



C.3. Copy of a long-term sustainable extension program, e.g. community development projects, etc.

Capacity Building for Teachers in High-Need Mathematics Environments

This long-term extension program is specifically designed to address the critical shortage of specialized mathematics teachers in remote and underserved communities within the DepEd Cotabato and MBHTE BARMM divisions.

Recognizing that many mathematics classes in these areas are facilitated by non-math majors or teachers handling "out-of-field" subjects, the program focuses on capability building by providing these teachers with research-validated, self-instructional materials. By shifting the focus from traditional lecturing to the use of high-quality Instructional Materials, the program ensures that student learning remains consistent and effective, regardless of the teacher's primary specialization.

Five-Year Development Roadmap

Time Period	Program Phase	Specific Project Activities
Year 1 (2023)	Foundational Design & Training	Empowering Elementary Teachers: Training teachers at Nangaan ES to design Mathematics Instructional Materials in the Maguindanaon language to bridge the gap between home and school.
Year 2 (2024)	Implementation & Classroom Validation	Classroom Support: Validating the use of mother-tongue materials in the classroom. This phase helps non-specialist teachers deliver math concepts more accurately using research-based local guides.
Year 3 (2025)	Secondary Development	Support for Non-Math Majors: Developing "Self-Instructional Materials" and Activity Pages (LAPs). These are designed to guide teachers who are teaching "out-of-field" (non-math majors) and help them facilitate complex topics.
Year 4 (2026)	Pilot Deployment & Mentoring	Bridging Teacher Gaps: Full implementation at Salvacion High School. Providing a sustainable "learning package" for students in remote areas where specialized Mathematics teachers are currently unavailable.
Year 5 (2027)	Strategic Scaling & Expansion	Sustainability Expansion: Distributing validated math resources to nearby schools identified as having no math majors. Establishing a permanent "Peer-to-Peer" support network between USM and local schools.





DETAILED PROPOSAL

A. BASIC INFORMATION

1. **Title of the Project:** Strengthening mother-tongue based education of elementary teachers in Deped Cotabato/MBHTE BARMM through instructional materials development and validation.

2. **Proponents(s)**

Component 1: Development of high-quality mother-tongue based instructional materials in elementary mathematics that effectively engage and educate students.

2.1 Name: PHILIP LESTER P. BENJAMIN

2.2 Designation: Component 1 Leader

2.3 Component 1 members: Leorence Tandog, Debbie Marie Verzosa, Florie Jane Tamon, Rowel Madio, Roel Valenton, Anna Jean Garcia, Leonard Paleta

2.4 College/ Unit: Graduate School/College of Science and Mathematics

2.5 Address: Osias, Kabacan, Cotabato

2.6 Telephone Number (s): 09338245352

2.7 Fax Number: none

2.8 Email Address: plbenj@usm.edu.ph

Component 2: Validation of mother-tongue based instructional materials developed for elementary mathematics through feedback from teachers, students, and parents.

2.9 Name: SANDRA A. NANDING

2.10 Designation: Component 2 Leader

2.11 Component 2 members: Merian Rubio, Jeaneth Licaros, Daryl Mae Mamon, Jonald Pimentel, Jennifer Pama, Honey Vincent Valle

2.12 College/ Unit: College of Science and Mathematics

2.13 Address: Mercado Street, Kabacan, Cotabato

2.14 Telephone Number (s): 09169284643

2.15 Fax Number: none

2.16 Email Address: nsnanding@usm.edu.ph

Implementing Agency

a. Lead Agency: USM Graduate School/College of Science and Mathematics

2. Collaborating Agency (s): Deped Cotabato/MBHTE BARMM

3. **Project Duration:** One year

4. **Project Location:** Cotabato/BARMM

5. **Total Budget Requirement**

6.1. Budget Requested: P60,000

6.2. Agency Counterpart



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CAPSULE PROPOSAL FOR EXTENSION

A. BASIC INFORMATION	
1. Project Title	Strengthening Barangay High Schools: Validating and Implementing Representation Approach-Based Learning Materials for Independent Study of Mathematics in Remote Schools
Component 1	Building Capacity for Teachers in Instructional Development
Component 2	Building Capacity for Teachers in the Conduct of Action Research
Component 3	Design and Development of Representation Approach-Based Learning Materials for Independent Learning of Mathematics
Component 4	Validation and Packaging of Representation Approach-Based Learning Materials for Independent Learning of Mathematics
Component 5	Implementation of Representation Approach-Based Learning Materials for Improved Learning of General Mathematics
2. Proponent/s Indicate Name Designation, Office	<u>Leorence C. Tandog</u> , Debbie Marie Verzosa, Jonald Pimentel Philip Lester Benjamin, Leonard Paleta, Anna Jean Sebastian, Jupiter Pilongo, Daryl Mae Catubig, Lawton Yabes, Roel Valenton, Shandra Nanding, Rowel Madio Faculty, College of Science and Mathematics
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3. Lead Unit/College	College of Science and Mathematics
3.1. Collaborating Unit/College	USM Graduate School
3.2. Partner Agency	

