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The relationship between self-efficacy and academic achievement among school students

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Abstract

This study's main objective was to find out whether and how students' self-confidence in their abilities connected to their actual academic success. An first examination was carried out utilising a descriptive survey study technique, and the aims were met. The Singh and Narain (2014) self-efficacy measure was used to collect data. We reached out to the registrar's office to get students' previous class grades so we could see how well they did academically. The research included one hundred people, 50 of whom were male and 50 of whom were female. Mean, standard deviation, t ratio, and correlation coefficient were among the statistical metrics used in the research. Results showed a positive and statistically significant correlation between self-efficacy and performance in the classroom. Students who self-efficaciously report better levels of academic accomplishment. Researchers have shown that there is a significant gender gap in kids' levels of confidence and academic success. Depending on their gender, male and female pupils perform differently academically, according to research. The results showed that, within the parameters of this research, male students had significantly greater levels of self-efficacy than female students. When it comes to their academic success, male and female students couldn't be more different in their perceptions of their own talents.

Keywords: Self-efficacy, academic achievement, performance and investigation

Introduction

Positive or negative, the kind of feedback a person receives about their performance may influence their self-efficacy beliefs, claim Podsakoff and Farh (1989) ^[10]. A person's subjective sense of their own effectiveness may have far-reaching effects on their mental health, level of motivation, view on life, and behavioural tendencies. Motlagh *et al.* found that students' perceptions of their own academic aptitude are very indicative of how well they do in school (2001). Academic success necessitates developing self-confidence and acknowledging one's innate abilities. According to Lane and Lane (2001) ^[7], this is the very least that the idealised viewpoint suggests. The findings showed that students' academic performance improved significantly when their self-efficacy levels were higher. Nonetheless, research shows that students' self-confidence significantly impacts their performance in the classroom. The flip side is that there is evidence that people may perform better when they are rewarded for their prior successes. For students, "self-efficacy" is the confidence they have in their own capacities to understand and implement course content. The belief that one can achieve their goals by intentional planning and the use of their own abilities is referred to as self-efficacy (Koseoglu, 2015) ^[6]. Confidence in one's own abilities is paramount in this particular situation. To the degree an individual is emotionally engaged, committed, and productive is significantly affected by their degree of self-efficacy. To be confident is to think that one can succeed at anything. A person's self-efficacy may be seen as a measure of their ability to control their own emotions and actions. You may measure your self-efficacy by how confident you are in your abilities and the outcomes of your efforts.

Academic Achievement

The significance of education in human life is evident, since it is crucial for the advancement of contemporary civilization. Education has a crucial role in the development of a civilization. Individuals in a culture that places a high importance on education are more inclined to exhibit good manners and refinement. The primary duty for equipping children for success in adulthood falls mostly with their families. College graduates often express gratitude for the time they spent acquiring knowledge in formal educational environments such as lecture halls, libraries, and labs. According to Ching, Wang, and Liu (2020) ^[2], a student's academic performance is assessed based on their average grade from kindergarten to college. Having self-confidence in one's abilities and establishing objectives for personal academic achievement. Due to uncertainties over their academic aptitude, several high

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school seniors have worries about their prospects for success in college. The ability to comprehend and utilise the instructional content serves as the fundamental basis for assessing a student's scholastic advancement. The academic achievement of students is mostly determined by their overall performance and letter grades.

Exploring the Correlation Between Self-Efficacy and Academic Success

Numerous organisations and people have devoted considerable attention to the issue of gender discrepancy in kids' academic attainment. Individuals belonging to this cohort are engaged in the fields of economics, politics, and educational research. Academic success relies on the cultivation of self-assurance in one's capacity to learn and remember new information. The degree of pleasure experienced by a learner is contingent upon their self-efficacy, notwithstanding the potential for intrinsic motivation to augment learning outcomes. According to a study conducted by Schunk, Pintrich, and Meece (1982)^[11], the attainment of academic achievement is contingent upon the presence of self-efficacy beliefs. Numerous studies have shown a beneficial correlation between a strong belief in one's own skills and academic achievement. Researchers Usher and Pajares (2008)^[13] found that students' self-efficacy—a measure of their confidence in their own abilities—may be a good predictor of how well they do in school across a range of subjects and grade levels. An individual's conviction in their capacity to endure hardship might impact their stress and anxiety levels, happiness, and academic achievements. Multiple scientific research indicate that students' academic performance is enhanced when they possess self-confidence and confidence in their abilities. Multiple research studies have shown that students' self-perceptions of their academic capabilities serve as reliable indicators of their actual academic achievement within the educational setting (Yokoyama, 2019)^[15].

Objectives

- Examining the relationship between students' self-efficacy and performance in the classroom is the goal of this study.
- Self-efficacy among school students: exploring gender differences
- Academic performance variations between male and female school students

Hypotheses

- Students' academic achievement and their sense of self-efficacy would be significantly correlated.
- There would be a significant variation in how gender influences self-efficacy.
- Gender would have a huge influence on academic achievement.

Research Design

The study conducted by the researchers employed a correlational technique. The selected approach was utilised to examine the potential influence of students' self-efficacy on their academic performance. The relationship between students' self-perceived abilities and their actual academic achievement was investigated using a quantitative approach. The current study utilised a survey approach to gather descriptive data. By analysing quantitative data gathered

from questionnaires, descriptive surveys provide light on the present condition and traits of the people under study, offering useful insights.

Sample

The sample included 100 students from Ranchi town, 50 males and 50 females, studying in different schools.

Tool

Self-Efficacy Scale: The research makes use of the method that Singh and Narain (2014) developed. It is tridimensional, including optimism, expectancy of success, and confidence in one's own abilities. The 20-item measure has 5 answer choices, including "strongly agree," "agree," "neutral," and "disagree," on a Likert-type scale. The scale assesses four aspects of self-efficacy: certainty in one's abilities (1, 2, 3, 4), belief in one's ability to achieve their goals (6, 7, 8, 9), outlook on life (11, 12, 13, 14, 15), and anticipation of their actions' consequences (16, 17, 18, 19, 20). It was discovered that the self-efficacy measure has a test-retest reliability of 0.82 and a construct validity of 0.92, which indicates that it is reliable and valid. Both of these figures are significant.

Academic Achievement: The cumulative academic grade was calculated by aggregating the scores of each student's previous exam.

Statistical techniques used

The data were analysed using the correlation coefficient, mean, standard deviation and t-test.

Analysis

This section presents the results of the study's extensive examination and assessment of the field data. The researcher used many statistical methodologies to methodically organise, classify, and assess the collected data, including measures such as the mean, standard deviation, correlation, and t-test. The study used many tactics in order to achieve its aims and evaluate its assumptions. As a component of the research attempt, a sample size of one hundred individuals was used, commencing with the administration of questionnaires to gather data. The present results have been derived from the collective contributions of all individuals involved in this study. The user conducted a comprehensive examination of the data, thereafter engaging in a deliberation over potential alternative interpretations of the findings.

Table 1: Relationship between Self-efficacy and Academic Achievement of School Students

N	r	Level of Significance	P Value
100	0.374	Significant	0.01

The correlation coefficient between academic achievement and degrees of self-efficacy is shown in Table 1. The coefficient is given a value of 0.374. The results indicate a significant association between students' self-perceived talents and their academic achievement inside the educational setting. In the article, the author undertakes a comparative analysis of two studies, namely one done by Talluri in 2018 and the other carried out at an Ethiopian institution. Both research yielded comparable findings. Correlation analysis refers to the process of comparing two

sets of data using statistical methods in order to determine the magnitude and direction of the link between them. The examination of the correlation between two variables is a prevalent strategy in the field of data analysis. This entails identifying patterns in the relationship between the two variables and their respective changes. The comprehension of interactions between datasets may be enhanced by the computation of correlation, a widely used statistical measure. Given the circumstances, it can be inferred that altering one variable will inevitably have an impact on the other. If the first variable deviates from its average, it is probable that the second variable will exhibit a similar tendency to the first variable. The interpretation of this pattern may either align with or diverge from the pattern

seen in the first variable. Hence, the hypothesis Students' academic achievement and their sense of self-efficacy would be significantly correlated was proved.

Table 2: Comparison of Male and Female School Students' Self-Efficacy

Group	N	Male		Female		t value	P value
		Mean	SD	Mean	SD		
Self-confidence	50	16.52	2.42	15.07	1.45	3.63	0.01
Efficacy expectation	50	16.36	2.37	14.81	1.60	3.83	0.01
Positive attitude	50	17.91	2.74	15.51	2.06	4.95	0.01
Outcome expectation	50	16.86	2.82	15.73	2.49	2.12	0.05
Total Self-Efficacy	50	67.65	10.35	61.12	7.6	3.67	0.01

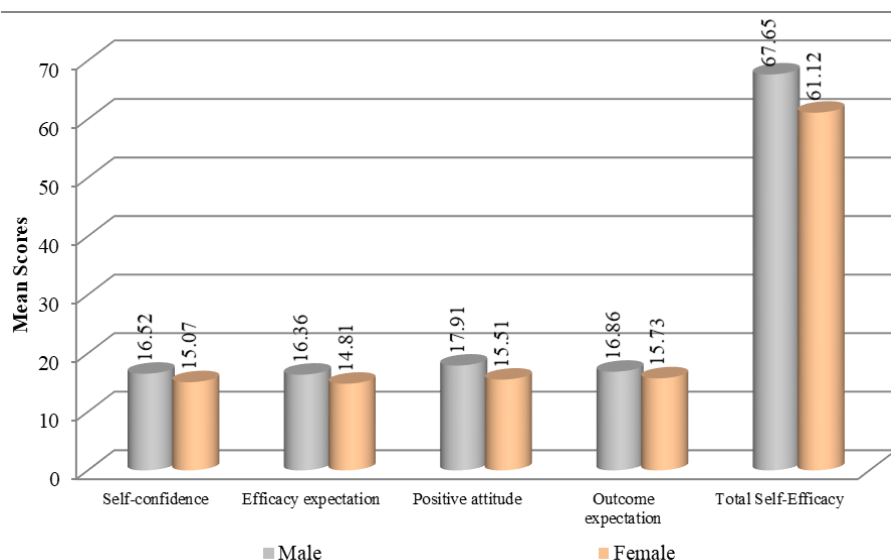


Fig 1: Mean scores of Male and Female School Students' Self-Efficacy

The table data suggests that the two groups' mean levels of confidence are different from one another. The data indicates the presence of a gender disparity in academic achievement. The average score for male students was 16.52, with a standard deviation of 2.42, indicating a wider range of values. Female students had a higher level of consistency in their performance, as seen by their lower mean score of 14.07 and smaller standard deviation of 1.45. The statistical significance was assessed at a significance level of 0.01, yielding a t-value of 3.67. The findings indicated that there was a significant disparity in the self-confidence component between male and female learners. The statistical data indicates that female students had superior performance compared to male students in relation to the average effectiveness expectation score. The mean scores on the effectiveness expectation dimension exhibited statistically significant fluctuations, as shown by a research with a significance level of 0.05. The calculated value of 't' is 5.72. The findings indicated a statistically significant disparity in the positive attitude evaluations between male and female students, as shown by a 't' value of 3.99, which indicates a substantial difference between the genders. This

outcome aligns with the findings of the investigation. The user's study indicates a considerable gender disparity among college students, as seen by the outcomes expectation scale. In terms of overall performance on the test, male students averaged 16.86 and female students 14.73. The findings indicate that a significant proportion of male students have a favourable perception of their own abilities. The findings indicate that male students achieved an average score of 68.21, but female students had a lower score of 64.32. Research findings indicate that female students often exhibit diminished levels of self-efficacy in comparison to their male peers. Consequently, it is reasonable to assert that "There would be a substantial disparity in the impact of gender on self-efficacy." The findings of Ifdil *et al.* (2018) [5] align with the outcomes of our own investigation.

Table 3: Comparison of Male and Female School Students' Academic Achievement

Groups	N	Mean	SD	t Value	P Value
Male Students	50	61.34	6.28	3.75	0.01
Female Students	50	59.17	4.73		

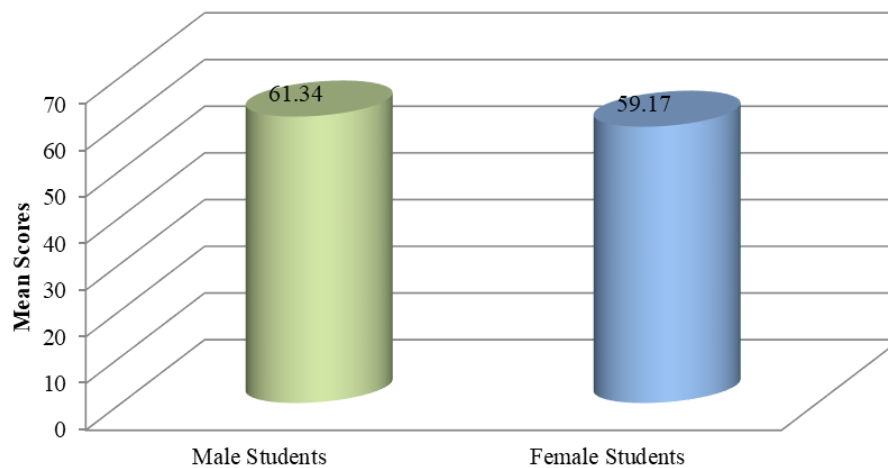


Fig 2: Mean scores of Male and Female School Students' Academic Achievement

The data indicates that the average score of male students was 61.34, with a standard deviation of 6.28. Conversely, the mean score for female students was 59.17, with a degree of variability of 4.28. Based on the observed disparity in means, it seems that male and female students exhibit significant disparities in their academic achievements. The statistical analysis revealed considerable differences in academic performance between male and female students, as shown by both the mean scores and standard deviation of these values. The choice of statistical measure was inconsequential since the portrayed situation remained same. It is evident that gender significantly influences pupils' academic performance. The results obtained are consistent with the prior research conducted by Nartgun et al. (2019).

Conclusion

The study's findings highlight a strong correlation between self-efficacy and academic achievement, suggesting that individuals with a positive outlook are more likely to excel in school. Examining potential gender differences in students' self-perception and confidence levels was the primary goal of this study. The data suggests that male pupils generally outperform their female counterparts in the classroom. Findings from this study shed light on how one's belief in one's own abilities relates to their actual performance. Improving students' belief in themselves leads to higher test scores, according to the research. According to the findings, there are a lot of important areas that need focus while interacting with students. Activities such as these include encouraging and motivating individuals, helping them establish a positive mindset, preparing them to learn, fostering the development of their skills, preparing them to be leaders, and focusing their attention on academic responsibilities and concerns. The level of certainty about the impact of class projects on students' academic performance. This is why schools must make boosting children's self-efficacy a top priority if they want them to do better in school. Those who believe in their own abilities are more likely to succeed academically. According to the findings, there are several crucial areas that need focus while interacting with students. Activities such as these include encouraging and motivating individuals, helping them establish a positive mindset, preparing them to learn, fostering the development of their skills, preparing them to be leaders, and focusing their attention on academic

responsibilities and concerns. Colleges' levels of confidence significantly impact students' academic performance. Consequently, schools must place a premium on boosting students' self-confidence as a strategy to improve their academic performance. In their empirical study, Davidson *et al.* (2012) [3] found that raising students' self-confidence had a favourable correlation with their academic performance. Among other social and developmental factors, Wang and Shan (2017) [14] suggest that early socialisation patterns that favour men in computer-related activities may contribute to the gender gap in academic self-efficacy and achievement. Various elements, such as socialisation, social environment, and individual qualities, may impact children's academic self-efficacy and achievement, according to the statement.

Recommendations

The findings of this study provide the groundwork for more research into the connection between academic achievement and a sense of self-assurance. Understanding that there are significant constraints that need to be taken into consideration is of the utmost importance. In order to get findings that are more representative of the community as a whole, it is possible that a bigger sample size, which includes individuals from a variety of various backgrounds, and a different technique will be used. The classroom environment presents substantial hurdles for female students, particularly in terms of gender inequity and cultural prejudices. Women may be given the ability to attain professional success and have a significant contribution on society if they are provided with equal work opportunities, tuition-free higher education, and student sponsorships. As a consequence of this, kids will be more motivated to achieve academic success, both from an internal and an external perspective. Instead of setting unnecessary expectations for their daughters, parents should support and motivate their daughters to achieve their aspirations.

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