role in their ability to effectively facilitate their children's learning. Some parents mentioned in interviews that they didn't complete elementary or

Table 1c. *Experiences through the Lens of Learners*

Themes	Description	Sample Verbatim
Difficulty to Understand Content	Problem on understanding the content are experienced for learners who are reliant to the discussion of teachers. Learners find portions of module that are too difficulties at their level.	*Naglisod kay dili nako masabtan ang words ug mga explaination. Sa mga activity ko naglisod labi na sa English kay wala pa man ko nasinati."*
Loaded Modules and bulky tasks	Modules are tasky for learners dealing 8 subjects a week. Some modules are too long while learning tasks are demanding.	*"kapuya man daghana modules buhaton then nay oban dghan activities. Lisod sabton puros ra words, lahi ra og nay modiscuss kay masabtan pa.*
Limited Interactions	Since modules and learning activities are individualized, learners do not have opportunity to interact freely in groups to share and exchange ideas to enrich learning.	*"..lisod ning kahimtang nga ato ra kaugalingon saligan or kinsa sa ato balay kay dili ta kainteractsa oban lahi sauna nga nay group activities nga malingaw kaayo mi.*
Poor Basic Skills in Literacy & Numeracy	Basic reading and numeracy adds difficulty in the comprehension of texts. Some learners struggle with lesson brought by poor basic prerequisite skills.	*" Naglisod kay hinay mobasa ug dili kaayo makasabot sa gibasa maong Dili tanan ako masabtan ang sulod sa module"*
Distractions that affect focus	The focus of learners is affected by the disturbance the get from working at home especially when the study space for learning at home is not conducive due to possible distractions such noise, gadgets, etc.	*"nay panahon dili ko kafocus sa balay kung adlawan kay alibugjaw, samok aho manghod, usahay kalit lang ko tawagon. Lisod sad og nay silingan nga banha kusog tukar music mao sahay muundang salaman ko og tuon.*
Connectivity Problems	Lack of gadget or no internet connectivity or signal to communicate with teachers for important matters. Unable to expand learning through research and watching video and exploring social media.	*"lisod kayo sa amo lugar sir kay walay signal, nagsalig rapod ko sa module kay wala ma koy celpon, wala mi kwarta ikapalit so dili ko kawork sa activity nga nagneed og research.*

high school levels themselves. Consequently, they felt their best option was to supervise their child's work on the module and ensure they were progressing, although they were not able to provide in-depth guidance. On the other hand, there were some parents who sought assistance from neighbors, relatives, or other learners who had a higher level of education.

Table 1c. *Experiences through the Lens of Learners*

Several students expressed their struggles in comprehending the module content. Some of them admitted to skipping certain parts and focusing only on what they felt capable of understanding. They mentioned that having a teacher present during discussions was crucial for them, as they were accustomed to learning by listening to teachers in the classroom. Relying solely on the module felt like a significant obstacle for some students. Trovela (2021) pointed out that even though studying from home could save costs for parents, learners reiterated that not everyone has the same level of intelligence, leading to difficulties in studying without a teacher's physical guidance.

Moreover, some learners faced challenges in contacting their teachers, especially when teachers utilized group chat platforms, as not all students had access to the necessary gadgets. This lack of immediate help proved problematic, particularly for students from remote areas. Additionally, students confessed that they often felt unmotivated to read bulky modules initially. They also complained that some activities were too complex and not suitable for their specific contexts. Uzurka and Makeri's (2020) findings supported this, as one student highlighted the overwhelming amount of tasks assigned by lecturers as a major challenge. The student believed that in-person classes were still preferable to the home setup due to the accumulation of task The lockdown has allowed families to spend more time together and bond, but it has also presented challenges in terms of the new instructional setup, which has hindered socialization among children (Agata & Cuaton,

2021). During modular distance learning, certain activities that were possible in face-to-face settings, like cooperative learning, are no longer feasible during the pandemic. Lukong et al. (2020) highlight that students' learning greatly benefits from social interactions with peers and teachers, whether in-person or through online platforms. Unfortunately, the limited activities in the modules and the lack of access to gadgets for online learning prevent learners from developing their socialization and communication skills.

A significant issue with modular distance learning is that some learners still struggle with basic literacy and numeracy skills. The learning environment plays a crucial role in effective education, but distractions at home often interfere with studying the modules. Uzurka and Makeri (2020) found that 14.62% of students reported their home environment was not conducive to learning, while 12.31% faced challenges due to uncooperative behavior from lecturers during the COVID-19

Table 2. *Triad's Initiated Strategies and Interventions.*

Teachers' Strategies	Parents' Interventions	Learners' Initiatives
Permitted Home Visitation	One-on-one tutorial	Seeking help
Group Chat	Referral	Read and reread technique
Audio-Video Lessons	Messenger with teacher	Time scheduling
Supplementary materials/ SIM	Prize-giving	Contact my teacher
Call & Text 24/7	Disciplinary measures	internet

pandemic. Moreover, connectivity problems, especially in areas with geographical variations, hinder the learning process as not all cluster barangays have access to communication networks. Consequently, some learners lack enjoyment and access to internet resources. Moakofhi et al. (2017) identified a lack of appropriate computer skills as another challenge that impedes the effective implementation of e-learning.

On Teachers' Strategies

During interviews, the majority of teachers disclosed that they conduct home visitations with proper consent and adherence to IATF health protocols. During these visits, teachers communicate with parents about their child's academic progress and inquire about any challenges or issues encountered while performing modular tasks. Additionally, teachers have found group chats using messenger platforms to be highly advantageous. This method allows them to send important instructions, clarifications, reminders, and urgent information directly to learners who are part of the group chat. To enhance remote learning, teachers have developed Audio-video lessons (AVL) on complex topics within their subject areas. However, some AVLs might not have undergone quality assurance due to time constraints and conflicting schedules of expert

validators for the videos. Furthermore, teachers have supplied learners with supplementary materials, like additional Learning Activity Sheets, work sheets, and strategic intervention materials (SIM), all aligned with the Most Essential Learning Competencies (MELC). Another measure taken by teachers is to create a master list of contact numbers and information for all the learners under their care. This allows learners to seek academic assistance from their teachers through calls or texts at any time. Unfortunately, not all learners have cellphones or stable signals, so only those who can be reached through these methods are accommodated by these interventions.

On Parents' Interventions

The primary findings from parents indicated that they often engage in one-on-one tutoring sessions with their children. This is particularly true for non-employed parents who have the luxury of spending ample time with their kids at home. On the other hand, working parents have less time to spare for their children compared to non-working parents. As a result, they resort to seeking help from others when they are unable to attend to their children's needs. Some parents turn to older siblings ("Kuya" and "Ate") or collaborate with their child's classmates who can assist with the school modules. Those with access to technology and the internet tend to seek aid through platforms like Facebook Messenger, where they may have group chats with teachers for assistance. To motivate their children, some parents offer incentives or rewards upon completing their modules. These rewards can be both intrinsic and extrinsic, as they believe that this boosts their child's confidence and attention towards their studies. Additionally, parents find that implementing disciplinary measures helps ensure that their children consistently fulfill their academic responsibilities.

On Learner-Initiated Actions

In home learning, parents are typically the go-to source for help. However, not all parents may be equipped to teach the content, theoretical concepts, or provide explanations effectively. Some learners resort to repeatedly reading the study materials, especially when examples are available, to grasp the ideas better. Additionally, managing time effectively is crucial for successful learning, but some learners struggle when overwhelmed with numerous modules, leading to last-minute cramming. Other strategies employed by learners include utilizing communication platforms and internet connectivity. Nevertheless, this approach is only feasible for those with access to cell phones, stable signals, and internet connections. Moreover,

Table 3. *Factors that affects learning in modular distance learning modality*

Factors	Subthemes from Triads	Descriptions	Sample Verbatim
Quality of Material	*Difficulty in Understanding the Module* *Difficulty to Understand Content* *Loaded Modules and bulky tasks*	Quality of Materials reflects on the amount and difficulty level of content and learning tasks	*"lisod isabot sa module nga dili klaro unya minus og mga examples."*
Process	*Delay materials affecting distribution & retrieval*	Process of distribution and retrieval can influence timeliness of outputs among students	*"dili mutulin ang mga bata kun malangan pod nila ang module"*
Learner's foundation & engagement	*Limited Interactions/socialization* *Poor Basic Skills in Literacy & Numeracy*	Level of basic skills and interaction among learners are essential factors that develop better learning.	*"..akong bata maglisod paman og basa, kinhanglan pa mobalik og review"*
Capability & Welfare of Facilitators	*Readiness & Adjustment* *Work Stress and Health Risks* *Met Problems from parents/ learners* *Managing Children's Discipline*	Parents/teachers' level of preparedness, stress, risks, problems met are possible situation that affect modular instruction.	*"hasol jod ning module, stress tungod sa daghan bohaton, maglisod ko pag- assist ky tungod sa pandemic"*
Level of Communi-cation	*Communication problem* *Connectivity Problems*	Availability of platforms & consistency of communication between teachers and learners/parents are necessary for effective distance learning.	*"kaning wala tay celpon sir lisod gyud mangajo og assistance sa teacher"*
Home Situations	*Balancing & managing Time* *Disruption of Work* *Learning Environment* *Distractions that affect focus*	Home situations reflects the environment of learning. A conducive learning environment is one without distractions that affect focus and learning.	*"lisod makafocus sa balay kay syempre dghan samok nga mga tawo, alibogjaw sad ang palibot tungod kabanha sa pikas balay"*

using the internet comes with the burden of expenses for data, which may not always be affordable for all learners.

The results clearly indicated that teachers, parents, and learners identified various potential factors that could influence the success of modular distance learning delivery. These factors include the quality of materials, the process of distance learning, learners' foundation and engagement, facilitators' capability, level of communication, and home situations. Identifying these factors is crucial as they provide valuable insights for formulating action plans and making policy decisions. The study highlighted that the implementation of modular distance learning posed challenges and difficulties for teachers, parents, and learners, making it essential to address their concerns. Equipping them with effective strategies to safeguard the future of education is of utmost importance. Research and discussions that focus on the perspectives of this triad regarding the impact of the lack of face-to-face interaction can greatly aid educators and policymakers in planning for future academic approaches.

Conclusion and Recommendations

The valuable insights gained from the triad's experiences highlight the importance of nurturing relationships with students and parents to better understand their current challenges. To promote student success, it is crucial to create interactive, flexible, and supportive learning environments that enhance social presence. However, teachers also need continuous support to effectively implement these approaches. To address accessibility issues, districts should devise strategies to assist learners with special needs, ensure technology access, provide support for learning tasks, and aid in resource navigation. Additionally, it is essential to extend the right kind of support to parents who may struggle with their daily lives while trying to support their children. Validating their feelings and acknowledging their efforts is crucial for

maintaining their mental and emotional well-being and enabling effective support for their children's education.

Learning from the challenges and triumphs of the triads can offer valuable inputs and ideas for building resilience and recovery approaches in a post-pandemic situation or any future pandemic. Utilizing firsthand experiences from teachers, parents, and learners during the COVID-19 education can help shape new policies and roadmaps to address learning losses. The issues and concerns faced by the triad provide valuable lessons that can guide educators and policymakers in taking steps and restructuring strategies to make education effective, regardless of the crisis that may occur in the country. By reflecting on these experiences, we can create a more robust and adaptable education system that can withstand and overcome future challenges.

References

Angdhiri, R.P (2020). Challenges of home learning during a pandemic through the eyes of student. The Jakarta Post. Retrieved from https://www.thejakartapost.com//life/2020/04/11/challenges-of-home-learning-during-a-pandemic-through-the-eyes-of-a-student-.html.

Akther, J. (2020). Influence of UNESCO in the Development of Lifelong Learning. *Open Journal of Social Sciences, 8(3), 103-112.*

Baker, J. (2020). *The kids who will never return to school after COVID-19. Retrieved from* www.smh.com.au/national/the-kids-who-will-never-return-to-school-after-covid-19-20200411-p54j0e.html#comments

Carr S. (2000). Online psychology instruction is effective, but not satisfying, study finds.

Chronicle of Higher Education. 46(27), pA48, 2/5p.

Clark, H., Coll-Seck, A. M., Banerjee, A., Peterson, S., Dalglish, S. L., Ameratunga, S.,Balabanova. D., Bhan, M. K., Bhutta, Z. A., Borrazzo, J., Claeson, M., Doherty, T., ElJardali, F., George, A. S., Angela Gichaga, A., Gram, L., Hipgrave, D. B., Kwamie, A., Meng, Q. Costello, A. (2020). A future for the world's children? A WHO–UNICEF–Lancet Commission. The Lancet, 395(10224), 605-658.

Dangle, YRP, & Sumaoang, J.D. (2020). The Implementation of Modular Distance Learning in the

Philippine Secondary Public Schools. 3ʳᵈ International Conference in Advanced Research in Teaching and Education. 100-108

Dong, S. Cao, S., & H. Li, H. (2020), "Young children's online learning during COVID-19 pandemic: Chinese parents' beliefs and attitudes," *Children and Youth Services Review, 118, 1-9, doi: 10.1016/j.childyouth.2020.105440.*

Drane, C., Vernon, L., & O'Shea, S. (2020). The impact of 'learning at home' on the educational outcomes of vulnerable children in Australia during the COVID-19 pandemic," National Centre for Student Equity in Higher Education, Curtin University, Australia, 2020

Folsom, J. (2020). Distance learning during the COVID-19 pandemic. Making Sense of Science. WestEd.

Garbe, A., Ogurlu, U., Logan, N. & Cook, P. (2020). Parents' Experiences with Remote Education during COVID-19 School Closures, *American Journal of Qualitative Research, vol. 4, no. 3, pp. 45-65, 2020, doi: 10.29333/ajqr/8471.* Hara N. & Kling R. (1999). Student's frustrations with a web-based distance education course. First Monday, 4(12)

Hapsari, S.M., Sugito, S. & Fauziah, P.Y. (2020). Parent's Involvement in Early Childhood

Education during the Covid-19 Pandemic Period," *Jurnal Pendidikan Progresif, 10 (2), 298-311, doi: 10.23960/jpp.v10.i2.202014.*

Lenz TL, Monaghan MS, Wilson AF, Tilleman JA, Jones RM, Hayes MM (2006). Using performance-based assessments to evaluate parity between a campus and distance education pathway. Am J Pharm Educ. 70(4): Article 90.

Linney, S. (2020). *How is the spread of the coronavirus impacting higher education institutions?* Retrieved from www.qs.com/how-is-the-spread-of-the-cornavirus-impacting-higher-education-institutions/ Malipot, H.M (2020). DepEd: Most stduents prefer moular over online. Manila Bulletin. Published July 3, 2020, 4:55 PM Retrieved from https://mb.com.ph/2020/07/03/deped-most-students-prefer-modular-learning-over-online

Middleton A.J. (1997). How effective is distance education? International Journal of Instructional Media. 1997; 24, 133±138.Ntekani, A. (2018). Parental involvement in education. Research Gate. Retrieved from https://www.researchgate.net/publication/324497851

Portugal, A. (June 9, 2020). Philippine students face distace learning until Vaccine found. US World Report News.

Schoech D. (2000) Teaching over the Internet: Results of one doctoral course. Research on Social Work Practice, 10, 467±487.

Shuey, S. (2002). Assessing Online Learning in Higher Education. Journal of Instruction Delivery Systems, 16(2),13-18.

Spinelli M. (2020). Parents' stress and children's

psychological problems in families facing the COVID-19 outbreak in Italy," *Frontiers in Psychology, vol. 11, pp. 1-17, 2020, doi: 10.3389/fpsyg.2020.01713.*

Steere, B. F. (1988). Becoming an effective classroom manager: A resource for teachers.

Suny Press.Omlinson, C. A. (2000). Differentiation ofinstruction in the elementary grades (ED443572).ERIC Document Reproduction Service

Tuscano, F.J. (2020). It's not about online learning: A

reflection on the new normal in education (Part 2). Retrieved from https://francisjimtuscano.com/2020/05/07/its-not-about-online-learning-a-reflection-on-the-new-normal-in-education-part-2/

Tanveer, M., Bhaumik, A., Hassan, S., & Ul Haq, I. (2020). Covid-19 pandemic, outbreak educational sector and students online learning in Saudi Arabia. *Journal of Entrepreneurship Education, 23(3).*

Uzorka, A. & Makeri, Y. A. (2020). Academic

EBALWASYON SA SANAYANG GAWAIN SA FILIPINO: PINAGYAMANG KAGAMITAN PARA SA PERSONS DEPRIVED OF LIBERTY (PDL)

Lucky B. Ondras, Teacher III
Hampipila National High School-303373,
Schools Division of Leyte
lucky.ondras@deped.gov.ph

Challenges faced by Students in Higher Education during COVID-19 Pandemic. International Journal of Research and Innovation in Social Science (IJRISS) 4(7), 474-476.

First Monday, 4(12)

Introduksiyon

Oportunidad kung maituturing ng mga Persons Deprived of Liberty (PDL) ang pagkakaroon ng paaralan sa loob ng koreksyunal na pasilidad. Sa bisa ng Regional Memorandum No. 538 at Government Permit No. 39 s. 2020 ng Kagawaran ng Edukasyon sa Rehiyon 8, naipatupad ang Senior High School sa loob ng pinakamalaking koreksyunal na pasilidad sa rehiyon. Bilang isang paaralang sekundarya sa loob ng kontroladong pasilidad, layunin ng Department of Education (DepEd) at Bureau of Corrections (BuCor) ang holistikong repormasyon ng mga mag-aaral na PDL na kalahok sa ipinatutupad na mga gawaing pampagkatuto. Subalit, ang mga kagamitang pampagtuturo at pampagkatuto kagaya ng mga aklat, modyul at mga sanayang gawain na ginagamit ng mga guro at mga mag-aaral sa malayang lipunan, ang ginagamit din sa kulungan bilang sanggunian o mismong suplimental na kagamitan. Kung kaya, malaking hamon sa mga gurong nagtuturo sa loob ng koreksyunal na pasilidad ang pagpapatupad ng mga angkop at makabuluhang gawaing

pampagkatuto sapagkat limitado ang mga kagamitang maaaring ipasok dito ganoon din ang mga gawaing itinatakda sa paniniwalang ito ay sensitibo sa mga mag-aaral na PDL o lumalabag sa mga panuntunan ng isang kontroladong pasilidad (Castro at Brawn, 2017). Suliranin din ng mga guro sa kulungan ang araw-araw na pag-isip ng mga gawaing magkapagbibigay ng mga makabuluhang karanasan sa mga mag-aaral na akma rin sa edad, at kinalalagyan ng mga ito. Kung kaya, kanais-nais ang pagkakaroon ng kalipunan ng mga sanayang gawaing angkop sa mga mag-aaral na tiyak din sa layunin at kompetensi ng asignatura. Pinagtibay sa ikalimang seksyon ng Republic Act 10533 o ang Enhanced Basic Education Act of 2013 ang mga guro na siyang tagapagtaguyod ng kurikulum sa paaralan na lumikha o gumawa ng mga hakbang sa pagdebelop ng mga kagamitang tiyak para sa mga mag-aaral bilang tugon sa pangangailangang mas nagiging madali ang pagkatuto kung ang mga gawain ay nauugnay sa edukasyonal at sosyal na konteksto.

Lalong tumingkad ang pangangailangan sa debelopment ng mga kontekstuwalisadong kagamitan tulad ng mga sanayang gawain nang magpatupad ang DepEd ng distance learning taong 2020 dahil sa pandemya. Ang mga guro ay hinikayat na gumawa ng mga sanayang gawain bilang tugon sa pangangailangan na ipagpatuloy ang edukasyon kahit pa man ang pagtuturo ay hindi pisikal na nagaganap sa loob ng silid-aralan. Dagdag pa, dahil

din sa naging pagkukulang ng ahensiya sa pagpapalabas ng mga Self Learning Modules (SLMs) sa lahat ng asignatura linggo-linggo sa bawat baitang, natugunan ng mga nabuong sanayang gawain ng guro ang gap sa kawalan ng kagamitan sa pagkatuto sa tiyak na panahon dahil hindi pa handa ang mga modyul na ito. Pinagtibay rin sa probisyong ito ang pagtiyak ng mga guro na ang mga kagamitang nabuo ay naayon sa Most Essential Learning Competencies (MELCs) na ipinalabas ng Bureau of Learning Delivery (BLD) ng Kagarawan. Hango sa DepEd Order no. 21, s. 2019 o ang Policy Guidelines on the K to 12 Basic Education Program at sa DepEd Order no. 18, s. 2020 o ang Policy Guidelines on the Provision of Learning Resources in the Implementation of the Basic Education Learning Continuity Plan (BE-LCP), mahalaga na ang mga kagamitan tulad ng mga sanayang gawain na nabuo ng mga guro dahil sa pangangailangan ng kaniyang mga mag-aaral ay idaan sa ebalwasyon nang matiyak ang kaangkupan at kalidad ng mga ito.

Kung kaya, naging layunin ng pananaliksik na ito na maebalweyt ang mga nabuong sanayang gawain sa "Komunikasyon at Pananaliksik sa Wika at Kulturang Pilipino" para sa mga mag-aaral na PDL. Tiningnan kung ang wika, nilalaman, layout at disenyo ng mga nabuong kagamitan ay ang*kop sa mga nabanggit na mag-aaral.*

Layunin

Nilayon ng pag-aaral na ito na maebalweyt ang mga nabuong sanayang gawain ng guro sa asignaturang Komunikasyon at Pananaliksik sa Wika at Kulturang Pilipino para sa mga mag-aaral na Persons Deprived of Liberty (PDL) sa ika-11 baitang. Sinuri ang **nilalaman** ng kagamitan batay sa (a) intellectual property rights compliance, (b) learning competencies, (c) instructional design and organization, (d) instructional quality, (e) assessment, at (f) readability. Maingat din na tiningnan sa ebalwasyon ang **wika** ng kagamitan batay sa (a) coherence and clarity of thought, (b) grammar and syntax, (c) spelling and punctuation, at (d) consistency in style. Binigyang pansin din sa ebalwasyon ang **layout at disenyo** ng kagamitan batay sa (a) physical attributes nito, (b) cover page, (c) front matter pages, (d) inside pages, (e) back matter pages, (f) design and layout, (g) typographical organization, at (h) visuals.

Batayang Teoretikal

Nagsilbing saligan ng pag-aaral na ito ang mga teoryang *Non-directive and Therapeutic Learning ni Rogers (1987) at Andragogy Theory ni Knowles (1997).*

Inilarawan ni Rogers (1987) ang non-directive therapy bilang isang paraan ng terapista sa panggagamot na kung saan sinusunod nito ang ninanais ng kliyente. Taliwas ito sa paniniwalang ang terapista ang siyang magdadala tungo sa lubusang paggaling ng kliyente. Sa halip, ang terapista ay tutulong lamang upang matukoy ng kliyente ang suliranin at hayaan itong madiskubre ang solusyon ng kaniyang pinagdadaanan. Matapos ang ilang taon, ginamit ng mga eksperto ang terminong person-centered sa halip na client-centered ng non-directive theory ni Rogers sa paglapat ng konseptong ito sa konteksto ng edukasyon. Binibigyang diin ng person-centered ang pagbibigay halaga sa pagkatao ng isang mag-aaral gayundin sa proseso ng pagtuturo sa mga ito. Inaasahan na ang guro na siyang huhubog sa kaalaman ng mga mag-aaral ay tiyak sa pagbuo ng mga gawain na akma at pabor sa pagkakakilanlan at kalagayan ng mga mag-aaral gayundin sa pagtukoy sa kung paano sila natututo at paano mas napapadali ang kanilang pagkatuto sa pamamagitan ng mga gawaing akma at may pagpapahalaga sa kanilang edad at kinalalagyan.

Ang pangalawang teorya na sinaligan ng pag-aaral na ito ay ang Andragogy Theory ni Malcolm Knowles (1997). Binigyang-diin ni Knowles sa kaniyang teorya na may tiyak na pangangailangan ang pagtuturo sa mga mag-aaral na nasa tamang edad na. Tinukoy niya na sa pagtuturo ng mga mag-aaral na may edad na ay dapat naiisip ng guro na ang mga ito ay may kakayahan nang suriin ang konseptong pansarili, may malawak nang karanansan, handang-handang matuto, may oryentasyon sa kaniyang sariling pagkatuto at nangangailangan ng motibasyon sa kanyang pagkatuto. Inaasan na ang guro ay responsable at may pagpapahalaga sa mga konseptong nabanggit habang siya ay naghahanda at nagtuturo sa silid-aralan. Dagdag pa, ang guro ay may kakayahan na mas pagyamanin pa ang kasulukuyang estratehiyang ginagamit sa pagtuturo kung nakikitang hindi na ito naaayon sa pangangailangan ng mga mag-aaral lalo pa na ang mga ito ay may kakayahan nang suriin kung ang paraan ng kanilang pagkatuto ay wala nang kaugnayan at hindi na kapaki-pakinabang para sa kanila.

Kahalagahan ng Pag-aaral

Mahalaga ang pag-aaral na ito sa mga gurong nagtuturo sa loob ng kulungan at mag-aaral na PDL dahil wala pang naibigay na kagamitang pampagkatuto ang DepEd na dumaan sa ebalwasyon at tiyak para sa kanila. Ang awtput ng pag-aaral na ito ay magsisilbing sanggunian o suplimental na kagamitan sa asignaturang Komunikasyon at Pananaliksik sa Wika at Kulturang Pilipino, baitang 11 sa Senior High

School. Magsisilbi ring sanggunian ng mga namamahala sa paaralan gayundin sa Leyte Regional Prison ang mga makabuluhang gawaing pampagkatuto na kanilang mabigyang pansin at suporta para sa mga mag-aaral na PDL. Maaaring maging batayan din ng mga opisyal ng BuCor ang pag-aaral na ito sa pagtugon ng ilang pangangailangan ng guro at mga mag-aaral sa pagpapatupad ng mga gawain bilang bahagi ng pakikilahok sa edukasyon sa loob ng kontroladong pasilidad. Magiging sanggunian naman ng mga mananaliksik ang proseso at awtput ng pag-aaral na ito sa ebalwasyon din ng mga nabuong sanayang gawain sa iba pang asignatura para sa mga mag-aaral na Persons Deprived of Liberty.

Mga Kaugnay na Literatura at Pag-aaral

Mahalagang dumaan sa ebalwasyon ang mga kagamitang pampagkatutong nabuo ng guro tulad ng mga sanayang gawain sapagkat sa paraang ito lamang natutukoy ang kalakasan at limitasyon nito bilang mga kagamitan at kung tumutugma ba ito sa pangangailangan ng mga target na mga mag-aaral (Hariyadi & Yanti, 2019). Sa pagsiguro sa kaangkupan ng isang kagamitan para sa tiyak na mga mag-aaral, mahalaga na suriin ang mga ito sa tatlong mahahalagang aspekto: ang (a) content o nilalaman; (b) Language o Wika; at (c) Layout & Design (DepEd, 2020). Sa pag-aaral ni Ayu (2020), binigyang diin na sa ebalwasyon sa **nilalaman** ng kagamitang pampagkatuto natitiyak na ito ay sumasalamin sa kultural na kalagayan o paniniwala ng mga target na gagamit. Upang masigurado ang kaangkupan nito, mainam na tingnan ng mga dalubhasa ang nilalaman nang mapatibay at mapaunlad pa ang ilang makikitang kahinaan. Malaki rin ang gampanin ng paggamit ng angkop na **wika** sa pagkakaroon ng isang mabisang kagamitang pampagkatuto sa target na mga mag-aaral. Samakatuwid, binigyang diin ito sa pag-aaral ni Rice (2017) at pinagtibay sa pag-aaral nina Rice at Deshler (2018) na mahalagang suriin ang wikang ginamit sa mga nabuong kagamitang pampagkatuto ng guro nang matiyak na hindi ito masyadong komplikado para sa mga mag-aaral at tumutugma sa tiyak malinaw na pagbibigay ng makabuluhang pagkatuto ng mga target na mga mag-aaral.

Ang pasiguro naman sa angkop na **layout at disenyo** ng mga nabuong kagamitan ng guro ay mahalagang masuri ng mga eksperto bilang pagsasaalang-alang sa matingkad at maayos na kabuoang dating nito sa mag-aaral (Saunders at Wong, 2020). Napatitingkad kasi nito ang ilang konseptong laman ng kagamitan at napapadaling maintidihan ng mga mag-aaral kahit wala masyadong salita (Clark at Mayer, 2016). Mainam na masiguro ang kaangkupan ng mga gawaing pampagkatuto na pinatutupad sa loob ng koreksyunal na pasilidad tugon sa pagpapahalaga ng mga alituntunin ng isang koreksyunal na pasilidad (Castro at Brawn, 2017).

Dagdag pa, mahalagang masiguro na ang itatakdang mga gawain ay hindi sensitibo at may positibong tugon sa pananaw at pag-uugali ng mga PDL bilang mga mag-aaral.

Metodolohiya

Kuwalitatibo ang disenyo ng pag-aaral na ito at ginawang pangunahing batayan ng mananaliksik sa interpretasyon ang mga tugon ng mga eksperto sa ginawang ebalwasyon sa mga sanayang gawain. Ginamit ng mga eksperto sa ebalwasyon ang *Evaluation Tool for Content, Language, Layout and Design for DepEd-developed Alternative Learning Delivery Modality Learning Resources* na inilabas ng Kagawaran ng Edukasyon (2020) hango sa DepEd Order No. 018 s. 2020. Ang mga naratibong puna at mungkahi ng mga eksperto ay ginamit ng mananaliksik bilang empirikal na batayan sa pagpapaunlad ng awtput. Isinagawa ng mananaliksik ang pag-aaral na ito sa isang pampublikong paaralan sa loob ng pinakamalaking koreksyunal na pasilidad sa Rehiyon 8. Pinili ng mananaliksik ang paaralang ito upang matugunan ang suliraning kaniya mismong naranasan bilang guro na nagtuturo ng asignaturang Filipino sa loob ng kontroladong pasilidad.

Tiniyak ng mananaliksik ang kumpirmasyon ng mga target na kalahok na eksperto upang maging bahagi ng pag-aara. Sinunod ng mananaliksik ang kanilang iskedyul bilang tugon upang hindi maabala ang iba nilang gawain. Binigyan din ng sapat na panahon ang mga eksperto sa ginawang ebalwasyon upang mas mabusisi ang lahat ng bahagi ng kagamitan.

Matapos malikom ng mananaliksik ang mga naging tugon ng mga kalahok na eksperto, ang mga datos ay manuwal na itinala sa talahanayan at sinuri hango sa mga indikeytor ng ginamit na instrumento. Binigyang halaga rin ang mga rekomendasyon ng mga eksperto sa pagpapaunlad ng awput.

Resulta at Pagtalakay

Binigyang-diin ang mga naging tugon ng mga eksperto pagkatapos ng isinagawang ebalwasyon sa nilalaman, wika, layout at disenyo ng mga sanayang gawain. Ginawang batayan din ng mananaliksik sa pagtalakay ang mga naging tiyak na rekomendasyon ng eksperto sa pagpapaunlad ng mga kagamitan.

Tugon ng mga Eksperto sa Ebalwasyon sa NILALAMAN ng mga Sanayang Gawain

Makikita sa Talahanayan 1 ang resulta sa ebalwasyon sa nilalaman ng mga sanayang gawain batay sa (a) Intellectual Property Rights Compliance, (b) Learning Competencies, (c) Instructional Design and Orgnanization, (d) Instructional Quality, (e) Assessment, at (f) Readability. Binigyang halaga ng mananaliksik ang bilang ng mga naibigay na tugon ng mga eksperto sa mga krayterya ng bawat standards

tungo sa mas malinaw na paglalahad ng mga datos. Nakatala rin ang kabuoang desisyon at rekomendasyon ng mga eksperto batay sa ginawang ebalwasyon.

Tatlong YES ang nakuha mula sa apat na

Talahanayan 1
Resulta sa Ebalwasyon sa Nilalaman ng mga Sanayang Gawain

Standards	Kabuoang Bilang ng Krayterya	Bilang ng mga Krayterya na may tugon na **YES**	Bilang ng mga Krayterya na may tugon na **NO**	Kabuoang Desisyon
Intellectual Proper Rights Compliance	4	3	1	Complied
Learning Competencies	1	1	0	Complied
Instructional Design and Organization	11	11	0	Complied
Instructional Quality	6	6	0	Complied
Assessment	6	6	0	Complied
Readability	6	6	0	Complied

Kabuoang Rekomendasyon	Frequency (f)
Minor revision. This material is found compliant to the minimum requirements in all six factors. Revision based on the recommendations included in the Summary of Content Findings form and LR with marginal notes must be implemented.	1
Major revision. This material is non-compliant to the requirements in one or more factors. Revision based on the recommendations included in the Summary of Content Findings form and LR with marginal notes must be implemented.	0
For field validation. This material is found compliant to all factors with NO corrections.	2

krayterya ng unang standard na Intellectual Property Rights Compliance. Ibig sabihin, complied ang desisyon ng mga eksperto sa bahaging ito ng ebalwasyon. Patunay ito na ang pangkalahatang nilalaman ng mga sanayang gawain ay walang copyright violation at nabanggit ang mga sanggunian ng mga copyrighted text and visuals kaya angkop itong gamitin ng guro at mga mag-aaral sa ika-11 na baitang bilang suplimental na kagamitan sa asignaturang Filipino. Samantala, may isang ebalweytor naman ang nagbigay ng NO para sa krayteryang the references are properly cited in the bibliography. Natuklasan na sa pahina 7, 15, 48 at 78 ng sanayang gawain, may mga awtor na nagbanggit ng mga may-akda ngunit hindi nailagay sa bahaging bibliography. Gayundin ang natuklasan sa pahina siyam kung saan hindi nabanggit ang reference ng mga ginamit na clipart at nirekomendahan na tiyaking nakalagay ang link ng mga ito sa bahagi ng sanayang gawain. Sa pahina 11 at 66 din ay hindi nalagyan ng taon kung kailan nailathala ng awtor na binanggit ang konseptong ginamit ng mananaliksik.

Lahat ng mga eksperto ay nagbigay rin ng YES sa nag-iisang krayterya ng sa standard na Learning Competencies. Ibig sabihin, complied ang kabuoang desisyon ng bahaging ito ng ebalwasyon. Nangahulugan na ang nilalaman ng mga sanayang gawain ay konsistent sa mga targeted DepEd Learning Competencies (LCs) for the learning area and grade level. Patunay din ito na ang nilalaman ng

mga sanayang gawain ay akma para sa kakayahan ng mga target na mga mag-aaral at tiyak na makatutulong sa pagtamo ng mga kasanayang inaasahang mayroon ang mga mag-aaral sa asignaturang Filipino sa ika-11 na baitang.

Samantala, 11 na krayterya ng Instructional Design and Organization ang minarkahan ng YES ng tatlong eksperto matapos ang ginawang ebalwasyon sa nilaman ng mga sanayang gawain kaya complied ang kabuuang desisyon ng mga eksperto sa bahaging ito ng ebalwasyon. Nangangahulugan lamang na ang nilalaman ng mga sanayang gawain ay nakaaambag sa pagtamo ng mga layunin ng asignatura sa tiyak na taon o baitang, may pagkakasunod-sunod sa nilalalaman at gawain ng bawat aralin tungo sa pagtamo ng mga layunin, at tugma para sa mga mag-aaral at lebel ng kanilang kasanayan, pangangailangan, at karanasan. Patunay rin ito na ang nilalaman ng mga sanayang gawain ay nakapagtitibay at nakapagyayaman sa kanilang kompetensi sa tiyak na asignatura at baitang o taon, lohikal at organisado ang pagbuo ng kagamitan kung saan ang mga gawain ay nakabalangkas mula simple patungo mahirap at mula observable to abstract, naglalaman ng mga mahahalagang introduksyon, rebyu at buod tungo sa maayos na daloy ng talakayan mula unang paksa sa pangalawa, may integrasyon sa una at kasalukuyang paksa, may mga pagganyak na gawain, at naglalaman ng iba- ibang estratehiyang tumutugon sa iba-ibang estilo ng pagkatuto ng mga mag-aaral. Masasabi rin na ang naebalweyt na sanayang gawain ay nakatutulong sa pagpapa-unlad ng *higher cognitive skills (critical thinking skills, creativity, learning by doing at problem solving)* at *21st century skills*.

Anim o lahat ng kraterya ng mga standards na *Instructional Quality*, *Assessment* at *Readability* ang minarkahan ng YES ng mga eksperto matapos ang ginawang ebalwasyon ng mga sanayang gawain. Ibig sabihin *complied* ang mga sanayang gawain sa mga bahaging ito ng ebalwasyon. Nangangahulugan na sa *instructional quality*, ang nilalaman at impormasyon na nakita sa sanayang gawain ay tumpak, napapanahon, malaya sa *social content violations, factual errors, computational errors*, *at grammatical errors*. Subalit nirekomendahan sa na ayusin ang tamang baybay ng sa isang may-akda na binanggit ng mananaliksik tungo sa mas tiyak na pagbibigay pagkilala nito bilang isa sa mga naging sanggunian ng konsepto. Samantala, sa panlimang standard na *Assessment*, malinaw na ang mga sanayang gawain ay naglalaman ng mga gabay at impormasyon na tumutulong sa mga guro na maebalweyt ang pagkatuto ng mga mag-aaral sa target na mga kompetensi. Dagdag pa, nangangahulugan din na

ang mga sanayang gawain ay naglalaman ng mga pagsusulit na tugma sa tiyak na mga layunin at paksa, naglalaman ng mga *self-checks*, *ready-made achievement tests*, at *review activities*, iba-ibang uri ng pagsusuri, may malinaw at tiyak na pamantayan o gabay kung paano ang mga ito tugunan, at sinisiguradong may aktibong pakikilahok ang mga mag-aaral sa mga gawain kaya angkop itong gamitin ng guro at mga mag-aaral bilang suplimental na kagamitan. Sa standard na *Readability* naman ay nangangahulugang malinaw ang lebel ng bokabularyong ginamit sa nilalaman ng mga sanayang gawain ay tugma sa mga target na gagamit ng mga materyal gayundin sa karanasan at antas ng kaalaman ng mga ito. Dagdag pa, ang haba ng mga pangungusap ay naangkop sa kakayahan at komprehensiyon ng mga mag-aaral, ang estruktura ng bawat talata at pangungusap ay may baryasyon at angkop sa mga mag-aaral, may lohikal at maayos na daloy ng mga ideya mula sa aralin, may konsistensi sa paggamit ng mga transition devices, at ang mga aralin gayundin ang mga panuto ay malinaw para sa mga target na gagamit ng kagamitan.

For Field Validation naman ang rekomendasyon ng dalawa sa tatlong eksperto matapos ang ebalwasyon sa nilalaman. Samantala, isa naman ang nagrekomenda ng Minor Revision matapos kakitaan ng iilang kakulangan sa mga bahagi ng mga sanayang gawain. Binigyan diin din ng isang eksperto na ang kabuuang *format* ng mga nabuong sanayang gawain ay wasto at nagmungkahi na ipagpatuloy ang pagbuo ng mga kagamitang tulad nito para sa pangatlo at pang-apat na kuwarter. Positibo naman ang naging tugon ng isang eksperto mula Bureau of Corrections kung saan binigyang diin na walang nakitang paglabag sa panuntunan ng koreksyunal na pasilidad ang nilalaman ng mga sanayang gawain. Ibig sabihin, katanggap-tanggap ito para sa mga mag-aaral na PDL.

Mahalagang matiyak ang kaangkupan ng nilalaman sa mga nabuong sanayang gawain upang masiguro na kaya nitong tugunan ang pangangailangan ng mga mag-aaral. Samakatuwid, ang konseptong ito ay napatotohanan sa ginawang pag-aaral ni Cordenete (2020) kung saan binigyang diin niya na natitiyak lamang ang kabisaan ng isang kagamitan kung dumaan ito sa ebalwasyon at kung naging positibo o katanggap-tanggap ang kabuuang tugon ng mga ebalweytor. Tugma rin ang pag-aaral ni Talabong (2019) na kung saan, pinatotohanan niya na sa pagtanggap ng mga kagamitang panturo sa Filipino na likha ng mga guro, mahalaga na bigyang diin ang naging positibong resulta matapos itong idaan sa ebalwasyon. Patunay rin sa naging resulta ng ebalwasyon ng nilalaman na kahit may sapat na kaalaman ang guro sa kanyang mga mag-

aaral at may sapat na kakayahan sa pagbuo ng mga kagamitang pampagkatuto, hindi ito nangangahulugang lahat ng kanyang mga inihanda ay wasto at malaya sa mga pagkakamali. Samakatuwid, napatutuhanan sa ginawang pag-aaral nina Bacio at Sagge (2022) na nagsisilbing tulay ang ebalwasyon sa interkasyon ng mga eksperto sa nilalaman ng mga nabuong kagamitan tungo sa maingat na pagbusisi nito.

Tugon ng mga Eksperto sa Ebalwasyon sa WIKA ng mga Sanayang Gawain

Sa tulong ng isang eksperto sa wika na naging kalahok din ng pananaliksik na ito gayundin sa mga detalyadong deskripsyon ng mga pamantayan sa instrumentong ginamit, ang mga tugon ng tatlong eksperto ay maingat na kinategorya batay sa mga krayteryang naging batayan sa ebalwasyon sa wika ng mga sanayang gawain.

Makikita sa Talahanayan 2 ang resulta sa ebalwasyon sa wika ng mga nabuong sanayang gawain batay sa (a) *Coherence and Clarity of Thought, (b) Grammar and Syntax, (c) Spelling and Punctuation, at (d) Consistency and Style.* Malinaw at detalyado ang ginawang pagtala sa mga nakitang obserbasyon gayundin ang tiyak na rekomendasyon ng mga eksperto tungo sa pagpapaunlad ng kagamitan. Ang mga ito rin ang naging batayan ng mananaliksik sa ginawang interpretasyon na bahagi ng pag-aaral na ito.

Maingat ang naging ebalwasyon ng mga eksperto sa wika ng mga nabuong sanayang gawain. Tiyak ang kanilang mga naging rekomendasyon sa bahaging nangangailangan ng rebisyon upang mas mapaunlad pa ang kagamitan para sa mga mag-aaral na PDL.

Matapos ang ginawang ebalwasyon ng mga eksperto, natuklasan na ang kagamitan ay kakitaan ng mga kakulangan sa krayteryang Coherence and Clarity of Thought. May hindi angkop na paggamit ng mga salita ang ilang bahagi ng kagamitan tulad ng naging tugon ng mga eksperto sa bahaging talaan ng nilalaman, unang pahina, pahina siyam, pahina 17, 26, 33, 40, 57, 63, 70, 79, 90, 97, 106, 116, at 125. Hindi naging konsistent ang ginamit na salita sa panimulang bahagi ng sanayang gawain na kung saan may mga terminong ingles ang inilagay ng may-akda sa mga bahaging nabanggit tulad ng "Linggo" para sa "Week" at "Kuwarter" para sa "Quarter" na maaari namang terminong Filipino ang gamitin tugon sa medyum o wika ng asignatura. Sa pahina 10, minungkahi ng mga eksperto na palitan ang salitang "adbertismo" ng salitang "patalastas" tugon upang mas madaling maunawaan ng mga mag-aaral. Ganito rin ang mungkahi ng mga eksperto matapos matuklasaan

na may mga salitang ginamit ang may-akda na hindi angkop at maaaring makapagdudulot lamang ng kalituhan tulad ng salitang "bilang" sa pahina 35 na sa halip na "biglaang", salitang "giling-giling" sa pahina 94 na dapat ay "galing-galing", "ukol dito" sa pahina 138 na dapat ay "ukol ito". Wala namang naitalang masyadong mahaba o komplekadong pangungusap sa kagamitan na sa tingin ng mga eksperto ay maaaring palitan. Samantala, may iilang obserbasyon din ang mga eksperto sa paggamit ng Conjuction and Transitional Phrases sa pahina 139 ng kagamitan tulad ng pagpapalit ng "na" sa salitang "marubdub", pagtanggal ng "na" sa gitna ng mga salita "naniniwala at sila", gayundin ang salitang "sila" sa gitna ng dalawang salitang "lang" at "sa", at ang paglagay ng "ng" sa gitna ng salitang "probinsya" at "Lucban". Binigyang diin na, dapat maging maingat ang may-akda sa pagpili ng mga angkop na salita dahil ang mga ito ang nag-uugnay sa mga pangungusap o talata. Lumabas din sa ginawang ebalwasyon na ang mga sanayang gawain ay kakitaan ng mga makabuluhang pahayag at ang mga konsepto o ideya ay lohikal ang pagkakasunod-sunod. Bagaman at iilan lamang sa mga salita ang hindi malinaw ang kahulugan at hindi konsistent sa paggamit ng mga ito sa mga pahayag, patunay ang tugon ng mga eksperto sa bahaging ito ng ebalwasyon sa wika ng mga sanayang gawain na may mga salitang kailangan talagang palitan sapagkat makapagdudulot ito ng kalituhan sa mga target na mga mag-aaral. Dagdag pa, ang mga mungkahi ring ito ay nangangahulugan lamang na may iuunlad pa ang konsistensi at estilo ng paggamit ng wika sa mga nabuong sanayang gawain ng guro.

Sa Grammar at Syntax naman natuklasan na may mga salita sa pahina 11 ang inuulit (redundancies) tulad ng "mga", at "humigit" na binigyang diin ng mga eksperto na ayusin. Wala namang nakitang pagkakamali sa agreement between subject and verb, use of verb tenses, at paggamit ng modifiers. Wala ring nakita ang mga eksperto na faulty parralel construction, split infinitives, at overuse of certain words. Patunay ang obserbasyong ito ng mga eksperto matapos ang ebalwasyon sa wika na may kaunting pangangailangan ang grammar at syntax ng mga sanayang gawain na maisaayos tugon upang hindi mahirapan ang mga mag-aaral na gamitin ito.

Marami naman ang nakitang pagkakamali sa Spelling and Punctuation matapos ang ginawang ebalwasyon ng mga eksperto. Natuklasan na sa unang pahina, pahina siyam,17,26,33, 40, 57, 63, 70, 79, 90, 97, 106, 116, at 125, ang salitang "seksyon" ay naging "seskyon". Sa pahina 2 naman nakita na dalawa ang titik "n" sa salitang "nagtakda" gayundin sa pahina 3 kung saan dalawa

ang titik "a" sa huling pantig ng salitang "magkaagapay" at sobra ang titik "i" sa salitang "naiuugnay". Sa pahina 8 naman ay nakita na ang salitang "tayo'y" ay naging "tayo's" gayundin sa pahina 10 na walang titik "g" ang salitang "pagmamahal". Mali rin ang baybay ng salitang "sosyo-sitwasyonal" kung saan nakita ng ebalweytor sa pahina 11 na wala itong titik "t". Sa pahina 11 rin ay sobra ng titik "a" ang baybay ng salitang "sa". Kakitaan rin ng maling baybay ang pahina 30 kung saan naging "instrumenting" ang salitang "intrumentong". Gayundin sa pahina 35 kung saan kulang ng isang titik "a" ang huling pantig ng salitang "biglaan". Naging "pariralaa" naman ang salitang "parirala" sa pahina 37. Pareho namang mali ang baybay ng salitang "kabuuan" sa pahina 136 at 137 kung saan ginawang titik "o" ang pangatlong pantig nito gayundin ang salitang "kongklusyon" na dapat sana ay wala na ang titik "g". Sobra rin ng isang "t" salitang "dito" sa pahina 139 at nirekomendahan na ayusin ang baybay nito.

Nangangahulugan ang resulta ito ng ebalwasyon sa wika ng mga sanayang gawain na mahalagang maging maingat ang guro sa pagbuo ng mga kagamitan lalo na sa asignaturang Filipino dahil madalas ay nagkakaroon ng autocorrection ang kompyuter lalo na sa pagbabaybay ng mga salita. Dagdag pa, patunay ng naging tugon ng mga eksperto sa bahaging ito ng ebalwasyon na ang mga nabuong kagamitan ng guro lalo na sa Filipino ay mahalagang idaan sa ebalwasyon upang mas matingnan at matiyak ang wastong baybay ng lahat ng mga salitang ginamit nang hindi magdulot ng kalituhan sa mga target na mag-aaral.

May natuklasan din ng mga eksperto sa Consistency in Style ng mga sanayang gawain matapos ang ginawang ebalwasyon sa wika ng mga sanayang gawain. Nakita na sa pang-apat at pang-anim na pahina, walang inilagay na kabuuang puntos sa rubrics na ginamit para sa mga gawain. Napansin din ng mga eksperto na sa pahina 49, hindi kapitalisado ang titik "w" at "p" sa "Wikang Pambansa" kayaminungkahi na tiyaking marebisa ito. Natuklasan din sa pahina 138 na nagkadikit ang mga salitang "kababaihan" at "may" kaya nirekomendahan ng mga eksperto na tiyaking ihiwalay ang mga ito. Ang tugon ng mga eksperto sa consitensy in style matapos ang ebalwasyon sa wika ng mga sanayang gawain ay patunay na may pangangailangan pa ang ilang bahagi ng kagamitan na paunlarin. Bagaman at hindi lahat, mainam pa rin na ang guro ay maging maingat sa pagsunod sa mga alituntunin sa capitalization, hyphenation at setting off in italics tugon upang maging angkop ang kabuoan ng wikang ginamit sa kagamitan.

Positibo ang naging kabuuang obserbasyon ng mga ebalweytor sa mga salitang ginamit sa mga

sanayang gawain. Dagdag pa, matapos ang ebalwasyon ay nakita na walang mga sensitibong salita sa mga sanayang gawain na maaaring magdulot ng distress para sa mga mag-aaral na Persons Deprived of Liberty na target na gagamit ng kagamitan. Mahalaga lamang na ang mga salitang ginagamit ng guro sa pagtuturo gayundin sa mga kagamitang inahahanda nito sa kanyang mag-aaral ay wasto o tugma hindi lamang upang patunayan na dapat hindi ito maaaring magkamali dahil siya ay guro kundi ito ay isang hakbang upang maturuan ang mga mag-aaral sa wastong gamit ng mga termino, baybay at bantas na mahalaga lalo na sa ika-uunlad ng kanilang akademikong perpormans.Napatotohanan ito sa ginawang pag-aaral nina De Guzman at Abagon (2021) kung saan nabanggit na kahit marami ang nagiging factor sa pagkatuto ng mga mag-aaral sa wikang Filipino, ang guro ang tinitingnan bilang isa sa may malaking impluwensiya pagdating sa kabuuang perpormans ng mga ito. Kaya madaling sabihin na sa mga gawain at mga kagamitang pampagkatuto na inihahanda, mahalaga na tiyak at maingat ang guro sa wastong paggamit ng wika. Dagdag pa, natutulungan din ng ebalwasyon ang pagtamo sa kalidad ng isang kagamitan dahil nabibigyang pagkakataon ang mga dalubhasa na mabusisi ito. Ang pagbibigay halaga naman kung ang wikang gamit sa mga sanayang gawain ay hindi sensitibo para sa mga mag-aaral na PDL ay mahalagang tugon sa layunin ng edukasyon sa loob ng koreksyunal pasilidad. Ang matiyak na magkaroon ng holistikong repormasyon ang bawat PDL na lalahok sa mga gawaing pampagkatuto na siyang pangunahing hangarin ngprogramang pinatutupad ng DepEd at BuCor ay mas napatitingkad pa sa tulong ng mga inihahandang kagamitan ng guro na may positibong gamit ng wika. Samakatuwid, napatotohanan sa pag-aaral nina Ondras at Alvero (2022) ang epekto ng pagkakaroon ng pormal na edukasyon sa loob ng koreksyunal na pasilidad gayundin ang potensyal na dulot ng mga mahusay na inihahandang kagamitang pampagkatuto na tiyak para sa mga mag-aaral na PDL.

Sa pangkalahatan, naging malinaw at tiyak ang obserbasyon at rekomendasyon ng mga eksperto sa mga pagkukulang na nakita matapos ang ebalwasyon sa wika ng mga sanayang gawain. Binigyang diin ang pagtiyak sa mga salitang gagamitin at wastong baybay ng mga ito sapagkat nasusukat ang mahusay na kagamitang pampagkatuto kung natatamo lamang nito ang hangaring maintindihan ito ng mga target na mga mag-aaral.

Tugon ng mga Eksperto sa Ebalwasyon sa Layout at Disenyo ng mga Sanayang Gawain

Maingat at detalyado rin ang ginawang ebalwasyon ng mga eksperto sa *layout* at disenyo ng mga nabuong sanayang gawain tugon sa layunin na matiyak na ang mga ito ay kapaki-pakinabang para sa mga mag-aaral na PDL. Dagdag pa, sa hangarin na magkaroon ng pinagyamang kagamitan para sa nabanggit na mga mag-aaral, pinahalagahan ng mananaliksik ang mga naging mungkahi ng mga eksperto.

Makikita sa Talahanayan 3 ang tugon ng mga eksperto sa ebalwasyon sa *Layout* at Desinyo ng mga sanayang gawain batay sa mga factor na *(a) Physical Attributes, (b) Design and Layout, (c) Typographical Organization,* at *(d) Visuals.* Makikita rin ang kabuoang desisyon at rekomendasyon ng mga ito matapos ang ginawang ebalwasyon.

Sa ginawang ebalwasyon sa Layout at Disenyo ng mga sanayang gawain, lumabas na sa Physical Attributes, tatlong eksperto ang may tugon na YES, sa lahat ng krayterya ng Cover Page. Ibig sabihin, nakita na ang sining mayroon ang cover page ay katanggap-tanggap, may kaugnayan sa asignatura, at nakakakuha ng interes. Samantala, napansin ng mga eksperto na sa front matter pages ay may talaan ng nilalaman subalit nakitang walang pahina ang bahaging ito. Sa Inside Pages natuklasan na walang *arabic numerals* ang pahina na ginamit sa panimulang bahagi ng mga kagamitan at ang mga bilang ng mga pahina ay hindi nakasentro sa ibabang bahagi. Wala ring nakitang back matter pages tulad ng *bibliography* at *appendix* ang mga eksperto para sa kabuuan ng kagamitan kaya *no* ang naging tugon nila sa bahaging ito. Sa pangkalahatan, Complied ang kabuuang tugon ng tatlong eksperto para sa standard na *physical attributes*. Patunay na kahit may mga maliit na bahaging kailangang marebisa, positibo ang mga eksperto na sanayang gawain ay angkop gamitin ng mga mag-aaral na PDL.

Complied naman ang kabuuang resulta sa *design and layout* matapos ang ginawang ebalwasyon dahil lima sa anim na krayterya ang may tugon na YES. Nangangahulugan lamang na nakita ng mga eksperto na konsistent ang mga sanayang gawain sa mga elementong tulad ng *main heads, subheads, sections,* at *subsections.* Nangangahulugan din na ang kagamitan ay simple lamang ngunit kakitaan ng dating. Dagdag pa, may katugmaan sa isa't-isa ang mga ginamit na ilustrasyon at teksto at tugma para sa mga target gagamit. Samantala, isa sa mga ebalweytor ang nagbigay ng hindi pagsang-ayon sa *harmonious blending of elements* dahil natuklasan nito na masyadong madilim ang *font color* ng isang ilustrasyon na makikita sa pahina 17. Ang paggamit ng light colors naman ang naging rekomendasyon

dito. Complied naman ang kabuuang resulta sa tugon ng mga eksperto para sa *typographical organization* kung saan lahat ng krayterya ay natugunan ng YES matapos ang ginawang ebalwasyon. Nangangahulugan lamang na tama ang *font size* at *font style* na ginamit ng may-akda sa mga nabuong sanayang gawain at natutulungan nito na matukoy ng mga target user ang kahalagahan ng bawat ideya o konseptong napapaloob. Dagdag pa, nakita rin ng mga ebalweytor na may kaugnayan ang ginamit na *boldface* at *italics* sa mga tekstong binibigyang diin sa kagamitan.

Complied naman ang kabuuang resulta sa *visuals* batay sa mga naging tugon ng mga eksperto. Sa labintatlong krayterya, lahat ay may tugon na YES mula sa mga eksperto. Nangangahulugan lamang na ang mga nakitang ilustrasyon, larawan, mapa, talahanayan, at graphs sa mga sanayang gawain ay nagsisilbing supliment ng teksto at mas binibigyang linaw ang mga konsepto o paksang pinag-uusapan tungo sa mas madaling pagkaunawa ng mga target gagamit ng kagamitan. Nangangahulugan din na konsistent at malinaw ang nilalaman at detalye ng mga ginamit na ilustrasyon at ang mga ito nakitang may pagpapahalaga sa edad, kultura, at sitwasyon ng mga mag-aaral. Kakitaan din ng potensyal ang mga ginamit na visuals sa pagpapanatili ng interes ng mga mag-aaral at ang mga ito ay may maayos na balangkas at sukat sa mga pahina. Angkop din ang mga label o caption ng mga ito gayundin ang kulay, line drawings at mga larawang iba-iba ang binibigyang representasyon.

Dalawa sa tatlong eksperto ang nagbigay ng tugon na Minor Revision bilang kabuuang rekomendasyon at ang isa naman ay may tugon na For Field Validation matapos ang ginawang ebalwasyon sa layout at disenyo ng mga sanayang gawain. Nangangahulugan ito na ang kagamitan ay compliant o sumusunod sa mga minimum na pangangailangan ng isang mabisang sanayang gawain subalit kakitaan ng maliliit na pagkakamali na kung saan kinakailangan na mabigyang rebisyon muna bago ang field validation.

Ang mahusay na layout at disenyo ng isang kagamitang pampagkatuto ay nasusukat hindi lamang sa dating nito sa mata ng mga mag-aaral kundi sa kung ano ang representasyon ng kagamitan sa pagkatuto ng mga ito. Samakatuwid, napatotohanan sa pag-aaral nina Sauders at Wong (2020) na ang iba-iba ngunit mahusay na mga desinyo ng isang kagamitang pampagkatuto ay may epekto sa prosesong kognitib ng mga mag-aaral. Aktibong iniuugnay ng mga ito ang dating kaalaman sa kanilang utak at ang mahusay na desinyo ang nagsisilbing pasiliteytor sa kognitib na prosesong ito. Sa pangkalahatan, bagaman at complied with

minor revision ang naging tugon ng mga eksperto matapos ang ebalwasyon sa layout at disenyo ng mga nabuong sanayang gawain, mahalaga na may tiyak na mga rekomendasyon ang mga ito upang mas mapaunlad pa ang kagamitan. Bilang pangunahing layunin ng mananaliksik na magkaroon ng pinagyamang kagamitan para sa mga mag-aaral na Persons Deprived of Liberty, hakbang ang pagpapahalaga ng mananaliksik sa mga tugon ng mga eksperto tungo sa pagsiguro na ang layout at disenyo ay akma sa target na mga mag-aaral.

Konklusyon at Rekomendasyon

Ang nilalaman ng mga sanayang gawain ay complied with minor revision batay sa mga standardna *(a) intellectual property rights compliance, (b) learning competencies, (c) instructional design and organization, (d) instructional quality, (e) assessment,* at *(f) readability*. Maayos din ang pangkalahatang formating ng kagamitan at walang paglabag sa patakaran ng koreksyunal na pasilidad ang nilalaman ng mga sanayang gawain kaya angkop itong gamitin ng mga guro at mag-aaral sa koreksyunal na pasilidad. Wala ring mga sensitibong salita ang ginamit sa mga sanayang gawain na magdudulot ng distress para sa mga PDL subalit may mga kakulangan sa WIKA pagdating *sa (a) coherence and clarity of thought, (b) grammar and syntax, (c) spelling and punctuation,* at *(d) consistency and style* na kailangang bigyan ng rebisyon upang mas madaling maintindihan ng mga target na mag-aaral ang laman ng mga aralin. Ang *LAYOUT* AT DESINYO naman ng mga sanayang gawain ay *complied with minor revision* batay sa mga factor na (*a) physical attributes, (b) Design and Layout, (c) Typhographical Organization,* at *(d) Visuals*. Ibig sabihin ay may mga nakitang kakulangan sa ilang bahagi ng mga sanayang gawain na kailangang matugunan bago ang *field validation*.

Ang mga naging mungkahi ng mga eksperto sa ginawang ebalwasyon sa mga sanayang gawain ay ginawang batayan ng mananaliksik sa pagpapaunlad ng mga ito. Malinaw mula sa mga naging rekomendasyon na may ika-uunlad pa ang kagamitan. Dagdag pa, kahit kakitaan ng ilang maliliit na mga bahagi ang mga sanayang gawain na nangangailangang marebisa, minungkahi ng mga eksperto na kapag natugunan na ng mananaliksik ay gamitin ito ng mga guro at mga mag-aaral bilang suplimental na kagamitan sa asignaturang Filipino. Nangangahulugan na ang mga sanayang gawain ay angkop para sa ika-11 baitang na mga mag-aaral na Persons Deprived of Liberty at maaari nila itong gamitin sa loob ng kontroladong pasilidad.

Nirerekomendahan naman ng pag-aaral na ito na gumamit ng mga gawaing akma sa target na

mga mag-aaral at may pagbibigay halaga sa panuntunan ng koreksyunal na pasilidad sa pagbuo ng mahusay na NILALAMAN ng mga sanayang gawain para sa mga mag-aaral na Persons Deprived of Liberty. Mainam din na piliin ang mga angkop na salita upang mas madaling maintindihan ang mga pahayag sa mga sanayang gawain at maging maingat sa paggamit ng WIKA upang hindi itomakapagdudulot ng distress sa mga mag-aaral na PDL. Tiyaking buo ang mga bahagi ng mga sanayang gawain upang matamo ang mahusay na LAYOUT at DESINYO ng mga ito. Piliin din nang maingat ang kulay at sukat ng mga ilustrasyon at teksto na angkop para sa mga mag-aaral na PDL. Mainam din na gamitin ng mga guro at iba pang mananaliksik ang proseso at instrumento ng pag-aaral na ito sa pagbuo at pagtakda ng ebalwasyon ng mga sanayang gawain sa iba pang asignatura para sa mga mag-aaral na PDL. Gawing sanggunian naman ng mga mag-aaral at gurong nagtuturo ng Filipino sa loob ng koreksyunal na pasilidad ang mga sanayang gawain na awtput ng pag-aaral sapagkat ang mga ito ay idinaan na sa ebalwasyon at may pagpapapahalaga sa kalagayan ng mga target na mga mag- aaral. Mainam din na mapatingin ang awtput ng pag-aaral na ito sa mas mataas na opisina ng Kagawaran ng Edukasyon upang mas maidaan pa sa ibang balidasyon bago maipakilala o mailathala bilang opisyal na kagamitan para sa mga mag-aaral na PDL na maaaring gamitin ng ibang paaralan sa loob ng koreksyunal na pasilidad.

Mga Sanggunian

Bacio Jr, S. P., & Sagge Jr, R. G. (2022). *Development and Evaluation of an Instructional Package for Komunikasyon at Pananaliksik sa Wika at Kulturang Pilipino*. Journal of Positive School Psychology, 6(3), 3010-3027. Retrieved from: https://www.journalppw.com/index.php/jpsp/article/view/2083

Cordenete, J. B., & Macaltao, M. T. E. (2020). *Pagbuo at Balidasyon ng Interaktibong Modyul sa Pagtuturo ng Florante at Laura*. PSU Multidisciplinary Research Journal, 3(1). Retrieved from: https://psurj.org/online/index.php/mrj/article/view/139

De Guzman, J. A., & Abagon (2021). *Kakayahan ng mga Guro sa Pagtuturo at Pagkatuto ng mga mag-Aaral sa asignaturang Filipino ng Senior High School*. Retrieved from: https://www.ajhssr.com/wp-content/uploads/2021/10/P21510125137.pdf

Department of Education (2013). *K to 12 Basic Education Curriculum Framework*. Retrieved from: https://www.deped.gov.ph/k-to-12/about/k-to-12-basic-education-curriculum/

Department of Education (2019). *Policy Guidelines on the K to 12 Basic Education Program*. Retrieved: https://www.deped.gov.ph/wpcontent/uploads/2019/08/DO_s2019_021.pdf

Department of Education (2020). *Alternative Delivery Modality Learning Resource Standards*. Retrieved from: https://www.studocu.com/ph/document/university-of-caloocan-city/education/adm-lr-standards-05082020/17698287

Department of Education (2020). R.M. no. 538, s. 2020. *Establishment of Cagbolo Senior High School, Leyte Division*. Retrieved from: https://region8.deped.gov.ph/wp-content/uploads/2020/10/RM-s2020-538.pdf

Department of Education (2020). *Government Permit no. 039, s. 2020. Cagbolo Senior High School, Techvoc Track: Ia (Smaw I & Ii, Eim, Automotive Servicing)*. Retrieved from: https://region8.deped.gov.ph/wp-content/uploads/2020/03/GPSecPub-s2020-039.pdf

Department of Education (2020). *Adoption of the Basic Education Learning Continuity Plan for School Year 2020-2021 in the light of Covid-19 Public Health Emergency*. Retrieved from https://www.deped.gov.ph/wp-content/uploads/2020/06/DO_s2020_012.pdf

Department of Education (2020). *Policy Guidelines for the provision of learning resources in the implementation of the basic education learning continuity plan*. Retrieved from: https://www.deped.gov.ph/wp-content/uploads/2020/08/DO_s2020_018.pdf

Department of Education (2020). *School Calendar and Activities for School Year 2020-2021*.Knowles, M. S. (1972). *Andragogy*. NETCHE. Retrieved from: https://www.researchgate.net/profile/Lucille-Maddalenapublication/279925413_What_the_is_Andragogy/links/559e738408aeab53f8fd2cc5/What-the-is-Andragogy.pdf

Ondras, L. B., & Alvero, J. R. (2022). *Senior High Program in Prison Culture: Its Rehabilitative effect during and after Incarceration*.

analysis in relation to the phenomenon with the use of the interview guide. In order to assure accuracy and completeness of the data needed for the study, the researcher individually explained to the participants the objective of the interview and made sure that all questions in the semi-structured interview guide were asked. As recommended by Diehl et al. (2011), the in-depth interview allowed the participants to talk in the vernacular to explain the phenomenon. This allowed the participants to voice their opinions and attitudes, which improved the credibility of the results (Berger, 2011). More so, the interviewees' permission was obtained before the recording of responses, which was essential for the analysis of the data.

Data Analysis

The phases of the Collaizi Method were applied to interpret the participants' narrative account using inductive thematic analysis. Colaizzi's descriptive phenomenology approach was primarily used to describe and represent the experiences of the individuals who were mentioned, as well as to identify emerging themes and their interconnected relationships (Wirihana et al., 2018). First, in order to get a broad feel of the participants' experiences teaching physical education (P.E.) in senior high schools, the qualitative research experts reviewed, reread, and cross-checked each participant's transcript. Second, extracts were made from each transcript of a noteworthy statement that related to the study's experiences. Additionally, in order to correctly ground the transcription, pages and audio numbers were carefully noted. Thirdly, important phrases were grouped into several sub-themes. Fourth, themes were created by analyzing sub-themes. Fifth, the findings of the investigation were incorporated into a thorough description of the phenomenon under examination, which was supported by studies from the associated literature. Sixth, a description of the phenomenon's basic structure was given. Finally, the research participants were asked to validate the findings by contrasting the researcher's descriptive findings with the experiences of these out-of-field senior high school teachers and its capabilities in instructing physical education classes in their respective schools.

Results and Discussion

The results of the interviews were categorized and transcribed in order to develop and portray the primary themes and subthemes. The participants encountered challenges such as a lack of skill mastery, insufficient of trainings and seminars, a lack of equipment and facilities, and technological skills constraint Also, the responses of the 22 participants in their quest to provide quality education to PE learners revealed the following coping mechanisms: adopt the challenges, provide a positive outlook (open-mindedness), attend trainings and seminars, and provide equipment and sports supply.

Challenges Encountered by Out-of-field Senior High School PE Teachers in the Teaching-Learning Process

In the context of this study, challenges refer to the challenges encountered by out-of-field public senior high school teachers while teaching PE during the teaching-learning process. Hence, participants faced problems such as a lack of skill mastery, insufficient of training and seminars, a lack of equipment and facilities, and technological skills constraint.

Theme 1 Lack of Mastery and Skills

The mastery of subject matter serves as the foundation for a teacher's pedagogical abilities. Physical Education teacher must be able to master the subject matter and establish the interrelationships between different subjects, among other things. Hence, Johansson and Myberg (2019), among other factors, teachers' knowledge of teaching and subject matter, as well as qualifications obtained during teacher training, determine a teacher's efficacy. Similarly, Hattie (2016) argued that training teachers on what to teach helps them prepare for teaching because subject matter is more than just the delivery of facts and information, and the teachers' overall goal of teaching is to assist learners in developing knowledge, skills, attitudes, and values.

The following are some of the participants' experiences:

*"I sometimes encountered difficulties in understanding some terminologies met and cannot elaborate well the meaning of it". [I sometimes encounter difficulties in understanding some terminologies and I cannot elaborate well the meaning of those terms]. -**OOF PE TB***

"I think it is the lack of skills and the mastery of the subject matter". -OOF PE TV

*"Damo nga challenges, usa na paunanhon ko pagtutdo han skills han Basketball kay diri man ako MAPEH Major and I cannot master the skills hin usa la semester nga pagtutdo hin P.E. Mauro-upay gud an MAPEH Major nga matutdo kay iya man gud forte". [There are lots of challenges met. First is how can I teach the skills in Basketball since I am not a MAPEH Major and I have not mastered the skills in teaching Physical Education with the one-semester stint on the subject; it is much appropriate if it will be a MAPEH Major who will be teaching the subject since it is their forte]. -**OOF PE TU***

TEACHING PHYSICAL EDUCATION SUBJECT IN IN-PERSON CLASSES: CHALLENGES AND COPING MECHANISMS OF OUT-OF-FIELD TEACHERS

John Clark M. Mesias and Mike Harold G. Pelicano, Teacher II
Burauen Comprehensive National High School, Schools Division of Leyte
johnclark.mesias@deped.gov.ph and mikeharold.pelicano@deped.gov.ph

Introduction

Out-of-field teaching, as a concept, is used by many to refer to those teachers assigned to teach subjects in which they have not specialized (Ingersoll & Collins, 2018). Hobbs and Porsch (2021) stated that out-of-field teaching occurs when teachers teach a subject for which they are not qualified. According to Ingersoll and Curan (2004), it happens when school heads assign teachers to teach a subject for which they are not qualified. This has been an important but long unrecognized problem in schools and in education in general (Cobbold, 2010).

The 1987 Constitution of the Republic of the Philippines (Article XIV, Sec 1) stipulates that the state shall protect and promote the right of all citizens to quality education at all levels, and shall take appropriate steps to make such education accessible to all. In the same light, Article 26 of The Universal Declaration of Human Rights Section 2 states that education shall be directed to the full development of the human personality and to the strengthening of respect for human rights and fundamental freedom. The foregoing implies that the Department of Education is bound by the constitution to ensure that suitably qualified educators provide quality education for learners. Underlying this fact is the general idea conveyed in the constitution that a child's best interest is of paramount importance in every matter concerning the child (Universal Declaration of Human Rights, Art 26, Sec 2).

Consequently, Physical Education is one of the pillars of the general educational program. This subject aims to develop the individuals' psychological, mental, and physical health. It develops the individual to become an active member of society (Badeda & Shabeba, 2012). The roles of Physical Education teachers are very much important in a classroom setting. The duties of these teachers have multiple facets that include designing and implementing physical and sports activities that contribute to developing and enhancing learners' values and ethics; improving their physical abilities, strength, psychological health, motor skills, and social attitudes; and maximizing physical activity opportunities for the learners (AbuJameh, 2013).

The purpose of this study is to attend to what is said through the verbal and non-verbal language of participants while attempting to understand the lived meaning of out-of-field teaching. And to fill research gaps mentioned in the foregoing account of Hobbs (2012), it is deemed necessary to study the out-of-field teaching situation in Region VIII, particularly in Leyte Division schools, hence, physical education teachers' educational competencies are significant to facilitate learning. Hence, there are a variety of educational and personal challenges in teaching physical education in public high schools that is why this research has focused on the untold stories in teaching the subject for which the teachers have little knowledge of. Thus, this study was conducted for the need to understand and explore the experiences of the out-of-field senior high school teachers in teaching physical education in public high schools in order to provide appropriate support for them, placing emphasis that they are the resources who direct the outcome of learning.

Objectives of the Study:

This study has explored the lived experiences of the out-of-field public senior high school teachers who are teaching physical education in their respective schools. It intended to identify these teachers' coping mechanisms in facing the challenges and specifically sought answers to the following questions:
1. What challenges do of out-of-field public Senior High School Physical Education teachers encounter in the implementation of in-person classes?
2. How do out-of-field public Senior High School Physical Education teachers cope with these challenges?

Significance of the Study

Citing that all learning classrooms are staffed with qualified teachers is a challenge in our country. One of the least recognized causes is the problem of

teachers teaching not on the subject/specialization the teachers have graduated from as called for by their degrees or of teachers being assigned to teach subjects that do not match their training or field of expertise.

Studying the lived experiences of out-of-field public senior high school teachers who have been teaching physical education subject may give a sense of value to the following:

Out-of-Field Senior High School Physical Education Teachers. With the avenue of this study providing the space for these out-of-field teachers to express sentiments of maladjustment, challenges, frustrations, and others that make teaching daunting, better situation is hoped for.

School Officials. Findings of this study would provide bases for the crafting of intervention strategies designed for out-of-field teachers - opportunities to hone their leadership skills; they likewise may see the need of discouraging the practice as conveyed by this study.

Department of Education. The results of this study may serve as bases for drafting plans to improve guidelines in the implementation of proper job placement for hired teachers.

Future Researchers. The results of this study could help as bases for future researches who want to conduct similar or complementing studies about out-of-field teaching/teachers.

Review of Related Literature

In exploring the lived experiences of the out-of-field public senior high school teachers, their competencies, challenges, and coping mechanisms were obtained. The literature and studies reviewed in this chapter elucidate the need for this study and support the arguments that the researcher offer throughout this phenomenological exploration. This study underscores the importance of quality teaching and it aimed at describing the phenomenon of out-of-field physical education teaching by exploring through the different aspects of this issue from the perspectives of various authors. Existing literature cited in the sub-sections revolve on the prevalence of out-of-field teaching.

Out-of-field teachers. Not too long ago, the requirement for a person to become a teacher was just to have the basic ability in reading and writing. Traditionally, some people believed that "pedagogical or methodological knowledge – is of primary importance to be qualified; that in-depth knowledge of a subject is less important than in-depth skill at teaching" (du Plessis, et.al., 2014).

Out-of-field teaching in the Philippines. The study of Bayani and Guhao, Jr. (2017) emphasized that out-of-field teaching still exists and is experienced by different schools here in the

Philippines. Thus, it is revealed on said study that out-of-field teachers experienced diverse situations. Furthermore, it was found that these teachers experienced compliance and submission, had lack of aptitude for the language, lacked administrative and logistics support, were unable to muster enthusiasm and to establish rapport, and had a lot of frustration and insecurity while teaching the subject outside their field of expertise.

Challenges faced in Out-of-Field Teaching. Conceivably, the worst challenge of out-of-field teaching is the fact that it creates a vicious cycle. A teacher who is not content with the job will resign immediately (Hughes, 2016), which leaves an urgent vacancy at the school. The administrators of that school then scramble to assign another teacher to fill the position—often a teacher who has no background in that particular terrain. This teacher, in turn, challenged to learn what they need to teach (Caldis, 2017).

Methodology

With the use of a pre-planned set of semi-structured questions, while an in-depth interview was conducted to gather the information from the participants that was required to address the study's research problems.

Research Design

This study is qualitative in nature. This qualitative phenomenological study documented on challenges and coping mechanisms of out-of-field public senior high school teachers who were assigned to teach Physical Education subjects. The study's purpose was to identify and characterize the real-world challenges that senior high school public teachers faced when teaching physical education, as well as how they overcome those challenges. The researcher has taken inspiration from Creswell (2013) in this regard because the study used qualitative research approaches in the evaluation, notably the phenomenological approach.

Participants of the Study

Participants in this study were public senior high school teachers who were assigned to teach Physical Education in Areas 2A and 2B of the Leyte Division. The participants were chosen using the purposive sample technique, and they were all out-of-field public senior high school physical education teachers, which was a defining attribute of the participants.

Data Collection Procedure

The primary method used for gathering data for this study was the in-depth interview. The study was carried out in stages, starting with getting the approval letter, data collecting, and moving on to data

Johansson and Myberg (2019) assumed that among other things, teachers' knowledge of teaching and of subject matter and qualifications attained in teacher training largely determine the effectiveness of a teacher. More so, teachers' poor understanding and possession of improper information on the subject matter may result in incorrect ideas being passed on to learners or, worse, failure to guide learners in the appropriate way. Teachers' expertise of topic matter allows them to assist their students in learning and comprehending such subject matter.

Theme 2 Insufficiency of Trainings and Seminars

A teacher is lacking a certain competence if there aren't enough trainings and seminars for senior high school teachers who work outside their profession. Therefore, offering the right training will lessen accidents caused by inexperience (Jago et al., 2009). De Sousa (2011) suggested using appropriate training to cut down on accidents when teaching PE skills. On the study of Hammond and Snowden (2007) gives support for the preceding comments; hence, classroom instructors believe they require more thorough teacher preparation in physical education offered through longer courses with more exposure to PE teaching.

The following are some of the participants' experiences to this issue:

"Sa pagtuturo ko ng Physical Education, wala po akong formal training in teaching Physical Education". [In my teaching of Physical Education, I don't have any formal trainings regarding teaching Physical Education]. -OOF PE TA

"Basically, wala po akong trainings na related sa Physical Education". [Basically, I don't have trainings that are related to Physical Education]. -OOF PE TC

"None, hindi po ako naka-attend ng trainings related to Physical Education". [None. I wasn't able to attend any trainings related to Physical Education]. -OOF PE TV

Out of these immediately foregoing responses above, the study of Hammond & Snowden (2007) provides the support; thus, classroom teachers believe they require more extensive teacher training in physical education delivered through longer courses with greater exposure to PE teaching. Morgan and Bourke (2005) discovered a strong association between teachers' PE training and their reported confidence in teaching the topic. Non-PE teachers were much less confident in teaching the curriculum areas for which they believed they had received inadequate training. Truly, the impact of PE teachers' experience plays an essential part in the development of attitudes and perceived competencies about physical education teaching in a classroom environment, or in other situations, is the only source of information about PE for teachers. This may ultimately represent their confidence in teaching PE programs. This proposition's potential negative effects must be acknowledged.

Theme 3 Lack of Equipment and Facilities

The lack of instructional equipment and facilities can have an impact on the quality of teaching and learning, since quality suffers when the facilities required for imparting and learning are insufficient or, in certain cases, unavailable (Jones et al, 2010). Hence, the supply of suitable facilities, supplies, and equipment is just as vital as providing adequate incentives for both teachers and students, but maintaining such adequate facilities, supplies, and equipment is sometimes an administrative difficulty.

The following are some of the participants' experiences to this issue:

"Ang mga challenges na na-encounter ko sa physical education (P.E.) are lack of resources and infrastructure and lack of school management, and the weakening of expert P.E. teachers and lastly the student's struggle". [The challenges I encountered in teaching physical education (P.E.) were lack of resources and infrastructure as well as that of inefficient school management and the weakening of P.E. expertiser among the teachers, and lastly that of the students' struggle].
-OOF PE TU

"Mahirap in my part as a teacher because our school is lacking of materials and equipment". [Challenging in my part as a teacher because our school lacks materials and equipment].
-OOF PE TM

"During class time specially when the topic is sports, as a teacher it is somewhat challenging in my part due to lack of equipment and materials". - **OOF PE TP**

Truly, the provision of adequate facilities, supplies, and equipment is as important as providing adequate incentive for the teachers as well as for the learners, but the maintenance of such adequate facilities, supplies, and equipment often constitutes a managerial problem. Hence, the school is a social institution tasked with the formal education of society's youth. Similarly, Orunaboka and Nwachukwu (2012) noted that sporting activities have long been recognized as an essential component of most, if not all, educational programs

around the world.

Theme 4 Technological Skills Constraint

During this COVID – 19 pandemics, internet has been proved to be one's lifeline. No internet access means no economic opportunities. The internet plays an important role in the economic, health, and educational opportunities. Because of this Covid – 19, learners are sent home from schools and colleges and encouraged to continue their studies through online mode. The schools are sending videos and asking children to upload their work sheets, but because of lack of net access at some places in the region, some have lost their education.

The following are some of the participants' experiences to this issue:

"Nagamit ako hin appropriate strategies, I let them watch videos or sometimes in a friendly competition". [I always use the appropriate strategies, I let them watch videos or sometimes in a friendly competition]. **-OOF PE TL**

"Han una, we do the activities in the field. But this time of modular distance learning, the learners will just do the activity at home and record it thru a video presentation and submit it to me". [Before, we did the activities in the field. But this time of modular distance learning, the learners do the activity at home and record it thru a video presentation and submit it to me]. **-OOF PE TJ**

"Pinapapagkita ko hira hin videos hit proper execution of the lesson and on how to do it and I told them on how to emulate it. Sometimes, I do lectures and practical tests". [I let them watch videos on the proper execution of the lesson and I told them on how to emulate it. Sometimes, I do lectures and practical tests]. **-OOF PE TU**

The preceding observations highlight the participants' use of technology in the classroom. Chalkboards, textbooks, and cumbersome desktop computers have all but been supplanted in the traditional classroom by interactive whiteboards, tablets, and laptops. Today's teachers and students have access to hundreds of thousands of programs, videos, and online courses meant to improve learning (Allenby & Sarewitz, 2011).

Coping Mechanisms of Out-of-field Public Senior High School PE Teachers

The out-of-field scenario often becomes unbearable and teachers adopt coping mechanisms in an attempt to appear more competent. Teachers try to hide the fact that they are battling and that there is a lack of discipline in the classroom, hoping that someone else will see the dilemma they find themselves in. This proves that the condition of professional crisis of teachers has a significant reduction of expertise that leads to the process of reflection and strengthening of becoming a proficient teacher.

The following coping mechanisms emerged from the responses of the 22 participants in their quest of providing quality education to PE learners to wit: adopt with the challenge, provide positive outlook (open-mindedness), attend trainings and seminars in physical education and sports, and provide equipment and sports supply.

Theme 1 Adopt with the Challenges

Relatively, it is essential to have a flexible approach in teaching. This is imperative for the learners who are dependent on their teacher to maintain a sense of structure and leadership, and keep their sanity, no matter what the circumstances. Indeed, learners are often incredibly perceptive when it comes to noting whether or not a teacher is adequately prepared and in control. If a class can sense that a teacher is not in control, they are liable to push boundaries; seeing what they can get away with comes naturally to many pupils, and, in particularly dire cases, the classroom might become a student-led, rather than teacher-led one.

The following are some of the participants' experiences to this issue:

"As a teacher in DepEd it is expected from us that teachers must be flexible and that is why what I am doing is accept the task and do what is right for the benefit of the learners". **-OOF PE TO**

"So, as a Teacher perhaps we have to be flexible. So, every challenge that we face, face it with confidence. Because whatever task given to a teacher. We need to accept it". **-OOF PE TE**

"Embrace, as an educator we were taught to embrace that even though you are not a PE major, you can teach it, as it is another set of learnings and self-development altogether". **-OOF PE TC**

"We, teachers are resilient and even if it is difficult; even in this time of pandemic, on how we can teach PE thru module, with the provision of WHLP and we constantly communicate to student and inform them ahead of time if there are activities and thru video for MOVs". **-OOF PE TH**

For a teacher to be responsible for learners

who come from a mix of backgrounds, flexibility should certainly be one of the central tenets to teaching style. The more flexible a teacher's approach is, and the better able they are to think on their feet, the higher the chances are of increased student participation – ensuring that no child gets left behind (Filiz & Konukman, 2020).

Theme 2 Provide Positive Outlook (Open-mindedness)

Open-mindedness involves being receptive to a wide variety of ideas, arguments, and information. Being open-minded is generally considered a positive quality of a teacher (Bacon, 2019). It is very much necessary for the out-of-field teachers to be open-minded as it paves way to learn new concepts and strategies in the teaching process.

The following are some of the participants' experiences to this issue:

"I am open-minded, in the process of crafting the Lesson Plan and there will be observation with one-on-one forum, I will accept and improve the needed task in teaching PE".
-OOF PE TC

"So far, for me. I accept it that I am not perfect and this is not my expertise and if you have suggestions you tell it to me, so that when I still teach the subject I can apply it".
-OOF PE TK

"In my case, if there are suggestions, I accept it wholeheartedly so that I will be able to teach the lesson well".
-OOFPE TJ

"Its when you are teaching a lesson that you are not familiar. I look at the positive side of it because at the same time, I am learning. I have gained new sets of knowledge that I somehow forget, that's the best experience ever".
-OOF PE TL

This doesn't mean that being open-minded is necessarily easy. Being open to new ideas and experiences can sometimes lead to confusion and cognitive dissonance when we learn new things that conflict with existing beliefs. However, being able to change and revise outdated or incorrect beliefs is an important part of learning and personal growth. To enjoy the benefits of being open-minded, work on this ability.

Theme 3 Attend Trainings and Seminars in PE and Sports

In the process of teaching and learning, the role and the importance of the PE teachers are obviously great. Individuals should be trained in a way that they can keep pace with changes and developments in the society and the world and contribute to it (Esentas, et.al., 2018). On top of that, it is necessary that schools have a good education, that is, the quality of teaching in the school should be upgraded so that the learners can succeed. This is only possible, according to Omar et.al., (2020), with qualified teachers because teachers take various responsibilities in bringing new skills and values to themselves, to the learners, and to the whole society in the long run.

The following are some of the participants' experiences to this issue:

"Para haakon, macocope namon inin nga amon challenges in teaching physical education kun makakamay-ada kami hin more trainings and workshops that is focused in Physical Education". [For me, we can cope with the challenges we face in teaching physical education if we will be sent to more trainings and workshops that are focused in PE]. **-OOF PE TU**

"Mas maupay kun an DepEd mag provide hin more trainings para haamon nga out-of-field physical education teachers in order to have a quality instruction and basically will result to quality education". [It is best if DepEd will provide more trainings for us out-of-field senior teachers in order to achieve quality instruction which basically will result to quality education]. **-OOF PE TI**

In modern societies, teachers are seen not only as technical staff performing education and training, but also the people who will be the role model for the learners and society. This is achieved by a qualified physical education teaching personnel as well as a good education system (Teaching and School Administration, 2020).

Theme 4 Provide Equipment and Sports Supply

The lack of equipment and supply can affect the quality of teaching and learning; quality diminishes when the facilities required for imparting and learning are inadequate or at times not available (Sanni, et.al., 2018). Apparently, the availability of adequate facilities, equipment, and supplies as well as their utilization are important ingredients in any physical education and sports program. Ogbu (2015) asserted that availability refers to resources ready to

be used, able to be used or that can easily be found and used.

The following are some of the participants' experiences to this issue:

"Perhaps on the learning materials because there are no available learning resources and that's why I have to purchase my own learning materials online". **-OOF PE TD**

"In teaching Physical Activities, it is very much difficult in the teaching and learning process since we lack sports equipment at hand and I cannot force the learners to bring and provide their own".
-OOF PE TA

"One of the challenges that I encountered in teaching PE is the lack of equipment and supply that are very much needed in the skills acquisition during the first-hand experience of the physical activities". **-OOF PE TB**

Ugwuanyi (2013) noted that the availability is a state of making provision for a satisfactory standard requirement in terms of teaching resource to enhance effective instruction activity in a particular subject.

On the other hand, the relationship between knowledge of a skill and in actual utilization of such knowledge is agreed by the study of Peng (2019) as she emphasized that expected outcome in a program will not come from mere acquisition of knowledge but from its utilization.

Conclusions

It is evident from the perspective and responses of the participants This phenomenological study aimed to explore and understand the lived experiences and competencies of out-of-field public Senior High School PE teachers. The results show that out-of-field teaching has a meaningful influence on the professional effectiveness of teachers. This study confirms that mastery of the content is essential in the teaching-learning process. Teaching PE subjects is not all about imparting the content of the subject theoretically; it more on skills demonstration and acquisition.

Recommendations

With the outcomes of this study, other researchers may study further the experiences of out-of-field public Senior High School PE teachers. The fact that it is still stirring makes it unrecognized. Thus, this study on the phenomenon of out-of-field teaching invites future researchers to expand the current scope and focus on the solution of the observed problems and consider the following recommendations;

1. Assessment of this out-of-field teaching practice of the Department of Education as to the merit or demerit of the program implementation;
2. Re-visitation on the curricular offerings of Teacher Education Institutions and reconsideration on the offering back of minor fields by BSEd students - a fall back of the currently inevitable out-of-field in-service teaching assignments;
3. Provide out-of-field PE teachers with comprehensive training programs that cover the fundamentals of physical education, including curriculum design, instructional strategies, assessment techniques, and classroom management.
4. Train out-of-field PE teachers in inclusive teaching practices, emphasizing the importance of accommodating students with varying abilities and needs in PE classes.
5. Pair out-of-field PE teachers with experienced PE instructors who can serve as mentors. Regular meetings and collaborative lesson planning sessions with peers can also provide valuable support.
6. Hire more Physical Education major teachers. One of the main components of self-esteem for out-of-field senior high school PE teachers is a sense of competency. For many school set ups, school is difficult and stressful, particularly for teachers who are teaching outside of their field.

References

AbuJameh', Q.M. (2013). The role of educational supervisors in improving the competencies of Physical Education teachers in public schools in Gaza Governorates in light of comprehensive quality standards. Unpublished Master Thesis. Al-Azhar University, Gaza.

Backman, E., & Barker, D. Re-thinking pedagogical content knowledge for Physical Education teachers: Implications for Physical Education teacher education. Physical Education and Sport Pedagogy, 25, 451-463, 2020. https://doi.org/10.1080/1734554

Badeda, M., & Shabeba, S. (2012). The effect of teaching methods on teaching kinetic skills in the class of Physical Education and Sports: A comparative study. Qasidi University of Humanities and Social Sciences, Department of Physical and Mathematical Sciences and Techniques. Algeria.

Berger, J. (2011). Arousal increases social

transmission of information. Psychological Science, 22(7), 891-93. Wharton School, University of Pennsylvania.

Botagariyev, T., & Kubiyeva, S. (2016). Studying the effectiveness of Physical Education in the Secondary School. International Journal of Environmental and Science Education, 11, 3575-3594

Brown, M.M. (2011). Rubrics for use as an assessment tool for Elementary Physical Education. Central Washington University

Chappel, R., & Stinsson, R. (2010). Questioning our past and building our future: Teacher education in dance for the 21st Century, Journal for Dance Education, 10 (4): 134-144.

Casey, A., & Quennerstedt, M. (2020). Cooperative learning in Physical Education encountering Dewey's educational theory. Available in: https://doi.org/10.1177%2F1356336X20904075.

Deihl, D., Guion, L., & McDonald, D. (2011). Conducting an in-depth interview: Guidelines and techniques for conducting in-depth interviews. EDIS 2011(8):3 Available in: DOI:10.32473/edis-fy394-2011

Hayes, A., & Bulat, J. (2017). Disabilities inclusive system and policies guide. Research Triangle Park (NC): RTI Press; 2017 Jul. Available in DOI: 10.3768/rtipress.2017. op.0043.1707

Hobbs, L. (2013). Teaching out-of-field as a boundary-crossing event: Factors shaping identity. International Journal of Science and Mathematics Education, 11(2), 271-297, https://doi.org/10.1007/s10763-012-9333-4.

Janovsky, A. (2021). Safety Rules & Procedures for P.E. Classrooms. (2021, January 26). Available in: https://study.com/academy/lesson/safety-rules-procedures-for-pe-classrooms.html.

Laal, M., Laal, M., & Khattami-Kermanshashi, Z.

(2012). 21st century learning. Journal of Procedia-Social and Behavioral Sciences, 47 1696-1701.

Lieberman, L., Arndt, K., & Daggett, S. (2007). Promoting Leadership in Physical Education and Recreation. JOPERD Vol. 78, No. 3.

McCombes, S. (2021). Selection of and creating a research design. Revised by Pritha Bhandari.

Philippines Constitution. (1987). The Constitution of the Republic of the Philippines,

Ricketts, D. (2018). Liability and legal considerations for physical education. Available in: https://study.com/academy/lesson/liability-legal-considerations-for-physical-education.html.

Rockstroh, A.H. (2013). Teacher characteristics on student achievement: An examination of high schools in Ohio. Martin School Policy and Administration. University of Kentucky.

Shantz, A., & Latham, G.P. (2012). Transfer of training: Writing self-guidance to increase self-efficacy and interviewing performance of job seekers. Human Resource Management, 51(5), 733-746.

Serrano, J., Shahidlan, S., & Leite, N. (2013). The importance of sports performance factors and training consent from the perspective of coaches. Available in: DOI: 10.2478/hukin-2013-0055.

Soot, A., & Viskus, E. (2014). Contemporary approaches to dance pedagogy: The challenges of the 21st century. Procedia-Social and Behavioral Sciences. Available in: https://doi.org/10.1016/j.sbspro.2014.01.1167

Wang, J., & Rairigh, R. (2006). Using instructional rubrics in physical education. Educational Leadership, 57(5), 13-18.

Werihana, L., Welch, A., Williamson, M., Christenson, M., Bakon, S., & Craft, J. (2018). Using Collaizi's method of data analysis to explore the experiences of nurse academics teaching on satellite campus. PMID: 29546965. Available in: DOI: 10.774/nr.2018.e1516.

TEACHERS' PROFILE, KNOWLEDGE ON DEPED'S POLICIES, PROGRAMS STRUCTURE AND WORK EFFICIENCY: INPUTS TO INTERVENTION

Francis R. Delmonte, Teacher II,
Abuyog National High School
Schools Division of Leyte
francis.delmonte001@deped.gov.ph

Introduction

In accordance with Civil Service Commission Resolution 1600358 series 2016 (Department of Education Order 03 series 2016), the Enhanced Basic Education Act of 2013 was implemented in Senior High Schools in 2016, giving 1,638 provisional teachers the opportunity to teach even without a license.Senior High School becomes factory of varied professionals that cater to the needs of learners while carrying their ideology and grasp of policy, resulting in a comparison of the policies, programs, and structures that result in "satisfactory" performance (Arpilleda, 2019: Acedo, 2019).

DepEd encouraged schools to craft mechanism for securing school records from the learners for admission upon evaluation of subjects taken from previous school. This was an outcry of transferee students who were labelled as "irregular" after being found out not being taken Earth and Life Science (DepEd Leyte Curriculum Implementation Division, 2018). Failed in three (3) subjects is still entitled to enroll in subjects in Grade 12 where when subjects were not regarded prerequisites. Non-submission of permanent records deterred students not to graduate. Such was among the misconceptions of promotion and retention criteria (Abuyog NHS, 2018).

Cyberbullying in online class is evident which caused the child to feel like a lesser person (Philippine Daily Inquirer, 2021). Vargas et al. (2017) emphasized the impact of cyberbullying on social behavior. Similarly, SHS teachers recognize various sorts of psychological, mental, and emotional distortion. A grade 12 student dropped from school after engaging in social media disagreement with a teacher over absences from class and fraternity activity. Such prevalent conditions necessitate reporting, policy assessment, and broad awareness of the duties of each policy actor (UNICEF, 2020; Vargas et al, 2017).

Functional structure should be enforced to carry out the policies and programs implemented from higher authorities to low level managers to serve its clientele. According to a pre-survey conducted in one of the SHS in Lapu - Lapu City Division in Central Visayas, there is a misinterpretation on the structure between a Junior High School and Senior High School Heads Despite the fact that the school is integrated, the Senior High School Principal should have been given the authority, responsibility, and accountability to execute policies, programs, structure, and good governance within the department (Bongalos, 2019). Junior High School Head Teacher in Area - VA desired to divide the SHS Department into Technical - Vocational and Livelihood (TVL) Department and Academics Department in order to acquire a special order from the division office as head of one department. This is an evident overlapping of authority and an uncertain term of reference, which may be attributed to the system's complicated structure.

As conjectured to Helman & Siam (2014), structure is a way of achieving the divided distinct tasks of labors through collaboration among the members. It follows a different linear path to minimize redundant function activity, which could reduce member efficiency. Furthermore, a well-structured company fosters a linear and functional decision-making process.

Policies are set of rules and principles circulated to an organization which intends to have a functional and operational governance (Ulla, 2018). These provide teachers and other stakeholders a foundation on making decisions and other necessary actions to avoid charges for civil, criminal and administrative cases and explicitly discharge their duties appropriately. Hence, awareness and comprehensive understanding of such empowers the teachers and hastens the implementation up to the last unit. Revisiting and proper dissemination educational policies impact the learners and make the management of the school in order.

Knowledge on salient features of policies and programs would lead to an efficient workplace. With great emphasis on work efficiency, the department underscored greater efficiency, greater economy and greater effectiveness (Briones,

2019). Hence, efficiency measures quality and quality shall complement with productivity. In view thereof, one should have an in-depth understanding on the policies, programs and structure which have been pointed out as reasons of good performance.

Delayed submission of reports, wastage of resources, repetitive works, apparent decline of innovative works and creativity, complex tracking system and self-insufficiency and disengagement were observed. Thus, work efficiency could be attained when one knows the resources needed, the persons to work with and its definite role in the implementation of different policies and programs.

Essentially, the study aimed of determining the extent of knowledge of SHS teachers on DepEd policies, programs and structure and work efficiency in establishing association to teachers' profile. Moreover, it aimed of determining a relationship between work efficiency and their extent of knowledge of SHS teachers on DepEd policies, programs and structure. Hence, results of the study shall be a basis for proposed intervention which significantly contributed to the Curriculum Implementation Division, school administrators, SHS teachers, parents, students and researchers.

Study objective and hypotheses

The study looked into the association of teachers' profile and their extent of knowledge on DepEd policies, programs and structure. Moreover, it investigated its relationship on their work efficiency. Hence, the study tested the hypotheses that there is significant relationship between teachers' profile and their level of knowledge on the policies, programs and structure and there is significant relationship between work efficiency and their level of knowledge on the policies, programs and structure.

Literature Review

The first year of employment is crucial in building teaching disposition in relation to philosophical thought. Jennings (2021) assumed beginner teachers commence their teaching journey with prepared foundational skills needed to be effective and efficient. Luft (2014) validated the claim that they build community to further enhance their instructional and content competence linked to whom who they think shall support their profession. Teachers found help from teachers close to their classroom. In this light, teachers require a mentor in order to better grasp organizational goals and programs, which will eventually lead to the formation of formative relationships among their colleagues. As a result, respect and acceptance are witnessed within the society in which they are immersed, teachers tend to be efficient and efficient

(Gaziel, 2014). Thus, teacher efficacy is extrinsic.

Tenured teachers are individuals who are employed by the department on an ongoing basis with no set expiration date. Tenured teachers promote productivity, efficiency, and performance as a result of departmental culture adaptability and a thorough understanding of regulations and processes. However, they may feel disengaged from their job for a variety of reasons, including a lack of motivation and productivity (Ng & Feldman, 2013).

Throughout the previous five years of SHS implementation, the teaching-learning process among teachers has varied based on the accumulated knowledge and raw talents of middle-aged adults and younger adults (Warr, 1994). This is reinforced by Marsh's (2007) study, which discovered that age and experience had no significant effect on teaching and job performance. (McEvoy & Cascio; Rhodes; Salthouse and Maurer as referenced in Maurer & Barbeite, 2021). Bersin and Premuzic (2019). Age and number of years in employment are major predictors of job efficiency (Asio, 2021). In addition, sex is said to make a major difference in job performance. According to Berman (2018), there is a gender gap in work performance where women are more concerned with organizational advancement than with professional advancement.

Knowledge is considered input, where outcomes equate to performance. To enhance job performance, a desired amount of knowledge is required (Adewusi, 2017). Teachers with ample knowledge understand the set of responsibilities and their association with the ongoing capacity to keep abreast of the changes in job functions. Hence, knowledge on the job is an essential determinant of job performance.

Webbink (2012) pointed out that evaluating policies and interventions as one of the approaches to ensuring efficiency. He explained that policies and interventions should transform additional resources into better performance. Hence, policies and interventions could always mean success (Leaven et al., 2007).

Structure points out the interrelatedness among components of an organized whole (Ahmady et al., 2016). This is further related to human resources, the frontline service provider to educational clientele. Such would compose a framework of relations to jobs, systems, operations, people, and groups who would have shared equal effort to achieve definite goals. Moreover, it determined their duties and functions (Monavaria et al., as cited in Ahmady, 2016). The significant and definite role of actors in educational institutions determines organizational performance.

Hilman & Siam (2014) affirmed that organizational structure is a critical and significant factor determining any organization's success or

failure.Hence, the success or failure of the execution of any activity is dependent on how far the employee knows the policy and program to be implemented. Power DMS (2018) pointed out that following a consistent and definite structure would easily single out areas that need to be addressed and the person accountable.

Ancillary services are designated to empower teachers to exercise authority in implementing the provisions relative to their designation. The study of Into & Gempes (2018) pointed out that equally distributed ancillary functions shall strengthen the collaboration and support system among teachers. More so, they shed light powerful implications for improving the system by reinventing themselves to better serve with positive attitudes and skills (Wijetunge, 2016). Boulet (2015) emphasized that skills could be developed by utilizing theoretical knowledge in practice.

Buran and Basaran (2021) found out that teachers with post-graduate studies had kept track of their academic career, professional development, and knowledge - sufficient in their field and the department they are into. Moreover, teachers with high educational attainment tend to exhibit efficiency (Abun et al., 2021). Teachers with more experience confer more benefits to their coworkers, their pupils, and the school (Kini & Podolsky, 2016). Additionally, teachers working in a collegial working environment increase efficacy quickly.

Morgan (2000) teachers formulate a dichotomous categorization of policies and programs as "relevant "and "irrelevant." Moreover, interest and significance to one's practice make policies and programs "relevant" to teachers. In addition, policies that are "close to the heart" of the teachers are better understood. On the contrary, many policies initially had little bearing on teachers' work. They had a significant impact and discreetly influenced their behavior to a greater extent (Morgan, 2000).

Clif (2008), as cited in Kampini (2018), pointed out that clear and defined job-specific tasks enforced a better understanding of definite structure prioritizes workloads, and duplicity of tasks is prevented. Furthermore, employees develop autonomy in their work pace as the product of their knowledge gained through collaboration.

Malgapo & Ancheta (2020) believed that senior high teachers from other industries satisfy the need for the position. They are well-equipped with the skills needed to cater to the needs of the learners, especially in technical aspects. Moreover, teachers ought to be capable and knowledgeable enough to share their knowledge with the learners (Beausaert, 2013). Anent to this, non-education senior high school teacher's ability, knowledge, and skills acquired from their prior work have a significant influence on their pedagogical approaches and discharge of duties to a variety of learners in a variety of settings (Malgapo & Ancheta, 2020).

Temporary employment has a detrimental effect on productivity (Lisi & Malo, 2017). In contrast, regularizing teachers' employment status would improve job performance (Adewusi A. et al., 2017). Productivity in the teaching profession means a number of outputs accomplished, such as monthly reports, lesson plans, intervention plans, innovations, research, teaching and learning engagement, monitoring and evaluation, and community linkages. Hence, regular- permanent senior high school teachers ensure familiarization with internal programs and policies, which tend to raise their extent as the number of their years in service increases.

Theoretical Background

The study is hinged on the position of Knowledge, Structuration, and Efficiency Theories. Russell's Theory of Knowledge explicates that tangible and intangible result is a product of the cumulative knowledge from implemented policies and programs. Hence, knowledge is an input towards desirable results. On the other hand, Gidden's Structuration Theory posits enhancing predictable results of definite terms of references of each member of an organization. Moreover, Archer's Efficiency Theory assumes that a teacher enhances his/her efficiency by valuing his/her demand in the workplace.

One's behavior is a reflection of self-belief. A member of an organization seems to value the efficacy and efficiency of work because he believes he should. Bertrand Russell's Theory of Knowledge explicates those beliefs do not constitute knowledge until it is observed by the one who believes. Hence, behavior naturally outgrows.

Efficiency Theory's main objective is to provide employees with welfare services to secure, preserve and develop their efficiency and productivity. Efficiency has walls, and giving them welfare is breaking the walls and seeking resources to make them feel better and valued.One way of doing it is to change our minds, believe it is possible, and act on those beliefs. Thus, efficiency needs self-introspection and disposition in education. It also needs a functional philosophy that would give self-direction.

Structuration Theory centers on binding time-space in social systems, rules, and resources, which could be considered both the medium and outcome of reproducing practices (Sewell, 1992). Anent to this, Giddens pointed out that the theory examines the structure, interaction, and modality.

Taking into account the existing programs and policies as the basis of action and transforming the goals of education into an accomplished task enhances the degree of predictability of the system's future performance.

Conceptual Framework

The study aimed at determining the profile of the respondents in terms of age, sex, highest educational attainment, teaching position, years in service, ancillary services, and employment status. Furthermore, the level of knowledge on DepEd policies, programs, and structure is also assessed descriptively. In addition, the extent of work efficiency among respondents is also determined.

The relationship between profile of respondents and their level of knowledge is determined. In addition, association between respondents' level of knowledge on DepEd policies,
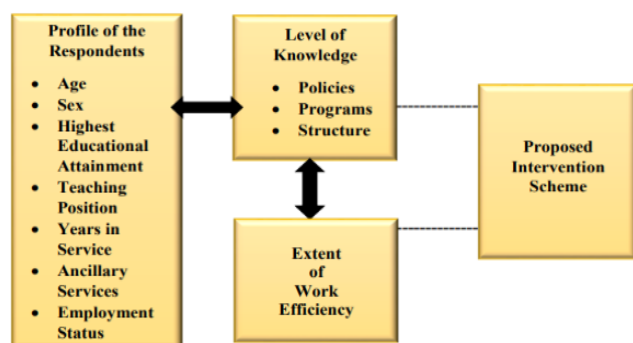

Figure 1. Conceptual Framework of the Study

program and structure relative to their perception on work efficiency is also established. Hence, findings of the study served as the basis for an intervention scheme.

Methodology

The study utilized descriptive-correlational design, which centers on determining the level of knowledge of the Senior High School Teachers on policies, programs, and structures relative to their work efficiency. Primarily, the study aimed at gathering vital information on respondents' profile where the magnitude of association to their level of knowledge is determined. Furthermore, it investigated the degree of relationship between the level of knowledge and work efficiency.

Four hundred –ten (410) Senior High School teachers were included in the study across all areas in Leyte Division represented each type of school typology either stand-alone or integrated. Participating schools were identified through stratified sampling where teacher-respondents were selected through complete enumeration method.

Research instrument to measure the knowledge of the respondents was self-structured

which underwent validity and reliability test. Items found in the instrument were taken from salient features and silences of DepEd Programs, Policies and SHS Structure. These include DepEd Order 55 s. 2016, DepEd Order 40 s. 2012, DepEd Order 54 s. 2016, DepEd Order 8 s. 2015, DepEd Order 36 s. 2016, DepEd Order 28 s. 2016, DepEd Order 30 s. 2017, DepEd Order 56 s. 2021, DepEd Order 13 s. 2019 and DepEd Order 26 s. 2017. On the other hand, a twenty-five-item self-assessment tool (adopted from Camasin, 2013) measure teachers' perceived work efficiency.

Research instruments were administered to the respondents in hybrid modality – face-to-face and online. Upon retrieval of the instruments, profile of the respondents, namely sex, age, highest educational attainment, teaching position, years in service, designation, and ancillary services, are coded and tabulated using descriptive statistics such as frequency counts, percentages, and mean. On the other hand, the extent of knowledge on policies, programs, and structure was interpreted through a mean range. Furthermore, work efficiency was interpreted through its mean range. Moreover, association of profile of teachers, knowledge of DepEd policies, programs and structure, and work efficiency was determined through spearman rho, point - biserial and eta.

Results and Discussion
Profile of the Respondents

Profile of the respondents in terms of their sex, age, highest educational attainment, teaching position, years of service, designation, ancillary services, and employment status are presented herewith.

In terms of age, respondents aged 22 to 34 years accounted for nearly half (48.8%). Moreover, the respondents' mean age is 34.19. On the other hand, a significant proportion of sixty-four percent (64.6%) are female, and practically one-third (33.2%) are male. Majority (56.3%) only have baccalaureate degrees and have yet to pursue a master's degree, while a much smaller proportion of the respondents (26.3%) are currently taking a master's degree program.

As to the teaching position they currently held, nearly three-fourths (73.7%) of the respondents indicated that they hold the Teacher II position, while 24.7% hold either the Teacher I or Teacher III position. Notably, about 4.3% are employed as either Teacher III or a Master Teacher.

Most respondents (54.4%) are relatively experienced teachers, having been teaching for at least 5 years. Sixty-nine percent (69%) are currently not assigned to perform any ancillary services or special assignments and only have to focus on their

Table 1. Distribution of the respondents by profile variable

Profile Variables	Mean	Frequency	Percent
Age	34.19	200	48.8
Sex			
Male		136	33.2
Female		265	64.6
Highest Educational Attainment			
Baccalaureate Degree		231	56.3
With Master's Units		108	26.3
Teaching Position			
Teacher I		90	22.0
Teacher II		302	73.7
Years in Service	4.77	385	83.9
Ancillary Services			
Not Assigned		283	69.0
Employment Status			
Permanent		337	82.2
Provisional		73	17.8

teaching loads. On the other hand, the vast majority of the respondents (82.2%) have permanent appointments.

Respondents' Knowledge of DepEd Policies, Programs and Structure

Table 2 shows that the respondents are only moderately knowledgeable about DepEd policies, with an overall mean of 3.28. The respondents obtained the highest mean score (3.42) on DO 8, s. 2015 or Policy Guidelines on Classroom Assessment for the K to 12 Basic Education Program, which is rather understandable, considering that classroom assessment is a major component of curriculum implementation.

On the other hand, the respondents' lowest mean score (2.97) is on Policy Guidelines on Awards and Recognition for the K- 12 Basic Education Program. This being the lowest can be attributed to recognizing learners' achievement being done quarterly and at the end of the school year. Teachers review or revisit this policy much less often than other policies. This practice tends to affect the retention of teachers' knowledge of the details or provisions of the policy.

However, respondents scored "slightly knowledgeable" on classroom settings focusing on Classroom Discipline, Guidelines on the release of learner's records, and assessment and recognition of

Table 2. Respondents' knowledge of deped policies

DepEd Policies	Mean	Interpretation
Policy Guidelines on Classroom Assessment for the K to 12 Basic Knowledgeable Education Program	3.42	Moderately
Guidelines on the Request and Transfer of Learner's School Records	3.36	Moderately Knowledgeable
Policy Guidelines on the National Assessment of Student Learning Knowledgeable for the K to 12 Basic Education Program	3.35	Moderately
Child Protection Policy Knowledgeable Policy Guidelines on Awards and	3.32	Moderately
Recognition for the K To12 Basic Knowledgeable Education Program	2.97	Moderately
Overall Mean	**3.28**	**Moderately Knowledgeable**

learners. Such facets circumscribe the scope of teachers in the teaching and learning process. Moreover, it could be deduced that respondents exhibited "moderately knowledgeable" to "very knowledgeable" on policy fundamentals but failed to apply them in the discharge of their duty.

Majority of the respondents (76.3%) are only moderately knowledgeable of DepEd policies. Hence, the knowledge of respondents on policies is much affected by their categorization, such as "relevant" and "irrelevant" for them. Thus, policies that have direct significance for them, such as the policy on assessment, constitute a greater extent of acknowledgment (Morgan, 2000).

Respondents' Knowledge of DepEd Programs

Table 3 depicts that the respondents are knowledgeable about the implementation of the Senior High School (SHS) Program, with the highest mean score of 3.76. Meanwhile, they are also knowledgeable about the guidelines for Work Immersion, with a mean score of 3.64. This is not surprising because work immersion is a major component of the SHS program.

Respondents are only moderately knowledgeable about the implementation of Enhanced Alternative Learning System 2.0, Homeroom Guidance Program, and Senior High School Voucher Program, with mean scores of 2.71, 3.22, and 3.31, respectively. Respondents scored "moderately knowledgeable" on the voucher system, aspects of the Homeroom Guidance Program and Alternative Learning System. It also shows that the majority of the respondents (72%) have a moderate level of knowledge concerning DepEd programs for senior high school which were communicated to the concerned teachers who are the catalyst of such. Furthermore, this result conforms to the study of Into & Gempes (2018), where collaboration and a robust support system during the implementation of these

Table 3. Respondents' Knowledge of Deped Programs

DepEd Policies	Mean	Interpretation
Guidelines on the Implementation of the Senior High School (SHS) Program in Existing Public Junior High Schools (JHSs) and Integrated Schools (ISs), Establishment of Stand-Alone Public SHSs, and Conversion of Existing Public Elementary and JHSs Into Stand-Alone SHSs)	3.76	Knowledgeable
Guidelines for Work Immersion Clarifications and Additional Information to DepEd Order No. 46, s. 2015 (Detailed Guidelines on the Implementation of the Knowledgeable Senior High School (SHS) Voucher Program)	3.64	Knowledgeable
	3.31	Moderately
Homeroom Guidance Program	3.22	Moderately Knowledgeable
Policy Guidelines on the Implementation Knowledgeable of Enhanced Alternative Learning System	2.71	Moderately
Overall Mean	**3.32**	**Moderately Knowledgeable**

programs will shed light and significantly impact the school in general.

Respondents' Knowledge of SHS Organizational Structure

With respect to SHS organizational structure, Table 4 shows that respondents' mean score is 3.18, indicating that their knowledge is only at a moderate level. This suggests that they are fairly aware of the guidelines, standards, and procedures that define SHS organizational structures, the staffing of a public SHS, and the roles and functions of teaching and non-teaching personnel. It also depicts that a small

Table 5. Respondents' Knowledge of SHS Organizational Structure

DepEd Orders	Mean	Interpretation
Guidelines on the Organizational Structures and Staffing Patterns of Stand-Alone and Integrated Public Senior High Schools	3.25	Moderately Knowledgeable
Additional Guidelines to DepEd Order No. 19, S. 2016 (Guidelines on the Organizational Structures and Staffing Patterns of Stand-Alone and Integrated Public SHS	3.11	Moderately Knowledgeable
Overall	**3.18**	**Moderately Knowledgeable**

proportion of the respondents (18.5%) are knowledgeable. There are also a few (4.1%) who only have minimal knowledge of the SHS organizational structure.

Work Efficiency of the Respondents

As shown, the respondents perceived themselves as very efficient on 8 of the 25 statements. Notably, these 8 statements relate primarily to

Table 6. Respondents' Level of Work Efficiency

Statements	Mean	Interpretation
I am honest and dedicated.	4.56	Very Efficient
I manage my time effectively.	4.43	Efficient
I am loyal to the department.	4.51	Very Efficient
I provide assistance to slow learners.	4.42	Efficient
I am friendly and cheerful in school.	4.48	Efficient
I am regular in every educational activity.	4.00	Efficient
I show friendly and enthusiastic behavior.	4.50	Very Efficient
I ensure that students improve their learning.	4.52	Very Efficient
I create and bridge a communication in school.	4.31	Efficient
I am aware of the national goals of education.	4.51	Very Efficient
I am persuasive to promote cooperation in school.	4.48	Efficient
I plan to achieve the desired school's objective.	4.48	Efficient
I give sufficient time for questions/discussions.	4.47	Efficient
I monitor regularly my job and students' performance.	4.47	Efficient
I discuss with teachers and students' classroom problems	4.37	Efficient

classroom instruction and the importance of collaboration among teachers in achieving quality teaching methodology and practices, the effective

I complete the school requirements / reports well on time.	4.35	Efficient
I provide timely, accurate and constructive feedback.	4.44	Efficient
I promote sportsman spirit among teachers and students.	4.48	Efficient
I am very receptive to my colleague's good ideas and inputs.	4.42	Efficient
I provide technical assistance to my colleagues when deemed necessary.	4.38	Efficient
I ensure the availability of right equipment, materials and tools in school.	4.41	Efficient
I ensure that my colleagues are satisfied with work climate in school.	4.60	Very Efficient
I keep the school and classroom environment conducive to learning.	4.41	Efficient
I demonstrate and present the school goals attractively and effectively.	4.51	Very Efficient
I try to improve the right attitude and work habit towards my colleagues and my students.	**4.46**	**Efficient**
OVERALL MEAN		

aspect of teaching, and the ultimate goal of every school.

In particular, respondents are efficient at keeping the school and classroom environment conducive to learning, improving student learning, accepting ideas and inputs, and improving their attitude and work habits towards their colleagues and students. They also view themselves to be honest and dedicated to their work ,loyal to the department, and friendly and enthusiastic. They also assessed themselves to be highly aware of the national educational goals.

Teachers who are efficient or very efficient at work account for about 99% of the respondents combined. They can produce the most output with the minimum possible time and effort, which can result in high levels of productivity. It is aligned with the study of Malgapo & Ancheta (2020), where senior high teachers utilized their acquired knowledge, skills, and ability to discharge their official duty. Hence, being open to constructive criticisms from colleagues, improving work attitude, and dedication to work direct a significant performance.

Relationship between Respondents' Profile and Knowledge of DepEd Policies, Programs and Organizational Structure

This study determined whether significant associations exist between the profile variables and knowledge of DepEd policies, programs, and structure. Table 7 shows that of the 21 variables, only years of service and knowledge of SHS organizational structure showed a significant relationship, with a correlation coefficient of 0.102 and p = 0.039. This suggests that teachers with long years of service or those who have been teaching for many years are more knowledgeable about the organizational structure of the SHS. Although significant, the magnitude of this relationship is

Table 7 Correlation between Profile Variables and Knowledge on DepEd Policies, Programs and Structure

Profile Variables	Measures of Association	Policies	Knowledge of Programs	Structure
Age	Pearson's r	-0.058	0.080	0.074
	p – value	0.238	0.107	0.136
Sex	Point-biserial	0.007	0.035	-0.019
	p - value	0.883	0.476	0.700
Highest Educational Attainment	Spearman Rho	0.019	0.023	0.046
	p – value	0.695	0.644	0.352
Teaching Position	Eta	0.092	0.084	0.055
	p – value	0.328	0.413	0.743
Years of Service	Pearson's r	-0.44	-0.075	0.102*
	p – value	0.376	0.130	0.039
Ancillary Services	Eta	0.086	0.078	0.079
	p – value	0.390	0.478	0.462
Employment Status	Point-biserial	-0.056	-0.024	-0.075
	p – value	0.259	0.626	0.127

weak.

Non-significant results indicate that any change in a particular profile variable is not associated with any change in knowledge of policies, programs, and organizational structure. In particular, master teachers are naturally expected to be more knowledgeable about policies, programs, and SHS organizational structure than teachers holding teachers I, II, and III positions because master teachers tend to be assigned to perform some leadership roles and hence, need to be aware of policy guidelines. Similarly, teachers assigned to handle heavy ancillary services usually keep themselves abreast of existing DepEd policies because they are expected to perform such services in accordance with policy guidelines. However, this

Table 8 Correlation between Work Efficiency and Knowledge of DepEd Policies, Programs and Structure

Profile Variables	Measures of Association	Policies	Knowledge of Programs	Structure
Work Efficiency	Pearson's r	-0.010	0.016	-0.116*
	p – value	0.841	0.740	0.019

study shows that the indicated variables are not associated.

Relationship between Respondents' Work Efficiency and Knowledge of DepEd Policies, Programs and Structure

Table 8 reveals a significant negative relationship between work efficiency and knowledge of SHS organizational structure. This indicates that teachers with high levels of knowledge structure tend to have low work efficiency. Moreover, human performance through interaction and adaptation to a work environment defines work efficiency(Venda, 1993). It is, therefore, a product of extrinsic rather than intrinsic drive towards work. This indicates further that knowledge on structure only sometimes translates into desirable work efficiency.

On the other hand, work efficiency is not significantly associated with knowledge of DepEd policies and programs. This implies that highly knowledgeable teachers could be more efficient in their work. This further indicates that other factors other than knowledge of policies and programs relate to high or low work efficiency among teachers. However, it does not indicate, in any way, that knowledge of such aspects is optional. Policies guide how teachers and schools should perform and thus play an important role in school operations.

Results on the association of work efficiency and knowledge of DepED PPS among SHS teachers are undeniably "negative"; if there is "very low." Findings resulted from an objective assessment of respondents' knowledge of PPS, while work efficiency was measured based on the adopted instrument through their perception, which is rather subjective.

Conclusions and Recommendations

Grounded on the findings, it could be deduced that SHS teachers are only moderately knowledgeable about the majority of the DepEd policies covered in this study. Teachers are "slightly knowledgeable" in the classroom setting focusing on classroom discipline relative to the Child Protection Policy, guidelines on the release of learner's records, and assessment and recognition of learners. Meanwhile, respondents are knowledgeable about some DepEd programs, including the implementation of the senior high school and the SHS work immersion program. They are "slightly knowledgeable" on the voucher system for a transferee to a recognized higher education offering SHS, aspects of the Homeroom Guidance Program and Alternative Learning System's aims, and admission requirements to SHS. It can be noted that teachers who have been in the teaching profession longer have better knowledge of the SHS organizational structure. Moreover, teachers with a high level of knowledge of the SHS organizational structure tend to have low work efficiency, suggesting that their knowledge of policy provisions on the structure may have yet to be applied to work.

In view of the findings, the following recommended that schools may find more creative ways to communicate policies to teachers as this is necessary to make the community aware of all policies governing school operations and the teaching profession in general. Activities can supplement this to facilitate greater awareness and knowledge of policies, such as inviting an expert to comprehensively discuss the policies in a teacher conference at the school level. This will help teachers learn important provisions and guidelines and allow them to clarify the policies first-hand. Hence, a compendium of DepEd policies, including

Senior High School programs and structure, may be created by schools to provide easy access and reference. Furthermore, a study may be conducted relative to work efficiency using an objective and a more valid tool and exploring teachers' knowledge of DepEd's policies and programs using other research designs and locale to confirm or refute herein results. DepEd may consider the proposed Review- Commitment – Engagement – Monitoring (R-C-E-M) intervention.

References

Adewusi et al (2017). Employment Status, pay and Perceived Performance among workers in foreign-owned Industries in Southwest, Nigeria. https://www.researchgate.net/ publication/322068962_Employment_Status_Pay_and_Per ceived_Performance_among_Workers_in_Forei gnowned_Industries_in_Southwest_Nige ria

Archer , Timothy S. (2010) . The Efficiency Theory.https://www.amazon. com/Efficiency-Theory-Improving-eliminating-restructuring

Asio, JM. (2021). Determinants of Work Productivity Among Selected Tertiary Education Employees: A Pre-COVID- 19 Pandemic Analysis. *International Journal of Didactical Studies. Volume 1, Issue*

Berman (2018). Women are more productive than men. World Economic Forum

https://www.weforum.org/agenda/2018/10/women-are-more-productive-than-men-at- work-these-days

Camasin, G. (2013). Organizational Climate, Leadership Styles and Job Performance of Public Elementary School Administrators in Area II – B , Division of Leyte.

Civil Service Resolution 1600358 series 2016. Teaching Position for Senior High School. 1600358 Civil Service Resolution 2100451 series 2016. Reappointment of Provisional Appointments of Senior High School Teachers. 2100451 – 2021

Department of Education (2012) . Child Protection Policy

Department of Education (2017). Guideline for Work Immersion

Department of Education (2015) . Policy Guidelines on Classroom Assessment

Department of Education (2016) . Guidelines on the Request and Transfer of Learners' School Records

Department of Education (2015) . Detailed Guidelines on the Implementation of Senior High School Voucher Program

Department of Education (2016) . Detailed Guidelines on the Applications of Senior High School Voucher Program

Department of Education (2019) . Policy Guidelines on the Implementation of Enhanced Alternative Learning System

Department of Education (2016) . The Policy Guidelines on Awards and Recognition for the K - 12 Basic Education

Department of Education (2016) . Policy Guidelines on the National Assessment of Student Learning for the K- 12 Basic Education Program

Department of Education (2016) . Guidelines on the Organizational Structure and Staffing Patterns of Stand-Alone and Integrated Public Senior High School

Department of Education (2016) . Clarification and Additional Information to the Detailed Guidelines on the Implementation of Senior High School Voucher Program

Department of Education (2016) . Additional Guidelines to the Organizational Structure and Staffing Patterns of Stand-Alone and Integrated Public Senior High School

Department of Education (2021). Guidelines on the Implementation of the Joint Delivery Voucher Program for Senior High School Technical - Vocational Livelihood Specialization for School Year 2021 – 2022

Department of Education (2017) . Addendum to Implementation of Senior High School Program in Existing Public Junior High School and Integrated High Schools, Establishment of Stand -Alone SHS and Conversion of Existing Public Elementary and JHS's Into Stand-Alone SHSs

Department of Education (2017). Amended Qualification Standards for Senior High School Teaching Positions in the Technical- Vocational and Livelihood Track and Other Clarifications in the Hiring Guidelines

Department of Education (2021). Interim Guideline on Giving of Awards and Recognition of the Basic Education Learning Continuity Plan for School Year 2020-2021

Department of Education (2021). Reappointment of Senior High School Teachers First Hired in School Year 2016 – 2017 and Amendment of DepEd Order No. 51 s. 2017

Eskivington, James E. (2007). A Study of Organizational 'Framework' and 'Process' Modalities for the Implementation of Business-Level Strategic Decisions. *Journal of Management Studies, 28(1) , pp 45-68. URL: https://ideas. repec.org/a/bla/jomstd/ v28y1991i1p45-68.html*

Fullan, M. (2021). There's No Leadership Without Nuance. The School Superintendents Association. URL: https://my.aasa.org/AASA/

Resources/SAMag/2021

Gaziel (2014) : Teachers' Self-Efficacy: The Role of Personal Values and Motivation for teaching.URL:https://www.frontiersin.org/articles/10.3389/fpsyg.2019.0

Hill, B. (2019) . The Importance of Good Organizational Structure. URL: https://smallbusiness.chron.com/importance-good-organizational-structure-3792.html

Hilman & Siam (2014) . The Influence of Organizational Structure and Organization Culture on the Organizational Performance of Higher Educational Institutions: The Moderating Role of Strategy Communication. *Canadian Center for Science and Education.Vol.10,No.13.URL:https://scirp.org/reference/referencespapers.aspx*

Into & Gempes (2018). Untold stories of teachers with multiple ancillary functions:A Phenomenology of Fortitude. *Journal of Advances in Humanities and Social Sciences. 4 (1).pp.13-25.*

Jennings, J. (2021) . Effective Classroom Management : Teacher Preparation and Professional Development.URL:https://www.oecd.org/education/school/263539

Kini & Podolsky (2016). Does Teaching Experience Increase Teacher Effectiveness? A Review of the Research. Learning Policy Institute. URL:https learningpolicyinstitute.org/sites/default/files/productfiles/Teaching_Experience

Kampini, T. (2018). Impact of Organizational Structure on Employee Performance.

Lisi & Malo (2017). The Impact of Temporary Employment on Productivity.Journal for Labour Market Research. 50,91–112.

Lesage et al (2013) . Scoring Method for Multiple Choice Assessment in Higher Education - Is is still a matter of number right scoring or negative marking?.Studies on Educational Evaluation. Volume 39, pp 188-193

Luft, J. (2014) . Newly-Hired Teachers: A Five-Year Study. Australasian Science Education

Research Association.URL: https://www.researchgate.net/publication

Malgapo & Ancheta (2020). Pedagogical and Approaches of Non-Education Graduates Teaching General Mathematics in the Senior High School. *International Journal of Advanced Engineering, Mathematics and Sciences. URL: https://www.semanticscholar.org/paper/Pedagogical-Approaches-and-Techniques-of-Graduates-*

Ong Ki (2020). The Bully is Still Present in Today's Online Classes. *Manila Bulletin. URL: https://mb.com.ph/author/czarina-nicole-ong-ki/page/56/*

Nicomedus, J. (2011) . Induction Program, Performance, and Morale of Teachers in Selected Schools in DepEd, Cavite City. Technological University of the Philippines. URL: https://www.academia.edu/INDUCTION_PROGRAM_PERFORMANCE_AND_MOR ALE_OF_TEACHEIN_SELECTED_SCHOOLS _IN_DEPED_CAVITE_CITY

Ng & Feldman (2013). Does longer job tenure help or hinder job performance? *Journal of Vocational Behavior, Volume 83, Issue 3, 305-314.URL: https:www.sciencedirect.com/science/article/abs/pii/S0001879113001395*

Ulla, S. (2018) . Importance of Policies in School Educational Ecosystem. Academy of Health and Education. URL: https://www.linkedin.com/pulse/importance-policies-school-education-ecosystem-sami-ulla-m.

Vargas et al (2017) . Senior High School Students Cyberbullying Experience: A Case of University in the Philippines.

Venda,
V. (1993). Work Efficiency vs. Complexity: I ntroduction to Ergodynamics. *Journal of the Washington Academy of Sciences, 83(1), 9– 31.*

Warr (1994) Age and employment. *Handbook of Industrial and Organizational Psychology*

COMMUNICATION REGISTERS AND STRATEGIES OF PUBLIC-SCHOOL HEADS: TOWARDS A LANGUAGE POLICY RECOMMENDATION

Erwin L. Purcia, Education Program Supervisor-English
Schools Division of Calbayog City
erwin.purcia@deped.gov.ph

Introduction

As the driving force behind any educational community, school administrators serve as the forerunners in delivering edifying reforms that students deserve. With such demanding responsibilities, establishing interactions with all stakeholders, both internal and external, is a major worry. Because active participation necessitates the use of precise language, the majority of them have difficulty expressing their thoughts and ideas in a clear and understandable manner. These challenges multiply when people convey ideas in a variety of locations, roles, and themes, or in a variety of social circumstances in particular, resulting in difficulties in expressing ideas that develop contextually. The majority of people struggle to express themselves, particularly in English. Unfortunately, one such predicament spreads not only among themselves, but among every individual they come into contact with as well as communicate to on a daily basis.

Various social elements are actually applicable in understanding for linguistic differences throughout Calbayog City school administrators, as they are inside the context of the Schools Division of Calbayog City school heads. Stakeholders (linguistic practitioners), context and procedure (conversation codes including tactics), topic, and function could all be related to these socio - cultural elements. Such factors suggest that in each area, such as Calbayog City, one's unique language repertory is made up of distinguishing variations that can be used in diverse public circumstances.

Because school administrators' everyday lives were typically occupied by writing information messages, responding to questions from community stakeholders, and a variety from other issues, linguistic feedback is needed. English becomes useful when there are other people inside the discussion. Every person in a dialogue does have a unique mind set and communicating themselves via communication; as the school's leader, s/he must make a strong impact on a few of individuals in order to develop empathy therefore, as a result, expect support for whichever activity that institution does. This environment, sadly, determines that environment wherein discussion occurs; a more conducive and welcoming the environment is, the better the discussion of views will be. More crucially, language is essential of transmitting not only knowledge but also experience, of being psychologically and emotionally interested in the topic of interaction. With sociological approach, the study identified the communication registers and strategies of school administrators in the Schools Division of Calbayog City as basis for a language training.

Specifically, this in-depth analysis and profound investigation aimed to:

1. Analyze the corpora of utterances of school heads in terms of communication registers and strategies they use in communicating to stakeholders

2. Draw implications for a language policy recommendation for school heads.

Methodology

This study employed qualitative-descriptive research method through observation and interview conducted to determine the communication registers and strategies of school administrators in interacting with their stakeholders. As a result, an in-depth examination of the transcribed corpus of utterances of school heads in various interactions, as well as the natural method in which school heads communicate with their stakeholders were gathered, evaluated, and interpreted.

This study was conducted in the Schools Division of Calbayog City with all the school heads both elementary and secondary were involved. There were eighty-two (82) total number of school heads: seventy (70) from the elementary school heads and twelve (12) from the secondary. These school heads are all residents of Calbayog City. Over seventy percent (70%) of these elementary school heads are assigned in various stations that necessitates a day, two or three travel through walking to reach their schools. In fact, most of them cross rivers and valleys and spend a night to rest before they can reach their stations. Yet, one can never see any complaint on their faces and they never did complain. The remaining thirty percent (30%) and the entire secondary school heads are all assigned in stations situated within car line. However, through the EFA goals of the Department of Education and the systematic districting program of DepEd-Calbayog, the schools division opened high schools located from

some of these hinterlands. Through total or complete enumeration sampling procedure, the researcher identified all these school heads as the respondents of this study.

The researcher captured all his interactions with the school heads and their stakeholders via recording with an interview guide as principal data gathering instrument along with the informed consent form distributed to and signed by the respondents informing them therein that a research study is being conducted but was kept with how it will be conducted to retain the naturalistic way of data gathering to which the corpora of utterances were generated as basis for the data analysis. The observation of the actual interactions of the school heads with their stakeholders substantially provided the data in this study. Hence, thematic analysis via coding was conducted to determine the most recurrent responses of the respondents as sources of the themes generated.

Results and Discussion

The study capitalized the importance of how communication takes place in various domains that school heads engage. These communicative acts are strengthened by diverse registers and strategies that they manifest in their daily activities especially among their stakeholders.

On Communication Register

Communication Registers are crucial to any organization (Beltran, 2014). No organization ever flourishes without effective communication. This is why in hiring employees, one of the qualifications employers often give weight is communication. One cannot simply serve, more so, lead if one lacks the ability to communicate. This is true to institutions like schools where communication is at the heart of every work. Below narrates the various communication registers that school heads often use in communicating.

Formal/Technical Register

This kind of register usually takes place in a formal setting. Here, no interruption is allowed and technical vocabulary or exact definitions are important and includes presentations and introductions between strangers. The conversation below with supervisors, principals and barangay captain substantially typifies this kind of register. This situation happened in the monitoring conducted by specialists and supervisors of various programs and projects implemented by the schools.

Principal: *Good Morning Ma'am and Sir!*
Supervisor 1: *Good Morning.*
Principal: *Sa opisina po kit anay.*
Supervisor 2: *Ayaw na, diritso nala kami sa iyo*

EBEIS.
Supervisor 3: *Hain an iyo transparency board?*
Specialist 1: *An iyo Sir GPP?*
Principal: *Yes ma'am and sir. Wait lang po. Paupdan ta kam samun mga coordinators.*

It can be gleaned from the conversation that the school head introduced both the visitors of the schools who are complete strangers. Technical terms and expressions (like EBEIS, GPP form 2, 4Ps recipients, academic performance) were uttered by interlocutors. These are examples of technical utterances with which any ordinary person especially those not in the academe could hardly understand. This conversation plainly infuses technical register.

Vulgar Register

In the succeeding utterances, words used by the speaker has some kind of vulgarity even if he was addressing his fellow administrators involving fossilized errors of vowels and consonant productions. This is a speech put into a written representation on the conference of school heads about the leak of the DELP on a Saturday as the ASDS called for a meeting relative to the issue and the factors that affected the results of the institutionalized last quarter division test and low results in Language Assessment for Primary Grades (Mock Test). One school got perfect score for two subjects taken, but was found to sneak a copy of the test questions for the two subjects. Most schools on the other hand got low score in almost all subjects. The ASDS, Chiefs and EPSs were not around during the conference because they were on official travel to Tacloban in preparation for the Palarong Pambansa on April 10. Hence, a certain School Head/OIC PSDS was tasked to talk on behalf of the ASDS.

It will tells what kind of teacher you are. For the school heads, the school, the physical (pisikal) aspect of the school. This will tells what kind of leader (lEder) you are. Diri kay hala day, mag Ingles ka, maupay imo iningles pero kay wara ka man action. Noh? Okay. Now, sana waray sugad sini dito sa atin didi sa aton division (dibision). When I was an school head, I never set down na marami ang paligid na…nani ni…mga basura. Itong mga bata mga bata, basura at bata nga nagkakalat duon dahil wala ang teacher, umalis, nagpunta sa division (dibision) office (opis), nagkuha san permanent ah…no…record…ano ba iton…service (serbis) record I mean (mEn). So, the principal, the head teacher naman naka set down sa kanyang office nanonood lang siya ng TV (tEvE), oh kaya nagse-selfie, sige la an text hello my dear (dEr), kumusta ka?

It can be noticed that words like *"mga bulok*

kam, ikaw teachers matatangal ka sa trabaho, you are your classroom, confident ka!, you are a high school head, obligasyon mo yan!... These are only few lines that this school head manifested vulgarity in his expressions. The words used, how he addressed his fellow school heads, and that almost all the words with parenthetical phonetic transcriptions are all the fossilized errors that this school head has, from enunciation, articulation and generally pronunciation. These have become the major problems of almost all school heads particularly those in the remote areas where first language interference has negative effects and any other factors that affect their second language acquisition.

Slang Register
Slang can be divided into four different types; country slang, urban slang, gay slang and common slang. Country slang is used by those who are in the rural parts of a country, while urban slang is spoken by those from the city. Gay slang is used by (Lesbians, Gays, Bisexuals and Transgenders) LGBT members. Common slang is used by almost everybody.

Every culture and every region has its own slang. In this case, Calbayog City Division school heads are more used to adopting gay slang since the institution is dominated by LGBT members. Below are some utterances that school heads have been using even in meetings and conferences in the district.

PSDS/School Head 1: *Good Morning everyone. Goday va!*
School Head 2: *Goday va Madam! Nanu unta aton yana talk show or paghaharampangan?*
PSDS/School Head 1: *Well, gin patawag ta kam sini nga meeting primarily because the division office especially si Inang Reyna kinahanglan na niya aton responsorial psalm para san letters tikang sa CO san YES-O for 2015 recipeints.*
School Head 3: *Ta, finish product na baya kami sana mother. Wadang na gad kami paghimo kay gin submit na ngane namun.*
PSDS/School Head 1: *Ahw, kay kalma gadla. Bakit ka galit? (laugh out loud)... An mga tapos na, winker na paghimo, an mga dre pa, laban na kam. I need the reports early bird catches early worm of morning by tomorrow.*
School Head 4: *Okinawa Japan Mother!*

The above cited example is a usual conversation that school heads have every time they are into conferences/meetings. There have been no meetings in the division that school heads or even immediate superiors do not use the gay slang. Here are the translated meanings of the underlined words that LGBT members or some men and women, especially gay use and understand.

Basically, most of these gay slangs were taken from the first to three syllables of the original words and on their semantics or even their contextual meaning. As in the case of *Goday va, taken from the words "good day" goday but added with inflectional morpheme "va" as gay expression.*
There are still a lot of these gay slangs that school heads use and that in every conversation they make, these have become parts of their vocabulary.

Colloquial Register
Colloquialism is a level of language use that is distinctively informal and varied commonly employed in conversation or other communication in informal situations. This kind of register also has become popular among school heads. Below is a sample utterance of how colloquial register is used by a school head and teachers in a casual conversation.

Principal: *Hasta sanu ka day mag leave?*
Teacher: *Hasta unta sakun panganak Sir kay wara-wara nganhi akun asawa sige la sabongize. Sabongize there and sabongize everywhere. Kumita kala Sir san hitsura baga na an Ogis dre ngani buranteng.*
Principal: *Hahaha…baga nala ini. It's okay, I ain't gonna mind at all kun mag personal leave ka before your due. Para makaandam ka gud.*
Teacher: *Salamat sir nga madamo. You are very sabotable. Hehehehe… nasabot ka sakun kamutangan sir.*
Principal: *Hahahaha… sabotable ka diyan…It's nothing I just wanna help.*

It can be noticed from the underlined words that they are not the usual words from typical conversations. The words "sabotable" and "sabongize" were created from the original Waray word "sabot" meaning to understand while the latter comes from the word "sabong" meaning a cock fight. The other underlined words are contracted terminologies. Ain't is a contraction of "am not," gonna is "going to" while wanna is "want to." These words/expressions are examples of colloquialism.

Table 3
Gay Slang words with meaning

GAY SLANG	MEANING
1. Goday va	Good morning/good day
2. Inang Reyna	Higher Authority (in this case the OIC-SDS who is also a member of the LGBT community
3. responsorial psalm	Response
4. finish product	Finished/done
5. mother	PSDS/School Head 1
6. Wadang	No/not anymore
7. winker	No/not
8. early bird catches early worm	To submit report early
9. Okinawa Japan	Okay

On Communication Strategies

Communication strategies are language processes that learners use to overcome communication problems in order to convey their intended meaning. Below are strategies utilized by school heads in the conversations they had with their stakeholders.

Circumlocution

This strategy refers to learners using different words or phrases to express their intended meaning. This is done by second language learners through elucidating his previous spoken utterance by specifying it so interlocutors could understand them better.

Below is an example of how school heads utilized circumlocutions in expressing their thoughts and ideas for better second language acquisition. This situation was transcribed based on the observation of the researcher in a meeting conducted in the division office.

School Head 1: *I guess we need to look for somebody else from the group who could donate a dozen of, I mean twelve (12) shuttlecocks for the badminton game during the Sports Fest.*

School Head 2: *That is right. Pwede man kit maka-aro sa uncle ni Sir A, an bugto ba san iya mama nga lalaki nga tag-iya san Kimbing Enterprises.*
School Head 1: *Pwede. Para dre na kit magpinanmalit ngan makatipid pa kit. What about the others? What are your suggestions?*
School Head 3: *I could also ask my brother in-law to donate rockets. My wife's bother who is the proprietor of Vida's Mar Commercial. He can be of great help.*

Taking a look at the underlined words, specifications of the school heads' addressees were given by each of the interlocutors. This is to instill better understanding of the words and expressions used by each of them so there would be smooth flow of communication. The underlined words which are specifications of their precedent words are called circumlocutions.

Asking for clarification

This is a strategy in communication whereby a certain interlocutor asks for further explanations or solicits further ideas to the person s/he is speaking with. This strategy emanates in the situation whereby asking an interlocutor for the correct word or help forms part in the conversation.

In most circumstances, as in the case of a meeting, conferences, seminars and the like, most often than not, school heads really resort to airing out clarifications and other concerns. These instances provide them the opportunity to be cleared of some points raised during these events to ensure a successful transfer of information to their constituents more specifically to teachers, students and other stakeholders.

Here is an example of utterances that school heads do during conferences when they ask for clarifications to other school heads informing them of some information they need to know.

School Head 1: *Alright, as mentioned by our OIC-SDS, our Division Pasidungog is moved from December to February due to some unavoidable circumstances beyond our personal control.*
School Head 2: *Again Ma'am? From December to February? For what specific reason Ma'am? Kay kaharayo man san agwat nga month. Why not January? Nanu daw po an rason?*
School Head 1: *Basta iya siring dire dayon sa December.*
School Head 3: *Kun pakianhan ba liwat kmi ma'am san amun teachers kay nanu na move an Pasidungog, okay na po ba liwat nga baton an "basta iya siring dire dayon?"*
School Head 1: *Mga pilosopo gudman kam. Dire ak maaram. Siya nala niyan an pakianhi.*
School Head 4: *Kay dre kaman ngean maaram, tadi nagyakan ka nala unta daan para dre kna pakianhan pa.*

Notice that all school heads in the division were only after the explanation of why such postponement and moving it to two months after. Response from the OIC-SDS enlightened the minds of each school head as to the reason why such action was made. The other school head who has not answered the clarification directly caused the communication aberration. Anyhow, the above cited instance is an example of asking clarification as a communication strategy.

Hedging

In linguistics, hedge is a mitigating word or sound used to lessen the impact of an utterance. Typically, hedges are adjectives or adverbs, but can also consist of clauses (Richards & Schmidt, 2009). They could be regarded as a form of euphemism.

Below are sentences that school heads usually utter in their casual conversation with teachers.

School Head 1: *In schools, there are always insignificant problems that still need to be addressed.*
School Head 2: *Why do you look somewhat like sick? Just file a form 6 and take a leave.*
School Head 3: *I'm not an expert but I can basically operate a projector and other educational devices.*

In the above cited examples, the first underlined word is an adjective, while the second is used as an adverb and the last is a clause. Hedges may intentionally or unintentionally be employed in both

spoken and written language since they are crucially important in communication. Hedges help speakers and writers indicate more precisely how the cooperative principle (expectations of quantity, quality, manner, and relevance) is observed in assessments.

The Use of Code-Switching

Based on the data gleaned from the observation, it is reported that school heads make use of code-switching, the use of two or more languages simultaneously, in communicating announcements, agenda, or suggestions with stakeholders or constituents. The following transcribed speech of a principal announcing something to the students during a flag ceremony illustrates this:

Principal: *Good Morning!*
Students (in moderate voice): *Good morning, principal!*
Principal: *Baganwara man mani-aga. Again, ahm good morning, everyone!*
Students (in loud voice): *Good morning, principal!*
Principal: *Buwas mayda kit mga bisita ahm from other schools. Please, listen ahmm kay importante ine. I expect ahh everybody na mag-behave. I-greet niyo atun mga bisita pag-umagi sira sa iyo. Wara dapat magpasaway. Okay? Okay kit sine? Yes or No?*
Students (in loud chorus): *Yes.*

Code-Switching is one of the observed characteristics of second language speakers. L2 speakers are said to use it to ease their communication in English while simultaneously speaking it with their native tongue. Another reported reason for the use of code-switching is to establish clarity. Communication among L2 speakers becomes much clearer when the use of target language is supported by the use of native tongue.

To prove this point, here is a transcribed discussion of a Department Head using code-switching for clarification purposes during a short meeting with her faculty constituents:

Department Head: *This will just be ahm a short meeting. Dire kit magiiha. I had a talk with the ahm principal regarding the finals and ah ahm he told me to make sure everything is ahm done as scheduled ahm to avoid hassles pagtapos san school year. Karuyag signgon sine nakinahanglan ko ma check ngan makit-an an iyo lesson plans for the finals pati na liwat an grades on or before san ira schedule for submission.*
Teacher 1: *Ma'am, waray pa man nag-post dates kun sano an deadline.*
Dep't Head: *Buwas, magbubutang ak san dates san deadline. Mayda pa kam questions?*

Teacher 2: *An mga grades san graduating students ma'am?*
Dep't Head: *Siguro, para samga graduating, submission of grades will be ahm earlier. I'll post the dates buwas. Igungay ko naliwat an date para san deliberation of honors. Mayda kit separate meeting para sa mga graduating. Mayda pa questions? Wara na? Okay, this is all for today. See you tomorrow.*

It could be noticed that the department head's words seem to sound repetitive. In the first transcribed sentence of her utterance, she is observed to say something in English and then say it again in the native tongue. This repetition, saying one thing in a certain language and saying it again in another language, may point out to her wanting to be clear. Her next transcribed utterances show how she starts by stating the announcement in English and then clarifying it using her native tongue. This just proves the point of the use of code-switching — to give the speaker the assurance of being understood. While the purposes of using code-switching among L2 speakers vary, it is nonetheless certain that bilingual organization leaders will resort to using it to make their utterance clearer and to establish a more comprehensive discourse with their constituents.

The Use of Politeness Markers

Aside from the use of code-switching, another observed language characteristic of public-school administrators is the use of politeness markers (Lee, 2013). It is said that great power comes with great responsibility. Leaders, above anyone else, are mostly expected to observe decorous formality all the time. In language, leaders may manifest formality through the use of linguistic politeness. In Pragmatics, politeness strategies refer to an interlocutor's use of politeness markers aimed at establishing an agreeable and harmonious communicative exchange. Politeness strategies generally have two categories: Positive Politeness which refers to expressions of praises, concerns, and inclusions, and Negative Politeness which refers to the use of hedging in an effort to lessen imposition of authority.

As observed, the participating public administrators employed politeness strategies in communicating with their constituents/stakeholders. The following transcribed discourse between a principal and parents of graduating students during a brief PTA meeting shows this:

Principal: *Maupay nga aga sa atun tanan! Siguro, maaram na kamu kay nanu why we have this meeting. Atunpag-memetingan an graduation san iyu mga anak. Congratulations, in advance! Nakatalwas gihap an iyu anak!*
Parents: (clap in response)
Principal: *Akun la kam ig remind na, as per DepEd policy, dire required an graduation party. An atun eskwelahan magkakamay-ada graduation ceremonies pero we did not announce na mayda party. Mayda kasi nakaabot sa akun*

na mayda mga estudyante na nangagaro kwarta sa ira iroy ug amay para kuno sa contribution for graduation party. Dire po iton ungod. Again, waraypo kit party na gin-announce.
(cont.) *Asya la ine. Ighatag ko na kam san atun coordinator para sa details san graduation. Salamat. Nakiagi la ak.*
Parents: *(laugh and clap in response)*

In this discourse, notice how the principal started by greeting the parents. Though this is a common etiquette, it nevertheless shows that the principal honors the presence of the parents and thereby feels obligated to greet them. Another important thing to notice is the principal's use of inclusion markers. The principal is observed to be using inclusive pronouns like 'we' in English and 'atun' in Waray, his native tongue. This is an act of courtesy that implies that the principal shows how he refers not just to himself in the discourse but also to everyone. Establishing rapport among one's constituents is important to any organization. This is why communication among school leaders and stakeholders is not just limited to fluent articulation of ideas but also to building relationships and boosting organizational solidarity. The use of politeness markers achieves this.

The Use of Discursive Attitude Markers

Whenever one is engaged in a communicative activity, he/she is said to be involved in a discourse. Hence, when public school administrators communicate with their stakeholders, they are establishing a form of discourse. Discourse is more than just a mere conversational exchange between or among parties. More importantly, discourse reveals how speakers, in this case public school administrators, handle talks with those they talk with. How leaders utilize language reveals how they handle discourse with their constituents; this is why in a study that attempts to determine school leaders' linguistic characteristics, it is crucial to know how they exactly participate in and control a discourse (Reeves, 2006).

One of the known methodologies used to probe discourse is the analysis of discourse markers employed in an utterance. Discourse markers are basically words or phrases that connect, unify, and organize what an interlocutor verbally expresses. However, more than just manage the transitions of thoughts in an utterance, discourse markers also carry pragmatic hints of the interlocutor's attitude. The following discourse between a Department Head and his teacher-constituents demonstrate this:

Dep't Head: *Next week na an culmination san art's month. Of course, karuyag signgon sine magkakamay-ada an aton department dance performance para sa program.*

Nanu man an maupay sayawon? An madali la.
Teacher 1: *Sir, kun mag-folk dance na la kit?*
Dep't Head: *Pwede gad pero honestly, perdihon iton na performance (laughs). Ngan san mayda na bangin nakakuha sana nga sayaw. An iba naman basta madali ngansan pwede masayaw san tanan.*
Teacher 2: *Kun mag-doxology or interpretative dance kit sir? Butngan natun kanan piso na speech explaining our performance.*

The underlined words/phrases are the discursive attitude markers employed by the department head. The use of *"of course"* indicates nonnegotiable necessity. Here, the department head tries to express the need to do something in light terms, without explicitly commanding assertion. Moreover, the use of *"honestly"* and *"I think"* shows that the department head refers to what he says as purely his own sentiments. This suggests that the department head, as a leader, accepts the fact that his ideas are not the only valid ideas; by using the said discourse markers, he implies that his constituents are free to disagree with him, and in a sense, invites them to suggest better ideas.

Social-affective Strategies

Communication goes beyond decoding signs and thoughts; communication is also about establishing rapport. To gain each other's trust and confidence, interlocutors make use of terms of endearment and honorifics. This proves true to organization leaders where building team relationship is crucial. The following transcribed dialogues between a department head and her teachers exemplify this:

Department Head: *Kumusta aton mga paperworks dear teachers?*
Teacher 1: *Tikatapos na ma'am!*
Department Head: *Aw, maupay! (referring to another teacher), imu sir?*
Teacher 2: *Adi ma'am gutiay na gad la. Matatapos na!*
Department Head: *Igremind ko la kam, ma'am/sir na an submission siton na atun paperworks ay next week na. Push la kit, dear teachers.*

Notice that most of the underlined words in the transcription above pointed out to one clear direction-that is to ensure that all of the rest of the teachers in the conversation or even in the organization has one's own role to play. This social-affective attribute brings back the old cliché' "one for all, all for one." Meaning that once a member of the faculty as in the case of the utterance cited, each teacher is given an honorific address that though the school head stands as the over-all in charge of the school's functionalities, still she still recognizes the roles that each teacher plays in this academic institution.

Accuracy-oriented strategies

Accuracy-oriented strategies refer to corrective measures employed by interlocutors when they notice a grammatical error in their utterance (Gass & Selinker, 2008). Such strategies are often observed in and employed by organization leaders wherein much is expected of them in almost anything including correct grammar. Here is a transcribed conversation between an English major school head and her teachers in which such strategy is observed to be employed by the former:

School Head: *Good morning, sa atun tanan. I bet you know why I have call you all, have CALLED you all today.*
Teacher 1: *Yes, ma'am. I think this is for tomorrow's recognition day.*
School Head: *Yes. I hope okay na an atan. Who is our top students for grade 6? Who ARE rather?!*
Teacher 2: *Adi ma'am. Si (gives the name of pupil A) an atun first honor. Si (gives the name of pupil B) an atun second honor. The rest ma'am, basaha nala sa list.*
School Head: *Okay, good. So, siguro okay na bangin an tanan for tomorrow. Let's just meet tomorrow.*

It could be observed that the school head employed corrective measures in rectifying observed grammatical errors in her utterances. She did this by saying the utterance again with the repetition being the corrected version.

Conclusion and Recommendation

Based on the results of the study, school heads often resort to speaking through formal or technical, vulgar, slang and colloquial registers. This can be attributed to the fact that since most of their engagements with stakeholders happen in an informal situation, their communication registers follow as well. Further, school heads resort to code-switching, politeness markers use, discursive attitude markers, social-affective strategy, accuracy-oriented strategy, circumlocution, asking for clarification and hedging as strategies in communicating to stakeholders. These strategies helped them bridge out the viable occurrence of communication breakdown while being mostly engaged informal conversations. The use of the registers and strategies that are not essential to standard English instigated the researcher to come up with a training design to improve the school administrators' communication skills.

There is a dearth or if not, none on standard language policies that DepEd implements as regards requiring school heads to use English as their medium of communication to stakeholders. The truth of the matter is, most often than not, their conversational engagements to the latter would always require them to communicate in their most comfortable language since their interlocutors are widely arrayed with diverse backgrounds not to mention their acquired sociolects from various social domains they come from. However, it should not hamper them or should not call negligence to the universality of the English language. After all, the English required of them in their daily communication is not that of the exonorms but of the codified endonormative standards defined and non-condescended in the realm of Philippine English. Hence, a study on mapping-out the Philippine English standards in various DepEd documents from communication protocol down to learning materials developed subdues a national call for an emerging body of knowledge in linguistic parlance and language policy the agency shall look into.

References

Agha, A., & Frog (Eds.). (2015). Registers of Communications (Vol. 18). Finnish Literature Society. https://doi.org/10.2307/j.ctvggx2qk

Beltran, E.L. (2014). "Analysis of Grammatical Errors of Utterance Structure." Technological University of the Philippines, Manila.

Gass, S. & Selinker, L. (2008). Second Language Acquisition: An Introductory Course. New York, NY: Routledge. ISBN 978-0-8058-5497-8. Halliday, M. A. K. (1978), *Language as Social Semiotic: the social interpretation of language and meaning, Edward Arnold: London.*

Huang, C. (2010). Exploring Factors Affecting the Use of Oral Communication Strategies at the University of Science and Technology, Taiwan.

Jankowski, B. (2013). A variationist approach to cross-register language variation and change, University of Toronto, Canada, Retrieved from https://tspace.library.utoronto.ca/handle/1807/43604.

Lee, J. (2013). "The Native Speaker: An Achievable Model?." *Asian EFL Journal 7 (2). Retrieved on January 21, 2016.*

Raj, H. (2011). Domains of Sociolinguistics. Retrieved from http://tumlingtar-hemraj.blogspot.com/2011/01/domains-of-sociolinguistics.html

Reeves, D. (2006). *The learning leader: How to focus school improvement for better results. Alexandria, VA: ASCD.*

Reid, T. B. (1956), "Linguistics, structuralism, philology", *Archivum Linguisticum 8.*

Richards, J. & Schmidt, R., eds. (2009). "Communication strategy". *Longman Dictionary of Language Teaching and Applied Linguistics. New York: Longman. ISBN 978-1-4082-0460-3.*

Willems, H. (2008). Characteristics that distinguish outstanding urban principals: Emotional intelligence, social intelligence and environmental adaptation. Journal of Management Development, 27 (1), 36-54.

EXTERNAL SUPPORT TO PSYCHOLOGICAL RESILIENCY OF STUDENTS

Edwin V. Salar, Teacher III
Batuan Integrated School
Schools Division of Southern Leyte
edwin.salar@deped.gov.ph

Introduction

Humans typically encounter a variety of difficulties and challenges during the course of their lives ranging from daily hassles to major life events, because life certainly does not come with a map that one already knows where he/she is going without experiencing life challenges. Not one is exempted to experience twists and turns from everyday challenges to traumatic events with more lasting impact, such as a life-altering accident, death of a loved one, a serious illness, or the threat of COVID-19 to the health of students and their family members. These traumatic experiences affect people differently, bringing unique thoughts, strong emotions, and uncertainties (American Psychological Association, 2020).

In many studies about resilience, it has been proven that external supports boost one's resilience. This external support may come from a family member, a peer or a friend, and teacher or school administration. The study of Alisha et al. (2019) states that the promotion of various social support and resources and ensuring a sense of stronger social support amidst a stressful atmosphere can help lessen the stress, spur adaptation, and enhance resilience. In relation to Alisha et al's. (2019) study, Lök & Bademli (2021) also noted that social support is identified as a major protective factor in psychological resilience from at least one significant adult. These suggest that the increase in social support is a factor that helps an individual cope with the difficulties one may face and will increase the strength of an individual, thus psychological resilience increases along with an increase in social support (Lök & Bademli, 2021). Their studies have proven the vital role of external support to individual's psychological resilience especially during the lowest moments of the person.

In the present case, COVID-19 pandemic, as one of the considerable challenges that brought some traumatic experiences to the students, has exacerbated and induced psychological reactions to students such as anger, anxiety, depression, and confusion among high school students since their emotional development is yet to be stabilized. These unfavorable experiences and challenges impact on students' well-being. However, there are students who have proven to be psychologically resilient, because, despite the insurmountable challenges they experience, they have overcome the odds and become physically, psychologically, socially, and emotionally productive and happy individuals. They manage not only to survive, but also to thrive. On the other side, some, as an adverse effect of the harmful experiences and challenges, have failed to cope and become less productive and unsuccessful. For this reason, building and enhancing psychological resiliency in students is very necessary as this help them manage themselves to succeed in life.

Students need to develop their resiliency to cope with adversities. Studies have shown that psychological resilience represents as mediator between stress and mental health status (Hao et al., 2015; Howell et al., 2020) and may mitigate the adverse effects of stress (Chang et al., 2019; Gong et al., 2020) . Pusch & Dobson (2017) and Sheerin et al. (2018) confirm that resilience has mediated the impact of personality traits and family dysfunction on depressive symptoms, and Pusch & Dobson (2017); Schulz et al. (2014) contend that resilience reduces the risk of depression in individuals with adverse childhood experiences. Thus, resilience is an essential buffer for stress or traumatic incident and could defend against psychological distress. As such, the assessment of individual psychological resilience could help predict mental health status of the learners.

In Batuan Integrated School, a public basic education provider, the teachers have been observing that most of the students, specifically in Junior High School, do not show interest in doing performance tasks and in answering the activities in the modules. At the same time, some of these learners are not comfortable staying at home with their families. In fact, in the past few months, one of the grade four students in Batuan Integrated School, was reported missing, but fortunately was found alive after two days in the nearby barangay. Testimonies of the child's elder sister revealed that the child was punished for not answering the module. Another grade 10 student was reported to have academic depression for not being able to completely answer the module.

In this setting, the researcher is inspired to conduct a study on the external support to psychological resiliency of Junior High School

learners of Batuan Integrated School, Maasin City. This study, by so doing, aims to address these alarming issues brought about by the new normal context through designing a school-based program of activities that enhances students' psychological resiliency skills.

The information gathered from this study will provide significant information that could help the parents know their significant role in building their child's psychological resiliency. Furthermore, this study will help the parents understand their child better and provide them with necessary support and psychological needs that will help the child in this time of sudden shift from what we used to be normal to the new normal context. In line with this, the study will also provide significant information to the teachers as professionals who are directly involved with the students in the new normal as this will help the teachers understand better the students' psychological resilience and their role as one of the external supports to students' psychological resiliency. Moreover, this study will allow the researcher, being the guidance designate of the school, to know the external support to psychological resiliency which will be the basis in designing a resilience-enhancing program in school.

Statement of the Problem and Objectives of the Study

This study will assess the level of external support to psychological resiliency of students of Batuan Integrated School, Maasin City. Specifically, it will answer the following questions:
1. What is the socio-demographic profile of the students in terms of:
    1.1. age,
    1.2. sex,
    1.3. family environment *(cohesive family, disengaged), and*
    1.4. family income?
2. What is the level of external support to psychological resiliency of respondents?
3. What is the psychological resiliency level of the respondents in terms of the following aspects:
    3.1. Emotional
    3.2. Mental?
4. Is there a significant relationship among the socio-demographic profile, external support and psychological resiliency among students?
5. What program can be proposed based from the findings of the study?

Methodology
The Sample and Locale of the Study

This study was conducted in Batuan Integrated School, Schools Division of Maasin City. Batuan Integrated School is a public educational institution in Batuan, Maasin City, Southern Leyte.

The school is located at the northwest of the mountain ranges of Batuan, Maasin City, Southern Leyte. This public school was established on 1937 known before as Batuan Elementary School. In the year 2015, Batuan Elementary School was converted to an integrated school under the administration Mrs. Cerelina S. Dolera, Principal II.

The Junior High School Department of Batuan Integrated School caters to all the elementary graduates of Batuan Integrated School, Tomoy-Tomoy Multi-Grade School, San Isidro Elementary School, and to all students who wanted to enroll in the school. Recently, the school has an Elementary and Junior High School Department.

The data collection strategy of this research was a complete enumeration using all student-population of Junior High School of Batuan Integrated School. The distribution of the respondents in this study is presented in Table 1.

Table 1: Distribution of the Respondents

Grade	Male	Female	Total
Grade 7	17	13	30
Grade 8	23	18	41
Grade 9	21	21	42
Grade 10	24	24	48
Total	85	76	161

Instrumentation

In order to gather the data needed, the researcher used a questionnaire that contains the three main parts.

Part I described the socio-demographic profile of the respondents. It gathered information as to their age, sex, family environment, and family income.

Part II consisted of the External Support to Psychological Resilience. External support to psychological resiliency was measured using the questionnaire adapted and extracted from the Adolescent Psychological Resilience Scale (Bulut et al., 2013). This tool can be downloaded at https://hrcak.srce.hr/file/164553 for free and needs no permission to use. Originally, the questionnaire was composed of 29 statements grouped into external and internal dimensions. Each dimension had three sub-dimensions. For the purpose of this study, only the external sub-dimension statements were extracted from the questionnaire. This external sub-dimensions were Family Support with seven (7) items that relate to communication in the family and support given to the respondent by the family (items 1, 2, 3, 4, 5, 6, and 9); Confidant-friend Support with five (5) items that relate to support given to the respondent by friends and confidants (items 13, 14, 15, 16, and 17); and School Support with five (5) items that relate to support given to the respondent by teachers and school staff members (items 7*, 8*, 10* 11*, and

12*). The questionnaire used a four (4) – point scale: 4 – Exactly Suitable for Me, 3 – Suitable for Me, 2 – Not Suitable for Me, 1 – Not Exactly Suitable for Me. Part III consisted of the Mental and Emotional Psychological Resilience of student-respondents which was measured using the questionnaire adapted and extracted from Zung's Self-Rating Anxiety Scale (SAS) and Zung's Self Rating Depression Scale (SDS) which were developed by William W.K. Zung. SAS was developed to assess the level of anxiety, while SDS was developed to assess the level of depression for educational purposes (Ww, 1965; *Zung Self-Rating Anxiety Scale (SAS), 1971) which can be accessed for free at https://jamanetwork.com/ journals/jamapsychiatry/article-abstract/488696 and http://www.mentalhealthministries.net/resources/ flyers/zung_scale/zung_scale.pdf respectively. These tools can be used without permission. Originally, both questionnaires were composed of 20 items. Each question was scored on a scale of 1-4 (a little of the time, some of the time, good part of the time, most of the time). These questionnaires were used in the study of Song et al. (2021) on Psychological Resilience as a Protective Factor for Depression and Anxiety Among the Public During the Outbreak of COVID-19.*

For the purpose of this study, only ten (10) statements were extracted from SAS and SDS questionnaires, and were rearranged and categorized whether the statement belongs to mental or emotional dimension of psychological resilience. Each category had only 10 statements. The items that were extracted from SAS and SDS scales constitute the mental and emotional psychological resilience scale. The items which assess the level of mental and emotional psychological resiliency of the students were all carefully analyzed according to the mental and emotional aspects. Moreover, those items were carefully chosen because they fit based on the current situation – COVID-19 pandemic. The questionnaire used a four (4)-point scale: (a little of the time, some of the time, good part of the time, most of the time).

Research Design

The purpose of this study was to determine the external support to psychological resiliency of the student. Hence, this study was a quantitative research using the descriptive correlational design to describe the relationships among the socio-demographic profile of the respondents, external support to psychological resiliency of the students, and the level of psychological resilience of the respondents in their mental and emotional aspects. Sufficient data of students' demographic profile, external support to psychological resiliency, and the level of psychological resilience were analyzed, interpreted, and treated statistically in accordance with the objectives of the study.

Gathering and Treatment of Data

The researcher sent a letter to the Schools Division Superintendent (SDS) of the Schools Division of Maasin City and to the School Head of Batuan Integrated School to ask for permission to conduct the study in Batuan Integrated School Junior High School Department. Communication letters were also sent to the students to inform them of their schedule and the designated meeting place depending on what Purok they belong together with the letter asking their parents' consent for their child to participate in the conduct of this study. Since the conduct of this face-to-face study happened during COVID-19 pandemic, minimum health protocol set by the Department of Health was strictly observed.

On the scheduled distribution and answering of the questionnaires, an orientation was initiated and discussed to the respondents on what the study was all about. Psychological resilience was explained orally to all student-respondents and instructions were given on how to answer the questionnaire. Assistance was also provided while the respondents were answering the questionnaire for further clarifications on items students find the difficulty to understand.

Retrieval of the questionnaires followed and 100% retrieval rate of the questionnaires were achieved. After data collection, responses were statistically analyzed utilizing statistical formula such as: frequency count, simple percentage, weighted mean, and Pearson Chi-Square test for independent samples to determine the significant relationships of the variables. The descriptive correlational method was also used in the data analysis and the different numerical and descriptive ratings for the interpretation.

The socio-demographic profile of students' in terms of age, sex, family environment, and family income found in Part I in the students' questionnaire was described through simple frequency and percentage count. It can be illustrated through the following:

$$P = \frac{n}{f} \times 100$$

Wherein: P = percentage

f = number of responses for every item

n = total number of respondents

Weighted mean was utilized to describe the external support to psychological resiliency in terms of family support, confidant-friend support, and school support which can be found in the Part II of the students' questionnaire using the formula:

$$\text{Weighted Mean (Xw)} = \frac{\sum fx}{n}$$

Wherein: f = frequency

x = score

n = total number of cases

The weighted mean was then categorized using the following numerical and descriptive ratings:

Numerical and Descriptive Ratings and Verbal Interpretation of External Support to Psychological Resiliency

Weighted Mean	Interpretation	Description
3.26 – 4.00	Very Supportive	The indicators were claimed by the respondents to be exactly suitable for them.
2.51 – 3.25	Supportive	The indicators were claimed by the respondents to be suitable for them.
1.76 – 2.50	Somewhat Supportive	The indicators were claimed by the respondents to be not suitable for them.
1.00 – 1.75	Not Supportive	The indicators were claimed by the respondents to be not exactly suitable for them.

Weighted mean was also utilized to describe the level of psychological resiliency of students which can be found in the Part III of students' questionnaire. The number of weighted mean was then categorized using the following numerical and descriptive ratings:

Numerical Rating and Descriptive Interpretation of Psychological Resiliency Level

Scale	Weighted Mean	Interpretation	Description
1	1.00 – 1.75	Low psychological resilience	The indicators were claimed by the respondents to have spent most of their time.
2	1.76 – 2.50	Normal psychological resilience	The indicators were claimed by the respondents to have spent good part of their time.
3	2.51 – 3.25	High psychological Resilience	The indicators were claimed by the respondents to have spent some of their time.
4	3.26 – 4.00	Very high psychological resilience	The indicators were claimed by the respondents to have spent a little of their time.

To determine the significant relationship among students' socio-demographic profile, external support to psychological resiliency, and the level of psychological resiliency, a Pearson Chi-Square test was employed using the following formula:

$$x_c^2 = \sum \frac{(O-E)^2}{E}$$

Where: x_c^2 = computed Chi-square

O = observed frequency

E = expected frequency

To express the descriptive findings of this study, tables were used to present a large amount of information clearly and efficiently since this study aimed to accurately and systematically describe the respondent-population such as characteristics, frequencies, trends, and categories. As this study also employed a correlational design, the findings were presented in tables to investigate the significant relationships among socio-demographic profile, external support to psychological resiliency, and the level of psychological resiliency.

Results and Discussion
Socio-demographic Profile of the Respondents
Age
The result shows that ages 13 years and below got the highest percentage of age representation which was equivalent to 35% of the total population. Based on the school records specifically in the official list of enrollment found in School Form 1 (SF1) of each grade level in Junior High School generated from the Learners Information System (LIS) of Batuan Integrated School, this age group was represented by the Grades 7 and 8 enrollees in the current academic year.

Table 2. Socio-demographic Profile of the Respondents

Indicators	Frequency	Percentage
Age (in Years)		
13 and below	56	35%
14	51	32%
15	36	22%
16 and above	18	11%
TOTAL	**161**	**100%**
Average Age (In Years)	Mean = 14.05 Years	
Sex		
Male	85	53%
Female	76	47%
TOTAL	**161**	**100%**
Family Environment		
Cohesive Family	129	80%
Disengaged	32	20%
TOTAL	**161**	**100%**
Family Income/mo.		
Below 5,000	69	43%
5,001 - 10,000	63	39%
10,001 - 15,000	10	6%
15,001 - 20,000	11	7%
20,001 - 25,000	2	1%
25,001 and above	6	4%
TOTAL	**161**	**100%**
Average Monthly Income	Median = ₱5,913.20	

Studies had proven that age is one of the predictors of resiliency and stress (Kimhi et al., 2020) and it is one important implications for the measurement of resiliency (Hayman et al., 2017). The developmental approach to resilience suggested that when people of different ages face the same situation, they may have different experiences of stress (Hayman et al., 2017). By necessary implication, psychological resiliency level in older people may be different and higher than younger people. With this finding, logically, older people tend to likely be more resilient compared with the younger people. This notion is consistent with the study of J. Sambu & Mhongo (2019) that older individuals record a higher resilience than the younger age. Since most of the respondents in this study were young with age ranges from 12-15 years old, their psychological resiliency is low, however, environmental support such as family, school, and confidant-friend can help them cope with life's adversities. According to Ovaska-Stafford et al. (2021) family support and good coping strategies have been noted to be important in the general adjustment to long term condition which may result to improve resilience and psychological health.

Sex
Sex is another important component under socio-demographic profile of the respondents as this will further determine as to what sex would emerged as having increased or reduced the likelihood of resiliency guided by the notion that men and women have different personality trait that influence the way they cope with adversity (J. Sambu & Mhongo,

2019). In this study, data showed that 53% were male respondents while 47% were female respondents as also revealed in the enrollment trend of BIS reflected in the Learners Information System of the current school year. Based on the result, it could mean that most of the respondents of this study were males who are more likely to be linked to higher resiliency than females who were reported to be linked to lower resiliency (Battalio et al., 2017; Terrill et al., 2016). The finding of the study is similar with the study of J. Sambu & Mhongo (2019) who contends that male have a higher level of resilience than female. Moreover, Marciano et al. (2020) indicated that there were several studies of gender and resilience that mentioned that women were less resilient than men following adversity.

Family Environment

As presented in Table 2, results revealed that 80% of the total number of respondents belong to the cohesive family, and 20% of the total number of respondents belong to the disengaged family. This is consistent with the school record which shows that a great number of the students have an immediate family that always stands by them and support them in any activity the students are involved into. This cohesiveness was also manifested during the quarterly portfolio day as great majority of the parents were always present based on the attendance record of each grade level in Junior High School Department.

The result also implied that majority of the respondents belong to a cohesive family which could mean that students tend to be emotionally secure with their family. With this emotional security, emotional bond that ties and strongly connect the relationship of parents and children were expected among them. According to Olson et al. (2019), family cohesion helps by establishing bonds among different family members, and a strong sense of cohesion indicates mutual support among family members that acts as a protective factor against different stressors. This suggests that close emotional bonds and mutual support between family members, which can be regarded as family cohesion, is an important resource when facing difficulties or even failures throughout the process (Anyan & Hjemdal, 2018; Lin et al., 2016).

Family Income

Another variable considered in this study that provides significant information on socio-demographic profile of the respondents is the family income. Data in Table 2 revealed that 43% of the total number of respondents have a family income per month below 5,000.00. Furthermore, results revealed that the average monthly income of the respondents is only ₱5,913.20 Based on the data presented, majority of the respondents' family income fall below the poverty line.

In Batuan Integrated School, the results revealed that almost half of the total population of the student-respondents were considered poor given the fact that 43% of them have family income of ₱5,000 and below and 39% of them have a family income ranging from 5,001-10,000 per month. The finding on family income of the respondents is in line with the data collected through Basic Education Enrollment Form that most of the parents' occupation are either farmers, construction workers or laborers whose daily rate ranging from 250-500 only. Furthermore, some of the parents became jobless after their employers shut down their company due to lockdown. Low income families tend to have more economic problems compared to families with higher income.

On this note, children were also affected since their school needs were not met. In addition, a family with an income of 5,000 and below is expected to be struggling with their daily expenses, because according to the report of Philippines Statistics Authority (2021) in the first semester of 2021, a family of five, on average, ₱12,082 per month is needed to meet their minimum basic food and non-food needs. In addition, according to IBON (2022) every person should spend ₱79.00 per day to belong to a family in the poverty line.

External Support to Psychological Resiliency

This section presents the result and discussion on external support to psychological resiliency among the respondents which includes family support, confidant-friend support, and school support.

Table 3. Level of External Support to Psychological Resiliency

Indicators	Weighted Mean	Interpretation
FAMILY SUPPORT		
My family really cares about me.	3.70	Very Supportive
My family believes that I will be successful.	3.44	Very Supportive
I have enjoyable time with my family.	3.43	Very Supportive
My family will listen to me when I have something to share.	3.22	Supportive
My family will recognize it when I have problems.	3.03	Supportive
My ideas are taken into account in family decisions.	2.89	Supportive
I feel happy to be with my family.	2.09	Supportive
Mean	**3.11**	**Supportive**
CONFIDANT-FRIEND SUPPORT		
I have friends with whom I spend good time.	3.52	Supportive
I have friends with whom I can share my problems.	3.24	Supportive
I have friends that would recognize my absence.	3.16	Supportive
I have friends that I can rely on them in my difficult times.	3.11	Supportive
My friends will help me when I am in difficult situations.	3.09	Supportive
Mean	**3.22**	**Supportive**
SCHOOL SUPPORT		
If I were not in class, my teachers would recognize it.	3.22	Supportive
My teachers listen to me.	3.14	Supportive
My teachers and classmates appreciate me when I do something good at school.	3.06	Supportive
My teachers appreciate what I do.	2.99	Supportive
My teachers really care about me.	2.91	Supportive
Mean	**3.06**	**Supportive**
Average Mean	**3.13**	**Supportive**

3.25 - 4.00   Exactly Suitable for me; Very Supportive
2.50 - 3.24   Suitable for me; Supportive
1.75 - 2.49   Not suitable for me; Somewhat Supportive
1.00 - 1.74   Not Exactly Suitable for me; Not Supportive
Note: Indicators in school support are rephrased positively.

Family Support

As to family support, data revealed that respondents have a supportive family as it gained an over-all mean of 3.11. This result is in logical connection with the findings on family environment that respondents belong to a cohesive type of family environment. Since majority of the respondents belong to a cohesive family, by logical presumption, it may follow that they have a supportive family. As mentioned, evidence of family support to students is manifested during school activities like portfolio day as great majority of the parents were present based on what is reflected in attendance record of each grade level in Junior High School Department.

Gleaned from Table 3, respondents claimed to experience the following indicator, "My family cares about me." with a mean of 3.70 with very supportive, while the least mean rating of 2.09 with supportive interpretation relates to the experience of feeling happy when being with one's family. These data revealed the gap between the two indicators. If the result will be taken individually, there were a few students who did not feel being with their families and were not comfortable staying with at home with their families even though their families care about them. This may imply that having a caring family does not guarantee that adolescent students would always be comfortable staying at home with their families especially when family systems or aspects of the family such as family members and family structure (i.e. interrelationship among family members) is concerned because this may also function as either risk or protective factors that contribute to the development or psychological distress, such as anxiety (Anyan & Hjemdal, 2018).

However, the respondents generally had a supportive family which could mean that students gained their psychological resiliency from their own family. According to Jocson (2016), Filipinos are often described as having a strong adherence to family-oriented values emphasizing cohesiveness among immediate family members and extended relatives. They feel that their family cares and are supportive in their academic endeavors. With these indicators, students feel that they belong to a happy and caring family which can eventually help build resiliency. This idea is consistent with the findings in the study of Zuardin et al. (2019) that high resilience developed within the individual cannot be separated from family supports they received which include (a) physical support such as helping, accompanying, looking after delivering and picking up, and fulfilling the needs; (b) emotional support by listening to their concerns; (c) informative support by seeking information and giving advice; and (d) appreciation support by praising and appreciating the efforts.

Moreover, the finding supports the study of Zuardin et al. (2019) that family support received by the respondents played a significant role for them because it gives a significant impact on their survival ability and family support in the form of material or moral supports made the respondents happy, feel cared for and loved because family support serves as their strength.

Confidant-Friend Support

In terms of confidant-friend, the over-all mean was 3.22 which can be interpreted as supportive. This could mean that they are happy and comfortable if they are with their friends who would consequently make them psychologically resilient individual. The finding is consistent with the study of Killgore et al. (2020) and Howell et al. (2020) which revealed that social support from family, friends, and a special caring loved one were associated with greater and higher resilience.

The indicator "I have friends with whom I can spend good time." got a mean of 3.52 which is the highest mean among all the indicators on confidant-friend support, and the meager mean among all the indicators on confidant-friend is, "My friend will help me when I am in difficult situation." with a mean of 3.09. Evidently, there is only a little gap between the two indicators. The data would somehow imply that, while most of the respondents have friends with whom they can spend good time with, there are very few who are available to help during difficult situation.

The result denotes that aside from family, respondents also experienced psychological resiliency if they have real friends or peers in the truest sense. It is believed that in the toughest times of their lives, the presence of their friends or peers continue to motivate and inspire them and face life's challenges courageously which would eventually make them psychological resilient. Parallel with this is the study of Graber et al. (2016) who revealed that close and supportive friends facilitate resilience in socio-economically vulnerable adolescents by supporting development of a constructive coping style, encouraging effort, using a supportive friendship network, and reducing disengaged and externalizing coping.

School Support

Regarding school support, the data revealed that the over-all mean of school support to students' psychological resiliency was 3.06 which can be interpreted as having supportive teachers and school staff. Aside from the support given by the respondents' family and confidant-friend, respondents may build and become resilient individuals with the support from school. This finding is in consistent with the study of Twum-Antwi et al. (2020) which claim that the school serves as the hub where young

people learn to develop the skills necessary to successfully maintain relationships through their interaction with peers and adults other than their immediate family members.

Data also revealed that the indicator, "If I were not in class, my teachers would recognize it." got the highest mean which was 3.22 that can be interpreted as having a supportive school. On the other hand, the statement "My teachers really care about me." got the lowest mean which was 2.91, despite being the lowest among the indicators of school support, it still falls under supportive interpretation. The conduct of this study happens during pandemic, and the school still implemented the distance learning modality. Students were just given modules and answer them without their teachers explaining the concepts. Although a great majority of the students are heavily dependent on the explanations by a teacher in class, student may have the feeling of being not cared by teachers due to few to no personal contact with their subject teachers during COVID-19 pandemic. This results to adverse effects on students educational endeavor. This notion is parallel with that of Sintema (2020) that the reason for the expected trend of adverse effects on education is largely due to loss of contact hours for secondary students and lack of e-learning facilities that students could have been using to interact with their teachers. Moreover, in connection with that of Sintema (2020), Fuente et al. (2021) concluded that there is a consistent positive predictive relationship between stress factors during teaching process and stress factors in the learning process which in turn predicted absence of positive emotions and the presence of negative emotions among students, as well as academic burnout among them. In addition to this, he added that teacher profile, referring to their emotions and their own motivations, had also been found to positively or negatively affect the students.

The finding obviously revealed that the respondents got also its support to their psychological resiliency from the teachers. The study of Twum-Antwi et al. (2020) maintain that school support would lead to academic development of the respondents while the schools are continuously implementing and improving interventions that are geared at promoting the psychosocial well-being of the students. The continuous implementation and improvement of intervention whether in the school classroom setting, through extracurricular activities and counseling sessions are among the tangible evidences that schools are promoting the positive development of students.

Level of Psychological Resiliency

This section presents the level of psychological resiliency of respondents. For the purpose of this study, psychological resiliency is assessed through their mental and emotional dimension. The results of the data gathered are presented in Table 4.

Mental Resiliency

As presented in Table 4, the highest weighted mean among all the indicators of mental resiliency is 3.21 which means that the respondents had a high psychological resilience on the statement, "Morning is when I feel the best." Based on this indicator, it may imply that mental resiliency is high which could mean that they were looking forward to experience another beautiful day and are able to sleep soundly at night without getting disturbed with so many concerns in mind. Thus, being psychologically resilient is an outcome of having a supportive family, friends, and school which is consistent with the findings of Alisha et al., (2019) that the various social support and resources and ensuring a sense of stronger social support amidst a stressful atmosphere can help enhance resiliency.

Table 4. Level of Psychological Resiliency

Indicators	Weighted Mean	Interpretation
A. MENTAL RESILIENCY		
Morning is when I feel the best.	3.21	High Psychological Resilience
I fall asleep easily and get good night's rest.	3.11	High Psychological Resilience
I find it easy to do things I used to.	3.01	High Psychological Resilience
My mind is as clear as it used to be.	2.77	High Psychological Resilience
I have to empty my bladder often.	2.77	High Psychological Resilience
I notice that am losing weight.	2.59	High Psychological Resilience
I have nightmares.	2.47	Normal Psychological Resilience
I get feelings of numbness and tingling in my fingers and toes.	2.45	Normal Psychological Resilience
I am bothered by stomach aches or indigestion.	2.35	Normal Psychological Resilience
I am restless and can't keep still.	2.29	Normal Psychological Resilience
Mean	**2.70**	**High Psychological Resilience**
B. EMOTIONAL RESILIENCY		
I feel hopeful about the future.	3.25	High Psychological Resilience
I feel that I am useful	3.10	High Psychological Resilience
I feel calm and can sit still easily.	2.93	High Psychological Resilience
I can feel my heart beating fast.	2.72	High Psychological Resilience
I am bothered by headaches, neck, and back pain.	2.48	Normal Psychological Resilience
I get upset easily or feel panicky.	2.46	Normal Psychological Resilience
I am irritable than usual.	2.39	Normal Psychological Resilience
I feel downhearted and blue.	2.37	Normal Psychological Resilience
I have crying spells or feel like it.	2.29	Normal Psychological Resilience
I feel that others would be better off if I were dead.	1.63	Low Psychological Resilience
Mean	**2.56**	**High Psychological Resilience**
Average Mean	**2.63**	**High Psychological Resilience**

Legend:
3.25 - 4.00   Very High Psychological Resilience
2.50 - 3.24   High Psychological Resilience
1.75 - 2.49   Normal Psychological Resilience
1.00 - 1.74   Low Psychological Resilience

The lowest weighted mean of the indicators of mental resiliency is 2.29 which implies that the respondents had a normal psychological resilience on the statement, "I am restless and cannot keep still." Although majority of the respondents felt the best every morning when they wake up, there were some who were experiencing pressures of everyday life and want to keep pace with the tasks that they need to cope with. In the process, they feel uneasy and fidgety. This is a normal reaction to an abnormal experience.

Generally, the overall mean on mental resiliency of the respondents is 2.70 which could mean that the respondents have high psychological

resilience. This may imply that the respondents were still able to maintain mental stability amidst adversities that they have experienced.

Emotional Resiliency

As can be seen in Table 4, the indicator "I feel hopeful about the future." got the highest weighted mean among all the indicators of emotional resiliency which can be interpreted that the respondents were having a high psychological resilience in this statement. Based on the statements, respondents were feeling positive with all the events in their surroundings and they were optimistic about the future. Moreover, they felt that they have something good to contribute to the community where they belong. This emotional positive attitude is linked to having a supportive social environment such as family, friends, and school. In line with this notion, the study of Labrague et al. (2021) highlight the value of emotional support that originates from peers and family when facing adversity and may provide individual with resources to cope with emotion-related adversity.

Although the data revealed that students have high psychological resiliency on the indicator, "I am hopeful about the future." there were few who claimed low on psychological resiliency on the indicator, "I feel that others would be better off if I were dead." with a mean of 1.63 only. While majority of the respondents were emotionally resilient, there were a few respondents who did not feel good about themselves. The data would imply that those who did not feel good about themselves could have suicidal thoughts and unsettled negative emotional experiences in the past, and were not able to positively cope with due to inadequate support from family, friends, and school. In addition, this could mean that these students have low coping and low frustration tolerance and would often feel helpless which may lead to suicidal ideation. This is why Khan et al. (2016) would argue that coping and adaptive strategies, including positive beliefs and strong social support, are necessary to buffer against suicidal behavior. Additionally, Khan et al. (2016) noted that individuals living in family with stronger resources of social supports had lower risks of suicide.

Moreover, the results revealed that the general weighed mean of respondents' emotional resiliency is 2.56 with an interpretation of having a high psychological resilience. Generally, the result would reveal that the respondents were having a high level of psychological resilience. Being psychologically resilient flows from having a very supportive external environment that comprises the family, confidant-friend, and school. However, looking at the individual result, the last indicator in the emotional resilience which is, "I feel that others would be better off I were dead." is very significant,

thus needs to be properly addressed by the stakeholders of the school in coordination with the family.

Result shows that respondents were psychologically resilient despite experiencing having risk or adversity like belonging to a poor or low income family, disengaged family, and other life stressors because of the presence of protective factors that buffer the negative effect of adverse conditions and experiences on an individual such as having a supportive and cohesive family, quality of communication among family members, confidant-friend, mentors, and other supportive relationships in the neighborhood and community. This may also include individual level factors such as age, gender, resourcefulness, intelligence, self-regulation, and optimism. Further analyses showed that psychologically resilient individual is associated with protective resources and environment that surrounded them (Jocson, 2016).

Taking these together, psychological resiliency is not just an achievement, rather, it is process that is achieved through protective factors that are derived from people and resources in the individual context.

Significant Relationship among Socio-demographic Profile, External Support to Psychological Resiliency, and Level of Psychological Resiliency

As reflected in Table 5, the relationship among the variables was tested using Chi-Square at 0.05 Alpha level of significance applying the P-Value Test.

Table 5: Relationship among the socio-demographic profile, external support, and psychological resiliency among students
Relationship of the External Support and Socio-

Comparison		Chi-Square Value	Df	p-value	Contingency Coefficient	Significance
Level of External Support	Age	0.532ⁿˢ	3	.912	.059	Not Significant
	Sex	0.031ⁿˢ	2	.985	.014	Not Significant
	Family Environment	4.768*	1	.029	.176	**Significant**
	Family Income	1.996ⁿˢ	2	.369	.115	Not Significant
Level of Emotional Resiliency	Age	2.511ⁿˢ	3	.473	.124	Not Significant
	Sex	0.611ⁿˢ	1	.434	.061	Not Significant
	Family Environment	2.084ⁿˢ	3	.555	.113	Not Significant
	Family Income	37.222**	2	.000	.433	**Significant**
Level of Mental Resiliency	Age	14.238*	6	.027	.285	**Significant**
	Sex	7.561*	2	.023	.212	**Significant**
	Family Environment	7.690*	2	.021	.214	**Significant**
	Family Income	5.750ⁿˢ	4	.219	.186	Not Significant
Level of External Support	Level of Emotional Resiliency	1.891ⁿˢ	2	.388	.113	Not Significant
	Level of Mental Resiliency	1.501ⁿˢ	1	.472	.100	Not Significant

** Significant at 1% level
* Significant at 5% level
ⁿˢ Not Significant

Demographic Profile

The findings, as reflected in Table 5, show that the computed Pearson Chi-Square value between the level of external support to psychological resiliency of the respondents and family environment is 4.768. The Pearson Chi-Square test result revealed that there was a negligible positive correlation between the level of external support to psychological resiliency of the respondents and family environment. While there is no significant relationship of the level of external support to psychological resiliency and socio-demographic profile on age, sex and family income, the level of external support to psychological resiliency of the respondents is significantly related to the family environment of the respondents. Logically, it necessarily follows that family environment, as one of the external support to psychological resiliency of the respondents, affect the level of external support to psychological resiliency given by the family. In addition, it suggests that psychological resiliency of the students is gained from their own family. This finding is in consonance with the study of Zuardin et al. (2019)

Relationship of the Emotional Resiliency and Socio-Demographic Profile

The result also revealed that computed Pearson Chi-Square value between the level of emotional resiliency of the respondents and family income is 37.222. The Pearson Chi-Square test result revealed that there was a negligible positive correlation between the level of emotional resiliency of the respondents and family income. The result also shows that the computed p-value of 0.000 is lesser than the 0.05 level of significance (0.000 < 0.05), the null hypothesis is rejected. These findings suggest that the level of emotional resiliency of the respondents is significantly related to the family income of the respondents, while there is no significant relationship between emotional resiliency and socio-demographic profile on age, sex and family environment. This connotes that family income had significant effect on the emotional resiliency of the respondents which is consistent with the study of Radetić-Paić & Černe (2020) which revealed the notable significance of below average family income. As can be seen in Table 2, most of the respondents belong to a family of low income earner, and the general finding on monthly family income of the respondents fall below poverty line as it only has an average monthly income of ₱5,913.20. This further signifies that low income families tend to have more economic problems because according to the Philippine Statistics Authority (2021) low income earners are expected to be struggling with their daily expenses that may result to a significant effect on respondents' emotional resiliency especially if their needs will not be addressed.

Relationship of the Mental Resiliency and Socio-demographic Profile

Age

The results also revealed based on the computed Pearson Chi-Square value between the level of mental resiliency and age is 14.238 which means that there was a negligible positive correlation between the level of mental resiliency of the respondents and age. The correlation implies that age had significant relationship with the mental resiliency of the respondents. It was further found that the computed p-value of 0.027 is lesser than the 0.05 level of significance (0.026 < 0.05) which signifies that the null hypothesis is rejected.

This suggests that the level of mental resiliency had significant meaning on the age of the respondents. Based on the sociodemographic profile found in Table 2, the result revealed that majority of the respondents would cluster on ages 14-15 years old. On this note, mental resiliency has significant meaning on the age of the respondents. This could mean that respondents were flexible to changes that were taking place. They had resources that made them cope or recover from the difficulties they have encountered in life. As reflected in Table 4, respondents were less worried, able to sleep soundly, and could handle their usual routine. In totality, respondents have clear direction and having this kind of mindset enabled them to do things right. In addition, as they get mature, they also tend to be more responsible in managing adversities and may develop self-acceptance which would consequently result to increase resiliency (Terrill et al., 2016).

Sex

The results also revealed based on the computed Pearson Chi-Square value between the level of mental resiliency and age is 7.561 which means that there was a negligible positive correlation between the level of mental resiliency and the sex of the respondents. The correlation implies that sex has significant relationship with the mental resiliency of the respondents. It was further found that the computed p-value of 0.023 was lesser than the 0.05 level of significance (0.023 < 0.05) which signifies that the null hypothesis is rejected. This indicates that the level of mental resiliency has significant meaning on the sex of the respondents. Based on the socio-demographic profile found in Table 2, the result revealed that majority of the respondents were males than females, however, this does not necessarily and logically imply always that males are mentally resilient than females because, according to Ballenger

-Browning & Johnson (2010) gender is an inconsistent and non-reliable predictor of resilience. In addition, there are also gender differences that may influence the way they cope with adversity, i.e. men tend to communicate less during the time of adversity and they end up getting less help and empathy as compared to women who communicate more and earn empathy and other types of support (J. Sambu & Mhongo, 2019).

The result in this study revealed that males are mentally resilient than females. This result is consistent with the study of J. Sambu & Mhongo (2019) which found out that males were more resilient than females in relation to the adversity. The result can be explained in the study of Anyan & Hjemdal (2018) which found out that girls have higher levels of anxiety and depressives symptoms.

Family Environment

The results also revealed based on the computed Pearson Chi-Square value between the level of mental resiliency and family environment is 7.690 which means that there was a negligible positive correlation between the level of mental resiliency and the family environment of the respondents. The correlation implies that family environment has significant relationship with the mental resiliency of the respondents. It was further found that the computed p-value of 0.021 is lesser than the 0.05 level of significance (0.021 < 0.05) which signifies that the null hypothesis is rejected. This connotes that the level of mental resiliency has significant meaning on the family environment of the respondents. Based on the sociodemographic profile found in Table 2, the result revealed that majority of the respondents belong to a cohesive type of family which could mean that unity along with open communication would help each member feel that they have a family to come home to. If these important elements exist in the family, it follows that children are more mentally resilient, because mindset and mutual support are established among all its members due to an enduring and strong foundation of their family which acts as a protective factor against different stressors (Lin et al., 2016). That is why family environment, and not economic strength, is a more significant predictor of crisis or adversity (Lin et al., 2016).

Table 5 also revealed a high psychological resilience in terms of mental dimensions. A warm family environment and high psychological resilience result to healthy behavior and high levels of confidence. This notion partially agrees with Lin et al. (2016) that family cohesion helps by establishing bonds among different family members and hence, unifying the core values within family.

Relationship of the External Support and Level of

Psychological Resiliency
Emotional Resiliency

The results also revealed that Pearson Chi-Square value between the external support and level of emotional resiliency is 1.891 which means that there was a negligible negative correlation between them. The correlation implies that external support and the level of emotional resiliency of the respondents has no significant relationship. It was further found that the computed p-value of 0.388 is greater than the 0.05 level of significance (0.388 > 0.05) which signifies that the null hypothesis is not rejected. This means that the external support of the respondents has no significant bearing on the emotional resiliency of the respondents. External Support also revealed a not significant influence on emotional resiliency. This further infer that in spite of the positive support the respondents have experienced, this did not matter on the level of emotional resiliency. As shown in Table 4, the respondents were psychologically resilient in the emotional dimensions. This finding totally went against the notion that respondents being psychologically resilient in the emotional dimension can be explained through the social support they got from their family, confidant-friends, and school. According to Mai et al. (2021), social support, as an important environmental resource for individuals in social life, is closely related to the control and prevention of negative emotions; good social support can provide protection for individuals under stress and had generally beneficial effect on maintaining the health and stabilizing the mood of individuals hence, external support can have influence on the psychological resiliency of an individual.

Mental Resiliency

The results also revealed that Pearson Chi-Square value between the external support and level of mental resiliency is 1.501 which means that there was a negligible negative correlation between them. The correlation implies that external support and the level of mental resiliency of the respondents has no significant relationship. It was further found that the computed p-value of 0.472 was greater than the 0.05 level of significance (0.472 > 0.05) which signifies that the null hypothesis is not rejected. This means that the external support of the respondents has no significant bearing on the mental resiliency of the respondents. This suggests that the level of external support did not significantly affect the mental resiliency of the respondents. This shows that regardless of the support which the respondents have received coming from their family, friends, and school, this did not matter on the level of their mental resiliency.

This finding did not support and is inconsistent with the study of Cao et al., (2020)

and Mai et al. (2021) which generally revealed that those who received more support from family or friends have a stronger mental capacity and are more mentally and physically healthy; in contrast, those who rarely received similar support have low mental capacity and poor mental and physical health (Cao et al., 2020; Li et al., 2020) ergo, external support influences psychological resiliency.

Conclusion

The following conclusions are drawn from the study:

The high psychological resiliency is due to the external support that respondents have. Students with cohesive type of family environment are psychologically resilient and are able to cope with life's adversities than those students coming from disengaged family. Majority of the respondents' population are poor, but in spite of the family income, students still have high psychological resilience The family environment and the level of external support of students show that the family environment creates an impact on the psychological resiliency of students.

Recommendation

Based on the findings and conclusion arrived in this study, the following recommendations are brought forward:

1. Organize relationship-building programs among parent-children, teacher – student and peer relationship to strengthen the support for the students' psychological resiliency;
2. Provide seminar to parents on various topics such as effective communication, and active listening to help them handle emotional outburst of their children;
3. Orient parents on their active role in the academic life of their children;
4. Create a positive and welcoming environment which exudes trust among the students;
5. Link teachers and stakeholders for appropriate resources including access to guidance and counseling and basic needs;
6. Conduct group activities which focus on emotions regulation to teach students to channel intense emotions appropriately and use reframing technique to handle stressful situation;
7. Coordinate with LGU'S and the Barangay to help low-income families cope with financial difficulties;
8. Organize support program to provide emotional, and social support to students who are experiencing various challenges in life;
9. Conduct peer-to-peer support group growth session such as "Girl Talk", "Boy Talk" to classify issues that entail concerns for boys and girls;
10. Adopt the proposed activities to enhance psychological resiliency skills.

References

Alisha, K. C., Gan, C. C. R., & Dwirahmadi, F. (2019). Breaking through barriers and building disaster mental resilience: a case study in the aftermath of the 2015 Nepal earthquakes. *International Journal of Environmental Research and Public Health, 16(16).* https://doi.org/10.3390/ijerph16162964

Anyan, F., & Hjemdal, O. (2018). Stress of home life and gender role socializations, family cohesion, and symptoms of anxiety and depression. *Women and Health, 58(5),* 548–564. https://doi.org/10.1080/03630242.2017.1316343

Battalio, S. L., Silverman, A. M., Ehde, D. M., Amtmann, D., Edwards, K. A., & Jensen, M. P. (2017). Resilience and Function in Adults With Physical Disabilities: An Observational Study. *Archives of Physical Medicine and Rehabilitation, 98(6),* 1158–1164. https://doi.org/10.1016/j.apmr.2016.11.012

Bulut, S., Fakültesi, A. İ. B. Ü. E., Bölümü, P. D. R., Turkey, G. B., Köyü, K., Turkey, B., Atatürk, B., & High School, A. (2013). ADOLESCENT PSYCHOLOGICAL RESILIENCE SCALE: VALIDITY AND RELIABILITY STUDY Uğur Doğan Bolu High School of Fine Arts and Sport Yunus Altundağ. In *Suvremena psihologija (Vol. 16).*

Cao, W., Fang, Z., Hou, G., Han, M., Xu, X., & Dong, J. (2020). The psychological impact of the COVID-19 epidemic on college students in China. *Psychiatry Research, 287(March),* 112934. https://doi.org/10.1016/j.psychres.2020.112934

Chang, L. Y., Wu, C. C., Yen, L. L., & Chang, H. Y. (2019). The effects of family dysfunction trajectories during childhood and early adolescence on sleep quality during late adolescence: Resilience as a mediator. *Social Science and Medicine, 222(17),* 162–170. https://doi.org/10.1016/j.socscimed.2019.01.010

Fuente, J. De, Pachón-basallo, M., Santos, F. H., Peralta-sánchez, F. J., González-torres, M. C., Artuch-garde, R., Paoloni, P. V, & Gaetha, M. L. (2021). *How Has the COVID-19 Crisis Affected the Academic Stress of University Students? The Role of Teachers and Students. 12(June),* 1–16. https://doi.org/10.3389/fpsyg.2021.626340

Gong, Y., Shi, J., Ding, H., Zhang, M., Kang, C., Wang, K., Yu, Y., Wei, J., Wang, S., Shao, N., & Han, J. (2020). Personality traits and depressive symptoms: The moderating and mediating effects of resilience in Chinese adolescents. *Journal of Affective Disorders, 265,* 611–617. https://doi.org/10.1016/j.jad.2019.11.102

Graber, R., Turner, R., & Madill, A. (2016). Best friends and better coping: Facilitating psychological resilience through boys' and girls' closest friendships. *British Journal of Psychology, 107(2),* 338–358. https://doi.org/10.1111/bjop.12135

Hao, S., Hong, W., Xu, H., Zhou, L., & Xie, Z. (2015). Relationship between resilience, stress and burnout among civil servants in Beijing, China: Mediating and moderating effect analysis. *Personality and Individual Differences, 83,* 65–71. https://doi.org/10.1016/j.paid.2015.03.048

Hayman, K. J., Kerse, N., & Consedine, N. S. (2017). Resilience in context: the special case of advanced age.

Aging and Mental Health, 21(6), 577–585. https://doi.org/10.1080/13607863.2016.1196336

Howell, K. H., Miller-Graff, L. E., Schaefer, L. M., & Scrafford, K. E. (2020). Relational resilience as a potential mediator between adverse childhood experiences and prenatal depression. *Journal of Health Psychology, 25(4), 545–557. https://doi.org/10.1177/1359105317723450*

J. Sambu, L., & Mhongo, S. (2019). Age and Gender in Relation to Resilience After the Experience of Trauma among Internally Displaced Persons (IDPS) in Kiambaa Village, Eldoret East Sub-County, Kenya. *Journal of Psychology & Behavioral Science, 7(1), 31–40. https://doi.org/10.15640/jpbs.v7n1a4*

Khan, A., Hamdan, A. R., Ahmad, R., Mustaffa, M. S., & Mahalle, S. (2016). Problem-Solving Coping and Social Support as Mediators of Academic Stress and Suicidal Ideation Among Malaysian and Indian Adolescents. *Community Mental Health Journal, 52(2), 245–250. https://doi.org/10.1007/s10597-015-9937-6*

Killgore, W. D. S., Taylor, E. C., Cloonan, S. A., & Dailey, N. S. (2020). Psychological resilience during the COVID-19 lockdown. *Psychiatry Research, 291(May), 113216. https://doi.org/10.1016/j.psychres.2020.113216*

Kimhi, S., Marciano, H., Eshel, Y., & Adini, B. (2020). Resilience and demographic characteristics predicting distress during the COVID-19 crisis. *Social Science and Medicine, 265. https://doi.org/10.1016/j.socscimed.2020.113389*

Labrague, L. J., Alexis, J., De Los Santos, A., & Falguera, C. (2021). *Social and emotional loneliness among college students during the COVID-19 pandemic: the predictive role of coping behaviours, social support, and personal resilience. https://doi.org/10.21203/rs.3.rs-93878/v2*

Li, X., Wu, H., Meng, F., Li, L., Wang, Y., & Zhou, M. (2020). Relations of COVID-19-Related Stressors and Social Support With Chinese College Students' Psychological Response During the COVID-19 Pandemic. *Frontiers in Psychiatry, 11(October), 1–9. https://doi.org/10.3389/fpsyt.2020.551315*

Lin, M., Lo, L. Y., Lui, P. Y., & Wong, Y. K. (2016). The Relationship between Family Resilience and Family Crisis: An Empirical Study of Chinese Families Using Family Adjustment and Adaptation Response Model with the Family Strength Index. *Journal of Family Psychotherapy, 27(3), 200–214. https://doi.org/10.1080/08975353.2016.1199770*

Lök, N., & Bademli, K. (2021). The Relationship Between the Perceived Social Support and Psychological Resilience in Caregivers of Patients with Schizophrenia. *Community Mental Health Journal, 57(2), 387–391. https://doi.org/10.1007/s10597-020-00665-w*

Mai, Y., Wu, Y. J., & Huang, Y. (2021). What Type of Social Support Is Important for Student Resilience During COVID-19? A Latent Profile Analysis. *Frontiers in Psychology, 12(June), 1–11. https://doi.org/10.3389/fpsyg.2021.646145*

Marciano, H., Kimhi, S., & Eshel, Y. (2020). Predictors of individual, community and national resiliencies of Israeli Jews and Arabs. *International Journal of Psychology, 55(4), 553–561. https://doi.org/10.1002/ijop.12636*

Masten, A. S., Best, K. M., & Garmezy, N. (1990). Resilience and development: Contributions from the study of children who overcome adversity. In *Development and Psychopathology (Vol. 2).*

Olson, D. H., Waldvogel, L., & Schlieff, M. (2019).

Circumplex Model of Marital and Family Systems: An Update. *Journal of Family Theory and Review, 11(2), 199–211. https://doi.org/10.1111/jftr.12331*

Ovaska-Stafford, N., Maltby, J., & Dale, M. (2021). Literature Review: Psychological resilience factors in people with neurodegenerative diseases. *Archives of Clinical Neuropsychology, 36(2), 283–306. https://doi.org/10.1093/arclin/acz063*

Pusch, D., & Dobson, K. S. (2017). Childhood adversity and adult depression: The protective role of psychological resilience. *Child Abuse and Neglect, 64, 89–100. https://doi.org/10.1016/j.chiabu.2016.12.012*

Radetić-Paić, M., & Černe, K. (2020). The influence of family income on students' family resilience in Croatia. *Economic Research-Ekonomska Istrazivanja , 33(1), 1172–1181. https://doi.org/10.1080/1331677X.2019.1697332*

Schulz, A., Becker, M., Van der Auwera, S., Barnow, S., Appel, K., Mahler, J., Schmidt, C. O., John, U., Freyberger, H. J., & Grabe, H. J. (2014). The impact of childhood trauma on depression: Does resilience matter? Population-based results from the Study of Health in Pomerania. *Journal of Psychosomatic Research, 77(2), 97–103. https://doi.org/10.1016/j.jpsychores.2014.06.008*

Semester, F., & Statistics, O. P. (2021). *Terms of Use of Nscb Publications.*

Sheerin, C. M., Lind, M. J., Brown, E. A., Gardner, C. O., Kendler, K. S., & Amstadter, A. B. (2018). The impact of resilience and subsequent stressful life events on MDD and GAD. *Depression and Anxiety, 35(2), 140–147. https://doi.org/10.1002/da.22700*

Sintema, E. J. (2020). Effect of COVID-19 on the performance of grade 12 students: Implications for STEM education. *Eurasia Journal of Mathematics, Science and Technology Education, 16(7). https://doi.org/10.29333/EJMSTE/7893*

Song, S., Yang, X., Yang, H., Zhou, P., Ma, H., & Teng, C. (2021). *Psychological Resilience as a Protective Factor for Depression and Anxiety Among the Public During the Outbreak of COVID-19. 11(January), 1–8. https://doi.org/10.3389/fpsyg.2020.618509*

Terrill, A. L., Molton, I. R., Ehde, D. M., Amtmann, D., Bombardier, C. H., Smith, A. E., & Jensen, M. P. (2016). Resilience, age, and perceived symptoms in persons with long-term physical disabilities. *Journal of Health Psychology, 21(5), 640–649. https://doi.org/10.1177/1359105314532973*

Twum-Antwi, A., Jefferies, P., & Ungar, M. (2020). Promoting child and youth resilience by strengthening home and school environments: A literature review. *International Journal of School and Educational Psychology, 8(2), 78–89. https://doi.org/10.1080/21683603.2019.1660284*

Ww, Z. (1965). *Zung Self-Rating Depression Scale.*

Zuardin, Razak, A., Maidin, M. A., Tamar, M., & Yani, A. (2019). Patterns of family support in cervical cancer survivors with high resilience. *International Journal of Innovative Technology and Exploring Engineering, 9(1), 1604–1606. https://doi.org/10.35940/ijitee.A4572.119119*

Zung Self-Rating Anxiety Scale (SAS). (1971). 1971.

INNOVATION ARTICLES

Compendium of Exemplary Basic Education Innovations

3D-ZONE: A BLEND OF DIFFERENTIATED, DIDACTIC AND DIGITAL APPROACHES FOR OPTIMUM NUMERACY EXPOSURE

Julius R. Garzon, Master Teacher II
Ibarra National High School
Schools Division of Maasin City
julius.garzon@deped.gov.ph

Abstract

Project 3D-ZONE was developed and implemented at Ibarra National High School to address the pressing issue of a significant number of non-numerate learners. This initiative aimed to enhance students' basic numeracy skills through engaging, collaborative, and interactive methods. The project utilized differentiated, didactic, and digital approaches to accommodate diverse learning styles, provide explicit instruction, support self-pacing, socio-emotional needs, and tap into students' technology interests. The program featured teacher-created activities and materials designed to bridge gaps in understanding fundamental numeracy concepts. It began with a diagnostic test to assess learners' abilities, followed by weekly review sessions targeting specific competencies. These sessions used a direct reteach and review approach with tailored examples for each student. The project employed various individual and group-based activities, including take-home exercises, to maintain learner engagement. An action research study demonstrated a significant improvement in numeracy performance, with an average increase of at least 5% in mean percentage scores from pretest to posttest. Most students excelled in 95% of the competencies, achieving score improvements of 5-7 points. The posttest results indicated a clear understanding of numeracy concepts, validating the project's success in equipping learners with proficiency and addressing misconceptions. Feedback from interviews revealed that the intervention was motivating, tailored to individual abilities, promoted collaboration, and fostered digital learning.

Rationale

Improving students' numeracy skills in secondary school has consistently been a crucial focus in mathematics education. However, a persistent challenge has been the inadequate foundation and mastery of performing core fundamental operations, making it difficult for teachers to smoothly progress from one competency to the next. To address this issue, it is now recognized as essential to provide students with diverse opportunities for review and exercises, taking into account their individual differences, emotional aspects, and utilizing a range of technological applications to enhance their engagement in learning. One promising approach to bridge the numeracy gaps is to combine differentiated, didactic, and digital methods as a numeracy intervention, ultimately leading to an improved level of numeracy among learners.

At Ibarra National High School, mathematics performance is influenced by various factors, and one of these factors is numeracy. As indicated by the September 2022 numeracy pretest results, 39% of Grade 7 students are considered non-numerate. The school's teachers employ a traditional "one-size-fits-all" approach, which may not be very effective for beginners. To improve understanding and mastery of numeracy, it is crucial to focus on explicit and didactic reviews or reteaching of concepts, rather than solely relying on brief lectures lacking sufficient illustrative examples and exercises. Unfortunately, the integration of technology is not prioritized during remedial sessions. To address these issues, a novel project named 3D-ZONE was introduced. This data-driven, classroom-based, and teacher-initiated intervention aims to cater to the diverse needs of Grade 7 learners who are newcomers to secondary-level mathematics and numeracy learning.

The **3D-ZONE *(Differentiated, Didactic, and Digital Zone of Optimum Numeracy Exposure)*** *is a teacher-initiated project design aimed to enhance learners' numeracy performance through a learner-centered approach. The project was an action research by the proponent who recognized the importance of considering learners' diverse needs and abilities. One key aspect of the 3D-ZONE project is its emphasis on addressing numeracy problems through direct and explicit remedial sessions tailored to different ability levels. The project also incorporates digital learning resources to foster motivation and interest among the learners. The project stands out due to its innovative combination of focusing on numeracy issues, utilizing digital learning methods, and departing from the conventional one-size-fits-all approach. This unique blend makes it a pioneering initiative in the realm of numeracy education. The project is built upon the foundation of the school's banner intervention, Project 2LINES (Lifelong literacy and Innovative Numeracy using Effective Strategies), which aims to enhance literacy and numeracy skills through*

innovative and lifelong learning methods. The 3D-ZONE project employs teacher-created activities and materials that are specifically designed to bridge gaps in understanding fundamental numeracy concepts and processes. By using differentiated, didactic, and digital approaches, students are equipped with the necessary tools to excel in their numeracy journey. Below illustrates the systematic framework is in place to highlight its core principles and operational methods. This framework offers an overview of how the 3D-ZONE project aims to revolutionize numeracy education and empower learners with the essential skills for success.

By the conclusion of the 2022-2023 academic year, the goal is to have no students labeled as "non-numerates" throughout the year, and to reduce the number of students categorized as "moderately numerates" by at least 25%. Beyond academic accomplishments, the project also aims to cultivate students' appreciation for numeracy. It emphasizes the importance of numeracy, as well as effective teaching methods and digital literacy, to help students effectively navigate the current challenges in K12 secondary mathematics. Overall, the project's comprehensive approach seeks not only to improve students' mathematical abilities but also to develop a positive attitude towards numeracy and equip them with essential tools to succeed in today's educational landscape.
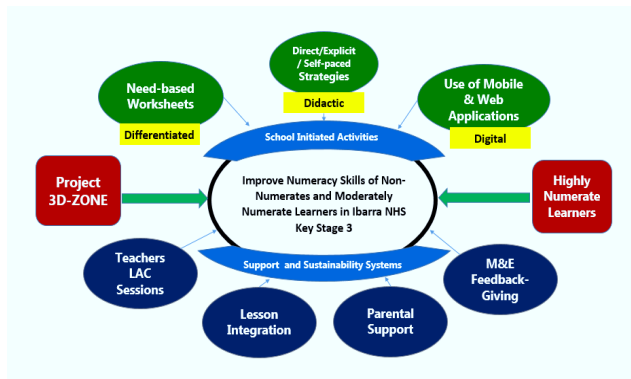
Procedures

The project's implementation plan embodies essential elements designed to improve students' foundational numeracy skills and overall understanding of mathematics. Initially, a diagnostic test was administered to assess the current level of the learners' abilities. Based on the results, weekly review sessions are conducted, which focus on specific numeracy competencies. These sessions utilize a reteach and review approach that is direct and straightforward, providing diverse and tailored examples according to each student's level. To keep the learners engaged, a variety of activities is employed, both individual and group-based, including take-home exercises. These activities make use of resources like the Division Pilot-tested LAS, teacher-created contextualized materials, and digital learning tools.

During the pilot implementation, the project recipients (N=66) were identified based on the pre-assessment results in September 2022 reflected in the Form 2 of the Numeracy Assessment, according to Regional Memorandum 280 s.2021. Parents, on the other hand, were capacitated on the conduct of the project and identified their roles towards their children to ensure they are always present and not left behind. Despite the lack of budget provided, mostly charged to personal pocket of the proponent, the implementation went on as planned since the project is very timely for learners. The delivery of exercises was made at least twice a week, for a duration of three (3) months implementation (October 2022-April 2023). Schedule was fixed in every Friday during RRE and one agreed time between teacher and student within a week or if not, during after the last subject in the afternoon/or after lunch. Learners were provided contextualized and differentiated learning worksheets tailored to suit their numeracy level. Written activities are complemented with explicit discussion, drills, 1-on-1 assistance, triad peer mentoring, buddy system approach, guided boardwork and group sharing/reflection. To nurture interest, learning are given avenue to enjoy through game-based activities using digital learning tools. Learners are being exposed blended activities focusing on work practices relative to numeracy concepts so that they can gradually elevate as they keep on exercising skills because the project believes that "constant practice makes perfect".

Impact

The impact of the Project 3D-ZONE to the learners was evident during the implementation. In an action research carried out, assessment results indicated a significant improvement in their numeracy performance. On average, their mean percentage score (MPS) increased by at least 5% from pretest to the posttest. Notably, a majority of students excelled 95% of the competencies, exhibiting an increase of 5-7 points in their scores. The posttest MPS showed substantial improvement compared to their initial scores, demonstrating a clear understanding of the numeracy concepts taught during the implementation of the 3D-ZONE intervention. Hence, the project activities successfully equipped learners' proficiency and overcome difficulties/misconceptions of numeracy concepts. Feedback from interview revealed that the intervention was motivating and interesting, suitable to one's ability level, established collaboration and foster digital learning.

Given the positive findings, this project will be sustained in the succeeding school years with the

support of the administration and stakeholders. Considering the impact and its timely and novel process, this 3D-ZONE can be considered innovative for the fact that it is practical & strategic approach of enhancing the learning of numeracy skills among learners. Even during this post-pandemic stage, a lot of learners not only in Ibarra NHS but other schools in Maasin City Division manifest poor foundation in basic fundamental math skills especially incoming Grade 7 learners. One very common problem was on their basic knowledge way back their elementary years. So far, no project innovation has been conceptualized and implemented not only in our school but in entire Maasin City Division focusing on blending differentiated, didactic and digital learning of students which are rarely considered in the teaching of basic skills due to "one size fits all" practices.

These aspects are deemed crucial to learners' success considering the individual needs, interest, and socio-emotional dimension. This is the gap that gives opportunity to put Project 3D-ZONE as complementary tool to maximize numeracy learning in the full Face-to-Face modality, and a way to prepare learners in the new program called National Learning Camp (NLC). 3D-ZONE, as innovation, is a new and timely mechanism that brought impact to learners in bridging numeracy gaps that hurdle success in math curriculum. By supplementing day to day learning with 3D approaches, the delivery or math instruction has helped learners cope with academic performance during the 3rd to 4th quarters.

The findings of the piloted Project 3D-ZONE has been shared with parents and teachers at Ibarra National High School through Learning Action Cell. Additionally, the research on 3D-ZONE will be presented in a research colloquium. As this dissemination continues, our next objective is to make the intervention available for other schools to replicate and encourage teachers to adopt benchmark strategies and develop new techniques. To strengthen the implementation at the school level, we will seek support from the administration and stakeholders to fully utilize the project's potential among grade-level and subject teachers. We will also involve the SDO (Schools Division Office) to incorporate the project into new policies and integrate it into all schools' project banners.

SIMULTANEOUS TUTORIAL AND ACTIVE REINFORCEMENT ON BASIC OPERATION THROUGH ACTIVITIES LIKE REPETITION DRILLS AND DIGITAL EXERCISES (STARBOARD)

Diosalyn A. Rocabo, Head Teacher IV
Granja-Kalinawan National High School-Hiagsam Annex
Schools Division of Leyte
diosalyn.rocabo@deped.gov.ph

Abstract

Basic numeracy skills consist of comprehending fundamental arithmetical operations like addition, subtraction, multiplication, and division. Due to limited/ no face-to-face classes during the pandemic, numeracy level of learners in Granja-Kalinawan National High School-Hiagsam Annex deteriorated. Thus, the school developed a practical and feasible strategy that could help the learners understand the basic math operation. This is where the STARBOARD *(Simultaneous Tutorial and Active Reinforcement on Basic Operation through Activities like Repetition Drills and Digital Exercises) came to light to level-up numeracy level of 13 Grade 7 learners from non-numerates to at least moderately numerates level. STARBOARD material was crafted and validated by Math Teachers and it has 5 sessions focusing on Addition, Subtraction, Multiplication, Division; and Mixed Operations. Each session has the following parts: kumustahan, 15-item digital exercises, basic operation lesson, 10-item repetition drills, 15-item digital exercises, journal, and progress chart. STARBOARD was conducted from May 29 to June 14, 2023, every 7:00-7:45 in the morning and/ or during their free time. The results revealed that the pre-test/ post-test average score of 13 Grade 7 STARBOARD learners was increased from 2.62 to 8.38. Based on the numeracy status, all 13 STARBOARD learners were level up from non-numerates to moderately numerates. It has ₱1,815.00 cost for the entire implementation. STARBOARD is made possible through the support of parents, teachers and community for binding themselves to attain its objectives. STARBOARD will be enhanced and will be part of the school's class program in the school year 2023-2024 to sustain its goal.*

Keywords: STARBOARD, Learner, Tutor, Numeracy

Rationale

Numeracy has been defined as the ability to use, reason, and apply simple numerical concepts in daily life, at home, work or in school. Basic numeracy skills consist of comprehending fundamental arithmetical operations like addition, subtraction, multiplication, and division (Gigante, 2020). Learning mathematics has been necessary given the fact that this subject is correlated with other curriculum learning areas such as science, economics to name a few. Hence, showing mastery in this area is both an academic priority and a life skill combined. However, our school has long struggled against low numeracy. Due to limited/ no face-to-face classes during the pandemic, numeracy skills of learners in Granja-Kalinawan National High School (GKNHS) – Hiagsam Annex deteriorated. This results in a higher number of non-numerates. During the School Year 2021-2022, the school performance indicator in terms of numeracy level was quite low. The numeracy level is only 67.70% or 153 out of 226 learners were highly numerates. This SY 2022-2023, based on the latest data from Quarter 3 SMEA, the school has 24.06% or 51 non-numerates out of 212 learners. To be specific, 13 learners from Grade 7, 16 from Grade 8, 10 from Grade 9, and 12 from Grade 10 (SMEA, 2023).

Based on these results, the school conducted root-cause analysis via focus group discussion with the mathematics teachers on the factors affecting numeracy skills of the learners. It found out that poor understanding of basic math operation especially on multiplication and division was the root cause of having low scores in numeracy tests. The school head together with numeracy coordinator and Math teachers look for a simple strategy that can be used to master math skills, that is intensive tutorial using repetition. By repeating and reviewing previous formulas, lessons, and information, students are better able to comprehend concepts at a faster rate (Resilient Educator, 2023). Another strategy to attract the interest of the learner is to use digital activities which provide opportunities for learners to practice the content and skills using laptops, tablets, and any other gadgets (Banks, 2023). Thus, the school developed a practical and feasible strategy that could help the learners understand the basic math operation. This is where the STARBOARD *(Simultaneous Tutorial and Active Reinforcement on Basic Operation through Activities like Repetition Drills and Digital Exercises) came to light, as a wing from the already implemented STARWARS (Simultaneous Tutorial and Active Reinforcement in Writing, Arithmetic, Reading and Spelling).*

The STARBOARD is an innovation that primarily aims to lessen, if not eradicate the number of non-numerates in Grade 7 of GKNHS-Hiagsam Annex for school year 2022-2023. Its logo has 4 elements consist of (1) images; (2) 4-pointed blue star; (3) green line circle and (4) learners with medal and ribbon. The first element is the images. The related images of basic operations refer to addition, subtraction, multiplication, and division. Images of activities refer to any mathematics related tasks that enhance their numeracy skills like repletion drills and digital exercises. Image of repetition drills represent a set of exercises that may be repeatedly done by the learners until they mastered the skills. Image of digital exercises refers to Math Apps installed in the tablet used by the STARBOARD learners. The second element is 4-pointed blue star – 4 pointed represents 4 basic math operations: addition, subtraction, multiplication, and division; blue - symbolizes inspiration and wisdom; star - a symbol of positivity. The third element is the green circle. Green - represents new beginnings and growth and circle represents unending learning. The fourth element is the learners with medals and ribbon. It represents the Grade 7 beneficiaries who undergo the tutorial sessions and receive awards based on their progress and achievement.

Procedure

STARBOARD has its terminal objective. At the end of the series of sessions, the 13 Grade 7 non-numerate learners would be able to level-up their numeracy level from non-numerates to at least moderately numerates level. Its enabling objectives are (1.) To provide STARBOARD session guides and learners materials; (2.) To orient STARBOARD participants; (3.) To conduct STARBOARD sessions in addition, subtraction, multiplication, and mixed operations using worksheets and Math Apps; (4.) To determine STARBOARD learners' progress; and (5.) To conduct the STARBOARD awarding ceremony.

To provide STARBOARD teachers session guides and learners materials, the proponent and the numeracy coordinator crafted the session guides on May 15, 2023. It was presented and validated by the Mathematics Teachers on May 16, 2023. Crafting of STARBOARD materials was done on May 18-22, 2023. It was also presented and validated by the Mathematics teachers before its final printing. STARBOARD material has 5 sessions: Session 1: Addition; Session 2: Subtraction; Session 3: Multiplication; Session 4: Division; and Session 5: Mixed Operations. Each session has the following parts: *kumustahan, 15-item digital exercises, basic operation lesson, 10-item repetition drills, 15-item digital exercises, learner's journal, and learner's progress chart. Installation of Math Apps to the DepEd tablets was made on May 25, 2023. The proponent and numeracy coordinator assist the ICT coordinator and prospects tutor in installing the Math Apps via Share-it Apps. Offline pre-play was done as part of testing the*

reliability, feasibility, and usefulness of the apps. Orientation to STARBOARD participants, identifying the names and sections of grade 7 non-numerates learners as STARBOARD learners were conducted on May 26, 2023. STARBOARD tutors were also identified. A school memorandum was sent to the concerned teachers and conducted orientation on their role as tutors. Getting the names of the parents and a communication letter was sent on May 26, 2023 stating that they need to attend an orientation on May 29, 2023 to orient them on their role. Pre-test was administered by the numeracy coordinator on the same day. STARBOARD sessions in addition, subtraction, multiplication, and mixed operations using repetition drill worksheets and Math Apps-digital exercises were conducted from May 29 to June 14, 2023, every 7:00-7:45 in the morning and/ or during their free time. On June 15, 7:00 – 9:00, STARBOARD contest-quiz bee-like was conducted to identify learners with the highest score in repetition drills and digital exercises. Post-test was administered by the numeracy coordinator on June 16, 2023. Reading of the learner's journal and accomplishing the learner's progress chart was also conducted to determine learners' insights and progress. STARBOARD has ₱ 1, 815.00 cost of expenses for materials like whiteboard, marker, eraser, notebook, and ballpen used by the learners and tutors during the STARBOARD implementation.

Impact and Results

To determine learners' progress after the conduct of the STARBOARD sessions, scores were recorded in the STARBOARD Learners Progress Chart on June 16, 2023. The pre-test/ post-test scores revealed that the average score of 13 Grade 7 STARBOARD learners was increased from 2.62 to 8.38. Based on the numeracy status, all 13 STARBOARD learners were level up from non-numerates to moderately numerates. 5 learners showed improved skills and 8 learners showed highly improved skills in basic operations. All learners got no zero in post- post-test.

Furthermore, of all the STARBOARD learners there is one that stood out in performance. This one STARBOARD learner showed consistency in his performance from pre-test, post-test, and during the contest, where he got the highest score of 24 out of 40 in repetition drills and 3250 points or 13 out of 15 items in Math Apps during the STARBOARD contest.

As part of the recognition system of the STARBOARD, the said learner received a STAR AWARD Certificate on June 21, 2023 as recognition for his commendable performance, and likewise, the tutor received a certificate of appreciation for his commitment in mentoring his learner. The STARBOARD Learner and Tutor who won in the contest was also recognized during the 8th Moving Up Ceremony and Recognition Day on July 14, 2023 at Jaro, Cultural Center, Jaro, Leyte. This recognition boosts the self-confidence of both learner and tutor to pursue teaching and learning Math in an easy and enjoyable way.

The accomplishment and the success of the STARBOARD is made possible through the help of the schools' Department Heads, Numeracy Coordinator, Math Teachers, EMIS, SBM Coordinator, School Information Coordinator, and the rest of the STARBOARD tutors for binding themselves in the goals and objectives of the STARBOARD.

STARBOARD will be enhanced and will be part of the school's class program and integrated in all learning areas by the school year 2023-2024 to sustain its goal and to enhance numeracy skills of learners for the advancement of the school, family and community.

PANDAY-TUHAY: REDESIGNING MY COMMUNITY

Jonathan G. Merillo, Master Teacher 2
Sulat National High School, Sulat, Eastern Samar,
Schools Division of Eastern Samar
jonathan.merillo@deped.gov.ph

Abstract

Teaching English for Academic and Professional Purposes to learners who are not into reading and writing academic papers is quite challenging. Unlike the usual way of teaching this learning area where learners are tasked to read sample academic papers then write their own, this pedagogical innovation, which is a learning resource package, is novel in the sense that it exposes learners to authentic, real-world problems in the community and allows them to apply the concepts of academic paper writing such as concept paper and project proposal. Anchored on Project-Based Learning Approach and 21st Century Learning Design (P21), this learning resource package provides learners with a platform to be proactive contributors of solutions to community problems and challenges. Ultimately, this allows learners to demonstrate their constructed knowledge by creating a pub-

lic presentation of their proposed solutions to identified community problems. As a result, learners were taught with the concept of academic writing in a more meaningful way. Paired sample T-test analysis of the results of the pre-test and post-test showed that the p value was lower than 0.05, hence it is considered highly statistically significant. Moreover, the effect size was analyzed and was determined through Cohen's d. It showed 1.94 effect size which is statistically significant. Panday-Tuhay has greatly affected the academic performance of the learners to whom the intervention was field tested and implemented. Community officials requested copies of the project proposals presented for possible adoption of ideas. Future plans include wider implementation and division-wide capability building on P21 integration.

Keywords: *Panday-Tuhay, Project-based Learning, 21st Century Learning Design, real-world problem solving, knowledge construction, 21st century skills*

Rationale

"There is always a way to do it better– find it!"
Teaching academic writing concepts to learners who do not have something up their sleeves for reading and writing is quite a task for teachers. For the past five (5) years since the Senior High School implementation in 2016, students were only exposed to sample academic papers, then ask them to write their own. This practice has shown minimal impact to learners especially those who are not into academic reading and writing. It is high time for the country's educational landscape to upscale its pedagogy a notch higher and embrace innovations in teaching. In the 21st century teaching and learning process, it is imperative that learners are given the platform to apply their learning to meaningful undertaking. Hence, when the proponent was given the opportunity to be one of the innovators to write a learning resource package anchored on P21 or Project Pedagogies in the 21st Century, brainchild innovation of the Regional SHS Coordinator, Dr, Ernani S. FErnanderz, Jr., the proponent took the challenge. Panday-Tuhay: Redesigning My Community, as an offshoot of a bigger innovative practice through the Regional Training Workshop on 21st Century Project-based Learning Pedagogy in August 2022, forwards the idea that learners need not be confined within the four walls of the classroom if we want them to appreciate the concepts they are learning in school. There is a need to realize that that even in their younger years in formal education, students can already start contributing to community development. The ultimate goal of our education is to be able to contribute meaningfully to nation-building, however, one need not wait for the day that he finally graduates before doing something for the kind of community he aspires to live in.

The objectives of this pedagogical innovation includes the following:

- To provide learners with learning resource package that will guide them into meaningful academic writing;
- To help learners apply the learned concept on academic writing to actual, real-life, authentic situations in the community;
- To increase student engagement to academic writing while forwarding doable solutions to the problems in the community;
- To enhance academic performance among English for Academic and Professional Purposes learners.

This pedagogical innovation is significant to learners, the teacher, the school, and the community. Learners were found to be more engaged with the learning activities as they see the impact of what they were doing to them as residents of the community they have chosen. They felt empowered in bringing innovative solutions to the problems in the community through the proposals they have presented to the residents of the chosen community. The teacher has also benefited from this learning resource package. Given that the traditional way of engaging learners to academic writing was through samples downloaded from the internet and other references, the learning resource package has been a huge help in making learners create their own papers based on the 21st century learning tasks provided in the learning resource. Since the activities are self-paced, the proponent found it helpful to use with minimal instructions as what learners need to do were already articulated in the material. The innovation is also significant to the community as they are the direct recipient of the innovative project proposals of the learners as a final output of their 21st century learning activities. Learners made the community feel they are acknowledged and that they are heard, appreciated and valued.

Anchored on 21st Century Learning Design and Project-based Learning Approach, students are guided through this learning resource package on the 21st Century Activities that they will engage in all throughout the semester. The learning resource package is designed to allow learners maximum application of their learning to community-based problems and issues. Embedded are activities that will develop learners' 21st century skills such as: Knowledge Construction, Self- Regulation, Skilled Communication, ICT for Learning, Collaboration, and Real-World Problem Solving.

Procedure.
Key Features. *This pedagogical innovation highlights*

the 21ˢᵗ Century Learning Activities that students need to engage in for the entire semester. All activities are interrelated which learners need to accomplish within the time frame stipulated in the learning resource. These activities are geared towards the final performance task which is the proposal marathon which provides learners the opportunity to present solutions to authentic real-world problems in the community. Another key feature of this innovation is the interdisciplinary curriculum where students can accomplish one task for two or more learning competencies from different learning areas that are identical or similar.

Persons Involved. The crafting of this learning resource package as an offshoot of the regional workshop on innovative pedagogies was made possible because of the guidance of Regional SHS Coordinator, Dr. Ernani S. Fernandez, Jr., regional validators, Division SHS Coordinator, Mrs. Marcosa A. Lavado, School Principal, Mr. Sixto D. Balita, and the proponent, Mr. Jonathan G. Merillo. The success of it's field testing became a huge success because of the following persons involved: Barangay Captains of the adopted communities: Hon. Maximo E. Zacate or Brgy. San Vicente, Hon. Nelia Colico of Brgy. Mabini, Hon. Telly Sumbilla of Brgy. Tabi, and Hon. Edgar Eladio of Brgy. Aet, Sulat, Eastern Samar. The involvement of the first ever class to which the field testing of this innovation was conducted, ABM-12 (SY 2022-2023) is also acknowledged.

Locale. This pedagogical innovation is field-tested last school year at Sulat National High School, Sulat, Eastern Samar among Grade 12 ABM students on their subject English for Academic and Professional Purposes. This year, it is also being implemented in two classes, ABM 12 and HUMSS-12A.

Resources Used. The field testing of this innovation used school resources such as bondpaper for the learning resource reproduction, printing of Activity Consent Form, Worksheets, and other important documents for reporting purposes as the field testing was monitored by the division as well as the regional office last year. Human resource used may include the teacher-implementer/ proponent of this innovation, school head, monitors such as the Division SHS Coordinator and the Regional SHS Coordinator. Moreover, the local officials in the community are also part of the human resources used in the implementation of this innovation.

Cost of the Project. A rough estimate of Php5,000.00 was spent in the implementation of the project. This amount was spent for the printing of the learning resource (LR), reproduction of the LR for learners, transportation, tarpaulin printing, brochure and portfolio printing, among others.

Methods of Gathering Information. To test the impact of the innovation to the learners' academic performance and as part of the field-testing process of the innovation, pre-test was administered before using the learning resource package. Then, the learners were tasked to use the Panday-Tuhay learning resource package as guide in working for their performance tasks. The 21ˢᵗ Century Learning Activities A-H provided learners the platform to demonstrate, develop and enhance their 21ˢᵗ century skills. Post test was then administered after working on the learning activities.

Sources of Information. The learners are the main source of information of this innovation. At the end of the semester, students have also submitted creative portfolios that can also be a rich source of qualitative information about their learning.

Impact and Results

As a result of this innovation, learners where taught the concept of academic writing in a more meaningful way. After the implementation of this innovation, the author analyzed the results of its pre-test and post-test to see whether there had been a significant difference on their learning, statistically. Statistical analysis using Paired Samples T- Test, showed that the p value was lower than 0.05, hence it is considered highly statistically significant. Also, the effect size was analyzed and was determined through Cohen's d. As shown, it has 1.94 effect size and can be considered significant. Panday-Tuhay as a pedagogical innovation has greatly affected the academic performance of the learners in English for Academic and Professional Purposes particularly the class to whom the intervention was field tested and implemented.

Since the project proposals, which was the final output of the learners, where based on community problems and issues, and they have presented these proposals to the residents and to the barangay council of the community that they have chosen, the innovation has created and forwarded possible and doable solutions to their problems through the learners. After their proposal marathon, some barangay chairperson asked for a copy of their proposal. Accordingly, they will talk about the proposal in one of their sessions for possible adaption of the proposed projects.

It is recommended by the proponent, as

part of next steps of action, to sustain the implementation of the innovation project. As a commitment, the innovation will be utilized yearly as a pedagogical innovation used in teaching English for Academic and Professional Purposes not only by the proponent but also by other teachers handling the same subject. Also, the division SHS Coordinator of Eastern Samar has already tapped the author to have the innovation shared to bigger audience through a division-wide orientation on Project-Based Learning Approach (first division-wide sharing was just among SHS   Coordinators in the division to SHS implementing schools). In the planned division orientation on 21PBL, which was already submitted by the SHS Division Coordinator as

part of her activities for SY 2023-2024, participants will be made to craft their own learning resource package for the learning areas they are handling and implement the said LR once it's validated.

In reflection, the best manifestation of learning is when you can finally create ideas or solutions and suggest or propose something that can benefit the many. Creating, in the first place, is the highest cognitive process in the Revised Bloom's Taxonomy of Knowledge as proposed by a group of cognitive psychologists and curriculum researchers. Similarly, the SOLO (Structure of Observed Learning Outcomes) also provides that when learners create something, it is a manifestation of higher order thinking skill.

CONTEXTUALIZED PHIL-IRI PACKETS FOR JUNIOR AND SENIOR HIGH SCHOOL

Erwin L. Purcia, Education Program Supervisor-English
Schools Division of Calbayog City
erwin.purcia@deped.gov.ph

Abstract

The Division Crafted Philippine Informal Reading Inventory (Phil-IRI) is an initiative of Calbayog City Division that aims to make every Filipino child a reader. As upheld by the Department of Education that every child should be given opportunity to read, Calbayog Division responds to the need of children to continue catering quality education through addressing learning loss (in this case reading) caused by the precipice of the global pandemic.

The goal of Calbayog City Division is to let children develop their love of reading which is a vital aspect to improve and enhance the reading skills. Through this project, no child will be left behind when it comes to reading. The Language team headed by Dr. Erwin L. Purcia identified language teachers from the different schools within Calbayog City Division to be part of the team who crafted the Phil-IRI tool which was utilized in reading activities. After creating a team, a conference was done for the planning and orientation regarding the tasks, actions and processes of making the tool. Right after the planning was the crafting of the said tool. The identified language teachers were given tasks to write passages as content of the Phil-IRI tool which was validated through standardized test processes and materials. Once it was already done, it was consolidated and submitted to the Division Office for the approval.

This project included the preparation, crafting and finalization of work and output. It did not cover a cost as schools where stages of the development shouldered the necessary expenditures of the activity as it is a division-initiated project.

The realization of this project was a great help for children to be a reader and an instrument for them to be successful in their endeavor.

Rationale

Literacy has something to do with academic achievement. Training an individual how to read is one of the most essential goals for today's education. A life of a person will be enhanced by developing his literacy into his work in the future.

According to Bender (2012), individuals who are regarded as smart as their peers but having poor reading abilities cannot improve it as their peers. As per record, all students pass elementary education. Corollary, even those who have poor in reading ability pass their classes. They cannot perform reading at the level expected of their grade, resulting in anxiety and depression throughout their schooling. They are usually stereotyped as unsuccessful in adoption problems in their classes.

Reading is a great foundation of academic success and constant life learning. As stated in the article from Philippine Star (2010), "The undeniable

fact remains that majority of Filipino students do not possess the ability and motivation to read. Due to the fast-evolving world and changing technology, it cannot be denied that sometimes reading is taken for granted". This is the reason why a child cannot enhance his reading ability. This is one factor why Filipino students do not appreciate reading and set aside its importance. The problem of non-reading becomes a major reason why the Philippines is not that so competitive in terms of world economy and a reason why the country continues to live in poverty. In fact, the Philippine shared a significant rate of low performers among all PISA-participating countries and economies. This indicates that 80% of the Filipino students did not reach the minimum level of proficiency in reading.

In Calbayog City Division, reading difficulties are present. In lower grade level such as elementary level, pupils found hard in reading passages and employing comprehension to what they are reading. As observed also in secondary level, there are still learners who cannot read and comprehend. This project aims to let each child in Calbayog City Division be a reader. Hence, a standardized reading assessment tool for secondary must be institutionalized so data on students' reading level can be authentic and appropriate. This would further call for an appropriate teaching pedagogy students shall engage in so to address their individual needs.

Procedure

The Phil-IRI is an informal reading inventory composed of graded passages designed to determine the individual student's performance in oral reading, silent reading and listening comprehension. These three types of assessments aim to find the student's independent, instructional, frustration and non-reading levels. The data from these measures could be used to design or adjust classroom, small group or individualized instruction to fit the students' needs and abilities. The Phil-IRI is not the sole assessment that provides the holistic reading performance of the students; it only provides an approximation of the students' abilities and could be used in combination with other reliable tools of assessment. The data shall also serve as one of the bases in planning, designing/redesigning the reading programs or activities in the school to improve the overall reading performance.

As to the process of developing this reading assessment breakthrough, it started from the immense rigors of conceptualization and brainstorming. Dr. Purcia called-out series of sessions from the orientation, to the crafting and the evaluation and quality assurance of the reading texts. These sessions started from the month of August 2022 up to September 2022. The English teachers were assigned in groups that would craft the four types of reading texts *(Academic, Transactional, Informative and Literary Texts) by grade level; from grade 7 to grade 12. Crafting this contextualized Phil-IRI material of the division was never easy because we made sure that this material will undergo series of assessments for us to measure the appropriacy of the material to its intended grade level.*

Each type of reading texts by grade level has undergone series of tests to check its validity and reliability. First, each reading text was run through an online software called **'Readability Checker'** *that measures the number of content words used and the level of word appropriateness to its respective readers. Each writer made sure that the reading material complies to the required number of content words and the level of word difficulty based of the level of readers. Another test which the reading texts were subjected to is* **'Turnitin'**, *an online software that checks the originality of the reading texts, to avoid plagiarism. As the reliability measures were established, expert validation was also instituted. Three (3) Filipino linguists validated the text via content and face validity to ensure authenticity and appropriacy of the tool especially addressing culture overload. These experts are luminaries of linguistic and language education researches in the country and abroad who are fellow members of the Linguistic Society of the Philippines of the lead proponent.*

The crafted reading materials were used during the Pre, Mid, and Post assessments of the students for school year 2022-2023, which resulted to the improvement of the students' comprehension skills. MOVs consolidated result of Division-Initiated Phil-IRI Reading Material showed significant decrease in number of non-readers and frustrated readers since the flagship of this project. Another result by using the Contextualized reading materials, teachers were able to properly assess the reading level of the learners resulting to appropriate intervention activities and materials to improve the reading levels of the students. In addition, the identified frustration level students were given enhancement reading materials, and now there's an evident improvement in their reading level. During the implementation of the said program, the printing of the reading materials during the pre, mid, and post assessment were done by every school in support of the said project.

Impact and Results

s to the impact and/or results, they were generated based on the rigors of the analysis and utilization of the tool which were as follows:

1. Decreased Non-readers. The division Phil-IRI results substantiate this.
2. Sense of scientific and innovative pride for teachers to be able to come with this tool that is first in a row in the entire region and maybe in the country.

PROJECT SMART – T DUO: IMPROVING AND STREAMLINING ASSESSMENT PROCESS (SELF-MONITORING ASSESSMENT RESULT TOOL – TABLE OF SPECIFICATIONS AUTO-LINK TEST ITEM ANALYSIS)

Ronald F. Cuevas, TIC
SHS Hingatungan National High School, Schools Division of Southern Leyte
ronald.cuevas@deped.gov.ph

Abstract:

Project SMART-T Duo is an innovative tool designed to revolutionize the assessment process for teachers. This platform streamlines assessments, offering a scientific and efficient approach. It digitizes the Table of Specifications (TOS) and seamlessly integrates Test Item Analysis (TIA), providing critical metrics such as the mean percentage score (MPS), mastery levels of students, and difficulty and discrimination indices for test questions. The innovation offers a unified platform that automates the generation of essential assessment metrics. The TOS was crafted for fairness, balance, and reliability, with item numbers adjusted based on learning competencies according to Bloom and SOLO taxonomies (70% easy, 20% average, and 10% difficult questions). TIA introduces automated features, including mastery levels, difficulty, and discrimination indices. Mastery Levels categorize competencies into below mastery, nearly mastered, and mastered, while the Discrimination and Difficulty Indices provide digitized item analysis. Developed using Visual Basic for Microsoft Excel, this tool simplifies quarterly assessments for teachers. It alleviates traditional assessment burdens, promotes higher-order thinking skills aligned with learning competencies, and ensures balanced, fair, valid, and reliable assessment. The impact of this innovation extends to the Division of Southern Leyte, where it was adopted on February 10, 2023, through Division Memorandum 57, Series of 2023. It enables teachers to focus on teaching and learning, reduces assessment-related stress, and fosters a student-centered approach. Ultimately, Project SMART-T Duo has the potential to enhance long-term student achievement through its comprehensive and user-friendly assessment approach.

Keyword: Project SMART-T Duo, Table of Specifications (TOS), Test Item Analysis (TIA), Difficulty Index, Discrimination Index

Rationale:

Assessment is an essential part of the K–12 Curriculum as it helps teachers monitor student progress, provide feedback, and make informed decisions about instruction (*DepEd, 2023). It involves gathering evidence of student learning to improve teaching and* learning (DepEd, 2015). However, according to Bodony (2020), the lack of systematic approaches to the assessment task can make the assessment results less reliable. The results from the Programme for International Student Assessment (PISA) revealed that Filipino students are not familiar with questions that require Higher-Order Thinking Skills(HOTS) and real-life situations (Juan, 2019). To address this issue, Project SMART-T Duo aims to guide teachers and school heads in creating HOTS questions based on Bloom's taxonomy and the SOLO Model.

The Project SMART-T Duo has two fundamental components that play a crucial role in the assessment process, namely the Table of Specifications (TOS) and Test Item Analysis (TIA). The TOS and TIA are essential tools for developing and evaluating high-quality tests (Spaan, 2006; Franzen, 2017). TOS helps ensure that the test adequately covers the intended content and learning objectives, while test item analysis provides insights into the performance of individual test items.

The traditional quarterly preparation of TOS and TIA has posed many challenges for teachers. A seamless, auto-linked integration between these two critical components has been lacking, making teachers prone to inaccurate assessment results.

The SMART-T Duo initiative is a remarkable tool that streamlines the quarterly assessment procedure for teachers and school heads. It leverages a coded Visual Basic program on the Microsoft Excel platform to digitize and automate tasks such as planning, designing, developing, analyzing, and interpreting data. The software seamlessly links all TOS and TIA reports, enhancing the efficiency of the entire assessment process.

Procedure:

The Project SMART-T Duo fills the gap by providing a unified platform not only for digitized TOS links with TIA but also for generating the mean percentage score, mastery level of students, difficulty index, and discrimination index of the test questions. The TOS and TIA are very technical, with high regard for data precision and analysis. It is a herculean task and a taxing job on the part of the teachers.

Through Project SMART - T Duo, the TOS

was formulated with codes for a fair, balanced, reliable, and valid number of items. The number of items was automated depending on the learning competencies on the number of days taught. This is to ensure equal distribution of test questions according to Bloom's and SOLO model taxonomies. The TOS distribution has 70 percent for easy questions for remembering and understanding, 20 percent for average questions comprised of applying and analyzing, and 10 percent for difficult questions that entail evaluating and creating. The TIA has two automated and distinctive features, namely the mastery level, difficulty index, and discrimination index. The mastery level determines the below mastery learning competencies, nearly mastered, and mastered competencies. The discrimination index and difficulty index display digitized analysis of whether the items are acceptable, accepted with little revision, accepted but need revision on the choices, may need revision on the question, needs major revision on questions and choices, and disregards the questions.

Two (2) master teachers (Mr. Ocleo Orpio and Ms. Jesa Deluza) and one (1) school head (Ms. Maria Lury Lagumbay) of Hingatungan National High School, Hingatungan, Silago, Southern Leyte were involved during pilot testing under alpha and beta testing of the innovation. After this, appropriate adjustments were considered, like sheet protection and separate input and raw data sheets.

All teachers at Hingatungan National High School utilized the project, which was later adopted by the Division of Southern Leyte Science Teachers after a year of implementation at the school level. The project incurred minimal costs, only covering snacks during the orientation and evaluation of the innovation. During the evaluation phase, teachers unanimously suggested readjusting the coded TOS for improved functionality and ease of use. The TIA was deemed a perfect tool based on the established standards, and no revisions were suggested by the teachers. A 100% satisfaction rate was reported by all teachers based on their written evaluations of the innovation. Furthermore, all teachers agreed to share and replicate the innovation in other schools within the Division of Southern Leyte.

Impact and Results:

The immediate impact of Project SMART-T Duo on the teachers was relief from the burden of doing the conventional quarterly assessment processes. The innovation helps the teachers develop HOTS aligned with learning competencies with balance, fairness, validity, reliability, and usefulness.

The impact and significance of the innovation reached the Division of Southern Leyte; it was officially adopted on February 10, 2023, through Division Memorandum 57, Series of 2023.

The innovation helps the teachers have more time to focus on the teaching and learning process; learning competencies are better aligned with HOTS; and assessment is more balanced, fair, valid, reliable, and useful. Moreover, the innovation helped promote a student-centered approach to assessment and helped reduce the stress and anxiety that teachers and students experience around assessments. Lastly, the innovative project has the potential to help improve student achievement in the long term.

The Project SMART-T Duo stands as a testament to its remarkable effectiveness in improving and streamlining assessment processes. Its replication is highly encouraged across all Divisions within Region 8, where it can make a significant positive impact on the educational landscape.

DATA VISTA: EMPOWERING DECISION-MAKERS THROUGH ENHANCED QUARTERLY DATA GATHERING TOOL

Merson O. Porazo EPS II – Designate
Schools Division of Baybay City
merson.porazo001@deped.gov.ph

Abstract

The enhanced Quarterly Data Gathering Tool (QDGT), a transformative innovation had impact not only on teachers and school administrators but also on the entire division office of Baybay City. Its primary mission was to ensure the availability of current and comprehensive data, empowering decision-makers at all levels. This was meticulously crafted to modernize the data collection process, emphasizing precision, reliability, and speed in generating results. The enriched data became an invaluable resource during School Monitoring Evaluation and Adjustment (SMEA) and Division Monitoring Evaluation and Adjustment (DMEA).

The process commenced at the school level, where data requirements encompassing Access,

Quality, and Governance results were meticulously collected each quarter. School ICT coordinators were very appreciative the tool for its user-friendly interface and automation capabilities, enabling the effortless production of summaries and graphs. Equally significant was the tool's secure data storage, which allowed the schools comprehensive quarterly record. This data served as a cornerstone for meaningful communication with stakeholders during presentations, reinforcing transparency and accountability.

The enhanced Quarterly Data Gathering Tool (QDGT) further facilitated data interpretation and decision-making through its navigation buttons. Schools could swiftly identify and prioritize areas requiring attention and potential solutions. Theres collaborative effort, with ICT coordinators spearheading data input, and the tool bridging the gap between data collection and actionable insights.

This innovative tool revolutionized data management within Baybay City's education system. Its legacy lay in its ability to empower educators, administrators, and policymakers with timely, accurate, and actionable data, ultimately driving improvements in the quality of education and governance.

Keywords: Enhanced Quarterly Data Gathering Tool, user-friendly, reliability, decision-making

Rationale

Prevalent challenges confront schools in the domain of data gathering and record-keeping, often culminating in the dissemination of erroneous information. These challenges started from a lack of consistency and standardization across various data sources, this creates a serious data inconsistency. Such inconsistencies, in turn, pose substantial hurdles when attempting to analyze and report data, rendering to derive meaningful insights and employ data judiciously in the decision-making process. Furthermore, time-consuming nature of data collection places a considerable burden on the shoulders of school ICT coordinators, predisposing them to the phenomenon known as "data collection fatigue." This state of weariness not only impedes the collection of pertinent information but also fosters a tendency toward capturing data that may not be realistically actionable or essential. Consequently, addressing these multifaceted challenges necessitates a concerted effort to establish standardized procedures, alleviate the burden on data coordinators, and instill the data-gathering process with efficiency and accuracy to ensure that reliable information informs decision-making within educational institutions.

Thus, the enhanced Quarterly Data Gathering Tool (QDGT) is a cutting-edge Excel-based project designed to assist schools in efficiently collecting and analyzing data related to students, teachers, and school performance on a quarterly basis. Built on the Microsoft Excel platform, the tool is easily accessible and user-friendly. It caters the school ICT coordinators need for an effective data gathering tool.

The primary purpose of the QDGT is to gather comprehensive data on various aspects of school performance, including ACCESS, QUALITY, and GOVERNANCE, as well as additional information on learners' physical and economic status. Data gathered is entered into the tool quarterly, enabling school ICT coordinators and school heads to track school performance over time and identify red flag areas where additional support may be needed.

Key features of the tool include its ability to generate consolidated reports on total enrollment and per-school enrollment, average and per-school MPS results in each learning area, percentage of passers per school, average KPI per school, total least-learned skills, total number and per-school data of pupils in each grade range, total and per-school numeracy results, total and per-school reading status results, and total number and per-school data of disadvantage learners based on the collected data. This tool provides invaluable insights into learners, teachers, and school performance, facilitating the monitoring of progress towards specific goals.

Moreover, the QDGT includes built-in data visualization capabilities and comparative data for each quarter, enabling school staff to easily interpret and communicate the data to stakeholders through readily available charts and graphs.

Overall, the QDGT is a powerful resource that empowers schools to improve teachers, learners, and school performance through systematic and efficient data gathering and analysis. Through the utilization of the QDGT in the collection and analyses of data enables the consolidation of information by district, and division. The QGDT allows schools to identify areas for improvement and develop targeted interventions to support teachers and learners' success. As a reliable data-based information source, the QDGT serves as a basis for immediate action for the DepEd Baybay City Division top management.

The QDGT aligns with key education policies and reforms in the Philippines, including Republic Act No. 10533 (K to 12 Law), which emphasizes innovative teaching methods and approaches to enhance student learning outcomes.

DepEd's ICT in Education Policy Framework recognizes the significance of integrating information and communication technology (ICT) in education, outlining strategies and guidelines for utilizing ICT tools and platforms to support innovative teaching and learning practices which the QDGT supports.

The Excel-based QDGT also offers several

advantages, simplifying data collection with structured templates and forms, ensuring consistency and accuracy. It incorporates features such as data validation, conditional formatting, and formula calculations to enhance data quality and reduce errors. Furthermore, the tool enables efficient data analysis through sorting, filtering, and tables, allowing users to quickly explore and visualize data, identify trends, and generate meaningful reports and charts.

The Quarterly Data Gathering Tool (QDGT) aims to establish data-based sources in the schools, in the districts, and in the division, with the following and significance:

1. Simplify and standardize the process of collecting data from schools and districts to the division office, ensuring consistency and accuracy in data entry.

2. Provide a centralized platform for storing, organizing, and managing data, enabling easy access, retrieval, and tracking of schools' and districts' quarterly performances and division information.

3. Expedite data entry, reducing manual effort, minimizing errors, and saving time for data collectors.

4. Ensure congruency of data from schools to the division office, serving as a dependable basis for policy review and recommendations.

Procedure

The enhanced QDGT soft copy will be sent to the school for the utilization of this template every quarter through private messenger Group Chat. There is only enhanced QDGT workbook to be used for the whole school year that has already consisting of four quarters for the purpose of comparative data. The enhanced QDGT tool has five sheets: sheet 1 is for QDGT entry portion, sheet 2 is for First Grading, sheet 3 is for Second Grading, sheet 4 is for Third Grading, Sheet 5 is for Fourth Grading, and sheet 6 is for graphical presentation. For the purpose of discussion these are the following steps in accomplishing the enhanced QDGT tool starting the school level.

1. Data Entry (QDGT)

a. Classroom Teacher

The enhanced Quarterly Data Gathering Tool has commenced at the school level where the data source has generated first. Every end of the quarter in school year the school must input the needed data requirement ask by this tool specifically the Access, Quality and Governance. Each classroom teacher shall provide data based on enrollment, grades, MPS, learning outcomes, learning materials, and the number of disadvantaged learners listed within the classroom under the advisory of the teacher. The data gathered by the teachers should be submitted to the school ICT coordinator/School Head for inputting the data on QDGT.

b. School ICT Coordinator

The school ICT coordinator/School Head must input the data using the navigation buttons built in this QDGT tool. After putting all the data to the QDGT tool in that quarter, the school ICT coordinator will submit the tool to the school head for final approval containing the veracity and correctness of the data being inputted by the school ICT coordinator.

c. School Head

The school head should ensure the correctness of all the data inputted to the tool by clicking the finalize button. Once the finalize button clicked by the school head the data being inputted to the tool can no longer be edited to ensure consistency and reliability of data content with a specific date appeared on the tool on when the data has finalized.

2. QDGT Submission

a. School Level

After the school head finalized the QDGT tool then the school head has the sole responsibility to submit the tool to the district ICT coordinator for consolidation through soft copy. Then the school head will print one copy for division data validation after the division M&E support staff validated the congruency of the data submitted then this hard copy will be return to the concern school as their official data document for that quarter.

b. District Level

When all the QDGT tools of all the schools belong to the district had completely submitted to the district through the district ICT coordinator then the district ICT will start consolidating for district QDGT consolidated report. The district ICT coordinator has a **burden-free** in consolidating the QDGT following the steps below:

1. The district ICT coordinator will open the school QDGT workbook and select the required sheet for specific quarter.

2. From the school QDGT specifically on the sheet that the specific quarter to be consolidated, the ICT coordinator will click the "copy button" found on the sheet of the specific quarter for consolidation then the ICT will open the District Summary Template then click "select paste area button" on the district summary template then hit "enter key" on the keyboard then the

data of the school has already inputted to the district summary.

3. After performing step number 2 to all the schools QDGT to the District Summary Template. The district consolidated data the figures and graphs are now available and ready for reporting.

4.The district ICT coordinator will submit the consolidated district QDGT report to the division M&E support staff for division consolidation.

C. Division Consolidation

The division's Monitoring and Evaluation (M&E) support staff will undertake the crucial task of collecting all the consolidated district Quarterly Data Gathering Tool (QDGT) submissions. Subsequently, they will meticulously follow the outlined procedure, denoted as 2b2, to consolidate these district QDGT data into the division's summary template designated for consolidation. Once this meticulous consolidation process, as per procedure 2b2, is completed by the diligent M&E support staff, the consolidated division-level report becomes readily available for potential verification, validation, and further scrutiny.

The compiled division-level report stands ready for a comprehensive review, which encompasses data verification and validation. This critical step aims to ensure the integrity and accuracy of the data collected, allowing for reliable decision-making. Furthermore, this verified data will serve as a foundation for extending support and providing technical assistance to schools in need.

Additionally, the M&E support staff will conduct a meticulous validation of the submitted hard copies of school-level QDGTs. This validation process will entail a thorough examination to confirm if the respective school QDGTs have been appropriately finalized. Particular attention will be directed toward verifying the date of finalization, as this date serves as a key indicator of the tool's completion status.

By meticulously adhering to these procedures, the division's M&E support staff plays a vital role in ensuring data accuracy, integrity, and readiness for decision-making and further support initiatives within Baybay City Division.

Impact and Results

The impact and results of this innovation "Data Vista: Empowering Decision-Makers Through Enhanced Quarterly Data Gathering Tool" based on surveys and interviews of the different school ICT coordinators, teachers, and school heads that this tool greatly contributed to.

1. Improved school's data accuracy

The tool streamlines data collection, reducing errors due to its automated data validation associated with manual data entry. Its capability to generate consolidated and summary report lessens the time of the ICT coordinator to consolidate by using the navigating buttons it simply fastens the manipulation and encoding of raw data on this QDGT sheet. Allow the school administrators to act upon based on the available data generated regarding the performance of their school. The scheduled face to face hard copy validation of QDGT data is no longer needed due to its finalization facility that has already built in this tool that promotes almost hundred percent congruency of data from the school, district and to the division office.

2. Timelier data availability

Automation features expedite data gathering, ensuring that up-to-date information is readily accessible that provides decision-making accurate response regarding data analytics. Decision-makers have access to comprehensive data, enabling them to make informed choices. As the result they would enhance educational strategies, resource allocation, and policy development.

3. Enhanced transparency

The teachers are now aware of their individual performance that motivates them to strive more to improve their performance for the next quarter as well as the performance of schools that the school heads will do extra efforts to implement the projects and programs aligned with their targets. Stakeholders can access and review data, fostering transparency and accountability especially every scheduled School Monitoring Evaluation and Adjustment or SMEA.

4. Promoting efficient technical assistance

Through the ability of QDGT to produce reliable source of data, the DFTACT team of the division has now possesses a comprehensive and insightful overview of schools and districts in need of immediate technical support and further intervention to enhance their performance in terms of Access, Quality, and Governance. This innovative tool empowers DFTACT to not only identify these educational entities but also to closely monitor performance trends and establish data-driven connections at the school level, providing a reliable and realistic source of information.

The QDGT tracks a wide array of performance indicators, offering a holistic view of each school's status. These indicators encompass vital figures such as number of enrollments, Mean Percentage Score (MPS), percentage of passers, areas of least learned skills, grade distributions, computed

grade averages, numeracy and reading proficiency levels, and data regarding disadvantaged learners, among others. This comprehensive data serves as a detailed portrait of each school's performance, equipping decision-makers with the insights necessary to formulate strategic actions and recommendations based on this wide of information. In essence, the QDGT serves as a crucial tool that empowers top management to make informed decisions and implement targeted interventions, ultimately driving improvements in the Access, Quality, and Governance of Baybay City Division.

5. Burden-free for district and division consolidators

The QDGT has its facilities that can be manipulated by just clicking the command buttons that generate summary, graphs and comparative data for district and division consolidation. The feature of this tool fastens the time and hustle-free for district ICT coordinators and school head especially during consolidation of data.

COMPENDIUM *of* **ABSTRACTS**

Action Research on Teaching and Learning

LET'S FLIPPED THE CLASSROOM: INCREASING THE ACADEMIC PERFORMANCE OF STUDENTS IN SCIENCE 8

Aileen Grace P. Fuentes, Teacher I,
Hilongos National Vocational School
Schools Division of Leyte
aileengrace.fuentes@deped.gov.ph

Abstract

The flipped classroom is an innovative educational approach that reverses the traditional classroom model, promoting deeper understanding and application of concepts. In this study, the effectiveness of the flipped classroom on the least-learned competency in Science 8 was assessed, along with students' perceptions of its impact on learning outcomes. An explanatory sequential research design was employed, incorporating both pre-experimental quantitative analysis and qualitative research for triangulation. The study was conducted at Cabucgayan National School of Arts and Trades with 20 participants, revealing promising results. Before the intervention, students scored 50.9% on the pretest, reflecting an average performance level. However, after exposure to the flipped classroom approach, their post-test scores soared to 90.65%, indicating a shift to a high-performing level. The observed significant difference between pretest and post-test scores further confirmed the effectiveness of the flipped classroom ($p<0.05$). Qualitative feedback from the participants emphasized three key themes. First, the flipped classroom led to heightened comprehension of learning principles. Second, students appreciated engaging in cooperative teamwork with peers during in-class activities. Lastly, the approach stimulated critical thinking, enriching the learning experience. Conclusively, employing the flipped classroom for the least-learned competency in Science 8 proved effective, fostering a significant improvement in student performance. The study recommends implementing this model in other subject areas to enhance teaching effectiveness. In summary, the flipped classroom provides a promising alternative to traditional teaching methods, promoting active learning, deeper understanding, and student collaborative engagement. The positive outcomes observed in this study underscore its potential as a valuable addition to educational practices.

TEMATIKONG DULOG SA PAGTUTURO NG FILIPINO 10 TUNGO SA PAGPAPAUNLAD NG PARTISIPASYON NG MGA MAG-AARAL

Chindy Lee P. Lopez– Dela Cruz, Master Teacher I
Lucelita L. Salado
Guadalupe National High School
Schools Division of Maasin City
chindylee.lopez@deped.gov.ph
lucelita.salado001@deped.gov.ph

Abstrak

Naging mahirap para sa mga guro na magkaroon ng transisyon mula sa paggamit ng gadyet sa pagkatuto tungo sa pagbabawal at pagkuha ng atensyon ng mga mag-aaral sa loob ng silid- aralan. Naging kaagaw na ng guro ang mga gadget na ito sa kanilang pag-aaral. Dahil dito, napiling gamitin ng mga mananaliksik ang tematikong dulog sa pagtuturo kung saan pumili ng akmang temang gagamitin sa pagtuturo ng mitolohiya, anekdota at epiko sa Filipino 10. Ginamit ang frequency count, mean, standard deviation, percentage at MPS sa pag-analisa ng mga datos na nakalap sa kwantitatibong pananaliksik na ito. Bagamat ang gamit na sarbey ay hinalaw mula sa pag-aaral nina (Alcantara, et.al, 2022), kinuha ang pananaw ng mga mag-aaral sa kadahilanan ng kanilang tugon upang maging balido ang puntos na ibinigay sa Likert scale. Nakitaan na may pagbuti sa antas ng pagdalo, pakikilahok sa klase at pasulit ang mga mag-aaral pagkatapos ng paggamit ng dulog tematiko. Ngunit nagbigay ng dagdag gawain sa guro bilang nangangailangan ng masusing paghahanda ng mga kagamitang pagtuturo ang tematikong dulog.
Mga susing salita: tematiko, pagtuturo, kagamitan, pakikilahok, tema

ASSESSING THE IMPACT OF QR CODE SCANNING ON ATTENDANCE MONITORING AND PUNCTUALITY AMONG GRADE 12 LEARNERS IN SECTION ATHENA OF ORMOC CITY REGIONAL SPORTS ACADEMY

Ervin James Y. Pabular, Teacher II
Ormoc City Regional Sports Academy
Schools Division of Ormoc City
ervinjames.pabular029@deped.gov.ph

Abstract

This research assessed the impact of QR code scanning on attendance and punctuality among Grade 12 students in Section Athena at Ormoc City Regional Sports Academy. The study aimed to examine how the introduction of QR code scanning for attendance affected punctuality rates, student perceptions, and overall punctuality, while also comparing it to traditional attendance methods in terms of accuracy and efficiency.

Using an experimental and control group design, attendance data were collected from 40 students in each group. The experimental group adopted QR code scanning, while the control group continued with manual methods. Punctuality rates were calculated, with the experimental group achieving a mean punctuality rate of 38.32 (SD = 1.22), compared to 29.88 (SD = 3.1) in the control group.

A t-test analysis revealed a significant difference in punctuality rates between the two groups (t (48) = 16.80, p < 0.001), with the experimental group exhibiting significantly higher punctuality.

Student perceptions of QR code scanning were positive, considering it a convenient and user-friendly method. Improved punctuality was attributed to the QR code system. QR code scanning demonstrated superior accuracy (95%) compared to traditional methods (80%) and proved to be more time efficient.

In conclusion, this study found that QR code scanning significantly improved punctuality rates among Grade 12 students and was positively received by students. It offered enhanced accuracy and efficiency, suggesting its adoption in educational institutions to boost punctuality and streamline attendance recording. This research contributes to the literature on attendance monitoring systems, highlighting the potential benefits of QR code scanning technology in educational settings.

PROJECT ECHO (End-of-Class Hurdle on One Paragraph): EXIT SLIP TOWARDS WRITING SKILLS ENHANCEMENT OF PRACTICAL RESEARCH STUDENTS

Jericho D. Ecija, Master Teacher I,
Salcedo Vocational High School,
Schools Division of Eastern Samar
jerichoduranecija@deped.gov.ph

Abstract

Research writing is a great way for high school students to explore topics that they are interested in, discover information, and expand their research skills. However, there are challenges met by the teachers in teaching practical research that may vary from the essentials of writing. The study utilized mix method action research wherein it was subjected to one-group pretest-posttest design (quantitative) and thematic analysis on the lived experiences of participants as they go through the intervention (qualitative). The PROJECT ECHO initiative was helpful to practical research students as it enhances their writing skills. It was clearly manifested with the results of the paired t – test on before and after the intervention, with established alpha error and degrees of freedom to produce critical value, the computed R value of 0.198 was less than the critical value of .273. This was interpreted to accept the null hypothesis. Momentarily, after the intervention, computed T (3.785) was greater than that of the critical value (2.009), which afforded to reject the null hypothesis. This signifies that there was a significant difference between the pre and post – assessments of the writing skills of the practical research students before and after the intervention. As to the live experiences of the students on this initiative, the participants boarded on the relevance of exit slip as a way meaningful for writing skills enhancement.

DIVIDE AND STRIVE: IMPROVING LEARNERS' PERFORMANCE IN THE LEAST LEARNED SKILL IN MATHEMATICS 5

Maria Lyka Rose A. Romagos, T3
Retchel P. Doncillo, T3
Julius C. Dadizon, TIC
Capayas Elementary School
Schools Division of Biliran
maria.romagos@deped.gov.ph
retchel.doncillo@deped.gov.ph
julius.dadizon@deped.gov.ph

Abstract

This study sought to ascertain the Strategic Intervention materials' efficacy in Mathematics 5 on dividing a 4-digit number by a 2-digit number. The class performance in the pre-test and post-test had to be established first, and then the significant difference had to be determined. A pre-experimental research design was applied to test the effectiveness of the intervention called **Divide and Strive**. The intervention was conducted in **three phases**: **preliminary**, **preparation**, and **evaluation**. A pre-test and post-test were given to the entire fifth-grade class to collect data and determine any progress in mastery level. The difference between pre-test and post-test scores had a p-value of 0.05 on its level of significance when the mean, mean percentage score, and one-sample T-test were used as statistical tools. In conclusion, Divide and Strive (SIM) is an effective tool for improving grade 5 students' performance in the identified least learned skill in math, as reflected on the post-test result. This suggests that SIM can be used as a teaching tool and instructional resource during the learning process.

Keywords: Least learned skill, Grade 5, Division, Strategic Intervention Material

IMPROVING GRADE 10 STUDENTS' PERFORMANCE IN BASIC STATISTICS THROUGH DIGITIZED INTERACTIVE LEARNING MATERIALS (DILM)

Renilda S. Flores, T-III
Elda Mae R. Pigte, T-III
Raian Mark P. Valenzona, HT-I
Baybay City National Night High School
Schools Division of Baybay City
renilda.soria@deped.gov.ph
eldamae.pigte@deped.gov.ph
raianmark.valenzona@deped.gov.ph

Abstract

Printed learning materials had been used for many years in the learning process. However, reproducing printed learning materials entails huge amount of money and effort. Bond paper and ink are getting expensive as well as printers and scanners. Producing printed learning materials are also very tedious starting from printing to binding. This research investigates the effectiveness of Digitized Interactive Learning Materials (DILM) in enhancing the performance of Grade 10 students in basic statistics compared to traditional printed learning materials. The research employed a quasi-experimental design, involving two equivalent groups: an experimental group using DILM and a control group using printed materials. Pre-test and post-test assessments were administered, with pre-test scores considered as covariates. The study used ANCOVA to test if there is a significant difference between the post-test scores of the experimental and the control group while controlling the effect of the pre-test scores. The results indicate a significant difference in post-test scores (p-value< 0.01, F = 20.402), favoring the experimental group using DILM. This finding suggests that DILM offers a more effective learning approach, stimulating engagement and improving academic achievement in Grade 10 statistics. The study recommends training educators in DILM design, providing accessible DILM for students, and reevaluating resource allocation in educational institutions. The research contributes to the understanding of digitized learning in Statistics education, emphasizing the importance of aligning DILM with students' learning needs for optimal impact. Future research could explore student perceptions of DILM and extend the study to other subject areas and larger sample sizes.

Keywords: Digitized Interactive Learning Materials (DILM), Analysis of Covariance (ANCOVA)

Basic Research on Teaching and Learning

LEVEL OF CRITICAL THINKING SKILLS AMONG SENIOR HIGH SCHOOL STUDENTS OF ALFREDO PARILLA NATIONAL HIGH SCHOOL: A CORRELATIONAL STUDY SY 2022-2023

Agnes M. Pilande, Teacher-II,
Alfredo Parilla National High School
Schools Division of Leyte
agnes.pilande@deped.gov.ph

Abstract

This quantitative research study investigates the relationship between critical thinking skill and academic performance among senior high school students enrolled in the Humanities and Social Sciences (HUMSS) strand at Alfredo Parilla National High School during the School Year 2022-2023. A sample of 136 students was selected from a total of 155 participants officially enrolled in the said academic year. The study employed the Modified California Critical Thinking Skill Test by Facione (1994) comprising of three sections in different levels with 12 questions to measure the students' critical thinking skills. The findings reveal that the students possess "satisfactory critical thinking skills." Additionally, the students' average academic performance falls within the range of 86% to 90% for the last three quarters of the academic year. The Spearman's rho test for correlation indicates a significant relationship between the students' level of critical thinking skill and their academic performance. This suggests that students' critical thinking abilities can influence their academic achievements. Based on the study results, further investigation with a larger sample size is recommended to validate and generalize the findings. Additionally, identifying factors that hinder the development of students' critical thinking skills is suggested. Teachers are encouraged to assess their teaching strategies and incorporate learning activities that foster critical thinking skills. Collaboration between school administration and stakeholders is also encouraged to develop interventions aimed at enhancing students' critical thinking abilities, ultimately leading to improved academic performance.

Key words: Critical Thinking Skills, Academic Performance

SENIOR HIGH SCHOOL LEARNERS' UNDERSTANDING AND PREPAREDNESS IN CONDUCTING A RESEARCH PROJECT (SY 2022-2023)

Antigo, Aida M., Teacher II
Alfredo Parilla National High School
Schools Division of Leyte
aida.antigo001@deped.gov.ph

Abstract

This study employed a correlational research design to determine the relationship between learners' understanding and preparedness in conducting a research project. Among the 155 learners, a total of 132 participated in the study. To gauge their level of understanding, the Attitudes Toward Research scale by Papanastasiou (2005) was adopted. Similarly, the level of preparedness was assessed using the Student's Research Preparedness scale by Elumba et al. (2019). The study's findings indicated that the learners possess a modest to moderate level of understanding, with a standard deviation of 0.55 signifying relatively minor variations in their comprehension levels. Additionally, the learners demonstrated a similar level of preparedness, with a standard deviation of 0.61, highlighting consistent levels of readiness in conducting a research project. Moreover, Spearman's rho test for correlation yielded noteworthy results, affirming a significant relationship between learners' understanding and their preparedness to conduct research. This implies that a learner's level of understanding can substantially influence their preparedness for research endeavors. This study underscores the critical role of understanding in shaping learners' attitudes and readiness for engaging in research projects. As a recommendation, a thorough curriculum review is needed to assess the competencies in inquiry-based subjects across secondary grade levels. Promoting the effective use of inquiry-based teaching strategies is vital for improving learners' research skills and preparing them adequately for such endeavors. Conducting orientation for learners and parents before embarking on research subjects is also essential for providing valuable insights into the significance and professional benefits of engaging in research activities.

Keywords: *Attitude, Inquiry-based teaching strategies, Motivation, Preparedness, Understanding*

INFLUENCE OF STUDY HABITS TO STUDENT LEARNING

Claire Jean S. Kintanar,
clairejean.kintanar@deped.gov.ph
Maasin City, Southern Leyte

Abstract
This research aimed to determine the study habits of the Junior High School learners of Canyuom Integrated School and their extent of learning during the pandemic who are currently enrolled for the SY: 2021-2022. This study focused on socio-demographic profile of the respondents according to their age, sex and monthly income. Moreover, this research aimed to determine the level of study habits of the students during the pandemic, their extent of learning during the pandemic and the relationship between the socio-demographic profile, study habits and the extent of learning during the pandemic. Complete enumeration method was used to gather the data from the 76 Junior High School learners. Descriptive correlational design using simple percentage, weighted mean and chi-square test of relationship were utilized.
Results revealed that majority of the learners are males while majority of the family has monthly income of below P5,000.00 or at the poverty level. The result revealed that the learners have a good study habit with a moderate extent of learning during the pandemic. Furthermore, the data revealed that the level of study habit is affected by sex while extent of learning is affected by sex and age. Lastly the data gathered showed that the level of study habits has a significant relationship to the extent of learning and is therefore vital to the respondent's extent of learning.

Keywords: study habits, extent of learning, level of study habits

CORNERSTONE: LINKING INNOVATION, RESEARCH, AND WRITING MASTERY IN ONE DYNAMIC WEBSITE

Raian Mark P. Valenzona, SEPS-Designate
Schools Division of Baybay City
raianmark.valenzona@deped.gov.ph

Abstract
"Cornerstone" serves as a centralized repository for research papers, innovation reports, and educational resources, consolidating valuable knowledge that was previously scattered and difficult to access. The website offers a comprehensive guide on conducting research and innovation projects, including a step-by-step process flow and insights into the liquidation of research funds. It also equips aspiring researchers with essential skills through a guide on writing research proposals. Additionally, it provides access to a downloadable research journal specific to the division and outlines priority research areas. The adoption of "Cornerstone" as the official research website in June 2023 marked a significant milestone. New researchers gain confidence and skills through the comprehensive guide, and the website serves as a powerful tool for sharing completed research and innovation. With 1,780 views since its launch, "Cornerstone" enjoys popularity not only within the division but also globally, with viewers from countries such as the United States, France, and Singapore. These outcomes demonstrate its positive impact on education and knowledge-sharing. Future plans for the website include expanding resources on statistical analyses, qualitative research designs, and a comprehensive list of published research. "Cornerstone" represents a dynamic and invaluable platform fostering growth, collaboration, and innovation in research and education in the Schools Division of Baybay City and beyond."

LEXICAL RICHNESS IN STUDENTS' ESSAYS: BASIS FOR SUPPLEMENTARY INTERVENTION TO IMPROVE WRITING QUALITY

Roxanne Joy F. Capatoy, Teacher III, Sta. Cruz National High School, San Miguel, Leyte
roxanne.capatoy@deped.gov.ph

Abstract

Several learning metrics proficiency assessments in the Philippines revealed a significantly low result of Filipino learners in English specifically in writing (Felipe, 2020; Santos et al., 2022). The current study attempted to investigate one essential aspect which is contributory to writing quality – lexical richness in the essays of grade 12 Senior High School (SHS) Students across different academic strands. Using a descriptive-correlational design, the study examined the students' level of writing quality and lexical richness in three indices – lexical diversity, lexical sophistication and lexical density and further assessed if significant differences and relationships are apparent between academic strands and lexical richness and writing quality.

The results disclosed that SHS students showed positive results in their lexical diversity and lexical density indices, except for lexical sophistication. This implies that the respondents are more inclined to use English Language in their written productions but have limited vocabulary on the usage of academic words. In addition, the writing quality of respondents is average which is significantly related to their level of lexical richness. However, when the measure of lexical richness was correlated between academic strands, significant asymmetry was revealed. The result showed that there was an existing gap and disparity of lexical richness in the GA strand as compared to the other strands (i.e., ABM, HUMSS, and STEM). Therefore, the findings of the study could serve as basis for supplementary interventions to enhance the writing quality of the students which might bridge the gap of lexical richness between GA and the other strands.
Keywords: lexical richness, lexical diversity, lexical sophistication, lexical density, academic strands, writing quality.

ANXIETY AND SPEECH PERFORMANCE OF SENIOR HIGH SCHOOL STUDENTS

Jannene Lieka S. Ceniza, Teacher II, Almeria National High School, Biliran Division
jannenelieka.ceniza@deped.gov.ph

Abstract

In speaking English, anxiety is common in language classrooms and is one main factor that influences the quality of students in class (Dyiar, 2014; Tsiplakides & Keramida, 2009). The current study aimed to investigate the speech anxiety and speech performance of Philippine Senior High School students in Oral Communication class across different strands. Specifically, it sought to determine the level of speech anxiety in relation to their personal profile and impromptu and prepared speech performances. It also determined the anxiety manifestations the students experienced.

Utilizing the mixed-method embedded design, the findings revealed that the level of students' speech anxiety is indeed significant in relation to student profile and speech performance. The sex and learning strands are specifically significant. Male rated significantly higher in anxiety over female and the Technical Vocational and Livelihood (Tourism) strand rated significantly higher in anxiety level over Science, Technology, Engineering and Mathematics (STEM) and Accountancy, Business, and Management (ABM) strands. The impromptu speech also gained a higher anxiety rate than prepared speech. Further, manifestations of anxiety as assessed by both students and cooperating teachers, are also apparent. Physical and overt indications involve shaky hands and feet, quivering lips, clammy hands, excessive perspiration, blushing, and poor eye contact. Significant covert responses include elevated heart rate and queasy stomach.

The findings of the study provide information of one factor that affects speech performance. Recommendations and suggestions on enhancing the students' communication skills through capability building activities and strategies toward decreasing the students' speech anxiety levels are also indicated.

Keywords: speech anxiety, speech anxiety level, speech anxiety manifestation, speech performance

4pATTITUDES AND STUDY HABITS IN MATHEMATICS OF THE PANTAWID PAMILYANG PILIPINO PROGRAM GRANTEES

John Randel L. Emboltorio, Teacher III,
Bool National High School
School Division Office of Biliran
johnrandel.emboltorio@deped.gov.ph

Abstract

    Mathematics is regarded as the main subject for nations' growth hence students' performance is consistently given attention. The Philippines created initiatives like the 4Ps to improve students' academic performance, especially poor but worthy ones. This study assessed 4Ps high school students' math attitudes, study habits, and academic performance. An explanatory-sequential design was used, with 50 respondents selected for the quantitative component and 12 for the qualitative. Socio-demographic characteristics and the Attitudes Toward Mathematics Inventory and Study Skills Assessment Questionnaire were used. Academic performance was determined by numeracy test results. The quantitative and qualitative data were analyzed using descriptive statistics, Product Moment Correlation, and theme analysis. Positive attitudes about mathematics relevance, fun, motivation, and study habits were found, but both need improvement. Attitudes and study habits affect academic performance. Participants claimed the 4Ps improved their study habits, academic performance, and attitudes by lowering financial stress and focusing on homework. In conclusion, 4Ps and students' attitudes and study habits affect math achievement and academic performance. Thus, the researcher recommended the adoption of the learning intervention plan in redesigning teaching approaches contextualized for 4Ps beneficiaries by Mathematics teachers.

ORTHOGRAPHIC STRUGGLES: ROOT CAUSE ANALYSIS

Madelyn M. Pallo, Teacher III
Cabucgayan National High School
School Division Office of Biliran
madelyn.monton-pallo@deped.gov.ph

Abstract

    The pressing issue of poor spelling skills among secondary students became the basis for this study which aims to determine the root cause of the problem. Teachers pointed to just one reason - the implementation of MTB-MLE of the K-12 curriculum. To have better understanding whether the claims is true, and to know other possible reasons of the problem, as well gather data to serve as basis for improvement of the current school intervention, this study was conceptualized.

    Using qualitative method specifically a descriptive phenomenological model, the researcher conducted focus group discussions to selected Cabucgayan National High School students from Grades 7 to 12, and interview seven (7) conveniently selected teachers. Integration of literatures completes the triangulation method. There were 7 themes formulated after a thorough thematic analysis. The themes that described the very reason of spelling difficulties among secondary students are lack of word recognition and phonological awareness, long-term effect of Mother Tongue - Based Multilingual Education, poor reading culture and reading difficulties, excessive gadget use, irregularity of spelling to sound affecting auditory processing, low retention, and absence of spelling drills. With the result, schools and parents should work hand-in-hand to make a need-appropriate intervention.

LIVED EXPERIENCES OF JUNIOR HIGH SCHOOL SPECIALIZED SCIENCE TEACHERS TEACHING SCIENCE USING THE SPIRAL PROGRESSION APPROACH

Teomar James A. Rosas, Teacher III
Muertegui National High School, San Isidro, Leyte
teomarjames.rosas@deped.gov.ph

Abstract

This study aimed to describe the lived experiences of the junior high school specialized science teachers teaching science in a spiral progression approach under the Department of Education (DepEd) K to 12 curriculum. A descriptive phenomenological research approach was used in the study with five specialized science teachers with different science specializations who were purposively selected using snowball sampling. A face-to-face interview with in-depth questioning in a local dialect (Cebuano) was employed for data gathering that allowed further probing. The responses were transcribed and analyzed. Findings revealed that specialized science teachers encountered problems such as the unavailability of learning resources and the struggle in preparation for their non-specialized science topics. However, they learned to become flexible and resourceful in improving their accustomed science teaching practices. They also learned to communicate and collaborate with fellow science teachers during mentoring and coaching as their means of coping strategies. Furthermore, science teachers still preferred the old curriculum in teaching science concepts. The results of the study will help DepEd policymakers and stakeholders in assessing the capability of secondary science teachers to improve their science classroom instruction through timely and relevant training programs.

Keywords: Spiral Progression, Curriculum, Teaching, Science Teachers, Science Specialization

EXTENT OF SUBJECT-INTEREST IN ENGLISH BY THE FRUSTRATION-CLASSIFIED STUDENTS IN CABUCGAYAN NATIONAL HIGH SCHOOL: BASIS FOR LITERACY LEVELLING INTERVENTION

Yandemar A. Ticoy
Victorino M. Refuerzo,
Vincent Lee C. Garcia
Cabucgayan National High School
yandemar.ticoy@deped.gov.ph

Abstract

This research delves into the subject interest of Grade-7 Frustration-Classified Students in Cabucgayan National High School concerning the English subject. It explores the relationship between the sex and the age of the respondents to the individual learning interests and the general interest of students in English. The study employs a Quantitative Research design with a Descriptive Correlational Approach to examine this relationship.

The findings reveal that students exhibit a strong general interest in the English subject, with a mean score of 3.71. However, they tend to engage less in reading English stories, novels, or similar materials outside of school. The study finds no significant relationship between the student's profile, including sex and age, and their Cognitive Engagement or On-Task Variables.

Crucially, the research demonstrates a significant correlation between individual learning interests and general interest. Students who display curiosity, enjoyment, self-efficacy, attention, and reduced boredom in their learning exhibit a higher interest in the English subject.

These results suggest that addressing individual learning interests can positively impact the overall interest of students in the English subject. The study provides insights into potential literacy-leveling interventions, including initiatives like "PROJECT READS," which leverages students' strengths and interests to enhance their English literacy skills.

While this research focuses on Grade-7 Frustration-Classified Students at one specific school, it offers valuable insights into the subject-interest dynamics that may apply to other similar student populations. By acknowledging and nurturing individual learning interests, educators and policymakers can design effective strategies to support students in their literacy journey and elevate their English language proficiency.

Action Research on Human Resource Development, Governance and Child Protection

TEACHERS' MENTAL HEALTH AND PERFORMANCE IN THE MIDST OF THE COVID-19 PANDEMIC: INPUTS FOR PSYCHOLOGICAL INTERVENTION MEASURES

Cyrus Glen B. Avestruz, Teacher II
Wenceslao R. Sugbo, Jr., Head Teacher I
Mayorga National High School, Mayorga, Leyte,
Schools Division of Leyte
cyrusglen.avestruz@deped.gov.ph,
wenceslao.sugbo@deped.gov.ph

Abstract

The COVID-19 pandemic, which caused a sudden shift from physical to virtual and hybrid learning, is overwhelming the operations and outcomes of educational systems around the world – most of which are already stressed in many ways. This shift in the learning system across the globe at such a large scale and in a short amount of time has given negative impressions to both the students and teachers. Not only this but also the continued spread of the virus across countries, lockdowns, travel restrictions, and closure of educational institutions have a significant effect on the education, social life, and mental health of teachers which may then affect their performance. This quantitative study then aims to determine the relationship between mental health and the performance of teachers during the pandemic. It also explores the different strategies and practices used by teachers in dealing with pandemic-induced stress and anxiety. The study relied on surveys using Goldberg's General Health Questionnaire – GHQ-28 and analysis through multiple regression, Pearson r correlation coefficient, and descriptive statistics for its methodology. Results revealed that mental health scores in terms of certain variables do have a significant effect on how well teachers perform their duties. However, these results were masked when data is looked at in general. Looking at the data individually, it was found that some teachers are suffering from depression. They are few but they are as important as the rest of the respondents in this study. In fact, their contribution manifested in the multiple regression analyses between the sub-categories of mental health and performance, specifically on severe depression. The said statistical treatment revealed that the scores in the severe depression sub-category can be used to predict performance as these two variables have a significant relationship. It was also revealed that these teachers found their own ways of combatting pandemic-induced stress – watching TV shows, reading, listening to music, cooking, and exercising.

Keywords: *mental health, performance, psychological interventions*

SELF-EFFICACY AND JOB SATISFACTION AMONG TEACHERS

Dennis J. Bernades, Master Teacher I
Villa Jacinta National Vocational High School
Macrohon, Southern Leyte
dennis.bernades001@deped.gov.ph

Abstract

This study aimed look into the level of self-efficacy and job satisfaction among teachers in Villa Jacinta National Vocational High School and the relationship of these two levels for the school year 2020-2021. Using a descriptive survey design, this study employed the use of adopted questionnaires which looked into the level of self-efficacy and job satisfaction among teachers. It also explored the relationship between these two levels. Findings disclosed that the level of self-efficacy of teachers is very high in creating a positive school climate. With regards to other aspect, the data show that teachers have a high self-efficacy in these indicators: decision making, school resources, instruction, discipline, and parental involvement. On the other hand, the level of self-efficacy of the teachers is moderate in enlisting community involvement. For teachers' level of job satisfaction, findings revealed that teachers are satisfied in their nature of work and are somewhat satisfied in these indicators: promotion, supervision, fringe benefits, workplace conditions, co-workers, and parental involvement. However, in contingent rewards the data posted that teachers are somewhat

dissatisfied along with communication. In terms of relationships, it was found that there is no significant relationship between teachers' self-efficacy and their job satisfaction. Results can be used in INSETs or in similar fora for the empowerment of teachers' self-efficacy and job satisfaction levels.

Keywords: *Perceived Self-efficacy, Fringe Benefits, Contingent Rewards*

LOCAL GOVERNMENT UNITS SUPPORT PROGRAMS TO SPORTS COMPETITION IN SAMAR

Eduardo C. Montejo Jr., EGT-III
Libas Elementary School
Catbalogan City, Samar
eduardo.montejo@deped.gov.ph

Abstract

Sports training and providing sports materials among elementary student-athletes are imperative in winning any sports competition. Explicitly, this study delved into investigating the Local Government Units support programs for sports competition in Samar Division and Catbalogan City Division, Province of Samar. Imperative data were taken from the eighty-four (84) respondents of the two (2) divisions through a mixed method of research. An in-depth interview was employed utilizing Husserlian descriptive phenomenology to obtain the results for the qualitative research. A survey was conducted to triangulate the responses. Results revealed that the year 2021 garnered the highest amount of financial support amounting to ₱ 2,825,807.15. The topmost LGU support programs were: drawing up an incentive program for athletes residing in the LGU who have excelled in local and international competitions; developing priority sports; procuring sports facilities, supplies, and equipment, and allocating prizes for local sports competitions and events, and ensuring that all public spaces where sports and physical activities can take place are kept clean, safe, conducive, and available for public use. LGU of Samar supported DepEd sports competition up to a very high extent with a grand mean of 4.35. This proves that winning schools were supported by LGUs. However, they still find ways and means to train and provide for their student-athletes. Hence, close coordination between schools and LGUs must be strengthened to sustain the support for the student-athletes.

Keywords: *Local Government Units, Sports Programs, Competition, Winning Schools in Sports*

THE IMPACT OF PROJECT NEAP-R CPAS ON THE ENGAGEMENT OF TEACHERS AND SCHOOL LEADERS TO THE NEAP PROGRAMS, ACTIVITIES, AND PROJECTS

Michael C. Parado, EPS II- HRDD
Alejandra B. Lagumbay, Chief HRDD
michael.parado@deped.gov.ph
alejandra.lagumbay@deped.gov.ph

Abstract

Organizational development and innovation require effective information exchange. The National Educators Academy of the Philippines (NEAP) in Region 8 encountered difficulties in timely information transmission, which hampered teachers' and school leaders' participation in NEAP programs, events, and projects. Project NEAP-R CPAS (NEAP-RO8 Communication and Public Affairs System) was launched in response to these difficulties. The project's goal was to build a NEAP Facebook page and a website to facilitate communication and knowledge sharing among teachers and school leaders.

The study utilized a qualitative, transcendental phenomenological research design. Purposeful sampling was employed to select participants who were teachers or school leaders in DepEd Eastern Visayas and followers of the NEAP Facebook page. Data collection methods included focus group discussions and interviews, recorded and transcribed. Thematic data analysis was applied using manual coding and NVivo 12.

The main themes that emerged from the data analysis are: (1) accessibility to updated and reliable information; (2) open communication leads to equal opportunity; (3) increased engagement with NEAP programs; and (4) challenges and future directions. The Facebook page positively impacted teachers and school leaders' engagement with NEAP programs, activities, and projects. It served as a valuable platform for communication and information sharing. The study suggests that social media platforms can play a vital role in supporting educational initiatives and facilitating engagement among educators. Future research could explore quantitative aspects of engagement and behavioral changes resulting from exposure to such platforms.

Keywords: *NEAP, Facebook, information dissemination, engagement, knowledge sharing, professional development, transcendental phenomenological research.*

Innovations on Curriculum and Instruction

PROJECT INTERTWINING: AN ECLECTIC INNOVATION IN BEGINNING READING

Aura D. Tomol, Head Teacher II
Lapay Elementary School, Tanauan II District
Schools Division of Leyte
aura.tomol001@deped.gov.ph

Abstract

Project Intertwining was first implemented at the school level during the limited face-to-face classes to the Grade 1 and 2 pupils in Atipolo Elementary School last April 25 to June 10, 2022 and 100% of the Grade 1 and 2 pupils became Grade Ready using the CRLA tool.

It was then approved by the Research and Planning Unit of the Leyte Division and was adopted and implemented at the district level of Tanauan II District with ten schools for Kindergarten pupils from February 10 to June 9, 2023. Based on the Project Intertwining Assessment Tool, 68.74 percent became Grade Ready and only 16.85 percent were Full Refreshers.

The consistent intertwined use of Waray alphabet chart, phonics song, mouth shapes/symbols, prompting hierarchies, and videos of Project Intertwining helped the learners elicit the correct beginning sound of the letters and gradually learned how to decode words.

Keywords: *Classical conditioning, prompting hierarchy, visual cues*

PROJECT UNO (UNLOCKING NUMERACY OBSTACLES)

Bryan M. Bulactin, Master Teacher II
Himbangan National High School
Schools Division of Southern Leyte
bryan.bulactin@deped.gov.ph

Abstract

Project UNO (Unlocking Numeracy Obstacles) came to life as the school's initiative to address numeracy problems resulted from the two-year modular distance learning that tallied 292551 or 52.99% non-numerates during the pre-test administration of the Regional Unified Numeracy Test. The analysis report of the RUNT results revealed the urgent need of mechanisms to improve learners' numeracy by mastering the basics that's advocated by project UNO. Every Friday, arithmetic-teacher volunteers composed of young professionals, SSG, and math club officers facilitated project UNO to target beneficiaries by making use of the pilot – tested and quality - assured instructional materials per grade level namely Learning Activity Sheets (LAS) for grade – 7, Flash Cards for grade – 8, Number Puzzles for grade – 9, and Window Cards for grade – 10 through fun-filled activities. These instructional materials came in three levels – Easy, Average, and Difficult, and all learners went through all three levels at different pace depending on their individual performance per level. For monitoring and evaluation, project team leader and subject teachers observed classes and signed topic logs of volunteers. On weekends, the parents / guardians of the learners facilitated drills on four operations and sent videos online to the subject teachers as proofs of conduct. Gradually, the learners showed attainment of the project's success indicators – decreasing number of non-numerates and improving academic performance. Project UNO showed positive impacts not only to learners but also to the implementers for two action researches about classroom innovations under it where chosen as BERF grantees.

Keywords: *school-initiated intervention, analysis report, Regional Unified Numeracy Test, instructional materials, numeracy, non-numerates, innovation*

DISASTER READY TV

Don Redentor C. Evasco, SHS Teacher III
San Isidro Agro-Industrial School
San Isidro, Northern Samar
evasco@deped.gov.ph

Abstract

The innovation, Disaster Ready TV, emerged in response to the educational challenges posed by the COVID-19 pandemic. With traditional learning disrupted, the absence of emergency response education among grade 12 students became evident during the first quarter of the academic year. Recognizing the need for an offline learning solution, Disaster Ready TV was conceptualized. This groundbreaking innovation capitalizes on television as a medium to impart emergency response skills to learners. Through immersive, interactive educational content integrated into television programming, Disaster Ready TV transforms passive viewing into an active learning experience. It allows learners to engage with real-life simulations, scenarios, and expert-guided tutorials, enabling them to practice and enhance their response skills in a safe environment. By addressing a crucial gap in traditional educational methods, Disaster Ready TV facilitates widespread accessibility to vital emergency response training, especially in remote or underserved areas. Leveraging television's reach, it amplifies awareness and understanding of disaster response, empowering individuals to play an active role in safeguarding their communities.

The implementation of Disaster Ready TV demonstrated a significant positive impact on students' performance in executing emergency response protocols. The results revealed a substantial increase in posttest scores compared to pretest scores, with a statistically significant difference. This affirms the effectiveness of educational videos in enhancing student learning. Students found the video lessons comprehensible and informative, underscoring the importance of Disaster Ready TV in promoting community preparedness and educating individuals about disaster risk reduction measures. This innovation not only addresses educational challenges but also facilitates a collaborative approach involving community stakeholders, fostering disaster resilience and saving lives within the community of Bantayan. The success of Disaster Ready TV extends beyond mitigating learning gaps; it exemplifies the potential to enhance accessibility to quality education and strengthen partnerships for the greater good of disaster risk reduction and management.

Keywords: *TV-based instruction, disaster risk reduction and management, emergency response protocols*

PROJECT KURIS KURIS
KEEPING THE UBIQUITOUS AND RAVISHING INTEREST IN VISUAL ARTS AMONG STUDENTS BY GIVING THEM KEEN AND UNIQUE OPPORTUNITIES REMASTERED TO ACHIEVE THEIR FULL POTENTIAL AND INVIGORATE SELF-MADE STYLES

Danreve D. Revez, Master Teacher II
Genaro B. Lureñana National High School
Division of Ormoc City
danreve.revez@deped.gov.ph

Abstract

In response to the discerned disparities in arts education access in underserved areas during the transition back to face-to-face learning post-pandemic, Project KURIS KURIS was inaugurated at GBLNHS. The initiative focused on Grade 7 and 8 students in a school with limited artistic resources and ingeniously merged traditional teaching with digital platforms like video tutorials, democratizing arts education across socio-economic spectra. Led by Mr. Revez in 2022-2023, the project facilitated a range of activities, enabling exploration and mastery of diverse art forms.

The outcomes were multifold: a noteworthy increase in honor students, the development and compilation of invaluable visual arts worksheets for future use, and a marked improvement in students' artistic skills, which found practical applications within the school. These accomplishments were celebrated through awards and visible contributions to school art. Extending its influence, KURIS KURIS reshaped local perspectives on arts education and heightened community engagement.

A 2018 study by Jovita F. Punzalan at Bulacan State University further validated the project's methodology, showcasing the positive impact of visual arts integration on academic performance, engagement, and student confidence. These collective successes underscore the essential role of arts in holistic development and represent a significant advancement towards a more inclusive and enriched educational environment.

Keywords: *Arts education, Project KURIS KURIS, Artistic engagement, Visual Arts, Underserved areas*

" PAMBATANG LASA PARA SA MASA" 21ST CENTURY PROJECT- BASED LEARNING RESOURCE PACKAGE IN EDUKASYONG PANTAHANAN AT PANGKABUHAYAN 4 (HOME ECONOMICS)

Elvira G. Dapiton, Master Teacher II
Valencia Central School, Brgy, Valencia ,
Division of Ormoc City
elvira.dapiton@deped.gov.ph

Abstract

The 21st Century Project-based Learning Resource Package entitled "Pambatang Lasa Para sa Masa" was uniquely developed as an innovation in teaching Edukasyong Pantahanan at Pangkabuhayan 4. Competencies were interdisciplinary and across the curriculum. Activities were adapted from the 21st Century Learning Design (21CLD) of Microsoft Partners of Learning such as Collaboration, Self-Regulation, Skilled-Communication, Knowledge Construction, Problem solving and Innovation and ICT for Learning. Assessment of performance is thru rubrics. Learners were expected to produce new food products which are nutritious, affordable and palatable to the taste of school learners. These 21PBL, Pambatang Lasa Para sa Masa, were field tested in our school, Valencia Central School, first quarter of school year 2022-2023.Results showed that there was an increase of MPS in the post test and new recipes of food products were developed. Moreover, entrepreneurial skills were being honed too.

These 21PBL " Pambatang Lasa Para sa Masa", a learning resource materials ,wherein the activities really is on the right track in producing 21st century learners. It can cater learners with special needs and it can be applied in different modalities. Being appreciated as well by the local government, these young chefs and entrepreneurs, shall be making a difference of being a 21st century kind of learners.

Keywords: *" Pambatang Lasa Para sa Masa" A 21st Century Project-Based Learning Resource package in EPP 4, with interdisciplinary competencies and across the curriculum. Activities were adapted from 21st Century Learning Design of Microsoft Partners of learnings.*

LARAWANG BUHAY

Lourdes L. Matan, Education Program Supervisor
Schools Division of Calbayog City
lourdes.matan@deped.gov.ph

Abstract

The innovation came at a time when digital platforms were fast becoming an indispensable in education. With the advent of the pandemic, parents and students had to adapt to the absence of physical classrooms. Video lessons emerged as a lifeline, offering a way to continue learning. The advantages of this shift were manifold – flexible scheduling, engaging lessons, personalized learning outcomes, and the ability to revisit content at will.

Inspired by that, this innovation known as "LARAWANG BUHAY" was designed to address the scarcity of appropriate teaching and learning strategies, as well as strategic materials, specifically tailored for Filipino language lessons in key stage 1. This innovation came into existence to show case the big books made by the teachers of the school's division of Calbayog City by making it into e-books coupled with differentiated activities that would suit for learners from K to Grade 3 with literacy levels from frustration to independent. Another feature of this innovation is the interactive materials and demonstration lessons to be used in any setting should the teacher wish to use it.

From the printed big books to e-books thus LARAWANG BUHAY takes what it means. Contextual in nature with eye catcher feature, these what makes the innovation relevance. This Project is still under the umbrella of ANGAT-Guro or Alay Na Gabay At Tulong-teknikal (ANGAT) sa mga Guro.

As the educational landscape continues to evolve, these innovative approaches will play a dynamic role in shaping the future of learning and in changing learning into revolutionary, seamless, and dynamic.

Keywords: *Teaching and learning strategies, Differentiated activities, Video lessons, Personalized learning outcomes, Big books, E-books, Literacy levels, Interactive materials, Filipino language lessons, Key Stage 1*

PROJECT IHAPON (INTERACTIVE, HANDS-ON, AND ASSISTIVE PROGRAM FOR OPTIMAL NUMERACY)

Monica Pinca-Delos Reyes, Teacher III
Michael J. Froilan, Head Teacher III
Catigbian National High School
Schools Division of Northern Samar
monica.pinca@deped.gov.ph
michael.froilan@deped.gov.ph

Abstract

Numeracy skills are pivotal in shaping the academic and professional success of students in today's educational landscape. Nonetheless, a substantial percentage of students grapple with numeracy-related challenges, as some of them are classified as non-numerates, lacking proficiency in fundamental operations like addition, subtraction, multiplication, and division. To confront these pressing issues and cultivate an engaging and efficient learning environment, the innovators have collaboratively developed Project IHAPON (Interactive, Hands-on, and Assistive Program for Optimal Numeracy). In Project IHAPON, students in Catigbian National High School were furnished with manipulative tools that enable them to tackle mathematical problems manually with the aid of these resources. This approach integrated various modes of learning, progressing from group-based activities with manipulatives to individual problem-solving without them. The findings reveal substantial progress in students' numeracy skills, with 80% demonstrating improvements in addition, subtraction, multiplication, and division. Moreover, numeracy test results demonstrated an overall elevation in students' numeracy proficiency levels. Furthermore, the results indicated that students genuinely enjoyed using the manipulative tools, and the collaborative aspects of group activities were particularly effective for slower learners. This innovation underscored the efficacy of Project IHAPON in enhancing numeracy skills and fostering a positive learning experience. It offers teachers valuable insights into the potential of interactive, hands-on, and assistive strategies for addressing numeracy challenges among students in contemporary educational settings.

Keywords: *numeracy, manipulative, Project IHAPON*

EdTech MATHUSAY-MOBILE APPLICATION TOOL HARNESSING UBIQUITOUS SKILLS FOR ADVANCING YOUTH IN NUMERACY

Ocleo T. Orpio, Master Teacher 1;
Edna J. Inocentes, PSDS
Ronald F. Cuevas, TIC
Hingatungan National High School, Hingatungan,
Schools Division of Southern Leyte
ocleo.orpio@deped.gov.ph
edna.inocentes@deped.gov.ph
ronald.cuevas@deped.gov.ph

Abstract

The EdTech MATHUSAY project represents a proactive response to the formidable numeracy challenges that were exacerbated during the two-year COVID-19 pandemic. This global crisis prompted an urgent need to address a substantial numeracy gap among Grade 7 students at Hingatungan National High School in Silago, Southern Leyte. The challenges these students encountered in mastering fundamental arithmetic operations underscored the imperative for an innovative intervention. At its core, the EdTech MathUSAY mobile app is a pioneering amalgamation of technology, pedagogy, and research. It represents a paradigm shift in numeracy education by seamlessly integrating educational technology with teacher-led remediation. This fusion creates a dynamic and flexible learning approach, fostering the cultivation of mathematical proficiency in an engaging and personalized manner. The primary beneficiaries of this visionary initiative were the non-numerate seventh-grade students at Hingatungan National High School. This project resonated deeply within the local educational ecosystem, reflecting a dedicated commitment to addressing numeracy gaps. The project's meticulous development journey involved rigorous alpha testing, beta testing with selected students from Sto. Niño National High School demonstrated the app's viability, as evidenced by an impressive Cronbach's alpha reliability coefficient of 0.74. Driving this transformative endeavor were collaborative remediation sessions led by Grade 7 Mathematics Teachers with the unwavering support of school head Mrs. Maria Lury A. Lagumbay and Division Research Coordinator Mrs. Jerelyn R. Amigo. The project's impact transcended mere numerical metrics, as qualitative feedback echoed a resurgence of enthusiasm for mathematics, heightened comprehension, and student interest. With this, the study advocates for the replication across various grade levels.

Innovations on Governance and Operations

D' P3 (DYNAMIC PROJECT-BASED LEARNING (PBL) FOR POWERED PARTNERSHIPS)

Glendale B. Lamiseria, Principal IV
Burauen Comprehensive National High School
Schools Division of Leyte
glendale.lamiseria@deped.gov.ph

Abstract:
D'P$_3$ (Dynamic Project-Based Learning (PBL) for Powered Partnerships) was an innovation developed to address the need to enrich the immersion classes of Grade 12 Science, Technology, Engineering, and Mathematics (STEM) learners at Burauen Comprehensive National High School (BCNHS). This was implemented last School Year 2022-2023 and was participated by 77 students, 3 STEM teachers and supported by stakeholders. The core objectives encompass addressing BCNHS's persistent littering issue, cultivating students' profound appreciation for PBL endeavors, fostering strengthened partnerships with both internal and external stakeholders, and enriching STEM educators' expertise in PBL implementation through Job-Embedded Learning (JEL). The impact of D'P$_3$ was shown through tangible results: a significant reduction in weekly trash collection, marked student growth in PBL comprehension, reinforced linkage with supportive organizations, and elevated proficiency among STEM teachers. D'P$_3$'s success underscores its potential as a sustainable, replicable model. Future plans extend towards refining and expanding this innovative approach, introducing service-learning initiatives, and forging collaborations with institutions like the Philippine Science High School. In essence, D'P3 transcends conventional educational boundaries, fortifying the STEM curriculum, addressing pressing environmental concerns, and advancing the professional development of educators. It serves as a testament to the transformative power of progressive education, aligning harmoniously with the broader objectives of the DepEd's MATATAG agenda, aimed at fostering quality, student-centered, and community-engaged learning environments.

Keywords: *Project-Based Learning; Partnership; STEM*

KAAGAPAY SI KAP

Milaner R. Oyo-a, School Principal III
San Policarpo National High School
Schools Division of Calbayog City
milaner.oyoa1@deped.gov.ph

Abstract
Kagaapay si Kap is an innovation on partnership and linkages, support to health, and disaster risk reduction management. This innovation was created in response to the challenges brought about by the new normal education and to let the public understand that The project came into being to resolve the insufficiency of MOOE fund by the support from various stakeholders to ascertain the continuous delivery of instruction to the learners. This project was guaranteed to have a lot of sensitivity to the current situation we are in. Though implemented because of an urgent need, Kaagapay si Kap had been part of the schools' system during the pandemic and even after the crisis because of its utmost significance and applicability. More importantly, it promotes strengthened and increased partnership among all stakeholders. Sustainability-wise, it surely has a lot to achieve in the long run. Committed to its tagline: "Reaching, Unleashing, Leading, and Empowering San Policarpians whenever and wherever they are ", SPNHS has been continuously striving hard to create programs and activities that equitably centers on teachers, learners, and stakeholders. Kaagapay si Kap is an innovation in the new normal and the now normal specifically because of the implementation of various programs and projects of the school and the challenges as well in ensuring that the 28 Barangays will be working collaboratively in the achievement of the vision, mission and goal of the Department of Education. San Policarpo National High School, being awarded at DepEd Central Office for the Best in Partnership Engagement Activity will never cease to partner with external stakeholders most importantly the father of every Barangay ,the "KAPITAN".

TLS CONNECTION: CONTEXTUALIZED M&E MECHANISM

Milaner R. Oyo-a, School Principal III
San Policarpo National High School
Schools Division of Calbayog City
milaner.oyoa1@deped.gov.ph

Abstract

The TLS Connection: M & E in Action program represents a dynamic and comprehensive approach to improving educational practices within an institution. Rooted in the principles of continuous improvement, this program seeks to transform educational quality through Planning, Monitoring, and Evaluation (M&E) systems, research, and technical assistance. The innovative framework, tailored to fit specific educational activities and programs, serves as a beacon of progress, emphasizing the importance of ongoing development in educational settings.

One of the program's foundational pillars is its commitment to continuous improvement. Recognizing that perfection is an elusive goal in educational endeavors, TLS Connection embraces a culture of learning from experience. By actively involving teachers, learners, and external stakeholders, the program creates a holistic feedback loop that captures insights and observations, leading to data-driven decisions and enhancements.

Furthermore, TLS Connection underscores the significance of stakeholder engagement, uniting educators, students, parents, and the broader community in the educational journey. The innovative M&E tools facilitate open communication channels, fostering a sense of ownership and collaboration. By integrating the voices of those invested in the educational process, the program forges stronger relationships and bolsters accountability.

The cyclical nature of TLS Connection underscores its adaptability to evolving educational needs. With a focus on Plan, Implement, Evaluate, and Report (PIER), the program ensures that educational initiatives remain responsive to changing circumstances. As the educational landscape continues to evolve, TLS Connection stands as a beacon of progress, guiding institutions toward a brighter, more dynamic future in which continuous improvement and stakeholder engagement pave the way for educational excellence.

In conclusion, TLS Connection: M & E in Action is a comprehensive approach to improving school programs and projects through continuous monitoring, evaluation, and stakeholder engagement. It has led to positive outcomes, increased stakeholder participation, and recognition from the Department of Education.

Research ¡ DepED

DEPARTMENT OF EDUCATION

DepEd Order No. 16, s. 2017

Parts of a Research Proposal	Parts of a Research Report

ACTION RESEARCH

is a process of systematic and reflective inquiry to improve educational practices or resolve problems in the classroom or in the school. It is a process of uncovering solutions to classroom or school problems through a series of activities to implement a solution or intervention. The outcome of these activities is the enhancement of classroom and school practices.

Maximum grant of PhP 30,000.00 from the Basic Education Research Fund

Context and Rationale
Proposed Innovation, Intervention, and Strategy
Action Research Questions
Action Research Methods
    Participants and other Sources of Data and Information
    Data Gathering Methods
    Data Analysis Plan
Action Research Work Plan and Timelines
Cost Estimates
Plans for Dissemination and Utilization
References
	Title Page
	Abstract
	Acknowledgment
	Context and Rationale
	Innovation, Intervention, and Strategy
	Action Research Questions
	Action Research Methods
	    Participants and other Sources of Data and Information
	    Data Gathering Methods
	Discussion of Results and Reflection
	Action Plan
	References
	Financial Report

BASIC RESEARCH

is undertaken to discover, develop, or formulate theories.
It is conducted for the sole purpose of finding out general laws about student learning and teachers' instruction.

Maximum grant of PhP 150,000.00 from the Basic Education Research Fund

Introduction and Rationale
Literature Review
Research Questions
Scope and Limitation
Research Methodology
    Sampling
    Data Collection
    Ethical Issues
    Plan for Data Analysis
Timetable / Gantt Chart
Cost Estimates
Plans for Dissemination and Advocacy
References
	Title Page
	Abstract
	Acknowledgment
	Introduction and Rationale
	Literature Review
	Research Questions
	Scope and Limitation
	Research Methodology
	    Sampling
	    Data Collection
	Discussion of Results and Recommendations
	Dissemination and Advocacy Plans
	References
	Financial Report

You want your research to get funded? We're offering research grants!

Just submit the following to your Schools Division Research Committee:
1. Application Form and Endorsement of Immediate Supervisor of the Proponent;
2. Research Proposal; and
3. Anti-plagiarism and Absence of Conflict of Interest Declaration

Teaching & Learning

INSTRUCTION

Instruction incorporates strategies to enhance the teaching-learning process. Particular attention is given to teaching various subjects in light of reforms under the K to 12 Program, and the growing importance of honing well-rounded learners able to compete in the current as well as future economies.

General Research Questions

What factors affect the teacher's delivery of the curriculum?

What teaching and learning strategies can teachers apply to ensure inclusive and learner-centered education?

CURRICULUM

Curriculum focuses on the contribution of the new K to 12 curriculum on improving learning outcomes.

General Research Questions

How is the curriculum able to contribute in achieving learning outcomes?

How is the curriculum responsive and relevant to learners?

LEARNERS

This Sub-theme studies the developmental, social, and behavioural effects of the teaching-learning process on Learners, who are the primary clients of basic education.

General Research Questions

What factors affect the learning behaviours of learners?

What contributes to the values formation of learners?

What makes a well-rounded, happy, and smart learner?

ASSESSMENT

As a key component of the teaching-learning process, Assessment requires further study to refine the details of the K to12 Assessment Framework.

General Research Questions

What factors affect the implementation of classroom assessment?

How is assessment conducted and utilized in the Philippine education system?

How effective is Recognition of Prior Learning (RPL) in determining students to special programs?

LEARNING OUTCOMES

The Research Agenda examines Learning Outcomes by understanding what drives achievement, and by assessing and comparing the progress of learners across subjects, grade levels, and geographical regions.

General Research Questions

What factors affect the achievement of learning outcomes?

How does achievement of expected learning outcomes vary in terms of practices per region, division, and/or school?

Basic Education Research Agenda

Child Protection

General Research Questions

How can DepEd best address the following child protection concerns:

Specific Topics

BULLYING
Physical Bullying
Emotional Bullying
Cyber Bullying

TEENAGE PREGNANCY
Reproductive Health Education

CHILD ABUSE
Grave Child Rights Violations (GCRVs)
SHS Work Immersion Context

ADDICTION
Substance Abuse
Online Gaming
Social Media

MEDIA CONSUMPTION
Internet
TV and film
Magazines
Radio

General Topics

History of problem

• Prevalence

• Factors contributing to the problem (e.g. access to technology, environment)

• Vulnerable segments (e.g. gender, location, economic status, persons with disabilities, children in conflict with the law, children at risk)

• Effects (e.g. physical, mental, emotional, social)

• Policies/ programs/ interventions

• Learning interventions

• Monitoring and evaluation of interventions

• Partnerships

DepEd Order No. 39, s. 2016

Human Resource Development

TEACHING AND NON-TEACHING QUALIFICATIONS AND HIRING

Research questions probe into the teachers' existing qualifications and competency requirements vis-à- vis the needs of the K to 12 and special education programs. The topics extend to teacher education institutions, particularly on ways to upgrade pre-service preparation and DepEd's role in providing continuous quality training. Similarly, developing the support structure of DepEd through its non-teaching personnel is an important area of inquiry.

General Research Questions

How effective is the professional development framework in the delivery of the K to 12 curriculum?

What qualifications and competencies are required for teaching in an inclusive learning environment?

How can pre-service teacher education be improved to develop teachers who can effectively deliver the K to 12 curriculum?

What qualifications and competencies are required of non-teaching staff to support the effective delivery of the K to 12 curriculum?

What are the issues and challenges in hiring public school teachers, and how can these be addressed?

CAREER DEVELOPMENT

There is likewise a keen interest on the Career Development of both teaching and non-teaching personnel in order to surface and address their capacity-building needs, and to examine various dimensions and determinants of their professional growth.

General Research Questions

How can selection, retention, assessment, development, promotion, and recognition be enhanced to support DepEd employees in different career stages?

What kind of capacity-building activities are necessary and most effective in addressing development needs and improving the work performance of teachers and other DepEd personnel?

EMPLOYEE WELFARE

Understanding career development also includes studying the nature and effectiveness of existing Employee Welfare provisions. The Department seeks to explore monetary and non-monetary strategies as well as non-traditional mechanisms to keep its personnel, especially teachers, motivated to perform well.

General Research Questions

What mechanisms are the most appropriate to promote the welfare of all DepEd employees?

What motivates teaching and non-teaching personnel to sustain commitment and passion to high-quality teaching, learning, and work performance?

These will help us look for a topic to research on!

Governance

PLANNING

The Department has already provided internal guidance (DepEd Order 13, s. 2015) for the development of effective and efficient policies. With this in place, DepEd's next concern is to ensure that these policies are implemented and translated into appropriate programs. Because it governs a very large sector with complex interrelationships, the Department often encounters challenges in its Planning process. This section deals with standards and policies that ensure the achievement of the Department's goals.

General Research Questions

How can DepEd determine effective and efficient standards for critical education resources for schools, community learning centers, and other delivery units?

How can DepEd improve its planning process across levels?

FINANCE

Financial management is a critical component in the governance of basic education. This highlights the need to closely examine the effects of financial management not just on program managers, but also on the intended beneficiaries.

General Research Questions

How can DepEd improve its process in the sourcing, acquisition, disbursement, recording, and reporting of program and project funds, consistent with applicable laws, policies, rules, and regulations?

How does financial performance affect key stakeholders in DepEd?

PROGRAM MANAGEMENT

Program Management, one of the crucial functions of DepEd, focuses on how DepEd can best develop, implement, monitor, and evaluate programs, projects, and activities.

General Research Questions

How effective is DepEd's overall program management system?

How can we maximize external partnerships locally and abroad to facilitate the delivery of basic education?

TRANSPARENCY & ACCOUNTABILITY

The Governance theme encompasses Transparency and Accountability in various levels of DepEd's operations. Studies can delve into how mechanisms such as the transparency board and grievance procedures promote transparency and accountability in schools.

General Research Questions

What factors affect transparency and accountability in DepEd operations?

How effective are internal business processes in allowing the public to monitor and document the performance of DepEd?

How can schools effectively respond to grievances from teachers, learners, parents, and the community?

EVALUATION

A separate section is dedicated to Evaluation. It aims to determine if DepEd programs, projects, and activities produced its intended result. This will aid decisions on whether to continue, discontinue, or revise these at the appropriate stages of the cycle.

General Research Questions

How effective have DepEd policies, programs, and projects been in meeting their stated objectives?

What are the unintended consequences?

How can DepEd maximize the benefits gained from the evaluation outputs and expertise from within and outside the department?

How can DepEd improve its evaluation process?

Classroom-based Action Research

A SIMPLE GUIDE FOR BEGINNING TEACHERS

[DepEd Memorandum No. 144, s. 2017]

STEPS	STEMS
Step 1. Identify the problem *Reflect on your experiences and identify the most critical problem that affects your students' learning.*	One of my most prevalent issues in my classroom that affect the learning of my students is _____ _____ _____ _____.
Step 2. Search the literature or interview your colleagues for previous strategies / interventions used to solve this problem *Refer to previous studies (use the internet if you do not have access to journals) and see if there have been efforts done to solve the problem or similar problems*	The strategy / intervention used before to solve this issue are the following: *(include the name of the author and the year of publication and briefly discuss their findings)* _____ _____ _____ _____.
Step 3. Develop a strategy *Based on previous studies, along with your experiences, develop a strategy / intervention to solve the problem. Then, implement the strategy / intervention in your classroom.*	I will solve the problem by *(your strategy / intervention - what will you do)* _____ _____ _____ _____ _____.
Step 4. Identify findings *Analyze your data - looking for findings with practical significance. If you are dealing with qualitative data, simple statistical tools are enough. If dealing with qualitative data (interview, observation, discussion) then look for recurring themes or patterns.*	The data show that _____ _____ _____. The findings that I will record include *(the kind of data that you need to gather and record will provide evidence to the effectiveness of your strategy / intervention)* _____ _____ _____.
Step 5. Make a decision *Use your findings to make decisions related to the learning of your students.* Example: "I will continue / discontinue using the strategy / approach because more than half of my students have shown very high scores in reading comprehension test after 3 weeks."	The approach / intervention I used worked / did not work because _____ _____ _____. In case where the strategy / intervention failed to solve the problem _____ _____ _____. I will try another strategy / intervention like *(then go back to Step 3)* _____ _____ _____.

project ROAR

DepEd Region VIII!

inspired by
PROJECT LEAD
LEAD, EMPOWER, AND ACHIEVE
THROUGH DATA-DRIVEN DECISIONS
...where LEADers create great schools

REINFORCE, ORGANIZE, AND AMPLIFY RESEARCH IN DEPED REGION VIII

Reinforcing

The project aims to boost the conduct of educational researches among administrators and teachers through continuous conduct of capability-building workshops and trainings. By 2020, all employees of DepEd Eastern Visayas have developed confidence and capacity to conduct and facilitate the conduct of educational researches.

Organizing

The project aims to consolidate and classify the educational researches of administrators and teachers through an open electronic library system. By 2020, all employees of DepEd Eastern Visayas have access to a wide range of educational research results and literature towards effective policy formulation and future research endeavors.

Amplifying

The project aims to expand the influence of educational researches of administrators and teachers through active involvement in local and international research fora and partnership with stakeholders. By 2020, DepEd Eastern Visayas is known to participate in various local and international research conferences and publications.

PROJECT Cart

COACHING ASSISTANCE IN RESEARCH FOR

This project is designed to build a partnership with supportive stakeholders with expertise on research and Teacher Education Institutions will lead the teachers into aided professional growth by completing their individual research in the classroom or school through coaching sessions, thereby utilizing research findings for evidence-based decision making of education leaders.

DepED
DEPARTMENT OF EDUCATION

Research beyond the pandemic:
From learning recovery
to education transformation.