

## **Exploring crucial factors of an interest in STEM career model among secondary school students**

### **ABSTRACT**

Many countries desperately need manpower from the fields of Science, Technology, Engineering and Mathematics (STEM) to help address the country's increasingly volatile economy. Barriers to implementation are identified when students are less exposed to STEM Education goals. Therefore, this study is to determine the main factor that could influence the development of STEM career interest among secondary school learners. Thus, the objective of this study is to develop a model towards the STEM career interest formation among Form 4 science stream students in Malaysia. This study uses quantitative study and proportionate stratified random sampling method in data collection. It involved 314 students Form 4 secondary school science stream in Selangor, Malaysia. The study used three instruments to collect data, namely S-STEM and interest in STEM careers, Science Motivation Questionnaire II (SMQ II), and Parental Authority Questionnaire (PAQ). Implementing correlational analysis between factors and simultaneous regression to determine the overall contributing with huge impacts of each factor towards the formation of STEM career interest among learners with the value of standardized regression weight for the determination coefficient ( $R^2$ ) = 0.64. The result of the findings shows the crucial factors in this study are accurate there are attitudes towards STEM, 21st-century skills, science motivation, and parental authority significance with the huge contribution of the cultivation of learners' STEM careers interest entirely.

**Keyword:** Industrial needs, model; Science curriculum; Secondary school; Stem career interest