
A Comparative Study of Study Habits and Scholastic Achievement Among Secondary School Students of Different Socio-Eco Status in Vidarbha

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Abstract:

Study habits represent the cognitive strategies, operational routines, and self-regulatory behaviors that students employ to organize and consolidate learning. This empirical study investigates the relationship between study habits and scholastic achievement among secondary school students across different Socio-Economic Status (SES) groups within the Vidarbha region of Maharashtra. Utilizing a comparative research design, a stratified sample of secondary students was evaluated using a standardized Study Habits Inventory (SHI) assessing dimensions such as time management, concentration, examination preparation, and reading comprehension alongside standardized academic performance records. Analysis of Variance (ANOVA) and regression models reveal significant variation in study habit efficiency across socio-economic strata. Crucially, findings demonstrate that specific procedural habits, particularly consistent time distribution and active examination preparation, serve as strong independent predictors of academic success, capable of mediating the disadvantages associated with lower socio-economic standing. The study concludes with actionable pedagogical interventions and institutional recommendations to foster effective study behaviors regardless of socio-economic background.

Keywords: Study Habits, Scholastic Achievement, Socio-Economic Status, Secondary Students, Vidarbha Region, Comparative Study, Educational Psychology.

I. Introduction

Secondary education marks a pivotal transitional phase in a student's academic life, laying the groundwork for higher education, specialized vocational training, and future professional capability. While educational research frequently emphasizes structural determinants such as institutional facilities and home resources, individual learning efficiency is heavily dictated by student agency specifically, their study habits. Study habits encompass structured behavioral patterns, time management techniques,

memory strategies, examination preparation routines, and environmental management practiced during learning.

In the contemporary educational environment, academic demands require students to process complex concepts, apply critical thinking, and manage significant study volumes independently. However, a student's capacity to form and sustain efficient study habits does not develop in isolation. It is continuously shaped by their socio-economic environment. Socio-Economic Status (SES) dictates access to quiet learning environments, supplementary reference materials, digital technology, and private academic mentoring.

In regions characterized by socio-economic diversity, such as Vidarbha, secondary school students experience vastly different domestic and community learning contexts. Students from higher socio-economic strata often benefit from structured home schedules, parental academic oversight, and dedicated learning infrastructure. In contrast, students from lower socio-economic backgrounds frequently contend with household responsibilities, shared living spaces, lack of private study areas, and minimal guidance regarding effective learning strategies.

Despite these structural disparities, empirical evidence indicates that well-developed study habits can act as an equalizer, enabling students from modest backgrounds to achieve high scholastic performance. Understanding how study habits vary across socio-economic tiers and identifying which specific study strategies contribute most directly to scholastic success is vital for educators, curriculum developers, and academic counselors. This study provides a comprehensive comparative analysis of study habits and scholastic achievement across varying socio-economic strata in the Vidarbha region.

II. Literature Review: Study Habits, Cognitive Processing, and Socio-Economic Variables

1. The Multi-Faceted Construct of Study Habits

Study habits are not a monolithic trait but a complex combination of cognitive, behavioral, and self-regulatory practices. Key dimensions established in educational psychology include:

- **Time Management & Planning:** The ability to allocate dedicated hours for homework, revision, and rest while avoiding procrastination.
- **Concentration & Distraction Control:** Cognitive control techniques used to sustain attention during reading and problem-solving, minimizing physical and digital interruptions.
- **Reading Comprehension & Note-Taking:** Active learning techniques, such as summarizing, outlining, and extracting core concepts from text.
- **Examination Preparation:** Strategic revision schedules, practice testing, and stress management prior to formal evaluations.

Research systematically demonstrates that students who employ active, self-regulated study habits achieve deeper conceptual retention and superior academic performance compared to those relying on passive re-reading or last-minute cramming.

2. Socio-Economic Dynamics and Habit Formation

Behavioral psychology stresses that habit formation relies on environmental cues and structural stability. High-SES households provide predictable routines, dedicated desk spaces, access to educational tools, and implicit modeling of disciplined work routines by educated parents. These conditions naturally facilitate the development of structured study habits.

Conversely, economically disadvantaged environments often introduce structural unpredictable elements. Overcrowded living quarters, noise, compulsory domestic chores, and financial stress disrupt regular study routines. Consequently, students from low-SES backgrounds may struggle not from cognitive deficiencies, but from environmental barriers that impede the establishment of disciplined study habits.

3. Study Habits as an Academic Equalizer

While socio-economic constraints present genuine hurdles, educational literature highlights cases where disciplined study habits bridge the performance gap. Students who cultivate strong internal motivation, effective time distribution, and strategic test preparation often outperform peers from privileged backgrounds who exhibit poor study discipline. Investigating the precise interaction between SES, specific study habit dimensions, and scholastic outcomes is necessary to design targeted educational interventions.

III. Research Methodology & Theoretical Framework

1. Conceptual Framework

This study uses a comparative quantitative design evaluating three core constructs:

- **Independent Variable 1:** Socio-Economic Status (Stratified into High [Group A], Moderate [Group B], and Low [Group C]).
- **Independent Variable 2:** Study Habits Index (Assessing Time Management, Concentration, Comprehension/Note-Taking, and Exam Strategy).
- **Dependent Variable:** Scholastic Achievement (Measured via cumulative secondary school board examination percentages across key academic subjects).

2. Sample and Data Collection

The study examined a stratified sample of secondary school students from public and private institutions across urban, semi-urban, and rural areas of Vidarbha.

- **Study Habits Inventory (SHI):** Data was collected using a validated 50-item questionnaire measuring study habit efficiency across four main domains on a 5-point Likert scale.
- **Socio-Economic Status Scale:** Students were categorized into High, Moderate, and Low SES based on parental income, occupational prestige, parental educational attainment, and domestic assets.
- **Scholastic Data:** Standardized examination marks were verified directly through institutional records.

3. Hypotheses Formulated

To guide the empirical evaluation, the following null hypotheses were tested:

- H_{01} : There is no significant difference in study habit scores among secondary school students belonging to different socio-economic strata.
- H_{02} : There is no significant correlation between overall study habit quality and scholastic achievement among secondary school students.
- H_{03} : The predictive power of study habit components on scholastic achievement does not vary significantly across socio-economic levels.

IV. Data Analysis, Results, and Discussion**1. Descriptive Evaluation of Study Habit Sub-Domains Across SES**

To understand how specific study behaviors vary by socio-economic standing, student scores across four core sub-scales of the Study Habits Inventory (SHI) Time Management, Focus & Concentration, Reading & Note-Taking, and Examination Strategy were evaluated across High (Group A), Moderate (Group B), and Low (Group C) SES strata.

Socio-Economic Strata	Sample (N)	Time Mgmt. Mean (μ_1)	Concentration Mean (μ_2)	Notes/Reading Mean (μ_3)	Exam Strategy Mean (μ_4)	Overall Mean Mark (%)
High SES (Group A)	135	42.1 / 50	41.5 / 50	43.8 / 50	40.8 / 50	77.4%
Moderate SES (Group B)	175	37.4 / 50	38.2 / 50	38.9 / 50	38.1 / 50	68.5%
Low SES (Group C)	140	31.2 / 50	33.6 / 50	34.1 / 50	32.5 / 50	59.1%

Note: Each SHI sub-domain carries a maximum score of 50 points.

The descriptive breakdown shows that while **Reading & Note-Taking** remains relatively stable across groups, **Time Management** exhibits the sharpest drop among Low SES students, largely driven by domestic commitments and less structured out-of-school routines.

2. Two-Way ANOVA: Interplay of SES Strata and Study Habit Efficiency

To test H_{01} and assess whether the interaction between Socio-Economic Status and Study Habit Classification (High vs. Low Habit Efficiency) significantly impacts scholastic marks, a 3×2 factorial Analysis of Variance (ANOVA) was executed.

$$F_{\text{Habits}} = \frac{MS_{\text{Study Habits}}}{MS_{\text{Error}}}, \quad F_{\text{Interaction}} = \frac{MS_{\text{SES} \times \text{Habits}}}{MS_{\text{Error}}}$$

Two-Way ANOVA Summary Table

Source of Variation	Sum of Squares (SS)	Degrees of Freedom (df)	Mean Square (MS)	F-Value	p-Value
Socio-Economic Status (SES)	4,120.5	2	2,060.25	31.42	< 0.001
Study Habit Efficiency Level	6,845.2	1	6,845.20	104.40	< 0.001
SES $\times$ Study Habits Interaction	812.4	2	406.20	6.19	= 0.002
Error (Within Groups)	29,110.0	444	65.56	—	—

Statistically significant at $p < 0.05$.

The main effect for Study Habit Efficiency ($F = 104.40, p < 0.001$) is substantially larger than the main effect for SES ($F = 31.42, p < 0.001$). This confirms that **study habit quality exerts a stronger direct effect on academic performance than socio-economic classification alone**, rejecting H_{01} .

3. Stepwise Multiple Regression: Key Behavioral Predictors of Success

To test H_{02} and isolate which behavioral routines contribute most to high academic marks, a Stepwise Multiple Regression model was estimated:

$$Y = 14.82 + 0.41(\text{Time Management}) + 0.33(\text{Exam Strategy}) + 0.27(\text{Concentration}) + \epsilon$$

Stepwise Regression Model Summary

Entered Step / Variable	Unstandardized β	SE	Standardized β	Partial R2 Cumulative	t-Statistic	p-Value
Step 1: Time Management	0.41	0.05	0.39	0.382	8.20	< 0.001
Step 2: Exam Strategy	0.33	0.06	0.31	0.514	5.50	< 0.001
Step 3: Concentration Control	0.27	0.05	0.23	0.578	5.40	< 0.001

Dependent Variable: Scholastic Achievement Marks (%). Excluded in step 4: Note-Taking ($p = 0.12$).

- **Time Management** entered the model first, independently explaining **38.2% of performance variance**.
- **Exam Strategy** added an incremental **13.2%**, proving that revision schedules and self-testing directly boost exam outcomes.
- **Note-taking alone was non-significant** unless combined with deliberate revision cycles.

4. Compensatory Effect of Study Habits in Low SES Strata (H_{03})

A targeted sub-group comparison examined whether high study habit efficiency could close the academic achievement gap for students in **Low SES (Group C)**:

- **Low SES with Poor Study Habits:** Mean Academic Mark = **51.2%** ($\sigma = 9.4$)
- **Low SES with High Study Habits:** Mean Academic Mark = **68.7%** ($\sigma = 7.8$)
- **Moderate SES Overall Average:** Mean Academic Mark = **68.5%** ($\sigma = 9.4$)

Low-SES students who scored in the upper quartile of the Study Habits Inventory achieved academic marks **virtually identical to the Moderate SES group average (68.7% vs. 68.5%)**. This rejects H_{03} and confirms that disciplined study habits serve as a direct **compensatory mechanism against socio-economic disadvantage** in the Vidarbha region.

V. Strategic Recommendations and Educational Implications

Based on the empirical findings, structured interventions should be integrated across school curricula and community frameworks:

- **Institutional Study Skills Workshops:** Secondary schools must move beyond subject-matter instruction to formally teach study methodologies including time-blocking, active recall, note-summarization, and exam preparation strategies.
- **Supervised After-School Study Programs:** To assist low-SES students lacking conducive home environments, schools should provide quiet after-school study spaces monitored by academic mentors.
- **Parental Guidance on Study Routines:** Orientation programs should guide parents on creating distraction-free home environments and respecting dedicated study hours, regardless of household space limitations.
- **Digital Literacy & Distraction Management:** As digital devices become more integrated into education, schools should provide guidance on managing digital distractions and using technology specifically for active learning.

VI. Conclusion

This comparative study demonstrates that study habits are a critical determinant of scholastic achievement among secondary school students in the Vidarbha region. While socio-economic status significantly influences the environmental ease with which study habits are developed, procedural habit dimensions particularly rigorous time management and structured examination preparation exert an independent, powerful impact on academic outcomes.

Educational institutions cannot alter a student's socio-economic background, but they can directly influence their behavioral and cognitive study strategies. By embedding systematic study-skills training into the secondary school ecosystem and providing supportive physical study infrastructure, educators and policymakers can narrow the achievement gap, ensuring that academic success is driven by effort and effective strategy rather than socio-economic privilege.

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