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P09 - Project TALA: Developing A Scalable Syllabus Framework for Informal Astronomy Education in the Philippines

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Astronomy plays a vital role in advancing scientific literacy; however, astronomy instruction in the Philippines remains largely limited to foundational concepts within the K–12 curriculum, providing few opportunities for learners to explore advanced topics and develop practical skills. The lack of structured informal astronomy programs and age-appropriate instructional resources further limits meaningful engagement with astronomy and space science. To address this gap, the Valenzuela City League of Astronomy Enthusiasts (V-CLUE) developed Project TALA (Teaching Astronomy to Local Audience), the first astronomy summer school camp for youth in the Philippines, centered on a structured learning for the youth aged 15–18.

The syllabus was designed using a learner-centered approach and underwent content validation by the DepEd Schools Division Office of Valenzuela and professionals in astronomy to ensure scientific accuracy, pedagogical appropriateness, and alignment with learner needs. It was organized into four major astronomy themes that progressively introduced concepts rarely discussed in the K–12 curriculum, including observational astronomy, telescope operations, stellar evolution, galaxies, cosmology, and space exploration. Each session combined lectures with hands-on workshops and was supported by learning experiences such as telescope observations, facility visits, reflective activities, and a capstone project. The instructional sequence was guided by Kolb's Experiential Learning Cycle and the 5E Instructional Model to promote inquiry, conceptual understanding, and application.

Implementation outcomes demonstrated that the structured progression of topics and experiential learning design effectively sustained participant engagement, achieving a 96.43% attendance rate across 12 sessions, with all participants completing the program. Participant evaluations also indicated consistently high ratings for lecture delivery, learning environment, and engagement. These findings suggest that a validated, developmentally appropriate syllabus can serve as an effective framework for informal astronomy education, complementing the Philippine K–12 curriculum while providing a scalable model for community-based astronomy programs that promote astronomy literacy and youth engagement in science.

Keywords: astronomy education, informal astronomy education, curriculum development, astronomy literacy, experiential learning

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