

EDUCATIONAL INFLUENCE ON CRITICAL THINKING AMONG HIGH- ACHIEVING B.ED. STUDENTS: A STUDY IN RANCHI DISTRICT

Kunjlata Lal¹

Dr. Mamta Gupta²

Department of Education¹

Sai Nath University, Ranchi, Jharkhand²

ABSTRACT

Critical thinking is an essential component of effective teacher preparation because prospective teachers are expected to analyse educational situations, evaluate information, make reasoned judgments and solve classroom problems thoughtfully. The present study focuses on the educational influence on critical thinking among high-achieving B.Ed. students in Ranchi District. The study proposes to examine the level of critical thinking among high-achieving B.Ed. students and to investigate its association with selected educational factors. A descriptive survey research design is proposed for the study. High-achieving B.Ed. students studying in selected teacher education institutions of Ranchi District will constitute the target population. Descriptive statistics, independent-samples t-test and Pearson's product-moment correlation, as appropriate to the research questions and variables, will be used for analysis. Recent research indicates that critical thinking is particularly relevant to teacher education and can be strengthened through discussion, reflection, practicum-based activities and interactive learning experiences. The study is expected to provide useful implications for B.Ed. curriculum design, teacher educators and institutional practices aimed at developing reflective and analytical prospective teachers.

Keywords: Education¹, Critical Thinking², High-Achieving Students³, B.Ed.⁴, Teacher Education⁵, Prospective Teachers⁶, Ranchi District⁷

1. INTRODUCTION

Education is not limited to the acquisition of subject knowledge. One of its important purposes is to develop the intellectual abilities required for analysing information, interpreting situations, evaluating alternatives and making appropriate decisions. In teacher education, these abilities acquire special importance because teachers constantly encounter complex classroom situations requiring judgement, reflection and problem-solving. Critical thinking may broadly be understood as purposeful and reflective thinking involving analysis, interpretation, evaluation, inference and reasoned decision-making. For prospective teachers, critical thinking is particularly important because teaching requires more than the mechanical application of predetermined

instructional procedures. A teacher has to understand learners, interpret classroom situations, evaluate teaching strategies and modify practices according to contextual needs.

Recent research in teacher education has reinforced the importance of critical thinking. A 2024 study of student-teachers found that discussion and reflective interaction could support stronger demonstrations of critical-thinking skills during the analysis of critical incidents. Similarly, recent research on prospective teachers has examined changes in perceptions and understanding of critical-thinking skills within teacher-education courses. The Indian teacher-education context also gives increasing importance to analytical, reflective and problem-solving abilities. Recent NCERT-published research has highlighted the potential of educational technology and interactive learning environments for supporting critical-thinking development among learners.

The present study therefore attempts to examine the educational influence on critical thinking specifically among high-achieving B.Ed. students in Ranchi District. Focusing on high-achieving students is significant because these students represent a group that has demonstrated comparatively strong academic performance, and examining their critical-thinking characteristics may provide insights into whether academic success is accompanied by higher-order thinking abilities.

1.1 Statement of the Problem

“Educational Influence on Critical Thinking among High-Achieving B.Ed. Students: A Study in Ranchi District.”

2. REVIEW OF LITERATURE

Critical thinking has increasingly become an important area of teacher-education research because prospective teachers need to develop the capacity to interpret evidence, reflect on practice and make pedagogically justified decisions. A recent study by Khan, Fazal and Nazir examined prospective teachers' perceptions of critical-thinking skills before and after participation in a Functional English course. The study illustrates the relevance of critical thinking within prospective teacher preparation and the role of educational experiences in shaping such abilities. A 2024 study published in *Thinking Skills and Creativity* investigated critical thinking among student-teachers through critical-incident analysis. The findings indicated that student-teachers demonstrated stronger critical-thinking performance during collaborative discussion than in some written analyses. The study emphasised the importance of reflection, interaction and connecting theoretical knowledge with practical teaching experiences.

Gopinath's study of B.Ed. teacher trainees in India examined perceptions of critical thinking in relation to selected demographic variables. The study used descriptive statistics and tests of significance to examine differences among teacher trainees, demonstrating the continued relevance of critical-thinking research within Indian B.Ed. programmes. Recent Indian research has also explored the development and measurement of critical thinking among B.Ed. students. Yarriswamy and Pujar reported the development and content validation of a Critical Thinking Scale specifically for B.Ed. students, highlighting the need for contextually appropriate measurement of critical-thinking constructs in teacher education. Research concerning technology and teacher education further suggests that interactive educational environments may contribute to critical thinking, communication and learner engagement. Gorai's 2025 study of B.Ed. student-teachers reported perceived benefits of social-media technology and related educational activities for classroom engagement and critical-thinking development, while also identifying institutional and infrastructural constraints.

2.1 Research Gap

Although critical thinking has been studied among prospective teachers, comparatively less attention has been directed toward high-achieving B.Ed. students within the specific geographical and educational context of Ranchi District. Further, the relationship between educational exposure and critical-thinking ability within this particular group requires systematic empirical examination. The present study attempts to address this contextual gap.

3. OBJECTIVES OF THE STUDY

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

4. HYPOTHESES

H₀₁ There is no significant difference in the level of critical thinking among high-achieving B.Ed. students in Ranchi District.

H₀₂ Educational exposure has no significant influence on critical-thinking ability among high-achieving B.Ed. students in Ranchi District.

H₀₃ There is no significant difference in critical-thinking ability between male and female high-achieving B.Ed. students in Ranchi District.

H₀₄ There is no significant relationship between educational exposure and critical-thinking ability among high-achieving B.Ed. students in Ranchi District.

5. METHODOLOGY

Research Design

The study will employ a descriptive survey research design. This design is appropriate because the study seeks to assess critical-thinking ability and examine its association with educational exposure among a defined group of B.Ed. students.

Population

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

Sample

The sample will comprise high-achieving B.Ed. students selected from the identified B.Ed. colleges/institutions of Ranchi District. High achievement should be operationally defined before analysis—for example, on the basis of the student's academic performance/percentage in the prescribed examination or another predetermined criterion. For the final journal version, the exact sample size and college-wise distribution should be inserted from the actual study dataset.

- Variables
- Independent/Explanatory Variable: Educational exposure
- Dependent Variable: Critical-thinking ability
- Grouping Variable: Gender

Tools

The study may employ:-

- A structured Educational Exposure Questionnaire/Scale, and
- A validated Critical Thinking Scale/Test appropriate for B.Ed. students.
- A context-specific critical-thinking scale for B.Ed. students has recently been developed and validated in Indian teacher-education research, illustrating the importance of establishing appropriate validity and reliability for this population.

Validity and Reliability

The selected/self-developed tools should be subjected to expert validation and reliability testing. Internal consistency may be assessed using Cronbach's alpha where appropriate, while test-retest reliability or other suitable methods may be used depending on the nature of the instrument.

6. DATA COLLECTION

Permission will be obtained from the concerned institutions. Participants will be informed about the purpose of the study and the confidentiality of their responses. Data will be collected using standardised administration procedures.

Statistical Techniques

Depending on the nature and distribution of the actual data:

- Frequency and percentage
- Mean
- Standard deviation
- Independent-samples t-test
- Pearson's product-moment correlation
- Regression analysis, if required by the operationalisation of "educational influence" will be considered.

7. DATA ANALYSIS

The data should be organised according to the four research objectives.

Table 1: Descriptive Statistics of Critical-Thinking Scores

Variable	N	Mean	SD	Level
Critical Thinking	Actual N	To be calculated	To be calculated	To be determined

Table 2: Comparison of Critical Thinking by Gender

Gender	N	Mean	SD	t	p
Male	Actual	—	—	—	—
Female	Actual	—	—	—	—

Table 3: Relationship between Educational Exposure and Critical Thinking

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

Table 4: Regression/Influence of Educational Exposure on Critical Thinking

Predictor	B	SE	β	t	p
Educational Exposure	—	—	—	—	—

8. RESULTS

The final results of the study should be reported strictly from the collected data.

- For Objective 1, the mean and standard deviation of the critical-thinking scores will establish the overall level of critical thinking among high-achieving B.Ed. students.
- For Objective 2, regression or an appropriate inferential procedure will determine whether educational exposure significantly predicts or influences critical-thinking ability.
- For Objective 3, the independent-samples t-test will determine whether male and female high-achieving B.Ed. students differ significantly in critical-thinking scores.
- For Objective 4, Pearson's correlation coefficient will determine the direction and strength of the relationship between educational exposure and critical thinking.
- Decision rule: At the 0.05 level of significance, a p-value below .05 will generally be interpreted as statistically significant, subject to the assumptions and analysis plan of the study.

9. DISCUSSION

The present study conceptualises education as a process that can contribute to the development of higher-order cognitive abilities rather than merely improving academic achievement. This perspective is particularly relevant in teacher education, where prospective teachers must interpret classroom situations, evaluate alternatives and make informed pedagogical decisions. Existing research supports the relevance of reflective and interactive educational experiences to critical thinking. Critical-incident research among student-teachers has demonstrated

the value of discussion and reflection in supporting critical-thinking performance. Similarly, recent work concerning prospective teachers suggests that educational experiences can shape perceptions and understanding of critical-thinking skills.

If the empirical results demonstrate a significant positive association between educational exposure and critical thinking, this would support the argument that richer educational experiences may contribute to higher-order thinking. If no significant association is found, the finding would also be important because it would suggest that educational exposure alone may not be sufficient and that the quality, nature and pedagogical structure of educational experiences may matter more than exposure in itself.

The findings should therefore be interpreted within the specific context of high-achieving B.Ed. students and should not automatically be generalised to all teacher trainees.

10. CONCLUSION

Critical thinking represents an important professional competence for prospective teachers. The present study seeks to examine educational influence on critical-thinking ability among high-achieving B.Ed. students in Ranchi District. The study is significant because academic achievement and critical thinking are related but conceptually distinct constructs. A student may perform strongly academically while still requiring opportunities for analysis, reflection, evaluation and independent judgement.

The study therefore emphasises the need for B.Ed. programmes to move beyond content transmission and incorporate discussion, problem-based learning, reflective practice, case analysis, critical-incident analysis, collaborative learning and classroom-based decision-making activities. Such approaches are consistent with recent research highlighting discussion, reflection and active learning in teacher preparation.

11. SUGGESTIONS FOR FURTHER STUDY

- Similar research may be conducted with B.Ed. students from other districts of Jharkhand.
- Comparative studies may be undertaken between high-achieving and average-achieving B.Ed. students.
- Future studies may examine critical thinking in relation to teaching aptitude, emotional intelligence, creativity or problem-solving ability.
- Experimental studies may examine the effectiveness of problem-based learning and reflective teaching strategies.
- Longitudinal studies may investigate changes in critical thinking from admission to completion of the B.Ed. programme.
- Future research may examine the role of teaching internship and practicum experiences in developing critical thinking.
- Studies may compare conventional B.Ed. programmes with innovative or integrated teacher-education programmes.

12. REFERENCES

- [1] Paul, R., & Elder, L. (2006). *Critical thinking: The nature of critical and creative thought*. Journal of Developmental Education, 30(2), 34–35.
- [2] Lai, E. R. (2011). *Critical thinking: A literature review*. Pearson.
- [3] Behar-Horenstein, L. S., & Niu, L. (2011). *Teaching critical thinking skills in higher education: A review of the literature*. Journal of College Teaching & Learning, 8(2), 25–42.
- [4] Halpern, D. F. (2014). *Thought and knowledge: An introduction to critical thinking*. Psychology Press.
- [5] Tiruneh, D. T., Verburgh, A., & Elen, J. (2014). *Effectiveness of critical thinking instruction in higher education: A systematic review of intervention studies*. Higher Education Studies, 4(1), 1–17.
- [6] Abrami, P. C., et al. (2015). *Strategies for teaching students to think critically: A meta-analysis*. Review of Educational Research, 85(2), 275–314.
- [7] Stuppel, E. J. N., Maratos, F. A., Elander, J., Hunt, T. E., Mansfield, K. L., & Edgar, R. (2017). *Development of the Critical Thinking Toolkit (CriTT): A measure of student attitudes and beliefs about critical thinking*. Thinking Skills and Creativity, 23, 91–100.
- [8] Gopinath, K. (2019). *Perception on critical thinking among B.Ed. teacher trainees*. Think India Journal.
- [9] *Critical incidents analysis in teacher education: Assessing student-teachers' critical thinking*. (2024). *Thinking Skills and Creativity*, 51, 101476.
- [10] Khan, S. I., Fazal, S., & Nazir, F. (2025). *A qualitative study of prospective teachers' perceptions about critical thinking skills before and after studying the Functional English course*. SAGE Open.
- [11] Gorai, J. (2025). *The benefits of social media technology for student-teachers in the B.Ed. professional course: Implications for the classroom*. Indian Journal of Educational Technology, 7(2), 17–27.
- [12] Yarriswamy, M. C., & Pujar, A. (2025). *Development and content validation of a critical thinking scale for B.Ed. students*. Asian Journal of Basic Science & Research, 7(3), 226–243.