

INVESTIGATION OF METHODS FOR THE OPTIMAL SELECTION OF STUDENTS INTO SPECIALIST SCIENCE SECONDARY SCHOOLS

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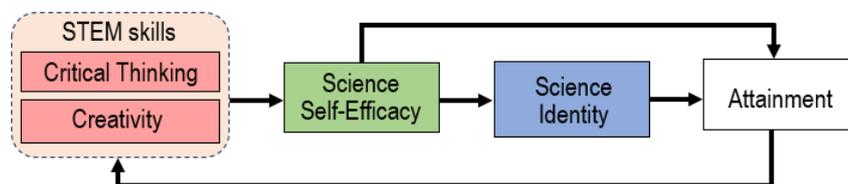
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The mission of specialist science secondary schools (SSSS) is to increase the number of students with aspirations to participate in higher education courses and careers in Science, Technology, Engineering, and Mathematics (STEM; Means et al., 2021). Although many SSSS use selective admission criteria (Erdogan & Stuessy, 2015), the efficacy of such entry assessment still requires exploration. This research is investigating the characteristics of students that may best benefit from the education provided through SSSS to in-turn inform the best design for the entry assessment. Our conceptual framework (shown below) was developed from social cognitive career theory, explaining factors influencing individuals' academic or career choices (Lent et al., 1994). Based on this theory, there are four student characteristics our work has chosen to focus on: critical thinking, creativity, science self-efficacy, and science identity.



These four characteristics are being explored through a validated questionnaire constructed from four pre-existing and validated instruments (Lin & Tsai, 2013; Lockhart et al., 2022; Runco et al., 2001; Sosu, 2013). The questionnaire was distributed and data were collected from students ($n = 87$), alumni ($n = 193$), teachers ($n = 23$), and school administrators ($n = 3$) from one SSSS in Thailand from April to June 2023. Participants' demographic information was collected to investigate any correlations between cohorts and their questionnaire responses. Additional qualitative data were obtained through both open-ended responses and interviews (teacher $n = 14$ and school administrator $n = 1$) to reveal further depth and help understand participants' perspectives. This presentation will share the questionnaire findings from one school involving this study.

These preliminary results provide practitioners and decision-makers with some initial insights about the student characteristics they should focus on for the selection of suitable students for SSSS.

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