

SEAMEO RECSAM STEM PADL FRAMEWORK: NURTURING EMPATHY FOR SUSTAINABLE SOCIETY

ABSTRACT

SEAMEO RECSAM in collaboration with Monash University came up with the draft of STEM Planning and Design Learning (PaDL) Framework comprised of the Design Planning for Teachers (DPFT) and Design Learning Process for Students (DLPFS) under the SEAMEO Basic Education Standards (SEA-BES) project. The SEA-BES project is aligned with the SEAMEO Secretariat's Priority Area #7 "21st Century Curriculum." STEM is seen as a potent avenue for developing scientists, engineers, mathematicians, technologists and the like imbued with strong belief that human values should be the key element in the educational process alongside content, thinking and processes for harmony and sustainability. Empathy is the first stage in the 4-stage Design Learning Process for Students followed by developing design ideas, prototyping/modeling and proposing solution in a STEM curriculum design. The framework of SEA-BES Common Core Regional Learning Standards in Mathematics and Science laid down the importance of mathematical and scientific values, attitudes and habits for human character where empathy is highlighted. Students should develop open-mindedness, be able to show tolerance and respect towards different opinions, viewpoints and people with different beliefs and value systems (SEAMEO RECSAM, 2017). Engaging students in empathy can make STEM education more meaningful because they can see the impact of STEM in their lives and the lives of others. The content becomes relevant and important to them and their communities. Taking a more interpersonal, issue-based or empathy-based approach to STEM learning can also broaden our visions of what it means to be a "STEM literate person."

Planning and Design Learning (PaDL) Framework

