



MATHSAVER (STRENGTHENING ANALYTICAL AND VALUE-BASED EDUCATION FOR RESILIENCE): AN INTERVENTION MATERIAL INTEGRATING CLIMATE CHANGE ADAPTATION AND DISASTER RESILIENCE

DR. RHEA ROSE A. CASTILLO

DR. CLARIZA D. DALISAY

MA. JANECY S. REYES

San Pascual Senior High School 1
rhearose.abanador@deped.gov.ph

ABSTRACT

This action research aims to enhance Grade 11 learners' mathematical problem-solving skills through the integration of climate change adaptation and disaster resilience concepts into General Mathematics instruction. The study specifically aims to identify the least mastered competencies in the General Mathematics Numeracy Assessment, determine the stages where learners encounter problem-solving difficulties, assess learners' perceptions of topic relevance, and develop intervention materials to address these gaps. A total of 117 purposively selected learners from San Pascual Senior High School 1, who scored below 8 in the Numeracy Test, participated in this study during the School Year 2025–2026. Following descriptive research design, data were gathered using documentary analysis, Newman's Error Analysis framework, and a researcher-made questionnaire. Results revealed that learners demonstrated low mastery in solving problems involving functions, exponential and logarithmic equations. Most difficulties occurred at the Comprehension and Transformation stages, indicating that while learners could read and decode problems, they struggled to interpret and translate them into mathematical representations. Learners strongly agreed on the relevance of integrating real-world themes, particularly climate change and disaster resilience, into problem-solving activities. These findings support the development of the MathSAVER intervention material, which incorporates contextualized, visual, and value-based strategies to strengthen comprehension and transformation skills. The study recommends embedding real-world

Editorial Team

Editor-in-Chief: Alvin B. Punongbayan

Associate Editor: Andro M. Bautista

Managing Editor: Raymart O. Basco

Web Editor: Nikko C. Panotes

Manuscript Editors / Reviewers:

Chin Wen Cong, Christopher DC. Francisco, Camille P. Alicaway, Pinky Jane A. Perez,
Mary Jane B. Custodio, Irene H. Andino, Mark-Jhon R. Prestoza, Ma. Rhoda E. Panganiban, Rjay C. Calaguas,
Mario A. Cudiamat, Jesson L. Hero, Albert Bulawat, Cris T. Zita, Allan M. Manaloto, Jerico N. Mendoza

INSTABRIGHT e-GAZETTE

ISSN: 2704-3010

Volume VII, Issue III

December 2025

Available online at <https://www.instabrightgazette.com>



contexts into mathematics instruction, providing targeted support in early problem-solving stages, and implementing professional development programs focused on contextualized teaching.

Keywords: *Mathematical Problem-Solving, Contextualization, Climate Change Adaptation, Disaster Resilience, Intervention Material*



Editorial Team

Editor-in-Chief: Alvin B. Punongbayan

Associate Editor: Andro M. Bautista

Managing Editor: Raymart O. Basco

Web Editor: Nikko C. Panotes

Manuscript Editors / Reviewers:

Chin Wen Cong, Christopher DC. Francisco, Camille P. Alicaway, Pinky Jane A. Perez,
Mary Jane B. Custodio, Irene H. Andino, Mark-Jhon R. Prestoza, Ma. Rhoda E. Panganiban, Rjay C. Calaguas,
Mario A. Cudiamat, Jesson L. Hero, Albert Bulawat, Cris T. Zita, Allan M. Manaloto, Jerico N. Mendoza
