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## MATHEMATICS WORKSHEETS FOR DAILY LESSON LOG (DLL) OF GRADE 8 QUARTER 1: TEACHER'S GUIDE IN CATAINGAN NATIONAL HIGH SCHOOL(CNHS), MASBATE PROVINCE DIVISION

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Abstract

The study aims to describe methodologies and approaches to address key concerns in the development and application of mathematics worksheets for the Daily Lesson Log (DLL) of Grade 8 students at Cataingan National High School (CNHS), Masbate Province, during the academic year 2022-2023. The main goal is to explore the effectiveness of these worksheets in enhancing mathematics education and to contribute to improving teaching strategies. This research focuses on examining the role of worksheets in the learning process, analyzing the challenges faced by teachers in their integration, and proposing recommendations for addressing these issues to improve overall mathematics instruction.

The statement of the problem outlines key research questions addressed using statistical methods. These include examining the profile of mathematics teachers in terms of gender, age, educational attainment, and teaching experience. It also explores how teachers incorporate mathematics worksheets into their teaching during the first quarter of the school year. Additionally, the study looks at the challenges teachers face, such as worksheet effectiveness, student engagement, and the adaptability of the worksheets, with a final question on suggested improvements from teachers to resolve these issues.

Masbate City, Philippines

The findings indicate that while many teachers have completed their academic requirements, there is a need for further professional development. Worksheets were generally rated as "very effective," but improvements were needed in areas such as teaching method integration, student engagement, and adaptability. The challenges identified include insufficient worksheet production materials, unreliable power supply, and student absenteeism, which hinder the full utilization of the worksheets in daily lessons.

The study concludes that the worksheets were effective overall, with positive ratings for their integration with teaching methods. However, addressing the logistical challenges of insufficient materials, power supply issues, and absenteeism is crucial to enhancing their impact. Recommendations include ensuring proper use of standby generators to resolve power issues and providing sufficient resources for worksheet production. By addressing these concerns, the study aims to contribute to more effective teaching strategies and improve student learning outcomes in mathematics at CNHS.

*Keywords*: Daily Lesson Log, Educational Improvement, Educational Resources, Mathematics Worksheets, Student Engagement, Teaching Methods, Teaching Strategies

## Introduction

Exploring effective teaching strategies in mathematics is an ever-changing field. This is especially true as students' progress through their academic careers and face increasingly complicated mathematical concepts. Examining the intentional incorporation of math worksheets into Daily Lesson Logs (DLL) for eighth graders at Cataingan National High School (CNHS) in the Masbate Province Division during the 2022–2023 school year is a crucial part of this research.

This integration's ability to improve the learning and teaching experience is the foundation of its relevance. According to  $(Andrin, 2020)^1$ , daily lesson logs are seen as crucial resources for thorough lesson preparation. The purpose of this research is to examine the pros, cons, and necessity of using math worksheets in everyday classroom instruction. Researchers ask teachers about their experiences with these worksheets using standardized ล questionnaire to learn more about their use in the classroom. This survey approach is in line with the study goals of looking at how things are done, how people see things, what problems teachers encounter, and how to fix them.

The long-term goals of this research are to address knowledge gaps in the field and to offer concrete recommendations to educators and legislators. Beyond only improving the learning experience, the ethical standards that guide the teaching profession are congruent with the deliberate incorporation of math worksheets into daily lesson planning.

The purpose of this research is to describe, from the perspective of teachers,

how math worksheets are purposefully incorporated into lessons in order to enhance this practice, as mentioned by (İnan and Erkuş, 2017)<sup>2</sup>. In the long run, it should help achieve educational goals, including quality education and professional excellence, while simultaneously making the classroom a better place for students.

The fact that math worksheets are widely acknowledged as essential resources enhancing mathematical for abilities emphasizes their significance in instructional design. Instructional design frameworks like ADDIE, Merrill's Principles of Instruction, Gagne's Nine Events of Instruction, and Bloom's Taxonomy can serve as a guide for developing educational programs. According to (Guevarra,  $2018)^3$ , a move towards student-centered approaches is being driven by the current focus on critical thinking and problem-solving in mathematics education in the Philippines.

Research on successful pedagogical practices and curricular reforms in the Philippines is based on the work of numerous researchers, including Nabayra, Sagge, Andrin, Verzosa, Vistro-Yu, and others. Insights like this help shape CNHS's eighth grade math worksheets to meet the requirements of individual pupils.

studv aims The to describe methodologies and approaches to thoroughly address crucial concerns throughout the academic year of 2022-2023, with the overarching goal of exploring the effectiveness of math worksheets and making a lasting contribution to mathematics education.

## Statement of the Problem

The researchers of this research study, entitled "Mathematics worksheets for Daily Lesson Log (DLL) of Grade 8 - Quarter 1: Teacher's Guide in Cataingan National High School (CNHS), Masbate Province Division", School Year 2022-2023 aim to answer the following questions with statistical approaches and methods to achieve the stated research purpose along the research period, A.Y. 2022–2023:

- What is the profile of Mathematics Teacher respondents in terms of: 1.1 Age
  - 1.1 Age
  - 1.2 Gender
  - 1.3 Years of teaching Mathematics
  - 1.4 Higher educational attainment

## **Scope and Delimitations**

This study focuses on the integration of mathematics worksheets into the Daily Lesson Logs (DLL) within the Grade 8 Mathematics at Cataingan National High School during the school year 2022-2023. Participants are distinctly educators of Mathematics at Cataingan National High School. Educators, actively involved in teaching Grade 8 mathematics during Quarter 1, serve as key informants, providing nuanced insights into the effects, challenges, potential benefits of and infusing mathematics worksheets into daily lessons.

To ensure precision and relevance in the study, specific parameters have been established. Inclusions encompass educators delivering mathematics at Cataingan National High School during Quarter 1 of the

### Gap Bridged of the Study

The literature review in the study illuminates a distinct gap in the realm of educational research, particularly in the development of math worksheets tailored for the unique learning environment of eighthgrade students at Cataingan National High

- 2. How do Mathematics Teachers integrating mathematics worksheets into their teaching and learning experiences during Quarter 1 of the School Year 2022-2023?
- What are the challenges faced by Mathematics Teachers in using mathematics worksheets in terms of: 3.1 Worksheet effectiveness
  - 3.2 Student engagement and participation
  - 3.3 Flexibility and adaptability
- 4. What suggested measures offered by the Grade 8 mathematics Teachers to help improved/ solved the problems?

academic year 2022-2023, ensuring a detailed exploration of the implementation phase.

Exclusions involve educators in Mathematics, maintaining a targeted approach. The study is delimited to Cataingan National High School, ensuring a localized examination that fosters a detailed understanding of the mathematics learning environment within the Masbate Province Division. Restricting the exploration of the mathematics curriculum. Each inclusion and exclusion are meticulously designed to contribute to the study's depth and specificity, ensuring a robust exploration of the integration of mathematics worksheets into the Daily Lesson Logs at Cataingan National High School.

School (CNHS) in the Masbate Province Division. While a considerable amount of research underscores the general effectiveness of math worksheets in enhancing mathematical skills and problemsolving abilities, there is a noticeable absence of studies that delve into the specific requirements and educational context of CNHS. This gap is significant, as the pedagogical needs and learning dynamics of CNHS students are likely to differ from those documented in broader studies.

In addition, the literature review sheds light on the critical importance of adapting and applying instructional design models, such as ADDIE, Merrill's Principles of Instruction, Gagne's Nine Events of Instruction, and Bloom's Taxonomy, in a manner that resonates with the specific educational needs and characteristics of CNHS students. This adaptation is not just a matter of academic exercise but is imperative to ensure the effective absorption and application of mathematical concepts by students in a real-world classroom setting. The existing instructional models, while robust, require a level of customization to be truly effective in the unique context of CNHS, especially given the transformative changes in the Philippine educational

### **Theoretical Framework**

This study's theoretical framework is crafted, meticulously drawing upon established instructional design models, educational paradigms, and insights gleaned from the literature on effective mathematics teaching practices. The integration of instructional design ideas from models such as ADDIE. Merrill's Instructional Ideas. Gagne's Nine Events of Instruction, and Bloom's Taxonomy provides a systematic and comprehensive approach to developing instructional materials. These models not only ensure the thorough coverage of topics but also guarantee alignment with cognitive processes crucial for effective learning.

The framework is deeply rooted in the dynamic landscape of mathematics education in the Philippines, emphasizing key principles such as critical thinking, problemsolving, and student-centered approaches. landscape that prioritize critical thinking and a student-centered approach.

The study presented, therefore, does not merely highlight these gaps but actively seeks to bridge them. It is designed to develop and rigorously evaluate mathematics worksheets that are not only grounded in established educational theories and pedagogical models but are also intricately tailored to the specific learning environment and educational goals of eighth-grade students at CNHS. The focus is on creating resources that are not only theoretically sound but are also practical, relevant, and conducive to enhancing the learning experience of CNHS students. This targeted approach ensures that the educational resources developed are not only academically rigorous but also culturally and contextually appropriate, thereby significantly contributing to the field of educational research and practice, specifically in the context of mathematics education in the Philippines.

Verzosa and Vistro-Yu's exploration of current curriculum revisions serves as a guiding beacon, emphasizing the need for resources that resonate with these evolving educational approaches. (Verzosa, Vistro-Yu, 2019)<sup>46</sup>

Local insights, drawn from studies like (Nabayra & Sagge, 2021)<sup>18</sup> research on successful teaching practices and (Andrin,  $2020)^{20}$ . examination of pedagogical approaches, enrich theoretical the framework. These insights offer a nuanced understanding of the specific challenges and requirements within Philippine the educational context, particularly emphasizing the importance of tailored instructional materials effective and communication skills.

The theoretical framework not only identifies gaps in the existing literature but

strategically aims to bridge these gaps within the unique setting of CNHS eighth-grade students. The envisioned Mathematics worksheets aspire not only to embody global best practices but also to finely align with the distinctive needs, challenges, and aspirations of the target audience.

In summation, the theoretical framework aligns the instructional design approaches with Philippine educational paradigms, integrating local insights, and

addressing identified gaps in the literature. This framework serves as a guiding compass the creation and evaluation for of Mathematics worksheets tailored for CNHS eighth-grade students, ensuring not only relevance and effectiveness but also appropriateness within the contextual dynamic educational landscape.

Figure 3 shows the theoretical paradigm of the study.



Figure 3 - Theoretical Paradigm

#### **Respondents and Sampling**

This study used purposive sampling since it included all the 15 Mathematics teachers in Cataingan National High School. The selection of participants is meticulously carried out through a Purposive Sampling Technique, ensuring that the individuals chosen are highly relevant to the research objectives. Their active involvement in teaching Mathematics during the specified academic year and their experiences, insights, and perspectives of these educators are considered crucial for the comprehensive evaluation of the effectiveness of the developed Mathematics worksheets.

### Instrument Used

In this research, the main data gathering instrument used by the researcher is survey questionnaire checklist. The instrument is composed of two parts. Part I contains Teacher's profile, including optional information such as name, age, gender, years of teaching mathematics, and educational attainment. Part II contains Math worksheets for DLL of Grade 8 – Quarter I, including worksheets effectiveness, integration with

## **Research Procedure**

This Study made use of the survey questionnaire checklist to gather the data prepared by the researcher. The research process involves several planned steps. Firstly, we meticulously review the finalized survey questionnaire. This questionnaire is carefully designed based on conceptual and instructional design frameworks to ensure clarity and relevance, avoiding any potential issues that could affect the data's validity. The questions were validated by the thesis adviser through careful examination and evaluation.

The researcher prepared a letter request to conduct the survey and was

## **Statistical Measures**

The data were treated using the different statistical tools: Frequency count and percentage; weighted mean and rank.

1. Frequency count and percentage: Formula:

 $P = \frac{R}{N} \times 100$ 

Where:

 $P = Percentage \qquad R = Number of$  $responses \qquad N = Total number of$ responses

2. Weighted Mean was used to determine the quantitative units of the responses from the value scale used for rating by the respondents. Formula:

teaching methods, student engagement and participation, flexibility and adaptability.

The researcher prepared a letter permit to conduct the study. When the letter was received and approved the researcher personally conducted the distribution of the research instrument to the identified respondents of the study. All the respondents were given the survey tool.

approved. The survey questionnaires were reproduced and personally distributed to the respondents. All the total 15 respondents survey questionnaires were one hundred percent retrieved.

From the data gathered, the findings were presented, conclusions were formed and the appropriate recommendations were deduced. The manuscript was prepared and the researcher requested from the office of the research director for the schedule of final – oral defense.

Weighted Mean  $W_m = n(r_5) + n(r_4) + n(r_3) + n(r_2) + n(r_1) / N_T$ Where:  $r_5 =$  respondents answered 5  $r_2 =$  respondents answered 2  $N_T =$ total respondents  $r_4 =$  respondents answered 4  $r_1 =$  respondents answered 1  $r_3 =$  respondents answered 3

n = number of respondents

3. **Ranking** was used in assigning the numerical values to items according

to its relative position in the group from highest to lowest.

#### **Profile of the Respondents**

#### Table 1.1

#### **Respondents' Profile as to Gender**

Gender	Number	Percentage	Rank
Male	9	60%	1
Female	6	40%	2
Total	15	100%	

Table 1.1 shows the gender of the respondents, majority of the respondents are male, there are 9 or 60% male mathematics teachers and 6 or 40% female mathematics teachers in Cataingan National High School, and a total of 15 or 100% Mathematics teachers.

#### Respondents' profile as to Age

### Table 1.2

## **Respondents' Profile as to Age**

Age	Frequency	Percentage	Rank
20 - 30	4	26.67%	2
31 - 40	7	46.67%	1
41-50	3	20%	3
50 -60	1	6.67%	4
Total	15	100%	

Table 1.2 shows the age profile of the respondents, there are 4 or 26.67% teachers with age ranging from 20 to 30 years old, rank 2; are 7 or 46.67% teachers with age ranging from 31 to 40 years old, rank 1; 3 or 20% teachers with age ranging from 41 to 50 years old, rank 3; and 1 or 6.67% teacher with age ranging from 51 to 60 years old.

#### **Respondents' profile as to Educational Attainment**

# Table 1.3Respondents' Profile as to Educational Attainment

Educational Attainment	Frequency	Percentage	Rank
CAR	12	80%	1
BSED	3	20%	2
Total	15	100%	

Table 1.3 shows the educational attainment of the respondents, twelve out fifteen or 80% teachers have Completed Academic Requirements; and three out of fifteen or 20% teachers graduated BSED major in Mathematics, and a total of 15 or 100%.

## **Respondents' Profile as to Number of Years Teaching Mathematics**

Table 1.4
<b>Respondents' Profile as to Number of Years of Teaching Mathematics</b>

Years of Teaching Mathematics Profile	Frequency	Percentage	Rank
11 and above	6	40%	1
7-10	4	26.67%	2
4-6	2	13.33%	3
1-3	2	13.33%	4
Total	15	100%	

Table 1.4 shows the respondents number of years teaching Mathematics, there are 6 or 40% teachers with 11 and above years' experience in teaching Mathematics, rank 1; 4 or 26.67% teachers with 7 to 10 years' experience in teaching Math, rank 2; 2 or 13.33% teachers with 4 to 6 years' experience in teaching Math, rank 3; 2 or 13.33% teachers with 1 to 3 years' experience in teaching Mathematics, rank 4; and a total of 15 or 100%.

## Findings

The following are the findings of the study:

- 1. Mathematics teachers with CAR or Completed Academic Requirements should be complied to enroll to complete the degree.
- 2. Worksheets with very effective and effective be raised to very much effective.
- 3. Worksheets with much integrated be raised to very much integrated on integration with teaching methods.
- 4. Worksheets with much engaged and engaged be raised to very much engaged.
- 5. Worksheets with much observed be raised to very much observed.
- 6. On problems met of Mathematics teachers, all indicators be given priority attention.

### Conclusions

These are the conclusions deduced from the findings:

- 1. The total respondents were 15 or 100% Mathematics teachers of Cataingan National High School.
- 2. The total Mathematics worksheets for worksheet effectiveness was 4.21 and has a verbal interpretation of very effective.
- 3. The total Mathematics worksheets for integration with teaching methods was 4.2 and has a verbal interpretation of much integrated.
- 4. The total Mathematics worksheets for student engagement and participation was 4.03 and has a verbal interpretation of much engaged.

- 5. The total Mathematics worksheets for flexibility and adaptability was 4.11 and has a verbal interpretation of much observed.
- 6. The problems encountered by the respondents were insufficient worksheets, insufficient power supply, production of worksheets, and student absenteeism.

#### **Recommendations**

The following are the recommendations of the study:

- 1. Proper implementation on the use of stand by generator (provision of fuels, operator and maintenance).
- 2. Provision of sufficient materials for worksheets production.

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