

## Formation of Science Literations Based on Indigenous Science Mbaru Niang Manggarai

**Authors :** Yuliana Wahyu, Ambros Leonangung Edu

**Abstract :** The learning praxis that is proposed by 2013 Curriculum (K-13) is no longer school-oriented as a supply-driven, but now a demand-driven provider. This vision is connected with Jokowi-Kalla Nawacita program to create a competitive nation in the global era. Competition is a social fact that must be faced. Therefore the curriculum will design a process to be the innovators and entrepreneurs. To get this goal, K-13 implements the character education. This aims at creating the innovators and entrepreneurs from an early age (primary school). One part of strengthening it is literacy formations (reading, numeracy, science, ICT, finance, and culture). Thus, science literacy is an integral part of character education. The above outputs are only formed through the innovative process through intra-curricular (blended learning), co-curricular (hands-on learning) and extra-curricular (personalized learning). Unlike the curriculums before that child cram with the theories dominating the intellectual process, new breakthroughs make natural, social, and cultural phenomena as learning sources. For example, Science in primary schools place Biology as the platform. And Science places natural, social, and cultural phenomena as a learning field so that students can learn, discover, solve concrete problems, and the prospects of development and application in their everyday lives. Science education not only learns about facts collection or natural phenomena but also methods and scientific attitudes. In turn, Science will form the science literacy. Science literacy have critical, creative, logical, and initiative competences in responding to the issues of culture, science and technology. This is linked with science nature which includes hands-on and minds-on. To sustain the effectiveness of science learning, K-13 opens a new way of viewing a contextual learning model in which facts or natural phenomena are drawn closer to the child's learning environment to be studied and analyzed scientifically. Thus, the topic of elementary science discussion is the practical and contextual things that students encounter. This research is about to contextualize Science in primary schools at Manggarai, NTT, by placing local wisdom as a learning source and media to form the science literacy. Explicitly, this study discovers the concept of science and mathematics in Mbaru Niang. Mbaru Niang is a forgotten potentials of the centralistic-theoretical mainstream curriculum so far. In fact, the traditional Manggarai community stores and inherits much of the science-mathematical indigenous sciences. In the traditional house structures are full of science and mathematics knowledge. Every details have style, sound and mathematical symbols. Learning this, students are able to collaborate and synergize the content and learning resources in student learning activities. This is constructivist contextual learning that will be applied in meaningful learning. Meaningful learning allows students to learn by doing. Students then connect topics to the context, and science literacy is constructed from their factual experiences. The research location will be conducted in Manggarai through observation, interview, and literature study.

**Keywords :** indigenous science, Mbaru Niang, science literacy, science

**Conference Title :** ICCPL 2017 : International Conference on Creative Pedagogy and Learning

**Conference Location :** Bali, Indonesia

**Conference Dates :** October 23-24, 2017