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CREATIVE COGNITION AMONG ACADEMIC PUPILS: A COMPARATIVE ANALYSIS

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ABSTRACT:

Creativity is not only essential for survival but also fundamental for attaining monetary success. Students at every educational level should endeavour to cultivate their creative thinking abilities, since it is one of the most essential and vital skills. The creative thinking skills of students from different achievement categories and genders are the main emphasis of the research. The research enlisted the help of 100 teenagers (50 males and 50 females) between the ages of 13 and 16. The data-gathering process included administering the Creativity Test, developed by Chouhan and Tiwari (1974), to test creative thinking skills. The study's overarching goal is to find out if there's a correlation between creative thinking and academic success and, if so, whether the correlation holds true for girls and boys. We analysed the data using t-tests and correlation. The research found that high achievers and poor achievers differed significantly with regard to their level of creativity. Lower performers exhibited less creativity compared to high achievers. When compared to females, boys exhibited more inventiveness. Additionally, the research found that creativity was positively and significantly correlated with academic performance.

KEYWORDS:

THINKING, RESEARCH, SKILLS, ACHIEVERS AND PERFORMANCE.

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INTRODUCTION

Some social variables encourage creativity while others stifle it. Creativity is a social phenomenon. Coming up with fresh, impactful, and practical ideas is what creativity is all about. Creativity is characterised from an individual's point of view as a feature of thinking, a constellation of traits, and the result of the interplay between one's own characteristics, one's own thoughts, and one's own motivations. Being creative is being able to articulate ideas in a unique manner. Given its significance and relevance to every industry, it is a subject that continues to attract more and more attention. In this age of information and communication technology, people's views on education, along with their own problems and demands, are evolving. The idea of creativity has been the subject of many theoretical proposals. Creative thought has long been believed to originate in the unconscious mind, according to psychoanalytic philosophy. Various types of creativity may be seen in both the arts and the sciences. From the beginning of time, there have been scientists and artists. The very essence of scientific inquiry is in the creative process.

More broad-ranging intellectual habits, like openness, ideation level, autonomy, competence, exploratory behaviour, etc., are considered when one focuses on the creative person's character. The conditions in which original thought may thrive are the subject of a place-based approach. For example, the kind of gatekeepers, the amount of freedom to choose, and the availability of resources. A creative person is one who comes up with something new and valuable, whether it's a product, a solution, artwork, a piece of literary work, a joke, etc. The term "new" may describe either the person who comes up with an idea or the context in which that idea takes place. The term valuable also has room for interpretation. Another definition of creativity is the act of making something new and valuable. An individual's capacity for creative expression is essential from the time of embryonic development all the way until maturity. The capacity to think and do things in fresh, original ways; to feel things in one's mind and body in ways one has never done before; and to see and solve issues in ways one has never done before are all components of creativity. National scientific research bodies have issued calls for assistance in the area of creativity, which is now high on the national agenda.

Numerous hypotheses have failed to provide a satisfactory explanation for the notion of creativity, which continues to baffle many psychologists. A creative product, method, person, or location may be the four main foci of studies on creative thinking. Everyone has untapped creative potential that can be developed by education. In the last 20 years, the emphasis on creativity in the classroom has

grown. A lot of people have been saying how great it is, and there are some strong links between creativity and education. Education is a process by which people learn, and it is believed that education should assist each person in reaching his or her maximum potential. It may be inferred from this finding that individuals exhibit varying degrees of creativity and original thought.

Creativity among students is crucial for developing critical thinking, problem-solving, and innovation skills necessary in complex real-world situations. It fosters adaptability, motivation, and engagement in learning, enabling students to approach tasks with originality and confidence. Creativity enhances cognitive flexibility, encourages exploration beyond rote memorisation, and supports lifelong learning. It equips students to generate novel ideas and solutions, essential for academic success and future professional challenges. Parents universally strive to ensure optimal outcomes for their children, which encompasses facilitating their academic success. Academic accomplishment serves as a measurable benchmark that all students should aim to achieve. Every student in our nation possesses the same opportunity for academic achievement, which can be assessed through quantifiable indicators like grade point averages or specific grades.

In education, academic accomplishment refers to how far a student, teacher, or school has progressed in fulfilling its educational objectives. What is often understood as "the knowledge acquired and skills developed in school subjects, generally indicated by marks obtained in tests" is what academic accomplishment pertains to. A student's performance in extracurricular activities is also considered part of their academic achievement. The term "academic achievement" refers to the results of a person's efforts in educational settings, such as high school, college, and university, and how well they met the objectives set forth for them. Cognitive objectives in school systems are often broad in scope (like critical thinking) or involve the development of expertise in a particular field of study.

REVIEW OF LITERATURE

- The usefulness of investigating this link is warranted since some studies have shown that creativity is a facilitator for academic accomplishment, while other studies have shown no or a weak association. The correlation between creative thinking and performance or achievement has been the subject of several intriguing research studies; for example, Chan (2007) found that gender, age, IQ, and other demographic factors were significant predictors of academic success.
- In order to assess undergraduates' creative abilities, Stolitzfus et al. (2011) administered the Torrance Test. On the creativity test, they found that the boys did better than the girls.
- The correlation between creativity and academic performance among secondary school pupils was investigated by Surapuramath (2014). A total of one hundred high school students from 50 different government and 50 non-government schools in Kollegala Taluk participated in the research. The study used the Baker Mahadiyar Creativity exam as its research instrument. The T-test method was used for data analysis, and the study instrument offers three types of activity coefficients of correlation. Students' levels of creativity did not vary significantly across gender, urban vs. rural, or between students attending public vs. private schools in eighth grade, and there was a little positive correlation between creativity and test scores.
- Academic achievement and creative thinking were the subjects of research by Mishra and Garg (2015). Higher education institutes provided the participants. The findings showed that the students' creative output was not significantly related to their academic achievement.
- The correlation between originality and performance in the classroom was studied by Arya et al. (2017). Three hundred randomly selected school-aged children from Uttarakhand were the subjects of the research. There was no association between creative thinking and test scores, according to the poll.

SIGNIFICANCE OF THE STUDY

A nation's educational system's legitimacy and advancement are two of its most important determinants. Learners' academic success and imaginative capacities determine the quality of education. The capacity to form habits and the intellectual creativity that results from such habits are the primary foci of the study. Through their students' experiences in the classroom, teachers may gain valuable insight into their students' creative abilities and how to support their development. And by keeping an eye on their pupils' creative tendencies, teachers may find out if imagination and intelligence go hand in hand in the classroom. A person's academic accomplishment is a key component of their overall life success. The current study aims to determine the level of creativity among high school students and how it correlates with their performance in the classroom by examining several facets of creativity.

METHODOLOGY

The research utilised a quantitative analysis method. The researcher used a descriptive survey approach, bearing in mind the study's hypotheses and the characteristics of the data obtained. Data from both primary and secondary sources are used to compile this article.

HYPOTHESES

- Compared to high achievers, low achievers are less creative.
- The gender effect on creativity will be significant.
- Creativity and academic success are linked.

SAMPLE

The study sample comprised 100 school students, classified into high and low achievers, with an equal distribution of boys and girls within each category. The information was collected from multiple high schools located in Ranchi. The students ranged in age from 14 to 16 years and were enrolled in the tenth grade. The aggregate marks obtained by students in class IX functioned as an indicator of academic performance. All the students originated from families classified within the middle socioeconomic bracket.

INSTRUMENT

- The academic achievements of students' overall performance in class IX were evaluated by looking at their aggregate marks.
- A tool for assessment created by Chouhan and Tiwari in 1974, designed to measure the imaginative abilities of students within the educational setting. The 32 items comprising this examination assess various dimensions of creative productivity, fluency, originality, adaptability, and problem-solving acumen. The scale demonstrates a validity of 0.36 and a reliability of 0.64, respectively.

STATISTICS

Methods in Statistics Used the data was analysed using the following tools: t-test, standard deviation, correlation coefficient, and mean.

RESULTS

TABLE-1 MEAN SCORES OF HIGH AND LOW ACHIEVER STUDENTS ON CREATIVITY

Groups	N	Mean	SD	t	P – Value
High Achiever	50	93.26	11.15	6.03	0.01
Low Achiever	50	81.64	7.84		

The levels of creative thinking and achievement among students, categorised as High and Low, were presented in Table -1, which included descriptive data. The mean score for high achievers was significantly higher at 93.26 with a standard deviation of 11.15, in contrast to low achievers who scored 81.64 with a standard deviation of 7.84 on the test of creative thinking. At the 0.01% significance level, a notable difference was observed in the averages of the two groups. Consequently, the theory has been validated. Top achievers exhibit a notable strength in creativity. Their approach to finding a solution to the problem involves the utilisation of multiple ideas, indicating a broader range of thought. High achievers exhibit a greater tendency for divergent thinking, whereas poor achievers tend to demonstrate more convergent thinking. They aim for excellence and seek to accomplish significant achievements. Achievement is attained by individuals who possess capability, confidence, and perseverance. Habibollah (2009) produced findings that were highly comparable.

TABLE-2 MEAN SCORES OF MALE AND FEMALE STUDENTS ON CREATIVITY

Groups	N	Mean	SD	t	P – Value
Male students	50	93.26	11.15	6.04	0.01
Female students	50	81.61	7.84		

There was a statistically significant difference in creative thinking between male and female students, as revealed by the data, which indicated that male students achieved significantly better scores than their female counterparts. This was demonstrated by a t-test value of 6.04 at a significance level of p= 0.01. During the evaluation of the students, male participants had greater performance in creative thinking, obtaining an average of 93.26 points, in contrast to the 81.61 points that were acquired by female participants. The outcome demonstrated the validity of the idea. This result is consistent with the conclusions that Stolitzfus et al. (2011) discovered. No scientific consensus supports the claim that males have better creativity than females. Creativity varies individually and is influenced by multiple factors, including environment, education, and experience, rather than gender alone. Studies show overlapping distributions of creative ability across genders without inherent superiority. No credible scientific evidence establishes that males have inherently better creativity than females. Differences in creativity observed in some studies often result from social, cultural, educational, and environmental influences rather than biological sex. Creativity is a complex trait shaped by numerous variables, not gender.

TABLE-3 CORRELATION-COEFFICIENTS SCORE OF ACADEMIC ACHIEVEMENT WITH CREATIVITY

N = 100

	Creativity	P value
Academic Achievement	0.323521	0.01

The above table makes it obvious that, at the 0.01 level of significance, there is a statistically positive connection between academic achievement and creative output. There exists a correlation between a higher degree of academic performance and a higher level of creative ability. The findings of the research conducted by Habibollah (2009) indicate that there is a significant connection between creative ability and academic success. This correlation shows how encouraging creative thinking in the classroom may improve students' learning and performance. Creativity contributes to academic achievement by enabling problem-solving, original thinking, and adaptability in learning. High creativity can enhance understanding and innovation in academic tasks. However,

academic achievement also depends on factors such as intelligence, motivation, study habits, and cognitive skills. The relationship is positive but not strictly causal; creativity facilitates more profound learning but does not guarantee higher academic scores alone.

CONCLUSION

In conclusion, the findings indicate that there is a link between those who are creative and those who are successful in their academic endeavours, and this association seems to be different for males and females. Incorporating creative thinking and activities into the curriculum in educational environments may improve students' academic performance, problem-solving ability, and overall cognitive development. Staff members' originality, problem-solving skills, and the learning system's adaptability may all benefit from an environment that encourages innovation. The results of the current research provide important insights to evaluate regarding creativity. Creativity represents a complex construct that requires a structured and systematic approach for comprehension within educational contexts. Many areas of school life and education stand to benefit greatly by seeing creativity as a valuable trait and incorporating it accordingly.

RECOMMENDATION

It is essential to inform parents and teachers about the strengths of their children in order to facilitate their development and success. Investigate and test various educational methods that leverage children's creative abilities to enhance their academic performance. Create and execute academic and extracurricular activities that inspire children to think creatively and provide them the chance to put their abilities to good use for the benefit of society as a whole and for their own personal growth.

IMPLICATION

The development of students' capacities for critical thinking and creative thinking is a crucial stage in the process of preparing them for a better and more affluent future. It is of the utmost importance to offer training for educators in the use of new pedagogical strategies to enhance the critical thinking abilities of teachers and pupils. It is possible that students in both urban and rural settings might benefit from attending symposia, seminars, and workshops that focus on model building to get a deeper understanding of the significance of creativity and critical thinking.

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