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Influences of Self-Efficacy and Study Habits on Academic Achievement of Undergraduate Students

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Abstract

Formal education is evaluated according to students' academic achievement.Academic achievement acts as an important determinant of a student's future career opportunities. Therefore, it is necessary to identifying the factors that influence academic achievement of students. The purpose of this study was to investigate how self-efficacy and study habits influences on academic achievement. The study, conducted through simple random sampling on 210 third-year undergraduate students in South 24 Parganas district of West Bengal. Employing a Descriptive Survey method, researchers considered demographic variables such as gender, stream and locality. The study revealed no significant differences in self-efficacy and study habits between genders or among different streams of study. However, a noteworthy distinction emerged between rural and urban undergraduate students, indicating a significant difference in academic achievement based on locality. Specifically, urban students tended to outperform their rural counterparts. The result obtained that there was a positive and significant correlation of Academic achievement with Self-Efficacy and Study Habits. These results highlight the importance of addressing factors like self-efficacy and study habits to enhance academic performance, particularly among students from rural backgrounds.

Key Word: Self-Efficacy, Study Habits, Academic Achievement, Undergraduate Students

Introduction

Education plays an important role in the overall development of an individual, which contributes significantly to the overall development of a nation. Education is a light that guides mankind to the right path. Education is one of the most important sectors in the world and has undergone revolutionary changes in recent years. A key objective in education is academic achievement, and it is crucial to comprehend the elements that influence it(Moreira

et al., 2020).Understanding the factors that impact academic achievement is crucial for creating effective strategies and interventions to improve students' learning outcomes.(Dadandi, 2023).

Self-efficacy is a person's belief in their own ability to succeed in particular circumstances or finish activities successfully. One significant component of human agency is the belief in one's own efficacy (Bandura, 1997). Self-efficacy among students is the conviction that they can succeed academically and overcome obstacles. Academic achievement among undergraduate students is a critical indicator of their educational success. Academic performance is greatly influenced by a number of elements, including study habits and self-efficacy. Several studies have demonstrated the positive correlation between academic achievement and self-efficacy (Gungor, 2020; Al-Abyadh 2022). According to Zimmerman (2000), college students' academic success is highly dependent on their level of self-efficacy, or self-confidence, for learning and performance. Motlagh (2011) emphasized that self-evaluation, self-direction, and self-regulation are linked to academic success.

Study habits are grounded in theories of learning and cognition and play a vital role in academic success by promoting efficient learning, time management, comprehension, memory retention, stress reduction, and long-term educational achievement. According to Sahile and Astatke (2017), self-efficacy and test anxiety significantly affected academic achievement, noting sex differences in academic performance and test anxiety, but not in self-efficacy and study habits. Shukla*et al.* (2020) emphasized the role of effective study habits in enhancing academic performance, with gender not being a significant factor.

Despite these findings, there is a notable research gap, especially in India, where there is a lack of extensive studies examining the connection between self-efficacy, study habits, and academic performance among different groups of undergraduate students.Addressing this gap is essential for understanding these factors' impact on academic achievement in the Indian context.

Objectives of the Study

The objectives of the study were formulated as follows:

1. To study the Self-Efficacy of Undergraduate Students with respect to their Gender difference, Stream and Locality;
2. To study the Study Habits of Undergraduate Students with respect to their Gender difference, Stream and Locality;
3. To study the relationship between Self-Efficacy and Academic Achievement of Undergraduate Students;
4. To determine the relationship between Study Habits and Academic Achievement of undergraduate students.

Hypothesis of the Study

On the basis of the objectives the hypotheses were as follows:

$H_0$1: There would be no significant difference between Male and Female Undergraduate Students with respect to Self-Efficacy scores;

$H_0$2: There would be no significant difference between Arts and Science students with respect to Self-Efficacy;

$H_0$3: There would be no significant difference between Rural and Urban Students with respect to Self-Efficacy;

$H_0$4: There would be no significant difference between Male and Female Students in respect of Study Habits;

$H_0$5: There would be no significant difference between Arts and Science students in respect of Study Habits;

$H_0$6: There would be no significant difference between Rural and Urban Students in respect of Study Habits;

$H_0$7: There would be no significant relationship between Self-Efficacy and Academic Achievement of undergraduate students;

$H_0$8: There would be no significant relationship between Study Habits and Academic Achievement of undergraduate students.

Methodology

Research Method

A descriptive survey methodology was used in this study.The questionnaire was administered to 210 undergraduate students studying in general degree colleges of Kolkata and South 24 Parganas districts of West Bengal. This study employed simple random sampling techniques.The independent variables were Self-Efficacy and Study Habits. The dependent

variable was Academic Achievement. The demographic variables were Gender (Male & Female), Stream (Arts & Science), and Locality (Rural & Urban).

Population and Sample of the Study

The target population for this study consists of undergraduate students from West Bengal. A sample of 210 undergraduate students was selected from the population for this study using simple random sampling method. The study comprised 210 third-year undergraduate students, selected from various colleges across the Kolkata and South 24 Parganas region.

Distribution of Sample on the basis of Demographic Variables

Variables	Sub variables	No. of respondents
Gender	Male	76
	Female	134
Stream	Arts	117
	Science	93
Locality	Rural	120
	Urban	90

Tools

The Self-Efficacy Scale was developed and validated by Dr.Arun Kumar Singh and Dr.ShrutiNarain.The Study Habit Inventory was constructed and validated by M. Mukhopadhyay and D. N. Sansanwal.

Test of Normality

Descriptive statistics showed skewness values of -0.149 for self-efficacy, -0.089 for study habits, and 0.174 for academic achievement. Additionally, the Shapiro-Wilk test was conducted and yielded statistically significant results for all three dimensions (p-value < 0.05). This indicated that the data were unfit for normal distribution. Consequently, the researchers opted to use non-parametric statistics for differential analysis.

Statistical Design

Mann-Whitney U test, Mean, Correlation, Standard Deviation were used in the present study. The data analysis procedure begins with data cleaning to address missing or inconsistent data, followed by inputting the cleaned data into Microsoft Excel. Subsequently, the dataset is

imported into IBM SPSS Version 2017 for analysis. Then, according to the hypothesis, correlations were carried out and the output or results were observed to draw conclusions.

Results of the Study: To apply the non-parametric tests the researcher analysed the nature of data for the variables under the study i.e., self-efficacy, study habits and academic achievement separately.

Table-1: Difference between Male and Female Undergraduate Students in Self-Efficacy

	Gender	N	Mean Rank	Sum of Ranks	Mann-Whitney U	Sig. (2-tailed)	Result
Self-Efficacy	Male	76	106.07	8061.00	5049.000	.919	Fail to reject null hypothesis
	Female	134	105.18	14094.00			
	Total	210					

Interpretation: From the above table-1, it was seen that male undergraduate students had a higher mean rank of106.07 than the female undergraduate students (105.18). The Mann Whitney U-Value was 5049.000, which was failing to reject null hypothesis.The results showed no significant difference in the mean rank scores of male and female undergraduate students regarding self-efficacy.

Table-2: Difference between Arts and Science Undergraduate Students in Self-Efficacy

	Stream	N	Mean Rank	Sum of Ranks	Mann-Whitney U	Sig. (2-tailed)	Result
Self-Efficacy	Arts	117	105.06	12291.50	5388.500	.905	Fail to reject null hypothesis
	Science	93	106.06	9863.50			
	Total	210					

Interpretation:

From the above table-2, it was seen that science undergraduate students had a higher mean rank of106.06 than the arts undergraduate students (105.06). The Mann Whitney U-Value was 5388.500, which was failing to reject null hypothesis.The findings revealed no significant difference in the mean rank scores of arts and science undergraduate students in terms of self-efficacy.

Table-3: Difference between Rural and Urban Undergraduate Students in Self-Efficacy

	Locality	N	Mean Rank	Sum of Ranks	Mann-Whitney U	Sig. (2-tailed)	Result
Self-Efficacy	Rural	120	115.41	13849.00	4211.000	.006	Reject null hypothesis
	Urban	90	92.29	8306.00			
	Total	210					

Interpretation:

From the above table-3, it was seen that rural undergraduate students had a higher mean rank of115.41 than the urban undergraduate students (92.29). The Mann Whitney U-Value was 4211.000, which was rejecting null hypothesis. The results showed a significant difference in the mean rank scores of rural and urban undergraduate students in self-efficacy.

Table-4: Difference between Male and Female Undergraduate Students in Study Habits

	Gender	N	Mean Rank	Sum of Ranks	Mann-Whitney U	Sig. (2-tailed)	Result
Study Habits	Male	76	98.95	7520.00	4594	.239	Fail toReject null hypothesis
	Female	134	109.22	14635.00			
	Total	210					

Interpretation: From the above table-4, it was seen that female undergraduate students had a higher mean rank of109.22 than the male undergraduate students (105.18). The Mann Whitney U-Value was 4594.000, which was failing to reject null hypothesis. The findings

revealed no significant difference in the mean rank scores of male and female undergraduate students regarding study habits.

Table-5: Difference between Arts and Science Undergraduate Students inStudy Habits

	Stream	N	Mean Rank	Sum of Ranks	Mann-Whitney U	Sig. (2-tailed)	Result
Study Habits	Arts	117	103.79	12143.50	5240.500	.647	Fail to reject null hypothesis
	Science	93	107.65	10011.50			
	Total	210					

Interpretation:

From the above table-5, it was seen that science undergraduate students had a higher mean rank of107.65 than the arts undergraduate students (103.79). The Mann Whitney U-Value was 5240.500, which was failing to reject null hypothesis. The results showed no significant difference in the mean rank scores of arts and science undergraduate students in terms of study habits.

Table-6: Difference between Rural and Urban Undergraduate Students in Study Habits

	Locality	N	Mean Rank	Sum of Ranks	Mann-Whitney U	Sig. (2-tailed)	Result
Study Habits	Rural	120	125.71	15085.50	2974.500	.000	Reject null hypothesis
	Urban	90	78.55	7069.50			
	Total	210					

Interpretation: From the above table-6, it was seen that rural undergraduate students had a higher mean rank of125.71 than the urban undergraduate students (78.55). The Mann Whitney U-Value was 2974.500, which was rejecting null hypothesis. The findings revealed a significant difference in the mean rank scores of rural and urban undergraduate students regarding study habits.

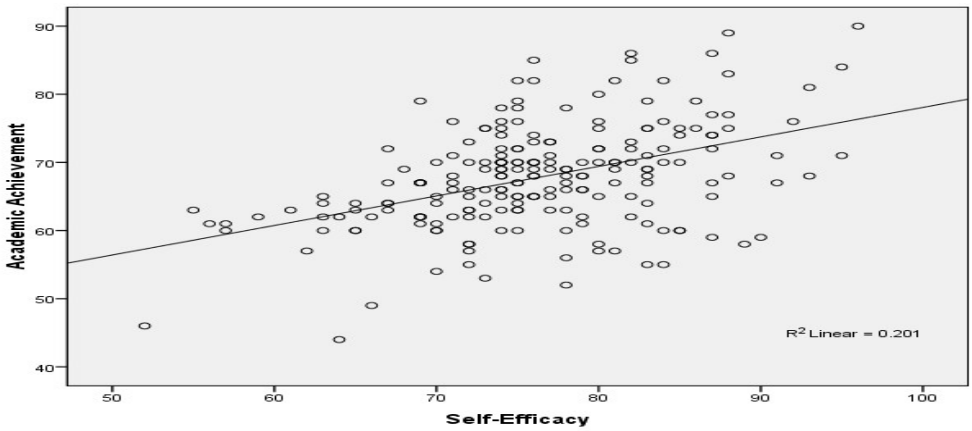
Table-7: Relationship between Self-Efficacy and Academic Achievement of undergraduate students

			Self-Efficacy	Academic Achievement
Spearman's rho	Self-Efficacy	Correlation Coefficient	1.000	.406**
		Sig. (2-tailed)	.	.000
		N	210	210
	Academic Achievement	Correlation Coefficient	.406**	1.000
		Sig. (2-tailed)	.000	.
		N	210	210

** *Correlation is significant at the 0.01 level (2-tailed)*

Interpretation: In table-7 the relationship between self-efficacy and academic achievement of undergraduate students was tested by using the Spearman's rho Correlation Test. The results indicated that obtained Spearman's rho Correlation – coefficient was statistically significant at 0.01 levels. It referred to reject the null hypothesis. Hence it may be concluded that there existed a positive and significant correlation between self-efficacy and academic achievement of the undergraduate students (r=.406**, p <0.01). Therefore, it can be inferred that there exists a positive correlation between the academic performance of undergraduate students and their self-efficacy.

Figure-1:Graphical representation of correlation between self-efficacy and academic achievement of undergraduate students



The scatterplots (Figure-1) also corroborated the interpretation of a positive correlation between self-efficacy and academic achievement among undergraduate students.

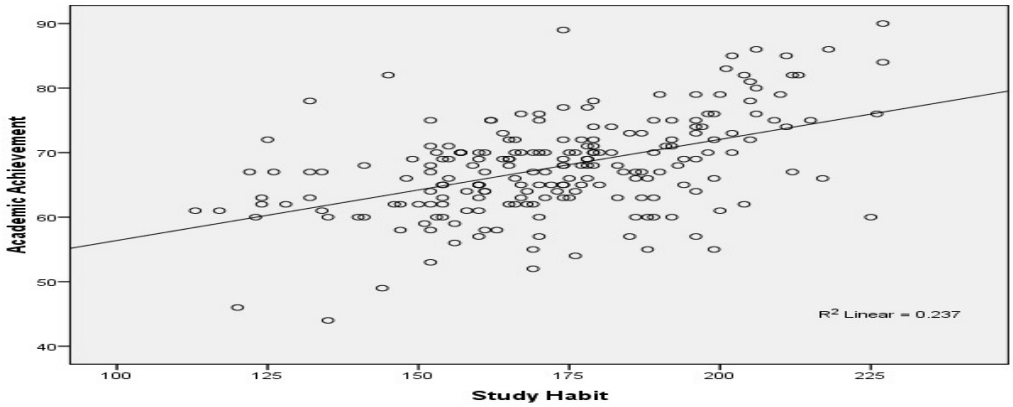
Table-8: Relationship betweenStudy Habits and Academic Achievement of undergraduate students

			Study Habits	Academic Achievement
Spearman's rho	Study Habits	Correlation Coefficient	1.000	.459**
		Sig. (2-tailed)	.	.000
		N	210	210
	Academic Achievement	Correlation Coefficient	.459**	1.000
		Sig. (2-tailed)	.000	.
		N	210	210

*** Correlation is significant at the 0.01 level (2-tailed)*

Interpretation: In table-8 the relationship betweenstudy habits and academic achievement of undergraduate students was tested by using the Spearman's rho Correlation Test. The results indicated that obtained Spearman's rho Correlation – coefficient was statistically significant at 0.01 levels. It referred to reject the null hypothesis. Hence it may be concluded that there existed a positive and significant correlation between study habits and academic achievement of the undergraduate students (r=.459**, p <0.01). Therefore, it can be stated that the academic achievement of the undergraduate students positively correlated with their study habits.

Figure-2: Graphical representation of correlation between study habits and academic achievement of undergraduate students



The scatterplots (Figure-2) corroborated the conclusion that undergraduate students' academic achievement and their study habits were positively correlated.

Discussion

The main aim of this study was to investigate potential differences in self-efficacy and study habits based on gender, locality, and academic stream, with the findings revealing significant variations in these factors.Bwenvu's (2023) investigation disclosed elevated scores in both self-efficacy and academic performance among students.Another study conducted by Digal and Walag (2019) observed that self-efficacy notably influences academic performance in Science. Mallick and Singh's (2015) research highlighted that females exhibited higher self-efficacy levels and academic achievement, maintaining consistent self-efficacy across different academic streams. Furthermore, the study noted a substantial disparity in academic achievement, with science students outperforming their arts counterparts.

Additionally, it was discovered that female students had better reading habits than male students.Supporting the aforementioned findings, Pervaiz*et al.* (2023) revealed distinctions between urban and rural students in study habits. Urban students showed greater proficiency in reading habits and exam preparation, while rural students excelled in writing habits and time management. Furthermore, male students demonstrated superior performance in writing, time management, and exam preparation, contrasting with female students who exhibited stronger reading habits. Gahir et al. (2022) identified several significant correlations, with a strong positive correlation observed between study habits and academic achievement among secondary school students.Moreover, this positive correlation was observed separately for boys and girls, indicating that both genders benefited from good study habits in terms of enhancing their academic achievement at the secondary level. These findings contribute to the existing literature on study habits and academic performance, highlighting the importance of cultivating effective study habits for students' educational success.

Conclusion:

The study revealed that self-efficacy and study habits are crucial factors positively influencing academic achievement. Gender was not a significant determinant in terms of self-efficacy and study habits, suggesting similar levels among male and female

students.However, science students demonstrated higher self-efficacy and better study habits compared to arts students, reflecting stronger confidence and more effective study techniques among science students.Additionally, rural students demonstrated higher self-efficacy and better study habits compared to their urban counterparts, implying that rural students may have stronger belief in their capabilities and more efficient study strategies. These insights highlight the importance of fostering self-efficacy and good study habits to enhance academic performance across different student groups.Educational institutions should consider offering study skills workshops to equip students with practical strategies for efficient studying.Open book exams are currently prioritised in order to help students form good reading habits and improve their attention span, both of which have an impact on their academic performance.

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