

An Exploratory Investigation into Gender-Sensitive Pedagogical Approaches among Pre-Service Teachers

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Abstract: *The present investigation focused on the ways in which pre-service teachers understand, perceive, and apply gender-sensitive pedagogical approaches, together with the constraints and enabling measures associated with their implementation. The study was conducted at Government Teachers Training College, Deoghar, and Government Teachers Training College, Hazaribagh, Jharkhand. A quantitative approach was used within an exploratory descriptive survey design. The sample comprised 150 pre-service teachers, including 75 from each institution, selected through simple random sampling. Data were collected through a researcher-developed Gender-Sensitive Pedagogical Approaches Questionnaire (GSPAQ) containing 30 statements on a five-point Likert scale. Six dimensions were covered: awareness, perceptions, classroom interaction, teaching-learning practices, challenges, and opportunities/measures. Pilot administration with 30 pre-service teachers yielded a Cronbach's alpha of 0.78, indicating acceptable internal consistency. In the main study, awareness recorded a mean of 3.87 and perceptions 4.02. Classroom interaction and teaching-learning practices obtained means of 3.77 and 3.68 respectively, while perceived challenges stood at 3.21. Opportunities/measures produced the highest mean of 4.19. The findings indicate that pre-service teachers hold generally favourable orientations towards gender-sensitive pedagogy, but stronger practical preparation, institutional support, reflection, curriculum integration, and supervised teaching experiences are needed to translate awareness into sustained classroom practice.*

Keywords: *gender-sensitive pedagogy, pre-service teachers, teacher education, gender equality, gender-responsive pedagogy, inclusive education, classroom practices, gender sensitivity.*

1. INTRODUCTION

Gender equality is a central consideration in building an educational environment where learners can participate and achieve without being restricted by gender-based assumptions. Schools and teacher education institutions influence more than academic learning; they also shape ideas about social roles, capabilities, relationships, identity, and expected behaviour. Teachers contribute to this process through their communication, classroom interactions, instructional choices, use of learning resources, organization of activities, and expectations of learners. UNESCO (2026) stresses that gender equality needs to be addressed across curriculum, pedagogy, learning environments, educational outcomes, and opportunities for participation.

Gender-sensitive pedagogy refers to purposeful teaching that recognizes gender-related inequalities, stereotypes, assumptions, and biases and seeks to create equitable opportunities for learning. In practice, it can involve inclusive terminology, balanced representation in teaching resources, fair distribution of classroom opportunities, supportive interaction, suitable instructional methods, and safe and respectful learning environments. Current approaches also emphasize challenging social and educational practices that reproduce inequality rather than merely responding to visible gender differences (UNESCO, 2026).

Teacher preparation offers an important period for developing the knowledge, attitudes, professional skills, and reflective dispositions required for such practice. Prospective teachers can be encouraged to examine their own

assumptions and understand how pedagogical decisions may influence learners differently. Esen (2013) found that sustained engagement with gender issues could lead prospective teachers to reconsider conventional assumptions and develop greater willingness to support social change.

Evidence from other settings also points to a relationship between awareness and teaching practice. Cagang et al. (2023), in research involving 234 pre-service teachers in the Philippines, found favourable levels of gender-and-development awareness and gender-sensitive pedagogical practice and reported a significant positive association between the two. Nevertheless, awareness by itself may not produce consistent classroom application. Sukanto et al. (2024), studying Indonesian pre-service English-language teachers, examined teaching resources, classroom management, and instructional methods and called for more focused preparation in gender-responsive pedagogy.

Kihwele et al. (2025) reported that pre-service teachers in Tanzania had limited exposure to gender-responsive pedagogy and faced difficulties in explaining its major elements. Their findings highlighted the importance of structured preparation, workshops, and curriculum integration. Hamedd et al. (2026) similarly emphasized teacher-educator support, professional modelling, and practicum experiences in the development of gender-responsive competencies.

The Indian policy context further supports attention to gender-sensitive teacher preparation. The National Education Policy 2020 gives prominence to equity and inclusion, recognizes gender as an important educational concern, and proposes a Gender Inclusion Fund to support equitable access to quality education (Ministry of Education, 2020).

In view of these considerations, the present study explores gender-sensitive pedagogical approaches among pre-service teachers in selected teacher education institutions of Jharkhand. It concentrates on their awareness and perceptions, reported pedagogical practices, perceived challenges, and views about measures that could strengthen gender-sensitive teaching.

2. Review of Related Literature

The available literature presents gender-sensitive pedagogy as a broad construct that extends across awareness, perceptions, classroom interaction, instructional practices, teaching-learning resources, language, classroom management, equitable participation, and the ability to identify and question gender stereotypes.

Esen (2013) examined gender sensitivity in pre-service teacher education in Turkey and found that purposeful engagement with gender-related issues could encourage prospective teachers to reconsider conventional beliefs and critically examine established value judgments. The study illustrates the potential of teacher education to influence future teachers' understanding of gender and their readiness to contribute to social change.

Acar-Erdol et al. (2022) investigated pre-service teachers' perceptions of gender equality and their readiness to teach it. Their findings draw attention to the difference between endorsing equality as a principle and possessing the professional knowledge and pedagogical preparation required to incorporate it into actual teaching. This distinction suggests that favourable attitudes should be accompanied by practical competence.

Cagang et al. (2023) studied 234 pre-service teachers in the Philippines and reported generally favourable levels of gender-and-development awareness and gender-sensitive pedagogical practice, together with a significant positive relationship between the two. The study suggests that strengthening awareness may support more gender-responsive approaches to teaching.

Sukanto et al. (2024) examined Indonesian pre-service English-language teachers' teaching practices from a gender-responsive perspective, considering teaching materials, classroom management, and instructional methods. Their work demonstrates the importance of examining what teachers actually do in classrooms rather than relying solely on stated attitudes.

Kihwele et al. (2025) explored pre-service teachers' conceptualization of gender-responsive pedagogy in Tanzania. Participants showed relatively limited exposure to the concept and difficulty describing its components. The authors consequently emphasized curriculum-level integration and structured training and workshop opportunities.

Indian scholarship has also addressed gender sensitivity among prospective teachers, including gender discrimination, stereotypes, attitudes towards equality, and the contribution of teacher education. Ghosh and Yadav (2025) examined

gender-stereotypical attitudes concerning technology use in teaching and learning among prospective secondary teachers, indicating that gender sensitivity is relevant to digital as well as conventional learning environments.

Taken as a whole, the reviewed evidence indicates that gender-sensitive pedagogy involves the practical translation of equality and inclusion into classroom decisions. It includes interaction with learners, instructional strategies, learning materials, language, classroom management, assessment, and teaching-practice experiences. A recurring issue is the distance between awareness and implementation: some studies report strong awareness and positive attitudes, whereas others identify limited conceptual understanding or difficulty applying gender-responsive principles in real teaching situations.

The literature also points to conditions that can facilitate the development of gender-sensitive competence. These include embedding gender issues in the teacher education curriculum, modelling by teacher educators, opportunities for critical reflection, professional development, suitable instructional materials, and meaningful practice during school-based teaching. The combined evidence supports treating gender sensitivity as a continuing component of teacher preparation rather than an isolated topic.

The present study builds on this body of work by bringing together three related areas: awareness and perceptions, gender-sensitive pedagogical practices, and the challenges and opportunities associated with strengthening such practices in pre-service teacher education.

3. Rationale of the Study

Gender-sensitive pedagogy is important for creating classrooms characterized by fairness, inclusion, respect, and equitable participation. Earlier studies suggest that prospective teachers may express positive views about gender equality without always possessing the practical preparation needed to implement those principles consistently. Curriculum exposure, teacher-educator guidance, critical reflection, and teaching-practice opportunities have repeatedly been identified as relevant supports (Esen, 2013; Sukanto et al., 2024; Kihwele et al., 2025).

Although gender sensitivity has been examined in both Indian and international settings, previous investigations have often concentrated on particular elements such as awareness, attitudes, stereotypes, curriculum, or selected teaching practices. Examining these elements together can provide a more integrated picture of gender-sensitive preparation. This is particularly relevant in the context of Jharkhand, where context-specific evidence can help teacher education institutions understand the preparedness and support needs of future teachers. The present study therefore investigates awareness and perceptions, pedagogical practices, challenges, and opportunities within selected teacher education institutions.

4. Statement of the Problem

Despite the increasing emphasis placed on gender equality in education, there may be a difference between what pre-service teachers know or believe about gender sensitivity and how consistently these principles are reflected in pedagogical practice. The present study therefore examines gender-sensitive pedagogical approaches among pre-service teachers in selected teacher education institutions.

5. Objectives of the Study

- To examine the awareness and perceptions of pre-service teachers concerning gender-sensitive pedagogical approaches.
- To identify the gender-sensitive pedagogical practices experienced and adopted by pre-service teachers during teacher education and teaching practice.
- To examine the challenges perceived by pre-service teachers and the opportunities they identify for strengthening gender-sensitive pedagogy in pre-service teacher education.

6. Research Questions

- What level of understanding and perception do pre-service teachers demonstrate regarding gender-sensitive pedagogical approaches?
- What gender-sensitive practices do pre-service teachers encounter and use during teacher education and teaching-practice experiences?

- What barriers do pre-service teachers perceive in applying gender-sensitive pedagogy, and what opportunities do they identify for strengthening such approaches within teacher education?

7. Delimitation of the Study

The investigation was limited to Government Teachers Training College, Deoghar, and Government Teachers Training College, Hazaribagh, Jharkhand. Participants were pre-service teachers enrolled in the selected institutions. The study focused on their understanding, perceptions, experiences, and reported practices relating to gender-sensitive pedagogy, as well as the challenges they perceived and the measures they regarded as useful for strengthening gender-responsive practice.

8. Research Methodology

8.1 Approach

A quantitative approach was adopted because the study required numerical description of participants' responses across defined dimensions of gender-sensitive pedagogy.

8.2 Research Design

An exploratory descriptive survey design was employed to obtain a systematic account of pre-service teachers' awareness, perceptions, reported practices, perceived difficulties, and views regarding possible strengthening measures.

8.3 Population

The population consisted of pre-service teachers enrolled in teacher education programmes at the selected Government Teachers Training Colleges in Deoghar and Hazaribagh, Jharkhand.

8.4 Sample

The study included 150 pre-service teachers: 75 from Government Teachers Training College, Deoghar, and 75 from Government Teachers Training College, Hazaribagh.

8.5 Sampling Technique

Simple random sampling was used. An eligible list was obtained from each institution and 75 students from each college were randomly selected, providing every eligible student with an equal opportunity of selection.

8.6 Tool

A researcher-developed Gender-Sensitive Pedagogical Approaches Questionnaire (GSPAQ) was used. It contained 30 statements rated on a five-point Likert scale: Strongly Agree = 5, Agree = 4, Undecided = 3, Disagree = 2, and Strongly Disagree = 1.

8.7 Dimensions of the Study

Objective	Dimension	Item Nos.	No. of Items
Objective 1: Awareness and perceptions	Awareness	1–5	5
	Perceptions	6–10	5
Objective 2: Gender-sensitive pedagogical practices	Classroom Interaction	11–15	5
	Teaching-Learning Practices	16–20	5
Objective 3: Challenges and opportunities	Challenges	21–25	5
	Opportunities/Measures	26–30	5
Total			30

9. Procedure for Data Collection

Permission was first obtained from the heads of the selected institutions. Lists of eligible pre-service teachers were prepared, and 75 participants were randomly selected from each college. The purpose of the study was explained to the

participants and informed consent was obtained. The GSPAQ was administered with instructions to respond honestly on the basis of personal understanding and experience. Completed questionnaires were collected, coded, checked, and organized for statistical treatment.

10. Data Analysis

The collected responses were summarized through frequency, percentage, mean, and standard deviation. Results were organized around awareness, perceptions, classroom interaction, teaching-learning practices, challenges, and opportunities/measures. Cronbach's alpha was employed during the pilot stage to assess the internal consistency of the questionnaire.

11. Pilot Testing and Reliability

11.1 Procedure

The GSPAQ was pilot-tested with 30 pre-service teachers before the main study. The pilot exercise was intended to examine the clarity and suitability of the statements and to estimate the internal consistency of the instrument. Participants responded to all 30 statements using the five-point Likert format, after which the responses were coded for reliability analysis.

11.2 Reliability

Instrument	No. of Items	Cronbach's Alpha	Interpretation
GSPAQ	30	0.78	Acceptable internal consistency

The alpha coefficient of 0.78 indicates an acceptable degree of internal consistency for the questionnaire and supported its use in the main investigation.

12. Findings and Results

12.1 Overall Descriptive Results

Dimension	No. of Items	Mean	SD
Awareness	5	3.87	0.45
Perceptions	5	4.02	0.43
Classroom Interaction	5	3.77	0.44
Teaching-Learning Practices	5	3.68	0.45
Challenges	5	3.21	0.43
Opportunities/Measures	5	4.19	0.42
Overall GSPAQ	30	3.79	0.27

12.2 Awareness and Perceptions

Awareness yielded a mean score of 3.87 (SD = 0.45), reflecting a comparatively strong level of understanding of gender-sensitive pedagogical ideas. The perception score was higher at 4.02 (SD = 0.43), indicating that participants generally viewed gender-sensitive pedagogy positively and considered it relevant to effective teacher preparation.

12.3 Gender-Sensitive Pedagogical Practices

Classroom interaction recorded a mean of 3.77 (SD = 0.44), showing a generally favourable tendency towards equitable interaction. Teaching-learning practices produced a mean of 3.68 (SD = 0.45). The lower practice score compared with perceptions suggests that translating favourable views into consistent classroom action may require additional practical preparation and supervised experience.

12.4 Challenges and Opportunities

Perceived challenges had a mean of 3.21 (SD = 0.43), representing a moderate level of difficulty in applying gender-sensitive approaches. Opportunities/measures received the highest mean, 4.19 (SD = 0.42), reflecting strong support for curriculum integration, training and workshops, teacher-educator modelling, reflective activities, and opportunities to apply gender-sensitive strategies during teaching practice.

12.5 College-wise Descriptive Results

Dimension	Deoghar (n=75)	Hazaribagh (n=75)
Awareness	3.86	3.89
Perceptions	3.98	4.06
Classroom Interaction	3.75	3.79
Teaching-Learning Practices	3.67	3.68
Challenges	3.18	3.25
Opportunities/Measures	4.21	4.17

The two institutions displayed broadly comparable descriptive patterns. Participants from both colleges showed relatively high awareness and favourable perceptions, while opportunities/measures received the strongest ratings. Since comparison between the institutions was not an objective of the investigation, the figures are presented descriptively rather than as evidence of inferential differences.

13. Discussion of Findings

The results suggest that the participating pre-service teachers generally hold positive orientations towards gender-sensitive pedagogy. Awareness ($M = 3.87$) and perceptions ($M = 4.02$) indicate that respondents recognize the importance of gender equality and gender-sensitive teaching. This pattern broadly corresponds with Cagang et al. (2023), who reported favourable gender-and-development awareness and gender-sensitive pedagogical practices among pre-service teachers and found a significant relationship between the two.

The practical dimensions scored somewhat below perceptions, which may indicate that positive beliefs do not automatically become consistent classroom behaviour. This interpretation is compatible with Sukamto et al. (2024), who emphasized the need to consider teaching practice itself and to provide explicit preparation in gender-responsive pedagogy.

The moderate challenge score ($M = 3.21$) suggests that participants experience barriers when attempting to implement gender-sensitive approaches. Possible barriers represented in the questionnaire include limited training, persistent gender stereotypes, inadequate teaching-learning resources, insufficient opportunities for application, and limited guidance. This pattern is consistent with Kihwele et al. (2025), who highlighted limited exposure and the need for structured training and curriculum integration.

The highest rating for opportunities/measures ($M = 4.19$) demonstrates strong recognition of the need for systematic support. Curriculum integration, professional development, modelling by teacher educators, reflective learning, and practical teaching experiences therefore emerge as important areas for strengthening pre-service preparation.

14. Significance of the Study

14.1 Pre-Service Teachers

The findings can encourage prospective teachers to examine their own assumptions about gender and consider how those assumptions may influence classroom decisions, participation, and interaction. The study may consequently support more equitable and inclusive pedagogical practices.

14.2 Teacher Educators

The results can help teacher educators identify areas in which pre-service teachers need further guidance, modelling, reflection, and supervised practice. They can also encourage teacher educators to demonstrate gender-sensitive approaches through their own classroom behaviour and mentoring.

14.3 Teacher Education Institutions

Teacher education institutions may use the findings to strengthen gender-sensitive components through workshops, reflective activities, appropriate learning resources, and meaningful opportunities for practical application.

14.4 Curriculum Developers

The study can provide evidence for incorporating gender-sensitive perspectives throughout teacher education curricula, learning materials, classroom activities, and teaching practice.

14.5 Educational Policymakers

The findings may contribute to efforts aimed at advancing equity, inclusion, and gender equality in teacher preparation in keeping with the broader direction of the National Education Policy 2020 (Ministry of Education, 2020).

14.6 Future Researchers

The study can serve as a starting point for further investigations in other institutions, geographical regions, and educational contexts and for research examining links between gender awareness and actual classroom practice.

15. Conclusion

The study investigated gender-sensitive pedagogical approaches among 150 pre-service teachers from Government Teachers Training College, Deoghar, and Government Teachers Training College, Hazaribagh. The investigation considered awareness and perceptions, gender-sensitive pedagogical practices, and the challenges and opportunities related to strengthening such approaches.

Participants demonstrated comparatively strong awareness and favourable perceptions. Classroom interaction and teaching-learning practices also showed positive tendencies, although practical application was somewhat less pronounced than perceptions. Respondents reported moderate implementation challenges and expressed strong support for institutional and professional measures. Opportunities/measures achieved the highest mean score ($M = 4.19$), highlighting the perceived importance of structured preparation, training, teacher-educator support, reflection, and practical experience.

The overall mean of 3.79 reflects a generally favourable orientation towards gender-sensitive pedagogy. The pilot administration yielded a Cronbach's alpha of 0.78, indicating acceptable internal consistency of the GSPAQ. Overall, the findings point to the need to move beyond conceptual awareness and provide sustained opportunities for developing practical gender-sensitive competencies during pre-service teacher education.

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