

# **The effects of socioscientific issues approach with thinking wheel maps on entrepreneurial science thinking among fifth graders**

## **ABSTRACT**

This research was conducted to examine the effects of the socioscientific issue approach (SSI) with thinking wheel map (TM) on entrepreneurial science thinking (EST) and the constructs of Observation, New Ideas, Innovation, Creativity, and Value. A teaching and learning (TL) module was developed to guide teachers in implementing the infusion of SSI with TM TL approach on EST among fifth graders. Quasi-experimental quantitative research was conducted on 345 fifth graders in urban primary schools in Malaysia. A total of three TL groups were assigned randomly; namely, i) SSI-TM approach (n=115), ii) SSI (n=115) and iii) Conventional approach (CONV, n=115). The results of the MANCOVA analysis showed a significant effect across the three groups of TL approach for EST. Meanwhile, the ANCOVA analysis results showed a significant effect of the SSI-TM TL approach compared to SSI and CONV on EST and in all constructs of EST. The SSI-TM TL approach showed a higher post-test mean score than the SSI, and then the SSI post-test mean score was significantly higher than the CONV in all constructs studied except the Observation. The findings prove that the SSI-TM TL approach positively impacts the cultivation of EST among fifth graders.