

Students' Views of an Out-of-school Time STEM Programme

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Abstract

Purpose – This study was conducted to explore Malaysian students' views on an out-of-school time STEM programme that was organised at the national level.

Methods – A Likert scale questionnaire was distributed to the student participants to obtain views and feedback on five aspects of the out-of-school time STEM programme in terms of their learning that related to Exposure to Technologies, Competency, Interest in STEM, Character Quality and Life-long learning Skills. The questionnaires consist of 30 items – 6 items for each domain of learning. The number of students who returned the questionnaires is 1223 students from 189 schools.

Findings – Most Malaysian students indicated that the out-of-school time STEM programme had impacted their Interest in STEM, Character Quality and Life-long Learning Skills. Two of the domains are considerably lower than the other domains, i.e. Exposure to Technologies and Competency. All ten states scored above four for Interest in STEM, Character Quality and Life-long Learning Skills domains. Based on the descriptive statistics (mean, standard deviation and Cohen's d effect size), there was no difference between urban and rural schools regarding the students' views of their learning from the programme. However, there is a difference between West Malaysia and East Malaysian in terms of Character Quality. Differences between boys and girls in terms of Exposure to Technologies and Interest in STEM are also observed. In general, the students viewed the out-of-school time STEM educational programme positively and perceived it to impact their learning.

Significance – A research instrument to examine secondary school students' views of out-of-school time STEM programmes was developed which has provided some evidence that informal out-of-school time STEM programmes can attract students to STEM career.

Keywords: Informal learning, Out-of-school time STEM education, STEM-based programme, Programme evaluation,