

BAR-ILAN UNIVERSITY

**Self-regulated Learning And Motivation Among Gifted And  
High Achieving Students In STEM Disciplines:  
Examining Differences Between Students From Diverse  
Socioeconomic Levels**

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## Abstract

Self-regulated learning is an active process that assists students in managing their thoughts, behaviors, and emotions in order to successfully navigate their learning experiences. Studies addressing SRL of highly intelligent and high-achieving learners are diverse and inconsistent in their conclusions. Several studies maintain that highly intelligent students are more knowledgeable about SRL and understand better why certain strategies are useful. The study examined the differences in motivation and SRL between gifted, high achievers and typical learners in STEM disciplines (Science, Technology, Engineering and Mathematics) by addressing the contribution of socio-economic status (SES). Research participants, numbering 151 in all, representing 11th and 12th grades students from two different schools (88 girls, 63 boys), were divided into four study groups based on their general intelligence and school grades in science and mathematics and SES. All participants completed SRL and motivation questionnaires. Additionally, 12 students were interviewed by the researcher, representing three students from each study group. The study results indicated that among gifted high achievers (GHA) all motivation measures were significantly higher than those of non-gifted typical achievers (NGTA). These differences were especially prominent among students from a low SES. Furthermore, GHA students reported having more SRL capabilities than NGTA students with regard to *organization, meta-cognition, time and learning environment, friends, learning, and effort regulation*. The *organization* strategies of GHA students were higher than those of NGTA; however, low SES students reported using more *organization* strategies compared with high SES students. The results demonstrated that NGTA students surpassed their GHA counterparts in critical thinking.