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"AN ATTEMPT TO EXAMINE TEACHER EDUCATORS' PERSPECTIVES ON CRITICAL THINKING"

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ABSTRACT

In order to delve into the viewpoints, habits, and convictions of teacher educators about the function of critical thinking in the educational setting, this research used a mixed-method strategy, integrating quantitative and qualitative data gathering. The research used stratified random selection to recruit 110 participants from a broad pool of institutions, faculties, and teaching experiences in the Patna region. The participants are teacher educators from universities and comparable educational institutions. We used descriptive statistics like frequencies, means, and percentages to make sense of the quantitative data that we collected via a structured Likert-scale questionnaire. Inferential statistics, such as t-tests and ANOVA, were used to delve further into the variations across the different groups. A thorough comprehension of teacher educators' perspectives on and use of critical thinking in the classroom is the overarching goal of this study.

Keywords: Teacher Educators, Critical Thinking, Perceptions, Teaching Practices, Mixed-Method

I. INTRODUCTION

A recommitment to teaching pupils to think critically and creatively is required in today's schools due to the fact that educational systems throughout the world are changing at a dizzying rate. This is where teacher educators, who are tasked with molding the educators of tomorrow, play a pivotal role. Beyond just imparting information, teacher educators also serve as role models for their students, demonstrating the values, attitudes, and pedagogical practices that will be carried over into their own classrooms. Therefore, they are crucial nodes in the educational environment due to their views and actions concerning creativity and critical thinking. This research aims to examine the viewpoints of university teacher educators in Patna, an educationally lively and historically rich city in India, on the importance of creativity and critical thinking in the classroom. The study's overarching goal is to provide light on the differences in the ways these core abilities are conceived of and developed during teacher preparation by comparing approaches taken at various institutions in Patna.

Although critical thinking and creativity has been the subject of much theoretical and practical discussion in education, these ideas remain difficult to define, evaluate, and put into practice. While critical thinking usually entails the ability to think reflectively and independently, to assess arguments, and to make reasoned decisions, creativity is generally linked with uniqueness, adaptability, and the potential to produce fresh and beneficial ideas. Both abilities have their own unique qualities, but they complement one another and work

well together, especially in classrooms that place a premium on critical thinking, creative problem-solving and analytical reasoning. Consequently, educator-in-training positions are at a crossroads in terms of advocating these abilities as concrete talents that should permeate all aspects of education, not only theoretical frameworks. How well pre-service teachers are encouraged to think creatively and critically is heavily influenced by their own views, which are in turn molded by their own ideologies, professional experiences, educational backgrounds, and institutional settings.

Several colleges and universities call Patna, Bihar's capital, home. These institutions vary widely in terms of demographics, educational philosophy, and the resources they make available to students. Teacher educators' perspectives and practices on creativity and critical thinking are shaped by their institutional settings. This variability provides a rich environment for comparative research. Traditional, exam-oriented education may be more valued at certain schools than at others, which may promote more modern, student-centered methods. Educators of future teachers are likely to vary on how to best identify and encourage students' creative and critical thinking skills. In addition, teacher educators' perspectives are heavily influenced by socio-cultural variables, such as the general public's views on education, innovation, and authority. Contributing to the larger conversation on educational reform and teacher development in India, delving into these intricacies may reveal the obstacles encountered and the tactics used by educators to foster these abilities.

While many teacher educators advocate for incorporating creativity and critical thinking into school curriculum, evidence shows that this seldom happens in practice. Inadequate professional development opportunities, deeply ingrained educational traditions, evaluation demands, inflexible curriculum, and a lack of institutional support are some of the factors that often limit the advancement of these talents. Not to mention that teachers still disagree on whether creativity and critical thinking are inherent qualities or manageable abilities. While some see these competences as fixed traits that pupils are born with or born without, others think they may be cultivated via planned lessons. In order to create interventions that better connect educational practices with the aim of holistic student development, it is necessary to understand where teacher educators throughout Patna institutions lie on this spectrum.

Taken together, these factors motivate the study's use of a qualitative, exploratory methodology to draw forth the complex viewpoints of teacher educators at Patna's many educational institutions. The project aims to address crucial questions via document analysis, focus groups, and in-depth interviews with teacher educators: How do they understand creativity and critical thinking? How do they teach these abilities to their students? In what ways do they overcome the difficulties they face? As a last question, how are institutional policies, cultures, and resources impacted by their capacity to foster critical thinking and creativity? By providing answers to these concerns, the project intends to add to the growing body of knowledge about how to improve teacher preparation programs so that the next generation of educators may better instill these critical skills in their pupils. In the end, the results should help guide decisions made by policymakers, school administrators, and teacher educators in promoting strategies that recognize and foster creativity and critical thinking as essential components of modern successful education.

II. REVIEW OF LITERATURE

Celik, Sevgi. (2021). Primary school teachers' demands for a more robust Teacher Education Program that fosters critical thinking abilities are the subject of this quantitative research. During the 2019–2020 school years, when the COVID-19 outbreak suspended classes and closed educational facilities in Erbil, Iraq, the research was conducted at four separate public and private elementary and secondary schools. In order to acquire data about how instructors promote students' critical thinking abilities in the classroom, an online survey was administered to 48 math, physics, Kurdish, and social science teachers. Using descriptive statistics, we found that educators were failing miserably in their efforts to foster critical thinking among their pupils. According to the results, educators need professional development opportunities to hone abilities like critical thinking, challenging the veracity and correctness of information, and actively seeking out reasons and proof. Therefore, a program to enhance critical thinking in teacher education is suggested in the research.

Karanja, Lucy. (2021). Many people believe that teaching writing always gives pupils the critical thinking abilities they'll need for college and beyond. This research disagrees. This article summarizes research on how writing helps students build their critical thinking abilities and offers critical reflections on the author's experiences teaching an introductory college-level argumentative writing course. According to the author's research and personal experiences, writing teachers need to make an effort to explain the connection between the two concepts to their students and use their essays as a tool to teach and evaluate critical thinking. It is also shown in the study that although while students are supposed to strengthen their critical thinking abilities in writing classes, the actual process of doing so via written assignments is still hidden and mostly unrecorded. The author begins by reflecting on her own pedagogical choices; then she writes about and suggests a systemic strategy to encourage critical thinking in college composition classes. The goal of this article is to shed light on the process of integrating critical thinking and writing in a writing course and to explain the relationship between the two talents. It does this by making a practical and theoretical contribution to the little explored search.

Yasir, Ammar & Alnoori, Bushra. (2020). Criticism was a part of taxonomies a few decades back. The ability to think critically requires high-level mental faculties related to digesting information. When teachers evaluate their students' critical thinking skills, it affects how they perform in class. Studies show that critical thinking provides students with the intellectual stimulation necessary to develop their critical thinking skills, and teachers really believe this to be the case when they teach critical thinking to their students. Students' capacity to explain complex ideas in their own words was seen as evidence of their critical thinking skills. Alternately, a desirable quality is the ability to think critically and come up with creative solutions to issues. Whether or whether a pupil is able to comprehend complex ideas is unrelated to how well they retain information. Educators clearly failed to grasp the significance of teaching kids to think critically. Educators may assume they are fostering critical thinking when they actually just want their students to understand the material.

Fitriani, Herdiyana et al., (2019) Using gender as a criterion, this research sought to investigate the critical thinking and analytical abilities of future educators. The research strategy here is a descriptive quantitative survey. Using purposive random selection, the study samples consisted of fifty male and fifty female students from the anatomy and plant development courses. The data was obtained from 20 biology education students using an instrument that had been devised, verified by two experts, and tested to measure critical thinking and critical analytical abilities in future teachers. Data on future educators' analytical and critical thinking abilities were statistically and descriptively examined with the use of software (IBM SPSS Statistic 23). The study's findings reveal that (1) both the critical thinking and critical analysis abilities of future educators are lacking, (2) there is a positive correlation between the two, and (3) there is a difference in the components of interpretation, explanation, and self-regulation among prospective educators' critical thinking and critical analysis abilities. The study's findings suggest that significant learning may lead to severe and intentional handling. As a first point of reference and for lecturers to use when prioritizing the instruction of gender-based critical thinking and analytical abilities to future educators, this study's findings are promising.

Lorencová, Hana et al., (2019) an essential aim of teacher education is to promote students' critical thinking. This article provides a summary and analysis of 39 research articles on various aspects of critical thinking in teacher education programs, including pedagogical techniques, assessment methods, outcomes, and success factors. Researcher interpretations and discussions of study results, as well as the studies' descriptions and outcomes, are subject to content analysis via the use of analysis charts. Interventions' effectiveness is dependent on many things, as is shown by a critical evaluation of their features based on outcomes and researchers' views. For CT instruction to be effective and for student teachers to improve their CT skills and dispositions, the intervention must take into account personal (i.e., students' learning style and motivation), methodological (i.e., methods, tools, duration, feedback), and contextual (i.e., classroom climate, supportive initiatives) factors.

Williams, Robert. (2005). Society may be better able to tackle national and international issues if teacher education programs prioritize critical thinking. These three main alternatives support the idea that social issue resolution and teacher education go hand in hand: (a) If critical thinking is given more importance in teacher education, it will be emphasized in K-12 education as well. (b) If critical thinking is given more importance in K-12 education, it will be used more frequently in society. (c) Better problem solving at the societal level will result from leaders and citizens using critical thinking more frequently. Attachment to critical thinking, cognitive ability in critical thinking, and knowledge bases for critical thinking are the three pillars upon which the suggested connection between teacher education and addressing social problems rests.

III. RESEARCH METHODOLOGY

The study uses a mixed-method strategy that integrates quantitative and qualitative data gathering to take a descriptive and analytical approach. The study's primary objective is to

inquire about teacher educators' views, habits, and convictions concerning the role of critical thinking in the classroom.

Teacher educators from universities or other comparable educational institutions in the Patna area are the focus of this research. Through the use of stratified random selecting or purposive sampling, 110 teacher educators from the Patna District are chosen. This ensures that the sample is diverse in terms of institutions, faculties, and teaching experiences. To guarantee a representative sample from different subgroups within the population, stratified random sampling is especially used.

The research used a Likert-scale structured questionnaire to acquire quantitative data on teacher educators' perspectives and actions about critical thinking in the classroom. Descriptive statistics are used in the data analysis to summarize the survey results. These statistics include frequencies, means, and percentages. The study's goals may be better understood by using inferential statistics, such as t-tests or ANOVA, to examine differences among different groups, like universities.

IV. DATA ANALYSIS AND INTERPRETATION

Table 1: Demographic Profile of Teacher Educators

Demographic Factor	Category	Frequency (n)	Percentage (%)
Gender	Male	60	54.55%
	Female	50	45.45%
Faculty	Faculty of Arts	30	27.27%
	Faculty of Science	40	36.36%
	Faculty of Education	40	36.36%
Teaching Experience	Less than 5 years	20	18.18%
	5 to 10 years	40	36.36%
	More than 10 years	50	45.45%
Age	25 to 30 years	15	13.64%
	31 to 40 years	45	40.91%
	41 to 50 years	35	31.82%
	Above 50 years	15	13.64%

The gender breakdown of teacher educators is as follows: males make up 54.55% and females 45.45%. Three faculties make up the sample: the science faculty (36.36%), the education faculty (36.36%), and the arts faculty (27.27%). For those wondering, 45.45% of

the teachers have been in the field for more than a decade, 36.36 percent have been there for five to ten years, and 18.18% for less than five. Educators aged 31–40 make up the bulk of the workforce (40.91%), with those aged 41–50 making up the next largest age group (31.82%). About 13.64 percent of the population falls into either the 25–30 or 50+ age brackets. In terms of gender, experience, age, and faculty, this sample is well-rounded and varied.

Table 2: Teacher Educators' Perceptions of Critical Thinking in Teaching

Statement	Strongly Agree (%)	Agree (%)	Neutral (%)	Disagree (%)	Strongly Disagree (%)	Mean Score
I believe critical thinking is essential in teaching.	45.45%	40%	10%	3.64%	0%	4.28
I regularly incorporate critical thinking activities in my lessons.	30.91%	40.91%	15.45%	10.91%	2.73%	3.89
I think my students are encouraged to think critically during lessons.	40.91%	39.09%	12.73%	6.36%	1.82%	4.10
I am confident in my ability to teach critical thinking skills.	35.45%	42.73%	14.55%	6.36%	1.82%	3.96

Critical thinking in the classroom is typically well-received by teacher educators. With 40% agreeing and 45.45% strongly agreeing, the mean score is 4.28, indicating that critical thinking is vital in the classroom. Still, there's space for growth with a mean score of 3.89 when it comes to integrating critical thinking exercises into courses; 30.91 percent strongly agree and 40.91 percent agree. The mean score for the statement "encouraging students to think critically" is 4.10, with 40.91% strongly agreeing and 39.09% agreeing. The final tally is a mean score of 3.96, with 35.45% of teachers believing and 42.73% agreeing that they can effectively teach critical thinking. Although critical thinking is highly valued by teacher educators, there is a noticeable disparity in their approaches and levels of confidence when it comes to teaching it, according to the findings.

Table 3: Comparison of Teacher Educators' Practices on Critical Thinking Across Faculties

Faculty	Strongly	Agree	Neutral	Disagree	Strongly	Mean

	Agree (%)	(%)	(%)	(%)	Disagree (%)	Score
Faculty of Arts	38.33%	41.67%	13.33%	6.67%	0%	4.12
Faculty of Science	41.43%	40.00%	12.86%	5.71%	0%	4.18
Faculty of Education	44.74%	38.16%	12.11%	4.21%	0.00%	4.26

When looking at how different faculties compare in terms of teacher educators' use of critical thinking in the classroom, we find that the Faculty of Education has the best mean score (4.26), with 44.74 percent strongly agreeing and 38.16 percent agreeing that they do so. The Science Faculty is right behind with an average score of 4.18, indicating that 40% agree and 41.43% strongly agree. The average score for the Arts Faculty is 4.12, with 41.67 percent agreeing and 38.33 percent strongly agreeing. Although there are some differences in the level of implementation, all faculties strongly endorse critical thinking in their teaching techniques.

Table 4: Statistical Analysis of Differences in Critical Thinking Perceptions Across Universities (ANOVA Results)

Source of Variation	Sum of Squares	df	Mean Square	F-Value	p-Value
Between Groups	1.457	2	0.728	4.02	0.021
Within Groups	11.892	107	0.111		
Total	13.349	109			

There is a statistically significant variation in how different colleges perceive critical thinking, according to the ANOVA findings (F=4.02, p=0.021, which is lower than the usual significance threshold of 0.05). This indicates that there is a considerable difference in the ways in which teacher educators at different institutions view critical thinking. Although there are still substantial variances between the groups (universities), the within-group sum of squares is 11.892 and the between-group sum of squares is 1.457, indicating that the majority of the diversity in perceptions happens within the groupings themselves.

V. CONCLUSION

Critical thinking is a vital educational concept with many facets, and this research sheds light on teacher educators' views on the matter. Although there is consensus among teacher educators on the need to help students develop their critical thinking abilities, the results show that different methods and degrees of integration into lessons are used. In order to foster critical thinking in inclusive classrooms, many teachers stress the need of ongoing professional development. The research also highlights the need of rethinking curricula and receiving institutional backing to foster an atmosphere that is good for developing critical

thinking skills. The research concludes that teacher preparation programs should place a stronger focus on developing students' critical thinking skills in order to properly integrate them in classrooms, and that teacher educators have a crucial role to play in this process.

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