



Republic of the Philippines
Department of Education
NEGROS ISLAND REGION

REGIONAL MEMORANDUM

No. 061, s. 2026

JAN 22 2026

**CONDUCT OF SURVEY FOR THE STUDY "SELF-REPORTED TEACHING
PRACTICES IN IMPLEMENTING THE FIVE STRANDS
OF MATHEMATICAL PROFICIENCY"**

To: **Schools Division Superintendents of:**

Schools Division of Bayawan City
Schools Division of San Carlos City
Schools Division of Talisay City

1. This Office, through the Policy, Planning, and Research Division, disseminates the Memorandum on the conduct of the survey for the study **"Self-Reported Teaching Practices In Implementing The Five Strands of Mathematical Proficiency."**

2. For details, contact Marife Corpuz through email address marife.corpuz@dlsu.edu.ph or Joey Ian C. Singson, Education Program Supervisor Designate of the Policy, Planning, and Research Division through email address joey.singson@deped.gov.ph.

3. Immediate dissemination of this Memorandum is desired.

RAMIR B. UYTICO EdD, CESO III
Regional Director

Encl: As stated
Reference: As stated

To be indicated in the Perpetual Index
under the following subjects:

RESEARCH

PPRD/JIS/Memo_Conduct of Survey on Math Teaching Practices.docx



DE LA SALLE UNIVERSITY - MANILA
Br. Andrew Gonzales FSC College of Education (BAGCED)
Department of Science Education



January 15, 2026

Dr. RAMIR B. UYTICO
Regional Director
Department of Education
Negros Island Region

Subject: Request for Permission to Conduct Online Survey Among High School Mathematics Teachers

Dear Dr. Uytico,

Peace and All Good!

I am **MARIFE O. CORPUZ**, a graduate student from the **College of Education of De La Salle University - Manila**. I am currently working on a survey research entitled *"Self-Reported Teaching Practices in Implementing the Five Strands of Mathematical Proficiency"*.

This study aims to examine how high school mathematics teachers implement the five strands of mathematical proficiency in their instructional practices. The study employs a stratified quota sampling design to ensure representation across DepEd Regional Offices nationwide, with an intended quota of 30 teacher-respondents per region, for an estimated total of at least 500 respondents.

I am pleased to inform your good office that permission to conduct the study has already been granted by the DepEd Central Office, as evidenced by the attached approval letter. In this regard, I respectfully seek the approval and endorsement of your office to allow the conduct of the survey in three (3) selected School Division Offices within your region, in coordination with the respective School Division Superintendents.

I respectfully assure your office that the conduct of the study will strictly comply with the following:

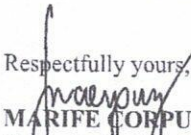
1. The survey will adhere to ethical research standards, commencing only after De La Salle University Research Ethics Office grants Ethical Clearance, and will conclude by March 31, 2026.
2. Prior coordination will be made with the concerned School Division Superintendents and school heads before the administration of the survey.
3. No government funds, equipment, supplies, or materials will be used in the conduct of the study.
4. Participation will be completely *voluntary*. In compliance to DepEd Order No. 9 s. 2005, classes or the duties/responsibilities of the respondents will not be disrupted. Teachers may answer the survey at their most convenient time.
5. The survey will be *anonymous*, and no personally identifiable information (such as names, school affiliations, or contact details) will be collected. All data gathered will be treated with utmost confidentiality, in strict compliance with the Data Privacy Act of 2012, and will be used solely for academic and research purposes.
6. The online questionnaire will be administered through a Google Form, which will be shared through e-mail invitations to the school heads (survey link: <https://forms.gle/MMFJEjipunPIF6Ct5>).
7. A copy of the research findings will be provided to appropriate DepEd offices for reference, and the results will also be submitted for publication in a scholarly journal.

Attached are the supporting documents, including the research outline, informed consent form, and survey questionnaire, for your review and consideration.

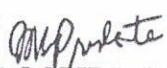
I sincerely hope for your kind approval to proceed with this research in collaboration with the high school Mathematics teachers from your region. Your support will be deeply appreciated and will greatly contribute to the successful completion of this research study.

Thank you very much.

Respectfully yours,


MARIFE CORPUZ
Graduate Student, MST-Mathematics
Department of Science Education, College of Education
De La Salle University - Manila

Endorsed by:


DR. MARICAR PRUDENTE
Research Adviser
Department of Science Education, College of Education
De La Salle University - Manila

ATTACHMENT 1 of 4: APPROVAL LETTER



Marife Corpuz <marife_corpuz@dlsu.edu.ph>

FOLLOW-UP ON RESEARCH REQUEST SENT LAST OCT 7, 2025

Office of the Assistant Secretary for Operations <asec.ops@deped.gov.ph>
To: Marife Corpuz <marife_corpuz@dlsu.edu.ph>
Cc: Office of the Undersecretary for Operations <ouops@deped.gov.ph>

Wed, Nov 12, 2025 at 12:59 PM

Dear Ms. Corpuz,

This is regarding your letter dated October 7, 2025 requesting permission to conduct online pilot testing and a survey among high school mathematics teacher.

Please be informed that you are hereby authorized to conduct your research with your identified target participants, subject to the confirmation or express consent of the concerned Regional Offices (ROs), Schools Division Offices (SDOs), and personnel involved.

For your guidance.

Thank you very much.

Respectfully,



Office of the Assistant Secretary for
Operations
Field Operations
Department of Education
asec.ops@deped.gov.ph | (02) 8833-7242
5th Floor, Room M-503, Mabini Building
DepEd Complex, Marikina Avenue, Pasig City, Philippines

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Secure notes. Think before you print.

From: Marife Corpuz <marife_corpuz@dlsu.edu.ph>
Sent: Wednesday, October 29, 2025 8:00 AM
To: Office of the Secretary <sec@deped.gov.ph>
Cc: Office of the Usec for Human Resource & Organizational Dev (OUHROD) <asec.hrod@deped.gov.ph>; Office of the Undersecretary for Operations <ouops@deped.gov.ph>; Office of the Assistant Secretary for Operations <asec.ops@deped.gov.ph>; Personnel Division <hrd@deped.gov.ph>
Subject: FOLLOW-UP ON RESEARCH REQUEST SENT LAST OCT 7, 2025

[Quoted text hidden]

Marife Corpuz.pdf
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Republika ng Pilipinas Department of Education

OFFICE OF THE ASSISTANT SECRETARY FOR GOVERNANCE AND OPERATIONS

November 11, 2025

MARIFE CORPUZ
Researcher
MST-Math, DLSU-Manila

Dear Ms. Corpuz:

This is regarding to your letter dated October 7, 2025, requesting permission to conduct online pilot testing and a survey among high school mathematics teachers.

Please be informed that you are hereby authorized to conduct your research with your identified target participants, **subject to the confirmation or express consent of the concerned Regional Offices (ROs), Schools Division Offices (SDOs), and personnel involved.**

For your guidance.

Thank you very much.

Very truly yours,



JOCELYN DR ANDAYA
Regional Director, NCR
concurrent Officer-in-Charge, Office of the
Assistant Secretary for Governance and Operations



16th Floor TechZone Building, 64 Puyat Avenue, San Antonio, Makati City
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Effectivity: 09-29-24 | Page: 1 of 1



ATTACHMENT 2 of 4: RESEARCH OUTLINE

Title: Self-Reported Teaching Practices in Implementing the Five Strands of Mathematical Proficiency
Researcher: Marife Corpuz
Institution: De La Salle University - Manila Br. Andrew Gonzales FSC College of Education

Problem Statement

The MATATAG mathematics curriculum mandates that Filipino learners achieve mathematical proficiency through the holistic development of the five strands: (1) conceptual understanding, (2) procedural fluency, (3) strategic competence, (4) adaptive reasoning, and (5) productive disposition. However, classroom observations and teacher accounts suggest that mathematics instruction often emphasizes only two or three of these strands. This study aims to provide empirical evidence on the gap between curriculum's intended goal and actual classroom practices across Philippine regions.

Research Questions

This study aims to examine high school mathematics teachers' self-reported practices in implementing the five strands of mathematical proficiency. Specifically, it seeks to answer the following questions:

- 1) To what extent do high school mathematics teachers implement each of the five strands of mathematical proficiency, and are there significant differences in implementation levels across these strands?
- 2) What factors do teachers identify as the key facilitators and barriers in implementing the five strands of mathematical proficiency?
- 3) How does the implementation of the five strands of mathematical proficiency differ among teachers with varying demographic and professional characteristics?

Participants

The population of the study consists of high school mathematics teachers across the Philippines. The inclusion criteria for the participants are the following: (a) teachers currently teaching junior high school and/or senior high school mathematics, (b) employed by a public or private school in the Philippines, (c) consenting to participate. The participants are professional teachers who are considered capable of giving informed consent and are not classified as vulnerable population under NEGRIHP guidelines.

Research Method

This study will use a quantitative, cross-sectional research design through an online survey administered via Google Form. The survey consists of three parts: (1) Demographic Information (such as type and location of school, educational attainment, years of teaching, and professional development received), (2) Instructional Practices (frequency of implementing the five strands of mathematical proficiency), and (3) Facilitators and Barriers (factors that support or limit implementation). Each item uses a 4-point Likert scale. The instrument underwent expert validation and pilot testing to ensure clarity, relevance, and reliability.

Data Collection Procedure

The study will use a stratified quota sampling design to ensure representation across DepEd Regional Offices in the Philippines. The target quota is 30 high school mathematics teachers per region. The researcher will first secure permission from DepEd Central, Regional, and Division Offices. Using the provided directory of schools, an e-mail invitation will be sent to school heads, who will disseminate the invitation to their high school mathematics teachers. Teachers who choose to participate will voluntarily access the survey link to the Google Form. The duration of the completing the survey is about 10 minutes. In compliance to DepEd Order No. 9 s. 2005, classes or the duties/responsibilities of the participants will not be disrupted as the survey may be answered at the participants' most convenient time.

Data Analysis

Collected data will be analyzed using descriptive and inferential statistics via Jamovi (version 2.6.45.0). Descriptive statistics, including percentage distributions, means, and standard deviations will be used to describe teachers' implementation levels for each of the teaching practices under the five strands of mathematical proficiency. Inferential statistics using the non-parametric Friedman test will be employed to determine whether significant differences exist in the implementation levels across the five strands. When significant results are found, Durbin-Conover post-hoc pairwise comparisons will be conducted to identify the strands that differ from each other. Descriptive statistics (frequencies) will also be used to identify the Top 3 facilitators and Top 3 barriers of implementation. The frequency with which each factor is ranked will be multiplied by its corresponding weight: 3 points for Top 1, 2 points for Top 2, and 1 point for Top 3. The three factors with the highest total weighted scores will be identified as the key facilitators and key barriers. Nonparametric tests will be used to identify which specific groups differed in implementation levels. Mann-Whitney U Test will be used for two-group comparisons (eg. Type of school: public vs. private) while Kruskal Wallis Test for multiple-group comparisons (eg. Educational Background: Bachelor's Degree, With MA/MS Units, Master's Degree, With Doctorate Units, Doctorate Degree). Analyses will be performed on both per strand and overall mathematical proficiency score.

Ethical Considerations

The study ensures that participation is voluntary and based on informed consent. The survey is anonymous and no personally identifiable information will be gathered. All responses will be treated with strict confidentiality and used solely for academic and research purposes.

Data Collection Period: February 1 to March 31, 2026, or later, depending on the issuance of the Ethical Clearance by the De La Salle University Research Ethics Committee

ATTACHMENT 3 of 4: INFORMED CONSENT FORM

SECTION 1: INFORMED CONSENT FORM

Dear Math Teacher,

You are invited to participate in this research study which aims to determine the extent to which high school mathematics teachers implement each of the five strands of mathematical proficiency, and to identify the key facilitators and barriers perceived by teachers in implementing the five strands of mathematical proficiency.

The survey will take about 10 minutes to complete. In compliance to DepEd Order No. 9 s. 2005, classes or the duties/responsibilities of the participants must not be disrupted, so you may answer the survey at your most convenient time.

*Participation is **voluntary** and **anonymous**. NO identifiable information such as name, school affiliation, e-mail address will be collected. You may withdraw your participation at any point without any penalty. All responses will be treated with **strict confidentiality** and will only be used for research purposes.*

We kindly request that you answer all questions with honesty and sincerity, as your genuine responses are crucial for ensuring the reliability and validity of the results. Your insights as a teacher are highly valued and will greatly contribute to the success of this research.

*By clicking "**YES, I consent to participate**", you confirm that you have read the information above, understood its contents, and voluntarily agree to take part in this study. Your consent to participate in this research project is also assumed upon completion of this questionnaire.*

RESPONSES:

- ☐ Yes, I consent to participate.
- ☐ No, I do not consent to participate.

ATTACHMENT 4 of 4: SURVEY QUESTIONNAIRE

Section 2: PARTICIPANT INFORMATION

This section gathers essential background details about the respondents. For each item, please select the option that best describes you.

- 1) Division
(varied options)
- 2) Type of school
(Public, Private)
- 3) Highest Educational Attainment
(Bachelor's Degree, With MA/MS Units, Master's Degree, With Doctorate Units, Doctorate Degree)
- 4) Years of Teaching
(1-3, 4-10, 11-20, 21-30, more than 30)
- 5) Professional Development Mathematics (seminars, workshops, and trainings received from 2023 to 2025)
(none, 1-5, 6-10, more than 10)

Section 3: TEACHING PRACTICES

This section contains statements related to the five strands of mathematical proficiency. Please indicate the extent to which you implement each item by selecting the response that best reflects your practice. Respond based on your actual practices this school year 2025-2026.

LIKERT SCALE:

- 4 = I *intentionally* carry out this practice in *nearly all* lessons.
3 = I *often* apply this practice in *most* lessons.
2 = I use this practice occasionally, *depending on the topic*.
1 = I *seldom or never* use this practice.

A. Conceptual Understanding

(comprehension of mathematical concepts, operations, and relations)

1. I connect new lessons to students' prior knowledge from previous topics or other areas of mathematics.
2. I explain the meaningful connections between mathematical concepts and procedures.
3. I represent mathematical situations in different ways
(e.g., words, symbols, equations, diagrams, graphs, or manipulatives).
4. I explain the importance and the kind of contexts in which mathematical concepts and procedures can be useful.
5. I provide opportunities for students to explain why some mathematical facts are consequences of others.
6. I give students tasks that help them build on what they know to adapt or create procedures in new, more complex situations.

B. Procedural Fluency

(skill in carrying out procedures flexibly, accurately, efficiently, and appropriately)

1. I conduct practice exercises focused on accurate and efficient use of procedures.
2. I provide tasks that require students to select the most appropriate tool for a given situation
(eg. mental math, calculator, or pen and paper).
3. I illustrate different procedures and explain when to use each one appropriately.
4. I demonstrate algorithms and show how to apply them flexibly in different types of problems.
5. I teach students strategies to estimate the result of a procedure.
6. I provide opportunities for students to find and analyze errors in solutions.

C. Strategic Competence

(ability to formulate, represent, and solve mathematical problems)

1. I guide students in identifying key information and irrelevant features in a problem.
2. I represent problems in different forms to model the relationship between the variables
(eg. equation, table, illustration, or graph).
3. I teach different strategies and explain which one is well-suited to solve a specific problem.
4. I assign tasks that require students to formulate math problems from given situations.
5. I provide students with routine problems to practice their ability to reproduce and apply known solution procedures.
6. I challenge students with nonroutine problems that require flexible approaches to problem solving.

D. Adaptive Reasoning

(capacity for logical thought, reflection, explanation, and justification)

1. I prompt students to justify their mathematical claims.
2. I ask students to discuss the reasoning behind their approach.
3. I ask "what-if" or counterexample questions that extend students' reasoning.
4. I give tasks that require students to check consistency of concepts, procedures, and solutions.
5. I demonstrate how to use logical steps to reach conclusions from given assumptions
(deductive reasoning).
6. I guide students to identify patterns, analogies, or metaphors to draw general conclusions
(inductive reasoning).

E. Productive Disposition

(habitual inclination to see mathematics as sensible, useful, and worthwhile, coupled with a belief in diligence and one's own efficacy)

1. I communicate to students that everyone can learn mathematics through effort and practice.
2. I use supportive language and practices that promote positive attitudes toward mathematics.
3. I acknowledge students' effort, persistence, and strategies to emphasize the value of sense making in mathematics.
4. I engage students in practical or recreational math tasks to help them see mathematics as useful and worthwhile.
5. I design learning activities that encourage peer support and collaboration.
6. I give challenging tasks that promote productive struggle while providing appropriate support.

Section 4: FACTORS AFFECTING IMPLEMENTATION

This section lists factors that may affect your implementation of the five strands of mathematical proficiency. Please indicate the factors that you perceived to have supported or limited your implementation by selecting the response that best reflects your experience.

Factors:

- a) Assessment practices (methods used to measure the skills emphasized by the strand)
- b) Class size
- c) Instructional resources (e.g. references, printed materials, technology, manipulatives)
- d) Instructional time
- e) Lesson preparation time
- f) Mastery of subject matter
- g) Professional development and trainings
- h) Support from peers
- i) Support from the school administration
- j) Teacher's beliefs about students' ability to learn mathematics

Which of these factors **strongly supported/limited** your implementation?
Choose only three (3), then rank them.

Rank 1 = Strongest Facilitator
Rank 2 = Next Strongest Facilitator
Rank 3 = Third Strongest Facilitator

(OPTIONAL) Would you like to share your reasons for choosing your Strongest Facilitator?

Rank 1 = Strongest Barrier
Rank 2 = Next Strongest Barrier
Rank 3 = Third Strongest Barrier

(OPTIONAL) Would you like to share your reasons for choosing your Strongest Barrier?

Section 5: CLOSING

The completion of this study will provide valuable insights into the classroom implementation of the five strands of mathematical proficiency. I am grateful for your willingness to participate, and hope that this research will ultimately benefit our students. May your kindness be rewarded a hundredfold. Thank you very much for your support!

IMPORTANT NOTE: Since the survey is anonymous, and the e-mail addresses are not collected, participants will not be able to have a copy of their responses. If you have any concern, you may send an e-mail to marife_corpuz@dlsu.edu.ph.