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The Effect of Adolescents' Grit on Stem Creativity: The Mediation of Creative Self-Efficacy and the Moderation of Future Time Perspective

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Abstract : Adolescents, serving as the reserve force for technological innovation talents, possess STEM creativity that is not only pivotal to achieving STEM education goals but also provides a viable path for reforming science curricula in compulsory education and cultivating innovative talents in China. To investigate the relationship among adolescents' grit, creative self-efficacy, future time perspective, and STEM creativity, a survey was conducted in 2023 using stratified random sampling. A total of 1263 junior high school students from the main urban areas of Chongqing, from grade 7 to grade 9, were sampled. The results indicated that (1) Grit positively predicts adolescents' creative self-efficacy and STEM creativity significantly; (2) Creative self-efficacy mediates the positive relationship between grit and adolescents' STEM creativity; (3) The mediating role of creative self-efficacy is moderated by future time perspective, such that with a higher future time perspective, the positive predictive effect of grit on creative self-efficacy is more substantial, which in turn positively affects their STEM creativity.

Keywords : grit, stem creativity, creative self-efficacy, future time perspective
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