

## **Examining Moderator Factors Influencing Students' Interest in STEM Careers: The Role of Demographic, Family, and Gender**

### **ABSTRACT**

This study investigates the characteristics that influence rural high school students' interest in jobs in Science, Technology, Engineering, and Mathematics (STEM). It focuses on the impact of socioeconomic class, family background, and gender on their ideas and desires for STEM jobs. The findings show that socioeconomic factors have a major impact on rural students' interest in STEM subjects. Due to enhanced access to resources, educational opportunities, and exposure to STEM-related activities, students from higher socioeconomic backgrounds in rural areas display greater interest and drive for STEM. Furthermore, parental education and occupation have a significant impact on rural children's perceptions of STEM vocations and self-confidence in these domains. The report also emphasises the impact of gender dynamics, with gender preconceptions and a lack of diverse role models contributing to rural students' underrepresentation of girls and marginalised genders in STEM jobs. It is critical to develop inclusive learning settings, challenge gender prejudices, and offer equal access to STEM education for rural children in order to increase interest and participation in STEM. By addressing these concerns, educators and politicians can encourage rural kids to pursue STEM careers, resulting in a more diversified and skilled STEM workforce and propelling rural areas forward in the face of technological breakthroughs.