School QUEZON HILL ELEMENTARY SCHOOL

Innovation Name BayongLab:Mobile Science and Math on the Go

Explain your innovation briefly

To make a science and math laboratory more functional, an intervention using “bayongs”(a traditional Filipino woven bags) can be implemented. These sturdy eco-friendly bags can be used to carry essential laboratory materials to classrooms, making it easier for students and teachers to conduct experiments without needing to have laboratory room. By organizing and pre-packing the bayongs with the necessary tools and supplies for specific experiments, this approach promotes hands-on learning and ensures that resources are readily available for all students. Additionally, this method encourages resourcefulness and sustainability by utilizing a culturally significant and reusable item. The intervention not only enhances the accessibility of laboratory experience but also foster a sense of shared responsibility among students in managing and maintaining their learning materials.

Problem Statement – What problem does the innovation seek to address

The BayongLab seeks to address the critical problem of limited access to fully functional science and math laboratories that deprives students of essential hands-on learning experiences.

How does the project demonstrate a clear understanding of the needs of your school community?

Enumerate the pain points and needs here.

1. Limited Access to Laboratory Facilities - this project recognizes the need to make lab experiences accessible to all students, regardless of the availability of dedicated lab spaces.
2. High Costs of Equipment and Maintenance – BayongLab offers a cost-effective alternative by using portable, pre-packed bags to deliver essential tools to classrooms, reducing the need for expensive lab setups.
3. Educational Disparities – BayongLab ensures that all students have equal access to these opportunities, helping to bridge the gap between resource-rich and resource-poor schools.
4. Needs for Culturally Relevant Solutions – The project integrates a culturally significant tool, the bayong, into the educational process, promoting environmental sustainability and cultural pride while meeting the practical needs of the school community.

What makes the project unique, different, and worthy of emulation?

The BayongLab project is unique because it creatively combines cultural tradition with modern educational needs. By using bayongs- a sustainable and culturally significant tool- the project not only promotes environmental consciousness but also preserves cultural heritage in an educational context. It makes science and math more accessible by bringing laboratory experiences directly to the classroom, especially in schools where dedicated lab spaces might be limited like in our case. The project is also cost-effective, requiring minimal resources to implement, making it easily replicable in diverse settings. Its emphasis on hands-on learning and community involvement makes it a model for other schools.

What are your key challenges and how do you plan to overcome them?

1. Sourcing and Standardizing Materials – ensuring that each bayong contains the necessary materials for specific experiments might be difficult . Solution- Create detailed lists of required materials and seek partnership.
2. Teacher Training and Familiarity- Teachers may not fully trained or familiar with the mobile lab concept and might struggle to integrate it effectively into their lessons. Solution- Provide comprehensive training sessions for teachers on how to use the bayongs. Include demo and hands-on to build confidence.
3. Cultural Acceptance and Integration – Some members of the community may not immediately see the value in using a traditional item like a bayong for educational purposes. Solution- Showcase success stories or positive outcomes from the project.

What resources would you need? How would you source them?

Enumerate the most important resources that you would need.

1. Bayongs: Durable woven bags of high quality to transport lab materials.
2. Laboratory Materials and Equipment: Basic science and math supplies for various experiments such as beakers, test tubes, measuring instruments, calculators etc.
3. Educational Materials: Detailed instructions, lesson plans, and experiment guides to ensure teachers and students can effectively use the materials in the bayongs.
4. Community Engagement : Efforts to involve parents, community leaders and stakeholders to support and advocate for the project.
5. Funding and Partnership : Financial resources to cover the costs of materials, training, and logistics. Partnership with LGU, NGOs or GOs.

BayongLab: Mobile Science and Math on the go

Maria O. Palsi

The Problem

The school has no Science and Math Laboratory room. No access to labs impedes hands-on experiences in Science and Math education in schools.

The Context

Quezon Hill Elementary School learners are in culturally diverse city with a significant Cordillera population seeking accessible and flexible educational resources to enhance their learning and retention in real world scientific and mathematical application.

Stakeholders Pain Points

LEARNER

Lack of consistent access to hands-on, experiment-based learning due to limited laboratory resources.

TEACHER

Teachers struggle with limited tools and resources to effectively teach science and math subjects and provide practical learning experiences.

PARENTS

Parents are concerned about the quality of education their children receive, especially when schools lack the necessary resources for hands-on Science and Math learning.

BARANGAY OFFICIAL

They are challenged by the need to support local schools in providing quality education despite limited community resources and infrastructure.

The Solution

BayongLab addresses the lack of science and math laboratories by providing portable, pre-packed bayongs with Learning Tool and Equipment(LTE) needed for the week for each grade level(3-6) based on the Learning Competency to be developed thru Inquiry Based Approach/ hands-on, experiment-based learning directly to classrooms for the readily access of teachers and learners.

A Differentiated Approach

Math and Science Lab Problem

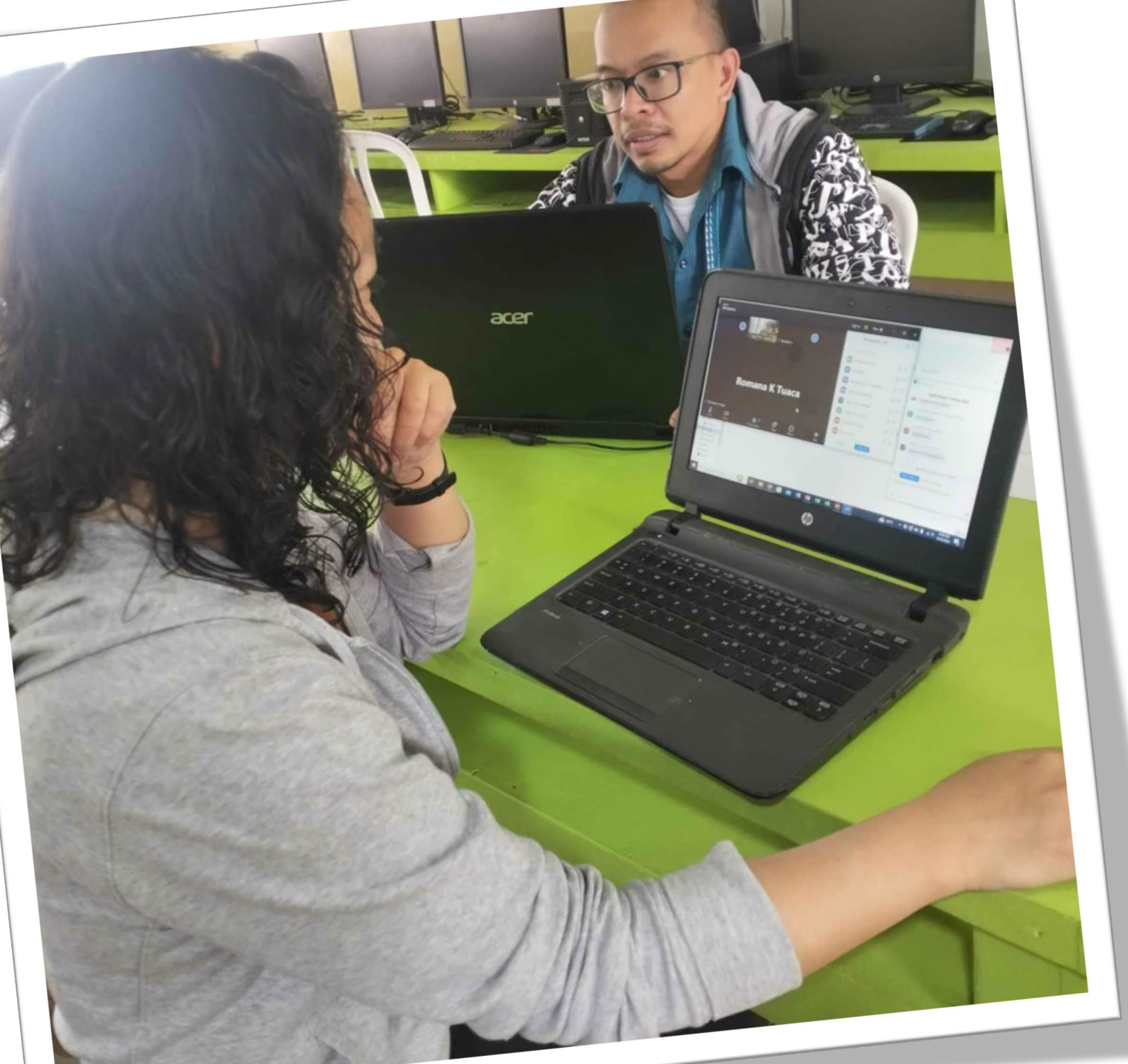
Bayong which contains the LTE that is needed in the grade level based on the Learning competency to be developed for the week using the Inquiry –Based Approach/Hands-on Learning.

Classroom observations and Post-conference

Monitoring

Inventory

Technical Assistance



Challenges

- Resource Sourcing and Standardization
- Teacher Training and Adaptation
- Cultural Sensitivity
- Logistical Management
- Community Engagement

Needed Resources

Bayongs, lab materials, logistical support and community engagement

MOOE, Partnership with internal and external stakeholders

Monitoring & Evaluation

The monitoring will be done through regular classroom observations, surveys and inventory checks.
Indicators for success: Increased student engagement, improved academic performance, positive teacher feedback, active community support

Critical Visual Narrative

QHES Grade 6 students struggled in Science, achieving the lowest regional average score of 40% on the Assessment Test.

This coincide with the MPS of the school across four quarters.

Mobile BayongLab is the solution to this concern.

You are a vital part of this endeavor.