



Correlates of Creativity and Self-Efficacy of Secondary School Students

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Abstract

The study investigates the relationship between *self-efficacy* and *creativity* among *secondary school students* in *Bhagalpur District*, Bihar. A total of **360** students (**180 male and 180 female**) were selected using a *stratified random sampling technique*. To assess self-efficacy, the '*Self-Efficacy Scale*' developed by *A.K. Singh* and *Shruti Narain* was utilized, while creativity was measured using the '*Passi Test of Creativity*' by *B.K. Passi*. Various statistical methods, including *percentage, mean, standard deviation, t-tests*, and *correlation coefficient (r)*, were applied to analyse the data and test the hypotheses. The key findings of the research are as follows: (i) *Male students exhibit significantly higher levels of creativity compared to female students.* (ii) *Male students demonstrate significantly greater self-efficacy than female students.* (iii) *Students with high self-efficacy show significantly higher creativity levels compared to those with low self-efficacy.* (iv) *There is a strong, positive, and significant correlation between creativity and self-efficacy.* These findings provide valuable insights for teachers, students, school heads, educators, psychologists, parents, administrators, and researchers. Understanding the importance of nurturing both creativity and self-efficacy can help promote the holistic development of secondary school students.

Keywords: *Creativity, Self-Efficacy, Gender, Secondary School Students.*

Introduction

In today's dynamic educational environment, creativity and self-efficacy are recognized as pivotal factors that profoundly influence students' academic achievements and personal growth. Creativity, typically characterized as the capacity to generate original and valuable ideas, plays a crucial role in problem-solving and driving innovation across various fields. Meanwhile, self-efficacy reflects an individual's confidence in their ability to accomplish tasks and achieve objectives. Together, these traits contribute significantly to shaping students' learning processes, motivation levels, and overall success.

The secondary school phase represents a critical period in which students refine essential cognitive, emotional, and social skills. It is during this developmental stage that



creativity and self-efficacy begin to exert a noticeable impact on how students tackle challenges and seize opportunities. A deeper understanding of the interplay between these two constructs is essential, as they collectively enhance students' adaptability, engagement with learning materials, and resilience in the face of setbacks.

Several factors influence the development of creativity and self-efficacy, including individual personality traits, environmental settings, and socio-cultural influences. For example, a nurturing classroom atmosphere, positive teacher-student relationships, supportive family environments, peer dynamics, and access to educational resources are vital in fostering these attributes. Conversely, societal expectations and academic pressures, especially at the secondary education level, can either support or hinder the growth of students' creative capacities and self-confidence.

This research investigates the relationship between creativity and self-efficacy among secondary school students, focusing on the factors that shape these constructs and their interactions. By examining these dynamics, the study aims to provide valuable insights for educators, parents, and policymakers, enabling them to create supportive environments that promote students' overall development. The findings may also guide strategies to enhance students' creative thinking abilities and self-belief, empowering them to effectively address the challenges of an increasingly complex world. Given the heightened importance of 21st-century skills and the demand for innovative thinkers, this study holds substantial significance.

Self-Efficacy?

“Self-efficacy refers to an individual's confidence in their ability or competence to complete a task, achieve a goal, or overcome challenges. It encompasses beliefs about one's capacity to perform at specific levels and exert influence over situations that shape their life experiences” (*Singh & Narain, 2014*). Self-efficacy is the belief in one's ability to perform tasks or achieve goals. Introduced by psychologist *Albert Bandura (1977)*, it is task-specific and impacts thoughts, emotions, and actions. This dynamic trait is influenced by factors like personal success, learning from others, supportive feedback, and emotional well-being. Strong self-efficacy enhances motivation, perseverance, and resilience, helping individuals confidently face challenges and recover from setbacks.



Creativity?

“Creativity is a multidimensional attribute, encompassing both verbal and non-verbal aspects that varies among individuals. It primarily involves the ability to identify problems, exhibit fluency, demonstrate flexibility and originality, and display traits such as curiosity and perseverance” (*Passi, 2010*). Creativity refers to the capacity to generate unique and meaningful ideas, solutions, or expressions by breaking away from traditional approaches. It is a blend of imagination, adaptability, and problem-solving skills that allows individuals to explore fresh perspectives and develop innovative results.

REVIEW OF RELATED LITERATURE

Several studies have explored the relationship between creativity and self-efficacy among secondary school students, yielding mixed results. Besides, a comparative study of the above variables has also been done between male and female students. *Bharti (2020)* reported that male students exhibit higher levels of creativity compared to female students. Conversely, findings by *Mandal (2024)* suggest that female students surpass their male counterparts in creativity. *Varsha (2023)* reported that no significant differences were observed between males and females on the level of creativity. Similarly, the same studies by *Ojha (2022)*, *Bhat (2021)*, *Rathour (2020)*, *Sharma (2018)*, *Upadhyay (2016)* indicate greater self-efficacy among males, while *Baldev (2015)* argue the opposite, attributing higher self-efficacy to females. *Varsha (2023)*, *Garcia & Velazquez (2020)*, *Pasricha (2015)* reported that no significant differences were observed between males and females on the level of self-efficacy. *Thakur (2014)* found that the high self-efficacy girls group of secondary school students had higher creativity scores than the low self-efficacy girls group. *Yao, Chen & Liu (2023)*, *Singh (2017)* observed a significant positive correlation between creativity and self-efficacy.

Researchers emphasize that demographic factors like gender, inhabitation, category, and school type influence creativity and self-efficacy. However, contradictions in findings and limited advanced research highlight a significant gap, especially regarding gender's impact. This study addresses this gap by examining the “Correlates of Creativity and Self-Efficacy of Secondary School Students.”



Rationale of the study

The present study, "Correlates of Creativity and Self-Efficacy of Secondary School Students" explores the relationship between two vital 21st-century skills: creativity and self-efficacy. Creativity drives innovation, problem-solving, and adaptability, while self-efficacy enhances motivation, resilience, and achievement. This research focuses on secondary school students, a crucial developmental stage, to understand how these traits interact and are influenced by socio-cultural factors such as gender, inhabitation, category, family, peers, and school environments. By addressing a gap in existing literature, the study aims to inform evidence-based strategies for fostering these skills. Its findings hold practical implications for teaching, counselling, and policies aligned with global education goals like SDG 4, 21st century skills, etc.

OBJECTIVES OF THE STUDY

The present study has the following objectives:

- O₁** To compare male and female Secondary School Students in terms of Creativity.
- O₂** To compare male and female Secondary School Students in terms of Self-Efficacy.
- O₃** To examine Creativity between High and Low Self-Efficacy groups of Secondary School Students.
- O₄** To examine the correlation between Creativity and Self-Efficacy.

HYPOTHESES OF THE STUDY

The present study has the following objectives:

- H₁** There would be significant difference between male and female Secondary School Students in terms of Creativity.
- H₂** There would be significant difference between male and female Secondary School Students in terms of Self-Efficacy.
- H₃** There would be significant difference between Creativity of High and Low Self-Efficacy groups of Secondary School Students.
- H₄** There would be significant correlation between Creativity and Self-Efficacy of Secondary School Students.

DELIMITATIONS

The present research has been delimited to the following aspects:

- ❖ The scope of the study was limited to government secondary schools in Bhagalpur District.
- ❖ The sample for the study comprised 360 secondary school students.



- ❖ In this study, creativity was considered the dependent variable, while self-efficacy was treated as an independent variable.
- ❖ An analytical method was employed to evaluate the data, utilizing tools such as the mean, S.D., Pearson Correlation Coefficient (r), t-ratio, etc.

METHODOLOGY

The present research used the survey method of descriptive research. Qualitative and quantitative research approaches were used for the collection and analysis of data.

Sample and Sampling Method

The sample for present study consists of 360 students (*180 male and 180 female*) from government secondary schools in Bhagalpur district, selected using a stratified random sampling method.

Tools used

The following tools were used to compile the data:

- ❖ '*Passi Test of Creativity*' by B. K. Passi.
- ❖ '*Self-Efficacy Scale*' by A. K. Singh and Shruti Narain.
- ❖ A self-developed *Personal Details Profile* was used for information about the respondent's Gender.

Statistical Procedures Used

(i) Mean (ii) S.D. (iii) t-value, (iv) Pearson Correlation Coefficient (r) & other suitable statistics were employed to examine the data.

DATA ANALYSIS AND INTERPRETATION

Data for the present study were gathered from 360 students enrolled in classes IX and X across different secondary schools in Bhagalpur district, using stratified random sampling. This section includes a preliminary analysis that offers a statistical overview of the various variables, emphasizing the key objectives and hypotheses of the study. The analysis and interpretation of the data are given in the tables and graphs on the following pages:

H₁: There would be significant difference between male and female Secondary School Students in terms of Creativity.

The ‘t-test’ was applied to assess the comparison; the data acquired from the present study is given in Table No. 01 and the graph below.

Table No. 01

Mean, SD, df, & t-value between Self-Efficacy of male and female Secondary School Students:

Group	N	Mean	S.D.	df	‘t’ value	Level of Significance
Creativity of Male	180	124.77	18.88	358	2.14*	significant at 0.05 level (p<0.05)
Creativity of Female	180	120.40	19.82			

**Significant at 0.05 level*

Table No. 01 indicates that the calculated *t-value* for the *creativity* scores of male and female secondary school students is **2.14**, which is statistically significant at the *0.05 level of significance* (*df=358*). Therefore, the alternative hypothesis (H_1), stating that "there is a significant difference between male and female secondary school students in terms of creativity," is accepted. The further findings reveal that male students have a higher mean score ($M1 = 124.77$) compared to female students ($M2 = 120.40$), indicating that males outperform females in creativity. This suggests a significant advantage for males in terms of creativity.

H₂: There would be significant difference between male and female Secondary School Students in terms of Self-Efficacy.

The 't-test' was used to analyse the comparison, and the data obtained from this study are provided in Table No. 02, along with the accompanying graph below.

Table - 02

Mean, SD, df, & t-value between Self-Efficacy of male and female Secondary School Students:

Group	N	Mean	S.D.	df	‘t’ value	Level of Significance
Self-Efficacy of Male	180	76.29	6.29	358	3.97**	Significant at 0.05 level (p<0.05)
Self-Efficacy of Female	180	73.46	7.18			

***Significant at 0.01 level*

Table No. 02 indicates that the calculated *t-value* for the *self-efficacy* scores of male and female secondary school students is **3.97**, which is statistically significant at the *0.01 level of*

significance ($df=358$). Therefore, the alternative hypothesis (H_1), stating that "there is a significant difference between male and female secondary school students in terms of self-efficacy" is accepted. The further findings reveal that male students have a higher mean score ($M1 = 76.29$) compared to female students ($M2 = 73.46$), indicating that males outperform females in self-efficacy. This suggests a significant advantage for males in terms of self-efficacy.

H₃: There would be significant difference between Creativity of High and Low Self-Efficacy groups of Secondary School Students”.

The ‘t-test’ was applied to assess the comparison; the data acquired from the present study is given in Table No. 03.

Table No. 03

Mean, SD, df, & t-value between Creativity of High and Low Self-Efficacy groups of Secondary School Students:

Group	N	Mean	S.D.	df	‘t’ value	Level of Significance
Creativity of High Self-Efficacy Group	30	146.93	12.18	174	13.60*	Significant at 0.05 level (p<0.05)
Creativity of Low Self-Efficacy Group	146	108.56	14.41			

* Significant at 0.01 level

Table No. 03 shows that the calculated t-value for the creativity scores of high and low self-efficacy groups among secondary school students is **13.60**, which is statistically significant at the *0.01 level of significance* ($df=358$). Consequently, the alternative hypothesis (H_3), which states that "there is a significant difference in creativity between high and low self-efficacy groups of secondary school students," is accepted. The results further demonstrate that the high self-efficacy group has a higher mean creativity score ($M2 = 146.93$) compared to the low self-efficacy group ($M1 = 108.56$). Thus, it can be concluded that students with higher self-efficacy exhibit significantly greater creativity, indicating that self-efficacy has a substantial impact on creativity.

H₄: There would be significant relationship between Creativity and Self-Efficacy.

The ‘Co-efficient of Correlation (r)’ was applied to assess the comparison; the data acquired from the present study is given in Table No. 04.

Table No. 04

Co-efficient of Correlation (r) between Creativity and Self-Efficacy of Secondary School Students:

Variables	N	r	Level of Significance
Creativity and Self-Efficacy	360	0.32*	Significant at 0.05 level (P<0.05)

* *Correlation is Significant at the 0.05 level*

Table No. 04 shows that the calculated coefficient of correlation (r) between creativity and self-efficacy is **0.32**, which is statistically significant at the *0.05 level of significance (df=358)*. This indicates a significant positive relationship between creativity and self-efficacy. Furthermore, the findings suggest that self-efficacy influences creativity, though in a positive manner.

FINDINGS AND CONCLUSIONS OF THE STUDY

The findings and conclusions of the present research are based on the testing of its objectives and hypotheses. The results indicate a significant positive relationship between self-efficacy and creativity. This suggests that as the level of self-efficacy increases, it has a positive impact on creativity, highlighting the influence of self-efficacy on creative abilities. The findings and Conclusions have been discussed in the following ways:

- Male students exhibit significantly higher levels of creativity compared to female students.
- Male students demonstrate significantly greater self-efficacy than female students.
- Students with high self-efficacy show significantly higher creativity levels compared to those with low self-efficacy.
- There is a strong, positive, and significant correlation between creativity and self-efficacy.

In nutshell, we can say that Self-Efficacy has their bearing on Creativity. We can adopt some ways to enhance the Self-Efficacy of the learners, but as the study suggests we can also manage learners" Self-Efficacy by taking care of their Creativity.

Educational and Psychological Implications

The research on the “Correlates of Creativity and Self-Efficacy of Secondary School Students” has significant educational and psychological implications. In the educational domain, the findings highlight the importance of fostering both creativity and self-efficacy to enhance



student performance and overall development. Creativity is a critical skill in today's world, enabling students to think innovatively, solve problems, and adapt to changing environments. Similarly, self-efficacy plays a pivotal role in motivating students, enhancing their confidence, and encouraging perseverance in challenging tasks. By understanding the relationship between these two constructs, educators can design teaching strategies and curricula that promote both creativity and self-belief in students. For example, incorporating project-based learning, collaborative activities, and opportunities for independent exploration can simultaneously boost creativity and self-efficacy.

From a psychological perspective, this research underscores the need to address individual differences in students based on factors such as gender, self-perception, and socio-cultural context. The findings suggest that interventions aimed at building self-efficacy may also positively impact creativity. Psychologists and counsellors can leverage these insights to design programs that help students develop a growth mindset, build resilience, and overcome self-doubt. Additionally, identifying students with low self-efficacy or creativity early on can help implement targeted interventions, such as mentorship programs or cognitive-behavioural techniques, to support their development.

In conclusion, the findings of this study underline the interconnectedness of creativity and self-efficacy, offering valuable insights for educators and psychologists. By understanding these constructs and their relationship, educators can develop strategies that promote creativity and enhance students' self-belief. Psychologists and counsellors can design tailored interventions to address individual differences, helping students overcome barriers to success and fostering a positive learning environment for all.

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