

Enhancing learning through intensive gardening

Mongu Catholic College of Education

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This change project involved using intensive urban gardening as an avenue for practically augmenting what is learnt in the classroom in two ways:

1. STEM (Science, Technology, Engineering, and Mathematics) subjects.

2. ECE (Early Childhood Education)

As part of the project, student teachers actively engaged in gardening on a small plot adjacent to one of the College classrooms. They were involved at every stage of development of the garden, from designing to managing the garden. Some crops were grown directly in the soil; others in empty sacks and containers filled with soil and enriched with plant matter. Topics in the teacher education and school syllabi were aligned with the activities of sustainable urban gardening.

STEM

The reed fence constructed to secure the garden plot provided an opportunity to put into practice knowledge and skills acquired from the design and technology class. Activities in the garden ranged from land preparation to planting and crop management and were an opportunity to put what is learned in agricultural science into practice. Students realized that one does not need several acres of land; all that is required is a small garden plot and income can even be generated in addition to food. The use of inorganic fertilisers was avoided. The students were encouraged to use bio-fertiliser made from plant remnants gathered on the college premises. This provided an opportunity to work with knowledge from chemistry.

ECE

It is also possible to teach Early Childhood Education (ECE) using an urban garden environment. The same garden at Mongu College was used to demonstrate how urban gardening can be part of ECE teaching by integrating it in lesson planning, daily programmes, learner assessment and child play. Aligning syllabi topics and learning outcomes with the activities in the garden is key in both ECE and STEM. Ultimately the garden environment enables the attainment of the curriculum intentions as well as the Sustainable Development Goals (SDGs).

Community of Practice

A Community of Practice that supports teachers in this way would include academic staff for ECE and STEM subjects in the College, as well as staff from the Ministry of General Education at Provincial and District levels. School management and staff at the schools as well as the students can use urban gardens for School Teaching Practice (STP). Student teachers do, however, need to be taught how to engage stakeholders, school management, higher grade learners, fellow teachers, support staff as well as how to involve the parents of the learners in healthy school community relationships.

“The STEM change project attempts to demystify the notion that STEM or science in general can only be taught within a laboratory setup (we call it “delaboratorization” of the teaching of STEM or science)...”

Mushinga Mooto

