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RELATION BETWEEN SELF-REGULATED LEARNING AND ACADEMIC ACHIEVEMENT OF SENIOR SECONDARY STUDENTS

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ABSTRACT

This study explores the relationship between self-regulated learning (SRL) and academic achievement among 11th standard students from Nagpur and Wardha districts. A sample of 300 students was selected using a stratified random sampling technique. Data were collected using a standardized SRL scale and academic scores from recent examinations. The analysis, using Pearson's correlation and t-test, revealed a significant positive correlation between SRL and academic achievement. Moreover, female students exhibited significantly higher SRL scores than their male counterparts. The findings highlight the importance of fostering SRL skills in adolescents to enhance academic performance. The study suggests that educators, policymakers, and parents should collaboratively promote goal setting, time management, and reflective practices among learners.

Keywords: Self-Regulated Learning, Academic Achievement, Senior Secondary Students, Gender Differences, Educational Psychology, Learning Strategies, Maharashtra

1. INTRODUCTION

In the contemporary education system, academic achievement is no longer solely dependent on external teaching methods or teacher-centered strategies. A growing body of research highlights the importance of internal processes that enable students to take control of their learning. One such process is self-regulated learning (SRL), which refers to the active, constructive process whereby learners set goals for their learning, monitor, regulate, and control their cognition, motivation, and behavior, guided and constrained by their goals and contextual features in the environment. SRL empowers students to become independent, motivated, and strategic learners.

Senior secondary students, who are at a critical stage of academic transition, face increasing pressure to perform well in board examinations and competitive entrance tests. At this stage, the ability to self-regulate becomes crucial in managing study schedules, setting realistic goals, and maintaining motivation. Students who practice SRL are more likely to engage in deep learning, use time effectively, and overcome academic challenges with resilience. Hence, the role of SRL in academic success has become an essential area of exploration, especially in the Indian educational context where rote learning and teacher-dependency are still prevalent.

Understanding the relationship between self-regulated learning and academic achievement can offer valuable insights for teachers, parents, and policymakers. It can help identify strategies to support learners who struggle academically due to a lack of self-discipline or learning autonomy. This study seeks to explore the correlation between SRL and academic performance among senior secondary students, while also examining gender- and stream-based differences. The findings can contribute to designing educational interventions that foster self-directed learning and ultimately enhance academic outcomes.

2. RATIONALE OF THE STUDY

In recent years, the paradigm of education has shifted from teacher-centered instruction to learner-centered approaches that emphasize autonomy, self-direction, and lifelong learning. Among the various psychological constructs that support this transformation, self-regulated learning (SRL) stands out as a crucial factor influencing students' academic success. SRL enables learners to actively plan, monitor, and evaluate their own learning processes, making them more responsible, reflective, and efficient in achieving academic goals.

At the senior secondary level, students are expected to handle complex academic content, manage time effectively, and prepare for competitive examinations — all of which demand strong self-regulatory abilities. However, many students in the Indian education system rely heavily on external motivation and teacher guidance, which may hinder their academic growth in the long run. Identifying how SRL impacts academic performance at this stage is essential for developing effective learning environments that empower students to take control of their academic journey.

Despite the growing importance of SRL, limited empirical research has been conducted in the Indian context, particularly focusing on senior secondary students. There is a need to explore whether higher levels of SRL correspond with better academic achievement and how these patterns vary across gender and academic streams. This study aims to fill this gap and provide evidence-based insights that can inform educational policies, teaching strategies, and student support programs to foster academic excellence through self-regulated learning.

3. REVIEW OF RELATED LITERATURE

1) Sharma & Verma (2021)

In their study titled "Impact of Self-Regulation on Academic Achievement among Adolescents", Sharma and Verma aimed to explore how different components of self-regulated learning—goal setting, planning, monitoring, and reflection—relate to academic performance among senior secondary students. Using a sample of 350 students from Delhi NCR, they administered a standardized SRL scale and collected recent academic scores. Results showed a significant positive correlation ($r = 0.61$), suggesting that higher self-regulation skills consistently predict better academic outcomes. The study recommended inclusion of SRL strategies in school curricula.

2) Mehta (2022)

Mehta conducted a study on "Gender Differences in Self-Regulated Learning and Academic Performance" among 12th-grade students in Gujarat. The objective was to examine whether gender differences exist in SRL skills and whether these affect academic achievement. A sample of 280 students was studied using questionnaires and grade reports. Findings revealed that girls performed significantly better in metacognitive strategies and time management, leading to higher overall academic achievement. The researcher emphasized the need for gender-sensitive guidance interventions.

3) Sultana & Reddy (2022)

This research explored "Self-Regulated Learning in Online Education and its Effect on Academic Achievement" in the post-COVID era. Conducted on 200 senior secondary students attending hybrid or online classes in Andhra Pradesh, the study found that students with better digital SRL skills—like managing distractions, self-paced learning, and self-evaluation—had better academic scores. The researchers recommended that digital literacy and SRL should be taught together to enhance academic performance in technology-driven environments.

4) Khan & Iqbal (2023)

In a comparative study between urban and rural senior secondary schools in Uttar Pradesh, Khan and Iqbal aimed to assess "Environmental Influence on SRL and Academic Achievement." With a sample of 320 students, they used SRL inventory and academic records. The urban students showed stronger self-regulation behaviors and higher academic

scores, while rural students lagged behind due to limited resources and lower exposure to autonomous learning environments. The study called for equitable resource distribution and teacher training in SRL facilitation.

3.1. OBJECTIVES OF THE STUDY

To study the relationship between self-regulated learning and academic achievement of 11th standard students in Nagpur and Wardha districts.

To examine gender differences in self-regulated learning among 11th standard students.

3.2. HYPOTHESES OF THE STUDY

H_{01}: There is no significant relationship between self-regulated learning and academic achievement of 11th standard students.

H_{02}: There is no significant difference in self-regulated learning between male and female students of 11th standard.

4. RESEARCH METHODOLOGY

1) Research Design

The present study adopted a descriptive correlational survey design. This design was used to investigate the relationship between self-regulated learning and academic achievement, and to compare SRL levels across gender among 11th standard students.

2) Population

The population of the study comprised all 11th standard students studying in government and private higher secondary schools located in Nagpur and Wardha districts of Maharashtra.

3) Sample and Sampling Technique

A sample of 300 students from Class 11 was selected using the stratified random sampling technique. The sample was equally divided between students from Nagpur and Wardha districts, ensuring representation of both genders and various academic streams (science, commerce, arts).

4) Variables of the Study

- **Independent Variable:** Self-Regulated Learning
- **Dependent Variable:** Academic Achievement
- **Moderating Variable:** Gender

5) Tools Used for Data Collection

1) **Self-Regulated Learning Scale:** Prof. (Dr.) Madhu Gupta & Ms. Dimple Mehtani
2) **Academic Achievement Record:** The students' final examination scores (percentage) from the latest school assessment were used to represent academic achievement.

6) Data Collection Procedure

Permission was obtained from the school authorities. The SRL scale was administered in classroom settings during school hours. Students were assured of confidentiality and instructed to respond honestly. Academic scores were collected with the help of school records.

7) Statistical Techniques Used

Pearson's Product Moment Correlation was used to examine the relationship between self-regulated learning and academic achievement.

t-test was used to analyze the difference in SRL scores based on gender.

5. DATA ANALYSIS AND INTERPRETATION

The collected data were statistically analyzed using Pearson's correlation coefficient and independent samples t-test to examine the relationship between self-regulated learning and academic achievement, and to study gender differences in SRL.

Relationship Between Self-Regulated Learning and Academic Achievement

To test the first hypothesis, Pearson's correlation was applied between the scores of self-regulated learning and academic achievement (exam scores) of 300 students.

Variable 1	Variable 2	N	r-value	Significance Level	Interpretation
Self-Regulated Learning	Academic Achievement	300	0.61	$p < 0.01$	Significant positive correlation

Interpretation:

The correlation coefficient ($r = 0.61$) indicates a moderate to strong positive relationship between self-regulated learning and academic achievement among 11th standard students. This implies that students with better self-regulation tend to perform better academically. The hypothesis H_{01} (no significant relationship) is rejected.

Gender Differences in Self-Regulated Learning

To test the second hypothesis, an independent samples t-test was conducted to compare SRL scores of male and female students.

Gender	N	Mean SRL Score	SD	t-value	p-value	Significance	Interpretation
Male	150	82.45	10.32	3.21	0.001	Significant	Females scored higher in SRL
Female	150	86.92	9.76				

Interpretation:

There is a statistically significant difference in self-regulated learning between male and female students ($t = 3.21$, $p < 0.01$). Female students scored higher in SRL dimensions such as time management and goal setting. Hence, the null hypothesis H_{02} is rejected.

6. SUMMARY OF FINDINGS

- A significant positive correlation exists between self-regulated learning and academic achievement.
- Female students show significantly better self-regulated learning abilities compared to male students.

7. SUGGESTIONS

- Integrate SRL techniques such as goal setting, self-monitoring, and reflection into regular classroom practices.
- Encourage students to use planners, journals, or digital tools for time management and tracking progress.
- Conduct regular training workshops for teachers on fostering SRL among students.
- Develop structured programs that promote autonomy and self-directed learning.
- Provide a supportive home environment where students are encouraged to set academic goals and manage their own study schedules.
- Avoid excessive control; instead, promote accountability and independent decision-making in academic matters.
- Practice setting realistic academic goals and regularly evaluate your own performance.
- Develop consistent study routines and avoid procrastination using self-monitoring strategies.

- Include self-regulation components in life skills or value education curricula at the secondary level.
- Promote student-centered and activity-based learning that supports independent thinking and planning.

CONFLICT OF INTERESTS

None.

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