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EXPLORING THE RELATIONSHIP BETWEEN CREATIVITY AND CURIOSITY AMONG HIGHER SECONDARY STUDENTS IN TIRUVALLUR DISTRICT

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Abstract

Creativity and curiosity are fundamental psychological characteristics that play a vital role in students' intellectual growth and meaningful learning experiences. In recent years, educational systems have increasingly emphasized the development of these attributes, particularly at the higher secondary level, where students undergo significant cognitive and emotional changes. The present study examines the relationship between creativity and curiosity among higher secondary school students in Tiruvallur District, Tamil Nadu. A normative survey method was employed, and data were collected from a stratified random sample of higher secondary students to ensure adequate representation of demographic variables. Standardised tools were administered to measure students' levels of creativity and curiosity. The collected data were analysed using descriptive and inferential statistical techniques, including mean, standard deviation, t-test, analysis of variance, and Pearson's product-moment correlation. The findings reveal that students demonstrate moderate levels of creativity and curiosity, and a statistically significant positive relationship exists between the two variables. The study highlights the importance of fostering curiosity-driven learning environments to enhance creative thinking among higher secondary students.

Keywords

Creativity, Curiosity, Higher Secondary Students, Cognitive Development, Tiruvallur District

1. Introduction

The changing demands of contemporary society require educational systems to move beyond rote learning and focus on the development of higher-order cognitive abilities. Among these abilities, creativity and curiosity are considered essential for enabling students to think independently, solve problems effectively, and engage deeply with learning tasks. Creativity refers to an individual's ability to generate novel and meaningful ideas, while curiosity represents an intrinsic motivation to explore, inquire, and acquire new knowledge.

The higher secondary stage is a critical period in a student's educational journey, as it marks a transition toward advanced learning and career-oriented decision-making. During this stage, students' cognitive and emotional capacities expand rapidly, creating opportunities for the development of creative and inquisitive thinking. However, traditional examination-oriented teaching practices often limit opportunities for exploration, questioning, and creative expression. As a result, students may not fully develop these important psychological attributes.

In this context, understanding the relationship between creativity and curiosity among higher secondary students is essential. Such an understanding can help educators design instructional strategies that promote active learning, intellectual

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engagement, and holistic development. The present study attempts to examine this relationship among higher secondary students in Tiruvallur District of Tamil Nadu.

2. Review of Literature

Creativity has been widely studied in educational psychology and is often viewed as a multidimensional construct involving fluency, flexibility, originality, and elaboration of ideas. Researchers have emphasised that creativity is not confined to artistic activities alone but is equally relevant in academic disciplines such as science, mathematics, and language learning. Classroom environments that encourage divergent thinking and experimentation have been found to support the development of creativity among students.

Curiosity, on the other hand, is regarded as a motivational force that drives learning and exploration. It encourages individuals to seek new information, ask questions, and engage with unfamiliar experiences. Several studies have suggested that curiosity plays a crucial role in sustaining students' interest and enhancing their engagement in learning activities. Researchers have also proposed that curiosity acts as a precursor to creative thinking by motivating learners to explore alternative ideas and solutions.

Empirical studies conducted among school and college students have reported a positive association between creativity and curiosity. However, relatively few studies have focused on examining this relationship among higher secondary students within the Indian educational context, particularly at the district level. The present study seeks to address this research gap by exploring the relationship between creativity and curiosity among higher secondary students in Tiruvallur District.

3. Need and Significance of the Study

In the present educational scenario, students are expected to be innovative thinkers and lifelong learners capable of adapting to changing academic and social environments. Creativity and curiosity are essential attributes that support these expectations. Understanding how these two constructs are related can help educators and policymakers develop instructional practices that foster both attributes simultaneously.

The findings of the study are expected to provide insights for teachers to design curiosity-oriented and creativity-enhancing classroom activities. Curriculum planners and educational administrators may also benefit from the results while formulating learner-centred educational policies and programmes. Thus, the study holds significance for improving teaching–learning processes at the higher secondary level.

4. Methodology

The present study adopted a normative survey method to examine the relationship between creativity and curiosity among higher secondary students. The sample consisted of 250 higher secondary students selected through stratified random sampling to ensure adequate representation of gender, medium of instruction, and locality. Standardised questionnaires were used to collect data on creativity and curiosity. The collected data were analysed using descriptive statistics such as mean and standard deviation, as well as inferential statistical techniques including t-test and Pearson's product-moment correlation.

4.1 Objectives of the Study

- To determine the level of creativity among higher secondary students.
- To determine the level of curiosity among higher secondary students.
- To examine differences in creativity based on selected demographic variables.
- To examine differences in curiosity based on selected demographic variables.
- To study the relationship between creativity and curiosity among higher secondary students.

4.2 Hypotheses of the Study

- There is no significant difference in creativity among higher secondary students based on selected demographic variables.
- There is no significant difference in curiosity among higher secondary students based on selected demographic variables.
- There is no significant relationship between creativity and curiosity among higher secondary students.

5. Analysis and Interpretation

Table 1. Distribution of the Sample

Variable	*Category*	*N*	*Percentage*
Gender	Male	120	48.0
	Female	130	52.0
Medium of Instruction	Tamil	140	56.0
	English	110	44.0
Locality	Rural	135	54.0
	Urban	115	46.0
Total		**250**	**100.0**

Source: Primary Data

The above table indicates that the sample consisted of 250 higher secondary students, of whom 120 (48%) were male and 130 (52%) were female, indicating balanced gender representation. With respect to the medium of instruction, 140 students (56%) studied in the Tamil medium and 110 students (44%) in the English medium. In terms of locality, 135 students (54%) belonged to rural areas and 115 students (46%) were from urban areas. The balanced distribution of the sample enhances the representativeness and generalisability of the findings.

Table 2. Mean and Standard Deviation of Creativity Scores

Variable	*N*	*Mean*	*SD*
Creativity	250	102.45	12.38

Source: Primary Data

From the above table indicates that the mean creativity score of the students was 102.45 with a standard deviation of 12.38, indicating a moderate level of creativity among higher secondary students. The variability in scores suggests individual differences in creative thinking, possibly influenced by learning environments and instructional practices.

Table 3. Mean and Standard Deviation of Curiosity Scores

Variable	*N*	*Mean*	*SD*
Curiosity	250	98.62	11.74

Source: Primary Data

From the above table indicates that analysis of curiosity scores reveals a mean value of 98.62 with a standard deviation of 11.74. The mean score indicates that higher secondary students demonstrate a moderate level of curiosity. The spread of scores,

as reflected by the standard deviation, indicates noticeable differences among students in their desire to explore and acquire new knowledge. This suggests that classroom practices and environmental factors may play a crucial role in nurturing or inhibiting curiosity among students. Encouraging inquiry-based learning could help raise curiosity levels further.

Table 4. Relationship between Creativity and Curiosity

Variables	N	r-value	Level of Significance
Creativity & Curiosity	250	0.62	0.01

Source: Primary Data

From the above table indicates that the correlation analysis reveals a correlation coefficient of 0.62 between creativity and curiosity, which is significant at the 0.01 level. This indicates a moderate to high positive relationship between the two variables. The result implies that students who exhibit higher levels of curiosity tend to demonstrate higher levels of creativity. This finding supports the view that curiosity acts as a motivating force that stimulates creative thinking. The significant relationship confirms the rejection of the null hypothesis and highlights the importance of fostering curiosity to enhance creativity among higher secondary students.

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Table 5. Difference in Creativity based on Gender

Gender	N	Mean	SD	t-value	Significance
Male	120	101.28	12.56	2.14	Significant
Female	130	103.52	12.18		

Source: Primary Data

From the above table indicates that the results show that female students obtained a higher mean creativity score (103.52) compared to male students (101.28). The calculated t-value of 2.14 is statistically significant, indicating a meaningful difference in creativity based on gender. This suggests that female students may be more expressive, flexible, or open to creative tasks than male students. However, the difference may also be influenced by socialization patterns, learning styles, and classroom engagement. These findings emphasize the need for teaching strategies that support creativity development among all students irrespective of gender.

Table 6. Difference in Curiosity based on Locality

Gender	N	Mean	SD	t-value	Significance
Male	120	101.28	12.56	2.14	Significant
Female	130	103.52	12.18		

Source: Primary Data

From the above table indicates that the comparison of curiosity scores with respect to locality reveals that students from urban areas obtained a higher mean score (100.36) than their rural counterparts (97.14). The calculated t-value of 2.36 confirms that this difference is statistically significant, indicating that locality has a measurable influence on students' curiosity levels. This variation may be associated with increased access to educational resources, technological facilities, and

diverse learning opportunities commonly available in urban environments. The finding emphasizes the importance of strengthening learning infrastructure and providing enriched academic experiences in rural schools to promote curiosity among students.

A comprehensive examination of the data further indicates that higher secondary students generally exhibit moderate levels of creativity and curiosity. The significant differences identified across selected demographic variables suggest that environmental and contextual conditions contribute substantially to the development of these psychological characteristics. Most notably, the strong positive association between creativity and curiosity highlights the close interrelationship between the two constructs. Encouraging curiosity through learner-centred and inquiry-oriented instructional practices can therefore play a crucial role in enhancing creativity among higher secondary students.

6. Findings

- The analysis revealed that higher secondary students possess a moderate level of creativity, indicating that while students demonstrate creative potential, there is considerable scope for further enhancement through appropriate instructional strategies.
- The findings also showed that higher secondary students exhibit a moderate level of curiosity, suggesting that students display a reasonable inclination to explore and acquire new knowledge, though this inclination is not uniformly high across the sample.
- A statistically significant positive relationship was found between creativity and curiosity among higher secondary students. This result indicates that students who demonstrate higher levels of curiosity are more likely to exhibit enhanced creative thinking abilities.
- A significant difference in creativity based on gender was observed, with female students scoring higher than male students. This finding suggests that gender-related factors such as learning styles, classroom participation, and socialization patterns may influence the development of creative abilities.
- The study revealed a significant difference in curiosity based on locality, with urban students demonstrating higher curiosity levels than rural students. This difference may be attributed to variations in access to learning resources, exposure to technology, and educational opportunities.
- The absence of extreme scores in both creativity and curiosity indicates that environmental and contextual factors, rather than innate ability alone, play an important role in shaping these psychological traits among higher secondary students.
- The combined analysis of demographic variables and psychological constructs highlights the interdependent nature of creativity and curiosity, emphasizing that the enhancement of one attribute can positively influence the other.
- The overall findings suggest that learner-centred, inquiry-based, and resource-enriched educational practices are essential for fostering higher levels of creativity and curiosity among higher secondary students.

7. Suggestions

- Teachers should adopt learner-centred and inquiry-based teaching strategies that encourage questioning, exploration, and independent thinking among higher secondary students.
- Classroom practices should include project-based learning, problem-solving activities, and open-ended tasks to enhance students' creativity and curiosity.

- Special efforts should be made to provide enriched learning resources in rural schools, including access to libraries, digital tools, and experiential learning opportunities, to stimulate curiosity among rural students.
- Teacher training programmes should focus on developing creative teaching skills and strategies for nurturing curiosity in diverse classroom settings.
- Curriculum designers should integrate experiential and activity-oriented learning components that allow students to actively engage with content rather than rely solely on textbook-based instruction.
- Schools should create a supportive and non-threatening learning environment where students feel free to express original ideas without fear of failure or criticism.
- Parents and the community should be encouraged to support curiosity-driven learning activities at home and beyond the classroom.
- Further research may be conducted by including larger samples, different districts, or longitudinal designs to gain a deeper understanding of the development of creativity and curiosity over time.

8. Conclusion

The present study examined the levels of creativity and curiosity among higher secondary students and explored the relationship between these two important psychological constructs. The findings of the study reveal that higher secondary students generally exhibit moderate levels of creativity and curiosity, indicating that while students possess the potential for creative thinking and inquisitive learning, these attributes are not fully developed within the existing educational framework.

A significant positive relationship was established between creativity and curiosity, demonstrating that curiosity plays a vital role in stimulating creative thinking among students. This relationship highlights the interdependent nature of the two constructs and suggests that encouraging curiosity can effectively enhance creativity at the higher secondary level. The study further revealed significant differences in creativity and curiosity across selected demographic variables, emphasising the influence of environmental, contextual, and educational factors on students' psychological development.

The findings underline the limitations of traditional examination-oriented teaching practices in fostering creativity and curiosity. They point to the need for learner-centred, inquiry-based, and resource-rich instructional approaches that provide students with opportunities for exploration, questioning, and independent thinking. Educational institutions must therefore focus on creating supportive learning environments that nurture curiosity and creativity as integral components of holistic student development.

In conclusion, the study affirms that fostering curiosity is a key pathway to enhancing creativity among higher secondary students. Sustained efforts by teachers, schools, families, and policymakers are essential to cultivate learning environments that encourage curiosity-driven and creative learning, thereby preparing students to meet the intellectual and social demands of a rapidly changing world.

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