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## Comparison of the Effectiveness of Self-Regulation Strategies Training and Problem-Solving Skills Training on Self-Efficacy and Academic Motivation of Tenth Grade Male Students

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### Extended Abstract

#### Aim

The advancement and prosperity of any society hinge on the quality of its educational framework. Achieving efficiency in education necessitates a thorough consideration of learners' academic progress across various stages (Alfonso & Lonigan, 2021). To effectively plan and develop educational programs, understanding the factors influencing students' progress and academic performance is imperative, paving the way for optimal outcomes in educational endeavors (Hallahan et al., 2020). Amidst their academic journey, students encounter numerous challenges and psychological pressures, which not only impede their academic performance but also breed unfavorable school experiences. This adverse cycle fosters a negative self-perception and outlook toward their environment, hindering the realization of their academic aspirations (Siddiq, Gochyyev, & Valls, 2020). Notably, students' academic engagement is influenced by various factors, chief among them being self-efficacy—a potent determinant of educational performance (Hanham, Lee & Teo, 2021). Additionally, academic motivation stands as a pivotal variable, indispensable in navigating the complexities of learning and surmounting educational hurdles (Cuskelly & Gilmore, 2014). Against this backdrop, this study aims to compare the efficacy of self-regulation strategies training and problem-solving skills training on the self-efficacy and academic motivation of 10th-grade male students

#### Methodology

This research employed a quasi-experimental design encompassing pretest, posttest, control group, and a two-month follow-up period. The study population comprised tenth-grade male students from Ahvaz during the academic year 2021-22. Utilizing purposive sampling, 55 tenth-grade students exhibiting low self-efficacy and academic motivation were selected and randomly allocated to three groups, including two intervention groups and a control group. The experimental groups underwent separate training sessions on self-regulation strategies (7 sessions) and problem-solving skills (9 sessions), while the control group abstained from such interventions. The assessment tools employed in this study were the Academic Motivation Questionnaire (AMQ) (Harter, 1981) and the General Self-Efficacy Scale (GSE) (Schwarzer & Jerusalem, 1995). Data analysis was conducted using mixed ANOVA via SPSS23 statistical software.

#### Findings

The results revealed that both self-regulation strategies training and problem-solving skills training significantly impacted self-efficacy ( $F=29.34$ ;  $\eta^2=0.53$ ,  $P<0.001$ ) and academic motivation ( $F=31.54$ ;  $\eta^2=0.55$ ,  $P<0.001$ ) among 10th-grade male students. Consequently, these interventions led to increased average scores of self-efficacy and academic motivation in the targeted group. Post hoc analysis further indicated no significant difference in the effectiveness of these two interventions.

**Conclusion**

Based on the study's outcomes, it can be inferred that both self-regulation strategies training and problem-solving skills intervention are effective methods for enhancing students' self-efficacy and academic motivation. Engaging in self-regulated learning and employing cognitive and self-regulatory strategies enhances students' planning abilities and facilitates progress monitoring. Consequently, students are better equipped to navigate course assignments and related tasks efficiently, leading to increased academic success, heightened self-confidence, and perceived academic competence, thereby fostering stronger academic motivation and self-efficacy. Moreover, teaching problem-solving skills equips students with the capability to tackle academic challenges swiftly and effectively, further contributing to enhanced academic motivation and self-efficacy.

**Keywords:** Academic Motivation, Self-Regulatory Strategies, Self-Efficacy, Problem-Solving Skills.

**Ethical Considerations**

To uphold ethical standards in the research, the researcher obtained informed consent from participating students for their involvement in the intervention program. Participants were fully briefed on the implementation process of the interventions. Additionally, students in the control group were assured that they would receive these interventions upon completion of the research. Confidentiality of participant information was maintained, and anonymity was preserved by excluding names from the study.

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**Conflict of Interest**

No conflicts of interest have been reported by the authors in this study.

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