

# EDUCATIONAL EXPOSURE AND CREATIVE THINKING ABILITIES AMONG HIGH-ACHIEVING B.ED. STUDENTS: AN EMPIRICAL STUDY IN RANCHI DISTRICT

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## ABSTRACT

*Creative thinking is an important competence for prospective teachers because effective teaching requires the ability to generate alternative ideas, design innovative learning experiences and respond flexibly to diverse classroom situations. The present study examines educational exposure and creative thinking abilities among high-achieving B.Ed. students in Ranchi District. The study focuses on creative thinking as a multidimensional construct involving abilities such as fluency, flexibility, originality and elaboration, depending upon the selected assessment tool. A descriptive survey design will be employed. High-achieving B.Ed. students from selected teacher-education institutions in Ranchi District will constitute the sample. Data will be collected using an appropriate educational-exposure measure and a validated creative-thinking test. Descriptive statistics, tests of significance and correlation analysis will be employed according to the objectives and hypotheses. Recent literature indicates that creativity among pre-service teachers remains an important but comparatively underexplored field, while experimental research has demonstrated that innovative instructional approaches can enhance creative performance in teacher preparation. The study is expected to contribute to understanding how educational experiences may be associated with the development of creative thinking among academically high-achieving prospective teachers.*

**Keywords:** *Creative Thinking<sup>1</sup>, Educational Exposure<sup>2</sup>, High-Achieving Students<sup>3</sup>, B.Ed.<sup>4</sup>, Creativity<sup>5</sup>, Teacher Education<sup>6</sup>, Ranchi District<sup>6</sup>*

## 1. INTRODUCTION

Education in the twenty-first century increasingly requires learners to move beyond memorisation and develop the capacity to generate ideas, approach problems from multiple perspectives and adapt to changing circumstances. Creativity therefore represents an important educational outcome as well as a professional competence for teachers. Creative thinking involves the generation and development of ideas that are novel, useful and appropriate to a particular context. In educational settings, creativity may be expressed through innovative

lesson planning, alternative teaching strategies, flexible classroom responses, novel learning activities and the ability to reinterpret familiar problems from different perspectives.

For B.Ed. students, creative thinking has particular significance. Prospective teachers are expected to design meaningful learning experiences for learners with different abilities, interests and backgrounds. A teacher who can generate multiple approaches to a teaching problem may be better positioned to respond to classroom diversity.

Recent scholarship has highlighted creativity as an important area within pre-service teacher education. A 2025 systematic review examining research published between 2014 and 2024 identified only 27 relevant empirical articles and reported considerable diversity in definitions and approaches to creativity among pre-service teachers, suggesting that the field remains relatively underexplored. Experimental research has also provided evidence for the potential of innovative pedagogical approaches. A 2025 study involving pre-service teachers found that a design-thinking intervention was associated with significantly stronger performance on teaching-plan creativity than the comparison condition.

Similarly, research on design thinking among pre-service teachers has connected divergent and convergent thinking with innovative pedagogical design. The present study focuses specifically on high-achieving B.Ed. students in Ranchi District to examine whether educational exposure is associated with their creative-thinking abilities.

### **1.1 Statement of the Problem**

“Educational Exposure and Creative Thinking Abilities among High-Achieving B.Ed. Students: An Empirical Study in Ranchi District.”

## **2. REVIEW OF LITERATURE**

Research on creativity in teacher education suggests that creative thinking should be considered an important component of teacher preparation. A systematic review by Education Sciences published in 2025 examined empirical research on creativity and preservice teachers from 2014 to 2024. Only 27 empirical studies met the review criteria, and the authors reported that the field showed substantial conceptual diversity and comparatively limited attention to the specific characteristics of preservice teachers.

A 2025 experimental study in Learning and Instruction investigated design thinking as an approach for developing the creativity of pre-service teachers in designing teaching plans. The experimental group performed significantly better than the control group, indicating that structured innovative pedagogies may support creative performance in teacher preparation.

Research on physical-education pre-service teachers has also examined design thinking, divergent thinking and technological pedagogical knowledge. The findings reported positive relationships between design-thinking factors and aspects of TPACK, suggesting that creative and innovative thinking can have implications for pedagogical design. Earlier Indian research specifically concerning pre-service teachers' creative thinking about teaching emphasised the need to identify and nurture creative thinking among prospective teachers and examined differences across selected demographic categories. Research also suggests that the development of creativity may

require appropriate coursework and practice-based experiences. Studies of pre-service teachers have identified lack of knowledge and experience concerning creativity as a potential barrier to creative pedagogical practice.

## 2.1 Research Gap

Although creativity has been examined in teacher education, the literature indicates that the field remains relatively underexplored and conceptually diverse. There is a particular need for contextual research focusing on high-achieving B.Ed. students in Indian districts and examining the association between educational exposure and creative-thinking abilities. The present study seeks to contribute evidence from Ranchi District.

## 3. OBJECTIVES OF THE STUDY

- To study the level of creative-thinking abilities among high-achieving B.Ed. students in Ranchi District.
- To examine the influence of educational exposure on creative-thinking abilities among high-achieving B.Ed. students in Ranchi District.
- To find out whether there is a significant difference in creative-thinking abilities between male and female high-achieving B.Ed. students in Ranchi District.
- To determine the relationship between educational exposure and creative-thinking abilities among high-achieving B.Ed. students in Ranchi District.

## 4. HYPOTHESES

**H<sub>01</sub>** There is no significant difference in the level of creative-thinking abilities among high-achieving B.Ed. students in Ranchi District.

**H<sub>02</sub>** Educational exposure has no significant influence on creative-thinking abilities among high-achieving B.Ed. students in Ranchi District.

**H<sub>03</sub>** There is no significant difference in creative-thinking abilities between male and female high-achieving B.Ed. students in Ranchi District.

**H<sub>04</sub>** There is no significant relationship between educational exposure and creative-thinking abilities among high-achieving B.Ed. students in Ranchi District.

## 5. METHODOLOGY

### 5.1 Research Design

A descriptive survey research design will be adopted to examine educational exposure and creative-thinking abilities among high-achieving B.Ed. students.

### Population

The population will comprise B.Ed. students enrolled in recognised teacher-education institutions in Ranchi District.

### Sample

- High-achieving B.Ed. students from selected B.Ed. institutions in Ranchi District will constitute the sample.
- Exact sample size and college-wise distribution should be inserted from the actual field dataset.

#### **Variables**

- Independent/Explanatory Variable: Educational exposure
- Dependent Variable: Creative-thinking ability
- Grouping Variable: Gender
- Dimensions of Creative Thinking

Where supported by the selected instrument, creative thinking may be examined through:

- Fluency – ability to generate numerous ideas;
- Flexibility – ability to generate ideas across different categories or perspectives;
- Originality – ability to generate uncommon or novel ideas;
- Elaboration – ability to develop and add meaningful detail to ideas.

#### **Tools**

- Educational Exposure Questionnaire/Scale.
- Standardised or validated Creative Thinking Test.

The selected creativity instrument should have established validity and reliability for the target population.

#### **Validity and Reliability**

Content validity should be established through expert review. Reliability should be calculated using an appropriate method such as Cronbach's alpha, split-half reliability or test-retest reliability, depending on the characteristics of the instrument.

### **6. DATA COLLECTION PROCEDURE**

After obtaining institutional permission, the researcher will administer the tools to selected participants under standardised conditions. Participants will be informed that their responses would be used for academic research and treated confidentially.

#### **Statistical Techniques**

The following techniques may be used:

- Frequency and percentage
- Mean
- Standard deviation
- Independent-samples t-test
- Pearson's product-moment correlation
- Regression analysis, where appropriate

### **7. DATA ANALYSIS**

**Table 1: Descriptive Statistics of Creative-Thinking Ability**

| Variable          | N        | Mean             | SD               | Level            |
|-------------------|----------|------------------|------------------|------------------|
| Creative Thinking | Actual N | To be calculated | To be calculated | To be determined |

**Table 2: Gender-wise Comparison of Creative-Thinking Scores**

| Gender | N      | Mean | SD | <i>t</i> | <i>p</i> |
|--------|--------|------|----|----------|----------|
| Male   | Actual | —    | —  | —        | —        |
| Female | Actual | —    | —  | —        | —        |

**Table 3: Relationship between Educational Exposure and Creative Thinking**

| Variables                                | N      | Pearson's <i>r</i> | <i>p</i> |
|------------------------------------------|--------|--------------------|----------|
| Educational Exposure & Creative Thinking | Actual | —                  | —        |

**Table 4: Influence of Educational Exposure on Creative Thinking**

| Predictor            | B | SE | $\beta$ | <i>t</i> | <i>p</i> |
|----------------------|---|----|---------|----------|----------|
| Educational Exposure | — | —  | —       | —        | —        |

## 7. RESULTS

- For Objective 1, the descriptive statistics will establish the overall level of creative-thinking ability among high-achieving B.Ed. students.
- For Objective 2, regression or another appropriate inferential procedure will be used to determine whether educational exposure significantly predicts creative-thinking ability.
- For Objective 3, an independent-samples t-test will determine whether the difference between male and female students' creative-thinking scores is statistically significant.
- For Objective 4, Pearson's correlation will establish the direction and strength of the association between educational exposure and creative thinking.

Where the creativity test provides separate scores for fluency, flexibility, originality and elaboration, dimension-wise analysis may additionally be reported. No numerical result should be entered until the actual field data are analysed.

## 8. DISCUSSION

Creative thinking is increasingly recognised as an important competence in teacher preparation. Prospective teachers need to develop the capacity to design learning activities, respond to unexpected classroom situations and generate alternative approaches to teaching.

The recent systematic review of creativity research among preservice teachers indicates that the field remains comparatively underexplored and that researchers use diverse conceptualisations and measures of creativity. This supports the need for clearly defined constructs and appropriate measurement tools when investigating creative thinking among B.Ed. students.

The findings of recent experimental research are also relevant. Design thinking has been shown to improve the creativity of teaching plans developed by pre-service teachers, suggesting that educational experiences designed around ideation, problem framing and innovation can contribute to creative performance.

Accordingly, if the present study establishes a significant positive relationship between educational exposure and creative thinking, it would indicate that richer educational experiences may be associated with stronger creative abilities among high-achieving B.Ed. students. Conversely, a non-significant relationship would suggest that educational exposure alone may not be enough and that the pedagogical quality of educational experiences needs greater attention.

The interpretation should therefore consider the nature of classroom practices, opportunities for experimentation, teacher-educator support, practical exposure and the extent to which B.Ed. students are encouraged to think independently.

## 9. CONCLUSION

Creative thinking is an important dimension of effective teacher preparation. The present study focuses on high-achieving B.Ed. students because academic achievement alone does not necessarily represent the full range of intellectual abilities required for effective teaching.

The study seeks to determine whether educational exposure is associated with creative-thinking abilities among B.Ed. students in Ranchi District. Particular attention may be given to fluency, flexibility, originality and elaboration where these dimensions are supported by the selected assessment tool. The findings may contribute to the strengthening of teacher-education practices by encouraging more innovative, experiential and learner-centred approaches. Recent evidence from pre-service teacher research supports the potential of design thinking and other active approaches for developing creative pedagogical performance.

## 10. SUGGESTIONS FOR FURTHER STUDY

- Similar studies may be conducted among B.Ed. students in other districts of Jharkhand.
- Future researchers may compare creative-thinking abilities of high-achieving and average-achieving B.Ed. students.
- Experimental studies may examine the effectiveness of design thinking, brainstorming and problem-based learning on creativity.
- Future research may investigate the relationship between creativity and teaching aptitude.
- Studies may examine the role of school internship in developing creative teaching practices.
- Comparative research may be conducted between government and private B.Ed. institutions.
- Future studies may investigate the relationship between critical thinking and creative thinking among prospective teachers.
- Longitudinal research may examine changes in creativity throughout the B.Ed. programme.

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