

PERMATA-UKM Science Institute: An Enrichment Program to Promote Students' Interests in STEM Career

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ABSTRACT

Today's educational system is becoming increasingly competitive for students especially in STEM area. Various initiatives are taken by countries all over the world to increase students' interests in choosing a career in STEM to meet demands of the increasingly challenging curriculum. One of the ways to impart students' interests is through STEM Enrichment Programs. Therefore, Pusat GENIUS@Pintar Negara took the initiative to organize The PERMATA-UKM Science Institute; a STEM Enrichment program where 27 students, 6 young scientists and 4 school teachers were selected through the Nobelist Mindset Workshop to participate in this program, which was held in London. This study employed qualitative approach. The instruments used for data collection were journal reflection entries and semi-structured interview. Throughout the program, students were asked to write daily reflections using Gibbs Reflective Cycle Model. Students' entries and interview were analyzed to study the impact of this program in promoting students' interests in STEM career, to determine how this program could be improved and to investigate how activities conducted were able to stimulate students' interests in STEM. The results indicated the participants' interests increased when they visited laboratories in Cambridge and Oxford Universities. They preferred hands-on activities rather than lectures. Real-life experience as scientists was also the key factor that enhanced their interests. The study showed a well-panned program with hands-on activities were preferred among the participants. This study provides crucial insights on the importance of a well-structured STEM enrichment program which is beneficial to the Ministry of Education and other stakeholders.

Keywords: STEM; enrichment program; career; journal entries; students' interests