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# **OMNISCIENT**

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**(An Indexed in SIS Database)**

**Mahatma Jyotiba Phule Rohilkhand University**  
**NAAC Accredited A++**  
**Bareilly Uttar Pradesh**

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**(An International Multidisciplinary Peer Reviewed Journal)**

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## Message from Vice Chancellor Desk

Dear Readers,

The future of higher education is undergoing significant transformation due to technological advancements, globalization, and the evolving expectations of students, particularly alpha learners. In this context, India's National Education Policy (NEP) 2020 serves as a crucial framework aimed at enhancing the internationalization of the Indian higher education system, positioning it to meet global standards of academic excellence while addressing diverse student needs.

The NEP introduces progressive provisions that promote a flexible and multidisciplinary educational landscape. By emphasizing a learner-centered approach, it encourages personalized learning experiences that align with the demands of alpha learners, who seek autonomy, creativity, and real-world application in their education. The integration of AI-driven learning tools and digital platforms enhances accessibility and inclusivity, allowing students to engage with content in ways that resonate with their individual preferences.

A central focus of NEP 2020 is competency-based education, prioritizing skill mastery over rote memorization. This shift is essential for preparing graduates to thrive in a competitive global workforce that increasingly values practical skills and critical thinking. Additionally, the emphasis on continuous upskilling through micro-credentials and short-term courses responds to the landscape's demand for lifelong learning.

To further internationalize Indian higher education, the policy encourages institutions to engage in interdisciplinary research and foster partnerships with global educational entities. Such collaborations are vital for addressing complex societal challenges and ensuring students acquire the knowledge and skills necessary to navigate an interconnected world. By participating in international research networks and promoting academic mobility, Indian institutions can enhance their global competitiveness and relevance.

Moreover, the NEP underscores sustainability and ethical leadership in education. By aligning with the United Nations' Sustainable Development Goals (SDGs), it encourages institutions to integrate sustainability into their curricula and operations, preparing students to be responsible global citizens.

As the Chief Editor of Omniscient, I am pleased to present this latest edition, which reflects the ongoing commitment of scholars and researchers to push the boundaries of knowledge and to address pressing questions in our fields. In today's ever-changing academic landscape, the role of interdisciplinary inquiry becomes more critical, particularly as we face complex global challenges that demand holistic solutions.

As we continue our journey of fostering academic discourse, I would like to extend my heartfelt thanks to our contributors. Their dedication to rigorous research and insightful analysis is the cornerstone of this journal's continued success. I would also like to acknowledge the invaluable role of peer reviewers and the editorial team, whose diligence ensures the highest standards of publication are met.

Looking ahead, Omniscient will continue to serve as a platform for intellectual engagement and scholarly rigor. We invite future contributors to challenge conventional thinking and to explore new paradigms that reflect the dynamism of the modern world.

It is through collective scholarly efforts that we not only deepen our understanding but also inspire the next generation of thinkers and innovators.

**Prof. K. P. Singh**

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## **Exploring the Dynamics of Mathematical Attitude and Academic Motivation: Insights from School Students**

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### ***Abstract***

*This study delves into the intricate relationship between mathematical attitude and academic motivation among secondary school students, aiming to provide insights crucial for educational practitioners and policymakers. Through a descriptive cum survey method, 100 7th-grade students from Jiya Lal High School in Barauni, Bihar, were meticulously selected, ensuring diversity across genders and geographic locations. Using the attitude towards Mathematics Scale and the Academic Motivation Scale, researchers assessed students' attitudes and motivations. Statistical analyses revealed no significant differences based on gender or location, suggesting the influence of other factors. Moreover, the lack of correlation between mathematical attitude and academic motivation underscores their independent nature. Interaction effects of gender and location on these constructs were negligible, indicating the dominance of other variables. This study highlights the need for nuanced interventions, focusing on socioeconomic status, cultural background and educational experiences rather than demographic factors alone. Embracing a holistic approach in educational support systems, including counseling services and culturally responsive teaching practices, is crucial for fostering positive academic attitudes and motivations among students. This research contributes to enhancing educational practices and interventions tailored to diverse student populations, ultimately promoting academic success in mathematics and beyond.*

---

**Keywords:** *Academic achievement, Academic Motivation, Secondary School Teachers, Descriptive Survey & Relationship.*

---

### **Introduction**

Contemporary educational discourse emphasizes the importance of fostering positive attitudes toward mathematics and promoting academic motivation among secondary school students. Mathematics, often seen as challenging, is crucial for both academic success and everyday life. Understanding the factors influencing students' attitudes and motivation is vital for educators and policymakers.

Mathematical attitude, encompassing beliefs, feelings, and perceptions about math, is linked to higher engagement and success in the subject, while negative attitudes can hinder learning (Wigfield & Eccles, 2000). Academic motivation, defined by drive, interest, and persistence, is a key predictor of success, with motivated students showing greater effort and achievement (Deci & Ryan, 2000). Despite these insights, the relationship between mathematical attitude and

academic motivation in secondary school students is underexplored. This study aims to address this gap by investigating the interplay between these constructs and their mutual influence on students' learning experiences and outcomes.

### **Mathematical Attitude**

Mathematical attitude among secondary students is a multifaceted concept that encompasses their feelings, beliefs, and behaviors towards mathematics. It plays a crucial role in shaping their academic performance, engagement, and future career choices. One aspect of mathematical attitude is students' perception of their own abilities in mathematics. Research has shown that students who believe in their own mathematical competence are more likely to engage actively in learning activities, persist in the face of challenges, and ultimately achieve higher levels of mathematical proficiency (Hannula, 2006). Moreover, students' attitudes towards mathematics are influenced by their experiences in the classroom, interactions with teachers, and societal stereotypes about the subject. For instance, students who perceive mathematics as boring, difficult, or irrelevant to their lives may develop negative attitudes towards the subject (Boaler, 2002). On the other hand, teachers who create a supportive and inclusive learning environment, emphasize the real-world applications of mathematics, and provide opportunities for collaborative problem-solving can help foster positive attitudes among their students (Stipek & Gralinski, 1996). Furthermore, societal attitudes towards mathematics, particularly gender and cultural stereotypes, can significantly impact students' mathematical identities and aspirations. Girls, for example, may internalize the belief that they are less capable than boys in mathematics, leading to lower confidence and participation in the subject (Steele, 1997). Similarly, students from marginalized backgrounds may face additional barriers to developing positive mathematical attitudes due to systemic inequalities in access to resources and opportunities (Nasir & Hand, 2006).

### **Academic Motivation**

Academic motivation among secondary students is a multifaceted construct influenced by various internal and external factors. One of the primary theoretical frameworks used to understand academic motivation is Self-Determination Theory (SDT) proposed by Deci and Ryan (1985). According to SDT, motivation is categorized into intrinsic motivation, extrinsic motivation, and amotivation. Intrinsic motivation refers to engaging in an activity for its inherent satisfaction and enjoyment, while extrinsic motivation involves performing an activity to obtain

external rewards or avoid punishment. When students are intrinsically motivated, they are more likely to demonstrate curiosity, persistence, and a genuine interest in learning. This type of motivation is often associated with higher levels of academic performance and a greater sense of autonomy and competence (Deci et al., 1991). While extrinsic motivators can initially promote engagement, reliance solely on external rewards may undermine intrinsic motivation in the long run (Grolnick & Ryan, 1987). Moreover, the socio-cultural context, including family, peers, and school environment, also impacts students' academic motivation. Supportive relationships with parents and teachers, opportunities for meaningful participation, and a positive school climate are associated with higher levels of motivation and academic achievement (Wentzel, 1998).

### **Significance of the study**

Mathematical attitude and academic motivation lie in the recognition of the pivotal role that these factors play in students' academic success and overall educational experience. Mathematical attitude refers to students' beliefs, emotions, and attitudes towards mathematics. Research suggests that a positive attitude towards math is strongly correlated with academic achievement in the subject. Conversely, negative attitudes can hinder learning and impede progress. Positive attitudes towards mathematics are associated with higher levels of engagement, persistence, and achievement, while negative attitudes can lead to avoidance behaviors and lower academic performance (Ma, 1999). Understanding the factors that influence students' attitudes towards math can help educators devise strategies to promote positive attitudes and enhance learning outcomes.

Academic motivation is another critical factor that impacts students' learning and performance in mathematics. Students who are intrinsically motivated tend to engage more deeply with the subject matter, persist in the face of challenges, and achieve better academic outcomes. Academic motivation encompasses students' internal drive and external influences that determine their willingness to engage in academic tasks, such as mathematics. Self-determination theory (Deci & Ryan, 1985) suggests that intrinsic motivation, which stems from personal interest and enjoyment, is associated with better academic outcomes compared to extrinsic motivation, which relies on external rewards or pressures.

In many educational systems, mathematics is considered a core subject, and proficiency in math is essential for academic and professional success. Therefore, understanding students' attitudes and motivation towards mathematics is of particular importance for educational policymakers

and curriculum developers. By investigating the relationship between mathematical attitude and academic motivation among secondary school students, researchers can identify factors that contribute to students' success or challenges in mathematics learning. This understanding can inform educators and policymakers in developing strategies to enhance students' attitudes towards mathematics and promote intrinsic motivation, ultimately leading to improved academic performance and long-term success in mathematics and related fields.

### **Literature Review**

Extensive research in mathematics education highlights the significant impact of students' attitude on their academic motivation and performance (Anderman & Anderman, 2016; Hembree, 1990).

#### **Review related to Mathematical Attitude**

In secondary school settings, where students' perceptions of mathematics begin to solidify, investigating these factors becomes particularly crucial. Students' attitudes towards mathematics encompass their beliefs, emotions, and behaviors related to the subject (Ma & Kishor, 1997). These attitudes are shaped by various factors, including past experiences, teacher-student interactions, and societal influences (Leder & Forgasz, 2002). Research indicates that students with positive attitudes towards mathematics are more likely to engage in mathematics-related activities, persevere through challenges, and ultimately achieve higher academic success (Hannula, 2002; Schoenfeld, 1992). However, negative attitudes towards mathematics are not uncommon among secondary school students. Fear of failure, lack of confidence, and perceived difficulty of the subject are frequently cited reasons for such attitudes (Meece et al., 1990; Ruff & Hoover, 1993). These negative attitudes can lead to disengagement, avoidance behaviors, and underachievement in mathematics (Ma, 1999; Wigfield & Eccles, 2000).

#### **Review related to Academic Motivation**

Academic motivation refers to students' drive and desire to engage in learning activities and achieve academic goals (Deci & Ryan, 1985). Within the context of mathematics education, motivation plays a critical role in students' willingness to exert effort, persist in problem-solving, and seek out opportunities for mathematical growth (Pintrich & Schunk, 2002). Intrinsic motivation, characterized by a genuine interest and enjoyment in mathematics, is associated with higher levels of engagement and achievement (Lepper et al., 2005). Students who find mathematics personally meaningful and relevant are more likely to adopt a mastery-oriented

approach, focusing on understanding and learning, rather than simply achieving high grades (Stipek et al., 1998).

On the other hand, extrinsic motivation, driven by external rewards or pressures, can have mixed effects on students' mathematical performance. While rewards such as grades or praise may initially increase motivation and effort, they can also undermine intrinsic interest and lead to shallow learning strategies (Covington, 2000; Deci et al., 1999).

### **Review Mathematical Attitude and Academic Motivation**

The relationship between students' attitudes towards mathematics and their academic motivation is complex and bidirectional (Gottfried, 1985). Positive attitudes towards mathematics can enhance intrinsic motivation by fostering a sense of competence and autonomy (Anderman & Midgley, 1997). Conversely, motivated students may actively seek out opportunities to develop their mathematical skills and, in turn, experience greater enjoyment and confidence in the subject (Eccles & Wigfield, 2002). However, negative attitudes can undermine academic motivation by creating feelings of anxiety, helplessness, or boredom (Turner et al., 1989). Students who perceive mathematics as irrelevant or uninteresting are less likely to invest effort in learning the subject, leading to a downward spiral of disengagement and underperformance (Wang & Holcombe, 2010).

In conclusion, secondary school students' attitudes towards mathematics and their academic motivation are closely intertwined and significantly impact their learning experiences and outcomes. Understanding the factors that shape these attitudes and motivations is essential for educators to design effective instructional strategies and interventions that promote positive attitudes, intrinsic motivation, and ultimately, mathematical success.

### **Research Objectives**

1. To study the mathematical attitude and academic motivation among secondary school students.
2. To find out the mean difference towards mathematical attitude and academic motivation in regards to gender and location.
3. To find out the relationship between mathematical attitude and academic motivation among secondary school students.
4. To find out the significant predictors which are affect to academic attitude and academic motivation.



### **Research Hypotheses**

1. There will no significant difference will be found in mean score towards mathematical attitude and academic motivation in regards to gender and location.
2. There will be no significance relationship found between mathematical attitude and academic motivation among secondary school students.
3. There will be gender and location' does not affect to academic attitude and academic motivation.

### **Methodology**

The researchers “descriptive cum survey method” were employed for the present study. The study recruited 100 secondary school students from Jiya Lal High School, located in the vibrant community of Shokhara, Barauni, Bihar. These students were specifically selected from the 7th-grade level, and their participation was entirely voluntary, emphasizing their active engagement in the research process. To ensure a diverse and representative sample, a purposive sampling technique was meticulously applied. This approach aimed to capture a balanced representation across genders and geographic locations within the school community. From each identified stratum, students were randomly chosen, fostering inclusivity and comprehensive insights into the study's findings.

### **Description about the Tool**

1. The Attitude towards Mathematics Scale (Gakhar & Sharma, 2004) was used to measure students' attitudes, beliefs, and perceptions towards mathematics.
2. The Academic Motivation Scale (Dr. T.R. Sharma (2014) was employed to assess students' academic motivation levels.

### **Statistical Techniques**

To assess the normality of the data and the current status of secondary school students' mathematical knowledge, researchers utilized mean, standard deviation, skewness, and kurtosis techniques. Independent samples t-tests were employed to compare mean scores of mathematical attitude and academic motivation across different genders and locations. Pearson's correlation coefficient was used to examine the relationship between mathematical attitude and academic motivation. Linear regression analysis was adopted to investigate the effects of gender and

location on academic attitude and motivation, while controlling for potential confounding variables.

**Table 1**  
 Descriptive statistics; Mean, SD, Skewness & Kurtosis on Academic Motivation and Mathematical Attitude

Variables	N	Mean	Std. Deviation	Skewness	Kurtosis
Academic Motivation	100	26.1600	5.52	-.889	2.564
Mathematical Attitude	100	178.23	20.63	-.406	-.377

In the dataset for Academic Motivation, consisting of 100 observations, the mean motivation score is 26.16, with a standard deviation of 5.52. The negative skewness value (-0.889) suggests a slight leftward skew, indicating a tendency towards higher motivation levels. Furthermore, the positive kurtosis value (2.564) indicates a distribution with heavier tails and a sharper peak compared to a normal distribution. Thus, the majority of individuals appear to have motivation scores clustered around the mean, with a tendency towards higher motivation levels, albeit with some variability and a distribution that deviates from perfect normality.

Similarly, in the dataset for Mathematical Attitude, also comprising 100 observations, the mean attitude score is 178.23, with a standard deviation of 20.63. The negative skewness value (-0.406) indicates a slight leftward skew, suggesting that most individuals tend to cluster around higher attitude levels. Additionally, the kurtosis value close to zero (-0.377) implies a distribution that is nearly mesokurtic, resembling a normal distribution with moderate tails and a peak. Therefore, individuals in this dataset also exhibit a tendency towards higher attitude levels, with a distribution that closely resembles a normal distribution in terms of shape, albeit with slight skewness.

**Table 2**  
 Independent sample t-test on Academic Motivation and Mathematical Attitude for checking the mean difference of Gender and Location

	Variable	N	Mean	SD	SEM	t	Remarks
Academic Motivation	male	40	26.20	6.03	.95	.05	Not Significance
	female	60	26.13	5.20			
	rural	44	26.13	5.26	.79	.03	Not Significance
	urban	56	26.17	5.77			
Mathematical Attitude	male	40	180.22	19.30		.78	Not Significance
	female	60	176.90	21.53			
	rural	44	179.93	19.36	2.91	.72	Not

	urban	56	176.89	21.65			Significance
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The analysis reveals that there were no significant differences in academic motivation based on gender ( $t = 0.05$ ) or residential area ( $t = 0.03$ ). Similarly, no significant differences were found in mathematical attitude based on gender ( $t = 0.78$ ) or residential area ( $t = 0.72$ ). These findings suggest that neither gender nor residential area appears to exert a substantial influence on academic motivation or mathematical attitude among the participants.

Based on the provided data, it appears that there is no noteworthy discrepancy in academic motivation between male and female participants or between students residing in rural and urban areas. Likewise, there is no discernible distinction in mathematical attitude between genders or between students hailing from rural versus urban locales.

Table 3

Pearson's correlation between Academic Motivation and Mathematical Attitude

Variables	P value	Remarks
Academic Motivation - Mathematical Attitude	.856	No significant

The p-value for the relationship between Academic Motivation and Mathematical Attitude is 0.856, indicating that there is no significant correlation between these two variables in the population from which the sample was drawn. This suggests that changes in academic motivation are not associated with changes in mathematical attitude, at least based on the data analyzed. Therefore, you would fail to reject the null hypothesis, which states that there is no correlation between the two variables.

Table 4

Linear Regression Analysis on Academic Motivation and Mathematical Attitude with Gender and Location

Variable	R	R Squire	Adjusted R Squire	Sum of Square	Mean Squire	t	f	remarks
Academic Motivation - Gender	.006	.001	.01	.107	.107	13.84	.003	Not Significant
				302	30.85			
Academic Motivation - Location	.004	.001	.010	.044	.044	14.25	.001	Not Significant
				3023.396	30.851			
Mathematical Attitude - Gender	.079	.006	.004	265.335	265.335	25.99	.62	Significant
				41882.375	427.371			
Mathematical Attitude - Location	.073	.005	.005	227.557	227.557	26.82	.568	Significant
				41920.153	427.757			

Academic Motivation - Gender: The coefficient for the interaction term between Academic Motivation and Gender is 0.006 and the R-squared value is 0.001, indicating that only 0.1% of the variance in the dependent variable (Sum of Square Mean) is explained by this model. Also the adjusted R-squared value is 0.01 and p-value is 0.003, suggesting that the interaction effect between Academic Motivation and Gender is not statistically significant.

Academic Motivation - Location: The interaction term coefficient between Academic Motivation and Location is 0.004. Similarly, the model's R-squared value of 0.001 suggests that only 0.1% of the variance in the dependent variable is explained by this relationship. The adjusted R-squared value remains at 0.01, indicating marginal enhancement in model fit. The low p-value of 0.001 indicates that the interaction effect between Academic Motivation and Location lacks statistical significance.

Mathematical Attitude - Gender: Here, the interaction term coefficient between Mathematical Attitude and Gender is notably higher at 0.079. With an R-squared value of 0.006, the model explains around 0.6% of the dependent variable's variance, showing a slightly stronger relationship than observed in the previous analyses. However, the adjusted R-squared value drops to 0.004, suggesting the inclusion of this interaction term might not significantly enhance model performance. Additionally, with a p-value of 0.62, the interaction effect between Mathematical Attitude and Gender is statistically insignificant.

Mathematical Attitude - Location: The interaction term coefficient between Mathematical Attitude and Location is 0.073. The R-squared value of 0.005 indicates that approximately 0.5% of the variance in the dependent variable is explained by this relationship. The adjusted R-squared value remains at 0.005. With a p-value of 0.568, the interaction effect between Mathematical Attitude and Location is considered statistically insignificant.

## **Discussion**

The analysis of the Academic Motivation and Mathematical Attitude datasets reveals intriguing insights into the psychological characteristics of individuals. In both datasets, the mean scores suggest a general inclination towards higher motivation and attitude levels. The slight leftward skewness in both distributions indicates that most individuals tend to cluster around higher levels of motivation and attitude. However, while the motivation scores exhibit heavier tails and a sharper peak, suggesting greater variability, the attitude scores resemble a more symmetrical distribution akin to a normal curve. These findings underscore the importance of understanding

individual differences in academic motivation and mathematical attitude, which may have implications for educational practices and interventions (Field, 2013; Lazarides & Ittel, 2013).

The lack of statistically significant differences in academic motivation and mathematical attitude based on gender and residential area aligns with previous research findings (Smith et al., 2018; Johnson & Lee, 2016; Brown & Jones, 2019). These results suggest that factors other than gender or residential location might play a more prominent role in shaping academic motivation and mathematical attitude among participants. Possible influential factors could include socioeconomic status, cultural background, or educational experiences (Gupta & Singh, 2020; Chen & Stevenson, 2018; Lee & Chang, 2017). Understanding these nuances is crucial for developing targeted interventions to enhance academic motivation and mathematical attitude across diverse student populations (Dweck, 2016; Eccles & Wigfield, 2021). Further research exploring these factors in greater depth could provide valuable insights into fostering positive attitudes and motivations towards academics and mathematics among students.

The non-significant correlation between academic motivation and mathematical attitude ( $p = 0.856$ ) suggests that alterations in one variable do not correspond with changes in the other within the studied population. This finding is consistent with prior research indicating a lack of direct association between these constructs (Smith & Johnson, 2017; Brown et al., 2019; Lee & Chang, 2018). Understanding this independence is crucial for tailored interventions aimed at improving academic performance, as interventions targeting one aspect may not necessarily impact the other.

The analysis of interaction effects between academic motivation, mathematical attitude, gender, and location provides nuanced insights into the relationship dynamics within these variables. Firstly, the negligible coefficients and low R-squared values across the board indicate that these interaction terms have minimal explanatory power over the variance in academic motivation and mathematical attitude (Smith & Johnson, 2017; Brown et al., 2019). Specifically, the lack of statistical significance in the interaction effects suggests that the influence of gender and location on academic motivation and mathematical attitude does not significantly differ from one another (Lee & Chang, 2018; Chen & Stevenson, 2018).

In the case of academic motivation, the interaction effects with gender and location failed to exhibit meaningful relationships, as evidenced by the low R-squared values and non-significant p-values (Johnson & Lee, 2016). Similarly, for mathematical attitude, while the interaction term

coefficients with gender and location were slightly higher, the overall explanatory power remained modest, and the p-values indicated a lack of statistical significance (Gupta & Singh, 2020; Eccles & Wigfield, 2021).

These findings suggest that factors other than gender or location may play a more influential role in shaping academic motivation and mathematical attitude among participants. Socioeconomic status, cultural background, and educational experiences are potential variables that warrant further investigation (Dweck, 2016; Lee & Chang, 2017). Understanding these complex interactions is vital for devising effective interventions to promote positive attitudes and motivations towards academics and mathematics among diverse student populations.

### **Educational Implications**

Educational Implications and Recommendations have come from the above discussions:

1. With no significant differences in academic motivation and mathematical attitudes based on gender or residential area, educators should design interventions that consider broader factors like socioeconomic status, cultural background, and educational experiences, rather than focusing solely on demographics.
2. Recognizing the complex factors influencing academic motivation and mathematical attitudes highlights the need for a holistic approach in student support. Schools should implement comprehensive systems, including counseling, mentorship, and culturally responsive teaching, to foster a supportive environment that promotes positive academic attitudes and motivation.
3. To foster positive attitudes and motivations towards academics and mathematics among diverse student populations, curriculum developers and educators should strive to create inclusive learning materials and instructional strategies. Incorporating diverse perspectives, real-world applications, and culturally relevant examples can enhance students' engagement and motivation in these subjects.
4. Educators should receive training and professional development opportunities focused on understanding and addressing the diverse needs of students. Training in culturally responsive teaching practices, motivational strategies, and differentiation techniques can empower educators to create inclusive classrooms where all students feel valued and supported in their academic journey.

By implementing these recommendations, educational institutions can better support students in developing positive attitudes and motivations towards academics and mathematics, ultimately enhancing their academic success and overall well-being.

## Conclusion

In conclusion, the analysis of the Academic Motivation and Mathematical Attitude datasets provides valuable insights into the psychological characteristics of individuals in educational settings. The findings suggest a general inclination towards higher levels of motivation and attitude, with minimal differences based on gender and residential location. However, the lack of significant correlations and interaction effects between academic motivation, mathematical attitude, gender, and location underscores the complexity of these constructs. Other factors such as socioeconomic status, cultural background, and educational experiences may play a more influential role in shaping attitudes and motivations. Therefore, understanding these nuances is essential for developing targeted interventions to foster positive attitudes and motivations towards academics and mathematics among diverse student populations. Further research exploring these factors in greater depth could provide valuable insights into designing effective strategies to support student success in educational settings.

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## **Strengthening STEM Education with Teacher Education: Preparing Teachers for STEM Teaching in the Twenty-First Century**

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### ***Abstract***

*For students to learn in the STEM fields, teachers must foster an environment of guided investigation. To encourage students to study and to better equip them to comprehend and address real-world challenges, it is essential to advance an integrated approach to STEM education that incorporates real-life scenarios. By utilizing concepts that cut across disciplines and the skills of critical thinking, cooperation, and creativity, STEM education can assist the next generation of students in solving real-world challenges. The way teachers may create learning environments that support students in developing their 21st-century skills is an example of how STEM is being implemented. An extensive rethinking and restructuring of pre-service courses and in-service workshops would be required for proper preparation in integrated STEM. Findings offer a starting point for identifying teacher needs in integrated STEM.*

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***Keywords:*** *STEM, STEM Education, Teacher Education, Professional Development.*

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### **Introduction**

Progress in education drives industry growth around the world, and industry growth compels changes in education. On a global scale, among the most crucial concerns are those related to industry, technology, and education because of their close connections (ASLAN EFE & Hanas, 2022). The 21st-century skills, which are also known as skills for our age, are demanded of every person, hence educational practices must be created to support the development of these talents (ASLAN EFE & Hanas, 2022). For several reasons, including cultural and economic progress, increasing participation rates in STEM education has emerged as a global need (Delahunty et al., 2021). To prepare people for the demands of the evolving workforce, STEM education has been implemented on a global scale (ASLAN EFE & Hanas, 2022). The availability of a multitude of skilled and well-trained personnel in the natural sciences, technology, engineering, and mathematics (STEM) sphere is essential for nations to continue being globally viable and competitive (Hackman et al., 2021).

The goal of integrated STEM education is to bring together the numerous academic fields to discuss a single issue that is relevant to the real world (Delahunty et al., 2021). Effective STEM educators are necessary in the context of the national emphasis on enhancing STEM education. Incoming educators need to get quality pre-service STEM teaching instruction, but this need is frequently disregarded (Radloff & Guzey, 2016). STEM education has been adopted in many

nations and is seen as significant (L. T. B. Le et al., 2021). Teachers frequently believe that they must modify their current teaching philosophies in order to successfully integrate STEM education (L. T. B. Le et al., 2021). In schools and institutions, STEM education which combines the four disciplines has been encouraged (Hoon et al., 2022). Only when students are inspired to study these topics will there be a surge in the number of workers in science and technology businesses (Hackman et al., 2021). An excellent strategy to boost students' motivation and enthusiasm for studying the STEM fields is STEM education (Hackman et al., 2021).

Science, Technology, Engineering, and Mathematics (STEM) components are increasingly and deeply ingrained in university-level courses in the twenty-first century, making teaching more difficult and complex. To create the university's desired outcome, the STEM workforce, the incorporation of STEM has necessitated changes to the course materials and method of instruction (Hoon et al., 2022). A passion for STEM education promotes the development and use of scientific knowledge to solve societal issues and boost the economy (Algarni & Alahmad, 2021). In terms of using engineering, they advise enhancing professional development programs. As a result, science will be learned that goes beyond basic engineering frameworks and notions (Algarni & Alahmad, 2021).

### **Understanding the concept of STEM (Science, Technology, Engineering, and Mathematics)**

In many nations, STEM education is seen as the cornerstone of economic development. It has drawn a lot of interest from many educational systems, but its actual application has created several issues (L. T. B. Le et al., 2021). In terms of fostering a STEM culture and climate and building the link between the school, society, and business world, instructors who implement STEM in scientific education over time have higher averages (ASLAN EFE & Hanas, 2022).

Science, Technology, Engineering, and Mathematics are referred to as STEM. STEM education has been defined as an interdisciplinary approach to education that tries to bring disparate fields of study together to aid students in solving real-world challenges (L. T. B. Le et al., 2021). STEM (science, technology, engineering, and math) education is thought to be one of the keys to overcoming many of our current difficulties. By piquing students' interest in STEM fields, STEM education is beneficial to the students. To accomplish this difficult goal, everyone must work together to create and innovate classroom practices for maths teachers (Noor Anita et al., 2019). The 21st-century teaching techniques, instructional designs, and STEM implementation were all part of the STEM practices. Creativity, data literacy, digital

literacy, and computer science are among the basic competencies that cover 21st-century teaching skills. Critical thinking, communication, cooperation, and problem-solving abilities were shown to be the most prevalent practices (Noor Anita et al., 2019). The instructors were able to apply the STEM method since common practices in the delivery of mathematics instruction were identified, enabling them to be both physically and intellectually ready. The instructional designs included scaffolding, evaluation, cultural relevance, and sensitivity in addition to the integration of STEM subjects and real-world applications (Noor Anita et al., 2019). Future generations will need to have advanced knowledge, abilities, and capabilities in technology to meet the challenges of the fourth industrial revolution (4IR). As 4IR grows, a nation's competitiveness depends on its STEM human capital (Rahman et al., 2021).

### **STEM and Students' Learning Outcomes**

STEM (Science, Technology, Engineering, and Mathematics) education plays a crucial role in developing essential skills and knowledge for students, preparing them for a technology-driven world. It enhances problem-solving abilities by encouraging students to approach complex problems methodically and apply logic and reasoning to find solutions. STEM education also fosters critical thinking, as students learn to question assumptions, analyse data, and evaluate evidence, making them more adept at assessing various situations. The hands-on, project-based nature of STEM often leads to increased engagement and motivation, which can result in improved academic performance. While STEM project-based learning activities outside of the classroom catered exclusively to kids' interests in STEM careers, STEM project-based learning activities within the science curriculum focused on enhancing students' learning achievement and higher-order thinking skills. Lastly, we make a few recommendations for future research areas in the area of integrated STEM approaches and student learning outcomes (H. C. Le et al., 2023). Through the progression of activities in STEM lessons, students acquire 21st-century skills such as reasoning, critical thinking, teamwork, time management, problem-solving, and the ability to search and select information. Students also learn how science, engineering, and technology integrate with mathematics, physics, and other subjects to solve real-world problems (Tuong et al., 2023).

Additionally, STEM emphasizes the application of theoretical knowledge to real-world scenarios, making education more relevant and practical. Collaboration and teamwork are integral to STEM, teaching students' effective communication and cooperative skills. Creativity and innovation are encouraged, enabling students to think outside the box and develop new solutions. With the growing demand for STEM skills in the job market, students

who receive a strong STEM education are better prepared for future careers in fields like engineering, technology, and medicine. The STEM profile that goes with it communicates and graphically portrays the advantages and disadvantages of design principles, explaining the degrees of students' fruitful interdisciplinary interaction. STEM education will find the STEM protocol useful as a research tool, and STEM classroom teachers will find it useful as a pedagogical guide to help them create better STEM learning experiences (Ong et al., 2024). Furthermore, STEM education enhances digital literacy, equipping students with the tools to navigate the digital world. Through the iterative process of STEM projects, students also develop resilience and adaptability, learning that failure is a part of the learning process and that adapting their approaches is key to success. Overall, STEM education significantly enhances student learning outcomes, equipping them with the skills necessary to thrive in an evolving world.

### **STEM and Teacher Education**

The world's top STEM (Science, Technology, Engineering, and Mathematics) professionals are to be educated, according to one of the four objectives of STEM. Professional development courses emphasize developing instructors' capacities and giving them direction on how to teach (Sujeewa Vijayanthi Polgampala, 2017). STEM implementation can be seen in the way teachers are able to set up learning environments that help pupils develop their 21st-century capabilities (Hoon et al., 2022). It has been proposed that a method that boosts student enthusiasm and engagement is integrated STEM education, which is hailed as a potential paradigm for the successful acquisition of 21st-century STEM competencies (Delahunty et al., 2021). The success rates of teachers in fostering a STEM-focused culture and atmosphere in classrooms are better when they have previously participated in projects connected to STEM education (ASLAN EFE & Hanas, 2022). Students' interest in STEM education will be stimulated by teachers who are experts in the field (Rahman et al., 2021).

Teachers encountered numerous difficulties with their interdisciplinary expertise, instructional strategies, curricula, practical limitations, and ideas about effective STEM education (L. T. B. Le et al., 2021). Since teachers lack experience and are ineffective in teaching science, technology, engineering, and mathematics (STEM), pupils receive inadequate instruction and lack the motivation to pursue STEM occupations (Hackman et al., 2021). (Yıldırım & Türk, 2018) emphasized that a successful STEM teacher should possess STEM knowledge as well as knowledge of pedagogy, integration, context, and 21st-century abilities. In particular, STEM subject knowledge, pedagogic knowledge, 21st-century skill knowledge, and integration

knowledge have been widely highlighted when the body of literature has been studied (Yıldırım & Türk, 2018). The benefits of possessing STEM knowledge and related abilities enable teachers to use effective teaching strategies. On the other hand, children who are STEM-literate can be creative, and innovative, and integrate STEM to grasp the issue and solve it by applying it to the context of the real world (Rahman et al., 2021). Secondary school pupils who participate in STEM-related activities are adequately prepared for future professions in the STEM workforce (Rahman et al., 2021). The effective teaching of STEM requires positive teacher attitudes (Hackman et al., 2021). In a study, all of the teachers thought they lacked STEM expertise. According to them, STEM integration required a multidisciplinary understanding of Science, Technology, Engineering, and Math, whereas they were trained to teach a particular topic domain, such as Physics, Math, or Chemistry. They believed that their interdisciplinary expertise needed to be improved for them to plan and execute successful STEM lessons (L. T. B. Le et al., 2021). The teachers believed that their motivation to teach STEM was based on their personal desire for innovative teaching strategies. The teachers claimed that the STEM movement in education was a new one that required them to be proficient in both cutting-edge subject knowledge and instructional strategies (L. T. B. Le et al., 2021). Teachers have admitted that they feel lacking in their understanding of engineering, application, and science and technology (Yıldırım & Türk, 2018).

STEM has transformed attitudes and ideas towards teaching mathematics and has come to view it as integral and indivisible (Alkhateeb, 2018). Few teachers had clear and right opinions about using STEM to create a helpful learning environment for students to enhance their talents. Furthermore, students' academic performance and success suffered significantly from teachers' lack of STEM teaching experience (Alkhateeb, 2018). STEM educators need to have a variety of approaches at their disposal for explaining STEM concepts, directing students in scientific inquiry, and encouraging more instructors to become involved in STEM education by allaying their concerns (Sujeewa Vijayanthi Polgampala, 2017). To address the present needs of the teacher, there should be a strong emphasis on in-service programs and the provision of specialized training for subject knowledge, pedagogy, and classroom management (Sujeewa Vijayanthi Polgampala, 2017). It is crucial to equip educators with the necessary tools for successful K–12 integrated STEM learning experiences and to provide them with ongoing, high-quality professional development. Policies for pre-service and in-service teacher preparation that support integrated, sustained STEM instruction can be very important in this regard (Kozan et al., 2023).

## **Teachers Professional Development of Teachers and STEM Education: Pre-service and In-service Education for Future Teachers**

The academic integration of STEM education was considered to be sufficient by science teachers, who also emphasized the need to address the lack of collaboration between the corporate world, society, and schools which is crucial to a successful STEM education. asserted that the STEM climate and culture in schools are insufficient (ASLAN EFE & Hanas, 2022). It is extremely difficult for teachers to execute an integrated approach to STEM education with real-life scenarios that will both inspire kids to learn and better prepare them for issues they will face in the real world (Costa et al., 2022). The application of this understanding in instructional design and deliberate reflection on pedagogical decisions by teachers must also be supported and encouraged (Marco-Bujosa, 2021).

Though experience was regarded as having a lower degree of proficiency than preparedness and effort, it was found to be strongly connected with pre-service teachers' confidence in STEM practices (Hoon et al., 2022). Science, technology, engineering, and math are all included in STEM education. The early childhood era and aspects of STEM education, such as inquiry, exploration, observation, communication, and play, are closely related (Çiftçi et al., 2022). Early childhood educators should give priority to integrating STEM education into the early childhood curriculum to support kids in learning about STEM subjects and concepts during this era of rapid learning and growth (Çiftçi et al., 2022).

Since the majority of pre-service teachers agreed that STEM education is appropriate for early childhood education, STEM education should be implemented during this time (Çiftçi et al., 2022). Pre-service STEM teacher education should at the very least cover STEM curriculum, methodology, and conceptualization (Radloff & Guzey, 2016). Professional development programs for in-service teachers should place more emphasis on providing teachers with current STEM knowledge and pedagogical techniques so that teachers will feel more competent and well-prepared to teach STEM (L. T. B. Le et al., 2021). Additionally, in-service teacher professional learning and development designers and trainers must equip teachers with the ability to deal with challenges and modify their current teaching strategies to fit STEM education for their classrooms and students (L. T. B. Le et al., 2021). The study recommends paying more attention to teachers' training on STEM skills to be able to provide such supportive classroom environments that support students' mathematical skills because the importance of providing supportive learning environments to students to be able to employ STEM is largely dependent on teachers' thoughtful planning of lessons (Alkhateeb, 2018).



STEM training, peer collaboration, professional and administrative support, and classroom time all have a favorable impact on science teachers' views toward STEM education (Hackman et al., 2021). It is important for teacher candidates to have the chance to design and execute research-based pedagogies, as well as to learn about the significance of education research for their own teaching practices (Milner-Bolotin, 2018). It is obvious that teacher professional development programs that can improve teachers' attitudes will benefit the adoption of integrated STEM teaching strategies (Delahunty et al., 2021).

Critical thinking, collaboration, communication, problem-solving, research-based pedagogy, problem-based and project-based learning, technological integration, accessibility, professional development and learning support, effectiveness evidence, availability of resources and practitioner support, and scalability were the dominant STEM practices. Despite the absence of research on integrated STEM domains, maths teachers should decide which STEM practices to use. The younger generation may be able to fill the increasing demand for STEM-related occupations once more students show an interest in investigating and delving into the sector (Noor Anita et al., 2019). For the purpose of IST and PST professional growth, training opportunities should be made available for acquiring ICT integration knowledge. Teachers ought to keep their knowledge current and maintain their digital and scientific literacy (Noor Anita et al., 2019).

Teachers understood the value of receiving training in STEM education, felt that this kind of professional development was highly pertinent, and found it to have increased their understanding of and ability to use STEM hands-on practices in the classroom (Costa et al., 2022). It is feasible to adopt a specialised online PDP in STEM education that inspires educators and enhances their expertise in putting STEM-related practical lessons into practise in the classroom. Teachers also understand the significance of using relevant real-world examples since it motivates students to study (Costa et al., 2022). The teachers made it clear that they did not feel prepared enough to teach STEM subjects. Teachers also emphasized the need for STEM understanding, pedagogy expertise, and 21st-century skills in a competent STEM teacher (Yıldırım & Türk, 2018). (Yıldırım & Türk, 2018) stress that STEM education is a valuable educational idea, but that there might be issues that come up in STEM education. Additionally, it was shown that instructors' attitudes towards engineering and technology have improved as a result of the STEM training.

STEM teacher preparation programs and professional development are what propel STEM education forward. Eliminating instructors' misconceptions and technological fear, which were the main obstacles, is especially important (Sujeewa Vijayanthi Polgampala, 2017).

Including technology in your regular lessons, there is still a high demand for STEM instructors who have received specialized training and are knowledgeable about interactive inquiry-based teaching methods, rigorous curricula, and acceptable knowledge evaluation procedures. By adding engineering standards to the current science standards, policymakers and professionals promote STEM education (Sujeewa Vijayanthi Polgampala, 2017). The STEM-focused professional development that prioritized career awareness, inquiry-based activities, and multidisciplinary activities was of particular interest to instructors. The most popular delivery methods were in-person meetings, workshops, and tours. It is necessary to raise awareness among parents and students of the value of STEM education (Sujeewa Vijayanthi Polgampala, 2017). Pre-service courses and in-service workshops would need to be extensively redesigned if students were to receive proper training in integrated STEM. Findings give a place to start in identifying teacher needs for integrated STEM (Shernoff et al., 2017).

### **Conclusion**

For the purpose of educating people who can fulfil the demands of the evolving workforce, STEM education has been adopted globally. To encourage students' learning in STEM disciplines, teachers must establish a guided discovery atmosphere. To encourage pupils to study and better prepare them to comprehend and resolve real-world problems, it is imperative to promote an integrated approach to STEM education with realistic scenarios. It is urgently important to comprehend the difficulties and barriers that arise when creating and implementing integrated STEM curricula and instruction, given the growing interest in and importance of such approaches to STEM education. The focus on STEM-focused professional development, emphasizing career awareness, inquiry-based activities, and multidisciplinary approaches, has garnered significant interest among instructors. Delivery methods such as in-person meetings, workshops, and tours have been particularly popular. However, there's a need to enhance awareness among parents and students regarding the value of STEM education. Both pre-service courses and in-service workshops require substantial redesigning to adequately equip students with integrated STEM training. These findings provide a foundational understanding for identifying teacher needs in the realm of integrated STEM education.

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## **Transcending Binaries: Exploring the Historical Context of Transgender Community in South Asia**

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### **Abstract**

*Transgender individuals, known as hijras in South Asia, have played significant roles in the region's social, cultural, and religious spheres for centuries. However, colonialism introduced Western gender norms and criminalized non-conforming gender identities, leading to the marginalization and persecution of transgender communities. This paper explores the historical evolution of transgender identities in South Asia across pre-colonial, colonial, and post-colonial periods. In the pre-colonial era, hijras were revered as a 'third sex' and held esteemed positions in society. However, British colonial rule criminalized the hijra community and enforced strict gender binaries through laws like Section 377 of the Indian Penal Code and the Criminal Tribes Act of 1871, resulting in violence, discrimination, and social exclusion. In the post-colonial era, advocacy and legal advancements have recognized transgender rights in countries like Nepal, Pakistan, Bangladesh, and India, but challenges persist due to societal attitudes and implementation gaps. Transgender communities continue to face discrimination, violence, and limited opportunities in education, employment, and healthcare. This paper underscores the historical injustice and contemporary struggles faced by transgender communities and advocates for their rights and meaningful inclusion in mainstream society.*

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**Keywords:** *Transgender, Hijras, South Asia, Colonialism, Gender Norms, Section 377, Criminal Tribes Act, Discrimination, Violence.*

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### **Introduction**

Transgender people, commonly known as hijras, have been an integral part of South Asia's rich, social, cultural, and religious history for generations, contributing to its rich and diverse history. In South Asia, Hijras are known by various names, such as Khawaja Sara in Pakistan, Meti in Nepal, Kinner in North India, Napunsaka in Telugu, Aravani in Tamil, and Jogappa in Karnataka, etc. Although the terms may differ, the concept is the same. However, the Hijra community views themselves as different from the term transgender, which they believe is a product of Western culture. (Hinchy, 2019) Transgender is a diverse category that covers many gender identities and expressions, including transsexuals, transvestites, cross-dressers, drag queens and kings, hijras, etc. who strongly identify with a gender opposite to their sex. Historical texts, myths, ancient Hindu law, medicine, linguistics, and temple sculptures provide evidence of the existence of transgender or third sex. However, the British colonial power imposed its narrow views of gender and sexuality on the South Asian society which shaped discriminatory attitudes towards transgender individuals.

In the post-independence era, the colonial era laws were upheld by the successive governments with no attention given to the minority community which further intensified the persecution and marginalization of transgender individuals. Transgender people still face rejection and discrimination from society, the state, and the medical community, which increases the risk of mental health problems, HIV, substance use, and suicide. In the past few years, countries like Nepal, Bangladesh, Nepal, and Pakistan, have taken steps to acknowledge the rights of transgender individuals by identifying them legally as a ‘third gender’ through Supreme Court verdicts or Cabinet rulings. It is crucial to examine the societal, cultural, and political forces that have influenced transgender identity and experiences, resulting in discrimination over time. The paper will examine the historical context and evolution of the transgender community in South Asia, exploring three distinct periods: pre-colonial history, colonial history, and post-colonial history.

### **Understanding the Concept and Evolution of Transgender Identity**

The term ‘transgender’ is used to describe individuals whose gender identity does not align with the biological sex assigned to them at birth. The term transgender is often used as an umbrella that includes a diverse range of gender identities beyond the traditional binary system and challenges heteronormative definitions of gender and sexuality. The categories of transgender people are diverse and include a range of gender identities and expressions such as transsexual, transvestite, drag queens and kings, gender non-conforming, third gender, etc. In contemporary usage, transgender is used to describe a wide range of identities and experiences, including but not limited to pre-operative, post-operative, and non-operative transsexual people, male and female cross-dressers, and intersexed individuals. Transgender individuals may undergo physical transition through medical interventions like hormone treatments and surgeries, but some choose social transition only by changing their name, clothing, and grooming habits to align with their gender identity. (Reisner et al.,2016) In 2018, WHO moved gender incongruence out of the mental disorder list and reclassified it as a sexual health-related condition.

At the beginning of the 20th century, Magnus Hirschfeld, a renowned German sexologist, coined the terms ‘transvestites’ in 1910 and ‘transsexuals’ in 1949. Hirschfeld used the term ‘transvestites’ to refer to a category that included cross-dressing and cross-gender identification, while ‘transsexual’ referred specifically to individuals who desired sex-change surgery. (Meyerowitz, 2001) In 1919, Magnus Hirschfeld founded the Institute for Sexual Science in Berlin, where the first “sex change” operation was performed. (Whittle, 2010) In

1969, Virginia Prince who was a pioneer in the US cross-dressing movement, coined the term 'transgenderist' to refer to individuals who live in a gender opposite to the one assigned at birth, but who do not desire sex-change surgery like transsexuals. (Bettcher, 2020) Virginia Prince considered the term 'transgenderist' to represent a spectrum between 'transvestite' and 'transsexual.' A watershed moment came in 1996 when Leslie Feinberg advocated for a transgender movement that would embrace all individuals who felt excluded by the gender binary. This was a pivotal moment when the term 'transgender' began to be used as a political umbrella term for all forms of gender variance and identity outside of the traditional male/female binary. In 1998, Susan Stryker began using 'trans' as an umbrella term in her writings, further popularizing the term. (Darwin, 2020) Since then, transgender has become a widely used political term associated with the transgender movement's ideology, encompassing all forms of gender identity and expression outside of the binary male/female categories.

### **Transgender Identities in South Asia**

Transgender people across various cultures in South Asia have historically been identified using a variety of indigenous terms such as hijra, kinner, khawaja sira, aravani, kothi, zenana, maigya pola, etc. In recent years, terms such as 'third gender,' 'transgender,' and 'transsexual' have also gained popularity and have been used to describe individuals who do not fit into the binary gender system and are often associated with non-normative gender expression and behaviour.

**Hijras/ Kinnar:** The term hijra is often translated into English as 'hermaphrodite', and is commonly used in South Asia, particularly in countries like India, Pakistan, and Bangladesh, to refer to individuals who are assigned male at birth but do not identify as either male or female. (Vincent & Manzano, 2017) They are often invited to bless newborns and newly married couples and to perform at cultural events.

**Kothi/Koti:** The term Kothi is commonly used in India and Bangladesh, to refer to men or boys who exhibit effeminate behaviour or dress in a feminine manner but do not undergo the castration process. Kothis are often associated with same-sex relationships and may prefer to take on a feminine or passive role. (Dutta, 2012)

**Jogappas/Jogtas:** Jogappas are a transgender community that worships goddess Renukha Devi (also known as Yellamma) and is predominantly found in border regions of Karnataka, Maharashtra, and Telangana. Jogappas are male individuals who dress and live as women and associate themselves with the former Devadasi tradition which was a system of temple prostitution in South India.

**Khawajasiras:** The term khawajasira is used in Pakistan for individuals who are assigned male at birth but identify as transgender or third gender. Khawajasira is preferred over hijra by the transgender community in Pakistan as it denotes a more respected social status.

**Nupa Maanba/Nupi Maanbi:** Nupa Maanba and Nupi Maanbi are traditional socio-cultural identities in Manipur that refer to trans masculine and trans feminine individuals, respectively.

**Thirunangai:** In Tamil Nadu, Thirunangai refers to trans feminine individuals. The term was formerly known as Aravani, but has been replaced by Thirunangai to reflect a more respectful and accurate representation of the transgender community.

**Eunuch:** The word 'eunuch' has Greek roots and originally meant 'keeper of the bed.' Historically, the term has been associated with negative attributes such as castration, impotence, and perceived failure of masculinity.

### **The Pre-Colonial Era: Recognition and Respect for Transgender Identity**

Transgender individuals have been integral to South Asian culture for over 4,000 years, as evidenced by Vedic period texts and ancient literature. Acknowledged as a 'third sex' or hijra, they are woven into the region's history, myths, and epics, reflecting their historical significance and societal acceptance. The Manusmriti, an ancient legal text, explains the biological origins of the three sexes: male, female, and the third sex. According to the text, "a male child is produced by a greater quantity of male seed, a female child by the prevalence of the female; if both are equal, a third-sex child or boy and girl twins are produced; if either is weak or deficient in quantity, a failure of conception results." (Michelraj, 2015) Similarly, the Sangam literature, dating back to the 3rd century BCE to the 3rd century CE, used the term 'pedi' for intersex individuals, 'panthi' who dress as women and perform dance, 'aravaani' who undergo castration and live as women and 'antharlinga' to describe Hijras who exhibit both male and female characteristics. (Mandal & Das, 2020) Chapter nine of the Kamasutra, written by Rishi Vatsyayana, discusses sexual acts, including those involving transgender individuals, which refers to them as the 'third nature' or 'Tritiya-Prakriti'/'napumsaka'. (Tiwari & Pal, 2020) Even the sculptures at Khajuraho and Konark temples depict diverse sexualities, including the third gender, reflecting ancient Indian society's cultural acceptance. Moreover, the Puranas describe three categories of deities related to music and dance based on gender: apsaras (female), gandharvas (male), and kinnaras (neuter).

In South Asia, the term transgender is often linked with the hijra community, viewed as divine incarnations of Hindu deities like Lord Vishnu and Shiva. Historically, hijras were respected by royal courts and revered in Hindu texts for their perceived special powers. Laxmi Narayan



Tripathi, a prominent transgender activist, asserts that transgender individuals were highly esteemed in ancient Hinduism and even regarded as 'demi-gods'. Jain literature since the 5th century CE delves deeply into the third gender, with Jain thinkers articulating a theory of sexual orientation, recognizing striveda (female), pumveda (male), and napumsakaveda (third sex). (Lal, 1999) Jain literature used terms like 'trtuya' and 'trairasika' to describe the third gender, diverging from Brahmanical and Buddhist views by distinguishing gender from reproductive abilities. (Zwilling & Sweet, 1996) These historical references indicate that ancient India embraced diverse sexualities and gender identities, reflecting a more inclusive and accepting societal attitude.

**Ardhanareeswara:** The word Ardhanareeswara has three parts, 'Ardha' meaning half, 'Nari' meaning woman, and 'Ishwara' meaning lord. Ardhanareeswara portrays a deity as half-man, half-woman, symbolizing the union of Shiva and Parvati, representing both masculine and feminine energies.

**Transgender in the Mahabharata and Puranas:** In Indian mythology, Lord Vishnu assumes the form of Mohini on several occasions. Firstly, during the churning of the ocean, Mohini distracts the Asuras from obtaining Amrita. Secondly, Mohini saves Lord Shiva from the demon Bhasmasura by tricking him into his destruction. Lastly, Mohini enchants Lord Shiva, leading to their marriage and the birth of Lord Ayyappa, worshipped as a deity embodying both Vishnu and Shiva at Sabarimala Temple in Kerala. (Srinivasan & Chandrasekaran, 2020)

**Transgender in Ramayana:** The Sundar Kaand in the Ramayana recounts a tale involving the transgender community. Lord Rama, during his exile, requested all the "men and women" followers to return home to avoid the hardships of forest life. Upon his return after 14 years, he found the hijras, neither men nor women, waiting for him. Touched by their devotion, Lord Rama granted hijras the ability to bestow blessings on auspicious occasions like childbirth, marriage, and inaugurations.

**Aravan:** Aravan, son of Arjuna and Ulupi, is revered by South India's transgender community. He sacrificed himself during the Mahabharata war for Pandavas' victory but wished to marry before his death. Lord Krishna, disguised as Mohini, fulfilled his wish and mourned Aravan's death before returning to his original form. (Srinivasan & Chandrasekaran, 2020) The Koovagam/Koothandavar festival in Tamil Nadu re-enacts Aravan's marriage to Lord Krishna, celebrated annually by transgender individuals.

**Arjuna: Cross-Dressing as Brihannala:** According to Hindu mythology, Arjuna was cursed by Urvashi to become a eunuch for life after he respectfully declined her advances, referring to

her as a mother figure. Later, at Lord Indra's request, Urvashi reduced the curse's duration to one year. During his exile, Arjuna spent this time as Brihannala, teaching dance and music, fulfilling his destiny and ultimately being liberated from Urvashi's curse. (O, 2009)

**Ila/Sudyumna:** In the Shrimad Bhagavata Purana, Ila is both the mother and father of the Chandravanshis or Lunar Dynasty. Vivasvata Manu and Shraddha sought a son through divine intervention, resulting in Ila's birth. Later, guru Vashishtha transformed Ila into a male named Sudyumna. After mistakenly entering Shiva and Parvati's sacred forest Sukumara (Sharavana), Sudyumna was turned into a woman. Seeking a solution, Shiva permitted monthly gender alternation with memory erasure. During her female phase, Ila married Budha/Mercury and gave birth to Pururavas. (S. P. Srinivasan & Chandrasekaran, 2020)

**Shikhandini to Shikandi:** In the Mahabharata, Princess Amba vows to avenge Bhishma's dishonourable act by undergoing severe penance, receiving Lord Shiva's boon to be Bhishma's cause of death in her next life. Determined to seek revenge, Amba immolated herself on her funeral pyre and was reborn as Shikhandini (female) to King Drupada but raised as a male. (O, 2009) Later in the Kurukshetra war, Shikhandi, a transgender warrior, was crucial in defeating Bhishma, who refused to fight due to knowing Shikhandi's past, leading to Arjuna's victory.

**Transgenders in the Mughal Courts:** With the Mughals' arrival in the 16th century, explicit references to hijras increased, as they were patronized and appointed to high positions in the imperial court. Medieval European travellers and historians noted the presence of hijras in the Mughal Empire, highlighting their political and social influence. Employed as guardians of harems, hijras held positions of authority due to their perceived intelligence and loyalty. They played a significant role in Mughal politics, even influencing state decisions during the empire's reign from 1526 to 1857. (Mohan, 2022) The Mughal emperors entrusted eunuchs with sensitive matters, considering them confidants of the royal family. Many eunuchs attained prominent positions as political counsellors, governors, and army commanders, showcasing their diverse abilities. Notable figures like Imaduddin Rayhan, Kafur Hazardinari, and Bakhtawar Khan played crucial roles in battles, politics, and empire expansion. Bakhtawar Khan, a renowned historian, was appointed as superintendent of eunuchs during Aurangzeb's reign. (Bhardwaj, 2017) The presence of hijras in the Mughal courts showcases the diverse and nuanced understanding of gender and identity, emphasizing the significance of valuing diversity and recognizing individual potential.

### **Colonial Legal Framework: Criminalization of Transgender Identity**

The colonial era in South Asia was marked by significant changes in societal, cultural, and political norms, which significantly impacted the condition of transgender individuals. The respect and recognition that hijras earned for thousands of years were taken away with the British colonial rule in the Indian subcontinent. According to Hinchy, hijras were categorized by British rule as a criminal community that needed to be policed and controlled by creating a hierarchy of gender and sexual differences, which resulted in hijras being viewed as deviants and criminals. (Hinchy, 2019) During the colonial era, transgender individuals faced numerous challenges as the British administration enforced strict gender binaries that criminalized gender non-conforming individuals, causing them to face persecution and marginalization. They were often subjected to violence and discrimination, and their livelihoods as performers and sex workers were threatened. The colonial government passed laws that criminalized certain hijra practices, such as castration and cross-dressing and created a legal framework that allowed for the policing and punishment of hijras. Their marginalization resulted partly because their identity stands in stark contrast to Western conceptions of gender and sexuality which the colonial masters tried to change by imposing their gender norms. The British rule imposed Western gender norms and medical models that pathologized transgender identities, labelling them as a form of 'mental illness' which resulted in widespread discrimination, violence, and social exclusion.

The decision to criminalize the Hijra community by the British colonial government did not occur abruptly but rather was a gradual process. British writings first mentioned hijras after the East India Company acquired Bengal's revenue rights in 1765. (Hinchy, 2022) From 1830 onwards, the hijras' encounters with colonialism were characterized by the removal of state support and patronage, which had detrimental effects on their well-being. After the annexation of various princely states, the colonial government started taking away their rights and privileges which they were granted under the princely rule. For instance, after the British East India Company conquered Maratha territories, the Bombay Presidency aimed to change the established relationship between the state and the hijra community. This eventually led to the government of Bombay revoking the hijras' begging rights in 1853. (Hinchy, 2022) While colonial rulers did contribute to their oppression, it is important to note that some Indian rulers also started changing their attitude towards the Hijra community. Before the arrival of the British, many Indian rulers had recognized and even patronized the Hijra community. They were often employed in the royal courts and were considered to have special powers of blessing

and cursing. However, many Indian rulers, gradually influenced by the Western concepts of morality and gender norms, also changed their attitude towards the Hijra community and limited their patronage. For instance, the Nawabs of Awadh started to exhibit a more hostile attitude towards the Hijra community during the 1830s, and this led to a crackdown on hijra prostitution in the 1840s. (Hinchy, 2022)

In 1860, the British colonial administration introduced Section 377 of the Indian Penal Code, which criminalized non-heterosexual intercourse as 'against the order of nature,' marking the beginning of societal discomfort towards transgender individuals. (Hylton et al., 2018) This discriminatory law targeted diverse sexual orientations and gender identities, contributing to the marginalization of the transgender community. Additionally, in 1871, the enactment of the Criminal Tribes Act categorized hijras as a 'criminal tribe,' further subjecting them to persecution and control by British authorities. In 1897, an amendment was made to the Criminal Tribes Act of 1871, titled 'Act for the Registration of Criminal Tribes and Eunuchs,' which explicitly linked sexual non-conformity with criminality. (Hinchy, 2019) The law established a category called 'Eunuchs,' which included all males who acknowledged or were medically found to be impotent. The classification enabled recording the identities and addresses of all 'eunuchs' and monitoring those suspected of abducting or castrating children or engaging in activities prohibited under Section 377 of the IPC. The law allowed detention of 'eunuchs' dressed as women or engaging in public performances without a warrant, punishable by up to two years in prison or a fine. The classification of hijras as a 'criminal tribe' subjected them to ghettos, and police violence, and forced them into prostitution for survival. (Nanda, 1990) Furthermore, societal attitudes, particularly among the middle class, perpetuated the stigmatization and exclusion of hijras. The British colonial administration's laws targeting the transgender community exemplified 'systematic oppression and marginalization'. These laws not only reinforced discrimination but also facilitated their exclusion from society, the education system, healthcare, job opportunities and basic human rights.

### **Post-Colonial Trans Advocacy: Legal Reforms and Decriminalization**

In the post-colonial era, the situation of transgender people was particularly challenging as colonialism often reinforced binary gender norms, which resulted in the criminalization and stigmatization of non-conforming gender identities. The transphobia that was introduced through colonialism was internalised by the modern South Asian nations. Transgender people are frequently excluded from mainstream society, denied access to education, employment, and healthcare, and subjected to discrimination, harassment, and violence. The lack of legal

recognition, employment prospects, and social welfare for transgender people in South Asia has forced them into precarious and stigmatized forms of work to earn a living. These include begging at busy locations such as traffic intersections, trains, and local markets, sex work, collecting money from marketplaces (bazar tola), performing at weddings and blessing newly married couples (badhai) as well as newborn babies (bachcha nachano). However, with changing societal attitudes and the forces of globalization, the traditional roles of hijras are diminishing. Consequently, many hijra individuals are increasingly resorting to sex work as a means of earning a livelihood. In contemporary South Asia, transgender individuals are situated in three different subject positions when interacting with the state. Firstly, as a 'criminal' community, secondly, as a 'third' gender, and that constitutes a distinct legal gender category, and thirdly, as a marginalized or 'backward' community entitled to reservations or affirmative action policies. (Hinchy, 2019) To this day, society, the police, government, and the media often perceive hijras, as criminals, in multiple and intersecting ways. They are frequently accused of stealing from their clients (who are involved in sex work), as well as kidnapping, castrating, and abusing children. There exists substantial evidence to prove that transgender individuals experience harassment, abuse and unlawful arrests at the hands of law enforcement agencies. These arrests often lead to physical abuse, rape and being placed in gender-inappropriate facilities which increases their likelihood of experiencing sexual and physical violence which negatively impacts their physical and mental health. (Hinchy, 2019)

Despite being signatories to the Universal Declaration of Human Rights and other international conventions, many South Asian states have failed to ensure basic human rights for transgender individuals. However, in recent years, some countries in the region have taken steps to recognize and protect transgender rights. Nepal led the way in 2007 when its Supreme Court granted full human rights to LGBTQIA citizens, recognizing a 'third gender' category. (Bochenek & Knight, 2012) Following Nepal's example, Pakistan, Bangladesh, and India granted transgender people the right to self-identify their gender and mandated legal recognition of a third/transgender identity. India's landmark 2009 Naz Foundation VS Government of NCT of Delhi case led to the abolition of Section 377 of the Indian Penal Code, which criminalized consensual sexual acts between adults in private. (Sathyanarayana Rao & Jacob, 2014) In 2015, Nepal introduced a third gender category on passports, and Pakistan passed the Transgender Persons (Protection of Rights) Act in 2018, recognizing the self-perceived gender identity of transgender individuals. India also passed a similar law in 2019, aiming to safeguard transgender rights and provide legal recognition. Despite legal progress,

challenges persist at the ground level. In 2021, the Indian government allocated funds for Garima Greh (shelter homes) for transgender individuals, but lack of funding threatens their closure. More efforts are required to address systemic discrimination and ensure meaningful inclusion and protection of transgender rights.

## Conclusion

The historical and contemporary experiences of transgender individuals in South Asia reveal a complex tapestry of societal attitudes, cultural norms, and political dynamics. From ancient times, transgender people, known by various identities such as hijras, aravanis, kothis, and khawaja siras, have played integral roles in South Asian society, religion, and mythology. However, the imposition of Western gender norms during colonialism led to the criminalization and marginalization of transgender communities, perpetuating the stigma and discrimination that persist to this day. Nevertheless, recent developments such as the legal recognition of a third gender category in several South Asian countries signify progress towards inclusion and equality. Additionally, the abolition of discriminatory laws like Section 377 of the Indian Penal Code reflects a growing acknowledgement of LGBTQIA+ rights. Government, civil society, and NGOs must work together to eliminate transphobia and discrimination and build an inclusive and equitable society where transgender individual can enjoy their rights and live with dignity.

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## Exploring Creative Insight and Cultivating Higher Order Thinking Skills in Education Reform - A NEP 2020 Research Perspective

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### **Abstract**

*The National Education Policy (NEP) 2020 is a transformative force reshaping education in our nation. In the research paper titled "Beyond Boundaries: Exploring Creative Insight and Cultivating Higher Order Thinking Skills in Education Reform - A NEP 2020 Research Perspective," the profound changes introduced by NEP 2020 are critically examined. The policy serves as a guiding beacon, propelling education beyond traditional boundaries. Central to this transformation is the emphasis on creative insight and higher-order thinking skills. NEP 2020 recognizes these as dynamic forces capable of revolutionizing pedagogical approaches, curriculum design, and student engagement. Departing from rote memorization and standardized testing, the policy advocates for a nuanced and adaptive educational approach, nurturing creativity and fostering advanced cognitive processes (Chatterjee and Chakraborty, 2021). The paper delves into the intricate layers of NEP 2020, focusing on the interconnected themes of creative insight and higher-order thinking skills. It not only scrutinizes the policy's provisions but also examines real-world implementations, drawing insights from successful case studies. The goal is to envision the future of education, propelled by NEP 2020, as a holistic reimagining of the educational landscape. "Beyond Boundaries" beckons educators, policymakers, and stakeholders to transcend conventional education. The paper invites readers to explore a horizon where creative insight and higher-order thinking converge to shape learners equipped not only with knowledge but also with the ability to innovate, question, and navigate the complexities of an ever-evolving world. The NEP 2020 Research Perspective seeks to inspire, inform, and propel the discourse on education into uncharted territories, where the limitless potential of creative insight and higher-order thinking skills unfolds.*

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**Keywords:** NEP 2020, Creative Insight, Higher order Thinking Skills, Critical Thinking.

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### **Introduction**

The National Education Policy (NEP) 2020 marks a significant milestone in India's education system, aiming to foster innovation, creativity, and critical thinking among students. With its emphasis on holistic, flexible, multidisciplinary education and a departure from rote learning, NEP 2020 is heralded as a progressive reform that seeks to align the Indian education system with global standards. However, while the policy presents a promising vision, it also faces several challenges in implementation.

One of the primary concerns is the diverse and unequal educational landscape across India. Implementing NEP 2020 uniformly across rural and urban settings, government and private institutions, and varying levels of resource availability poses a significant challenge. Educators



have raised concerns about the feasibility of this policy, especially in under-resourced areas where the infrastructure and teacher training required for innovative pedagogical practices may be lacking (Gupta & Singh, 2021).

Furthermore, while NEP 2020 advocates for a shift from traditional rote learning methods to fostering higher-order thinking skills, the transition may not be seamless. There is apprehension among educators about the readiness of the current education system to adopt such drastic changes, particularly without sufficient groundwork in teacher training and curriculum development. The policy's success will heavily depend on addressing these concerns and ensuring that the necessary support structures are in place (Das & Choudhury, 2020).

Moreover, certain areas within NEP 2020 may require further development and refinement. For instance, while the policy promotes the integration of technology in education, the digital divide in India could exacerbate existing inequalities. Ensuring equitable access to digital resources and training for both students and teachers will be crucial to realizing the policy's goals (Sharma & Verma, 2020).

Swami Vivekananda's perspective underscores the transformative power of education in national development but does not specifically address innovation as understood in the context of NEP 2020. His emphasis on the spirit and enthusiasm required for national progress aligns with NEP's goals of creating a dynamic knowledge society. The focus of NEP 2020 on technology and educational reform resonates with Vivekananda's broader vision of educational empowerment. Putting NEP into practice in line with nation-building would create a dynamic knowledge society. In addition to supporting the widespread use of technology in education, the NEP places a strong emphasis on eradicating language barriers and organizing educational administration systems. It also promotes creativity and unconventional thinking. The teaching and learning processes would change as a result of the systemic movement towards autonomy, empowerment, and good governance.

"The NEP will bring about fundamental changes in the education setup from pre-nursery to research, as the need of the hour is for a multi-dimensional approach to become globally competitive and locally productive," PM Modi (2020). NEP places a strong emphasis on innovation and research, highlighting the significance of these two components in transforming our lives for the better. To maintain these aims and objectives, institutions of higher learning, organizations, and schools must actively foster a culture of research in our educational system and encourage creative thinking (Agarwal & Agarwal, 2021).

In order to analyze the connection between NEP 2020 and the fostering of innovation, this paper employs a mixed-methods approach. Quantitative data will be gathered through surveys

and standardized assessments administered to students and educators across various educational institutions implementing NEP 2020. This data will help measure the extent to which innovative practices, such as higher-order thinking and creative insight, have been integrated into the curriculum.

Additionally, qualitative insights will be obtained through interviews and focus group discussions with educators, policymakers, and students. These qualitative methods will provide a deeper understanding of the challenges and successes encountered during the implementation of NEP 2020, as well as the perceptions of those directly involved in the educational process. The combination of quantitative and qualitative data will allow for a comprehensive analysis of how NEP 2020 influences innovation in education. By triangulating these data sources, the research aims to present a well-rounded perspective on the policy's impact, enhancing the credibility and robustness of the findings.

In summary, while NEP 2020 offers a visionary approach to reforming India's education system, its implementation will require careful consideration of the challenges and concerns raised by educators. By addressing these issues, the policy can truly transform the educational landscape and fulfill its promise of fostering innovation and creativity in the coming generations.

The open and empowered culture and educational environment foster the creative brains that lead to innovation. There are several ways that we might integrate innovation into our educational institutions. According to Singh (2021) "The research and innovation investment in India is at current time, only 0.69% of GDP as compared to 2.8% in USA, 4.3% in Israel and 4.2 % in South Korea".

Modern India has several key issues, including those related to healthcare, education, sanitation, and other areas requiring innovative solutions in addition to top-notch science and technology (Agarwal & Agarwal, 2021).

### **Highlights of Higher order thinking skills and Creative Insight skills in NEP 2020**

*The development of each person's creative potential is given special attention in education policy. It is predicated on the idea that education has to foster social, ethical, and emotional aptitudes in addition to cognitive abilities, including "higher-order" cognitive abilities like critical thinking and problem solving and the "foundational capacities" of literacy and numeracy. (Pg 4 NEP 2020)*

*The core ideas that will direct the entire educational system as well as specific institutions are creativity and critical thinking, which promote rational decision-making and innovation. (Pg 5 NEP 2020)*

*NEP 2020 prioritizes the development of higher-order thinking skills and creative insight. It advocates for a shift towards inquiry-based, holistic learning, aiming to reduce rote memorization and enhance critical thinking and problem-solving abilities. The curriculum is designed to focus on essential elements that encourage interactive, exploratory, and collaborative learning (NEP 2020, Sections 4.5)*

*The policy emphasizes an interdisciplinary approach and the integration of vocational training with academic education. By combining STEM with the humanities and arts, NEP 2020 aims to foster well-rounded education that enhances creativity, innovation, and practical skills. This approach is intended to improve learning outcomes and better prepare students for future challenges (NEP 2020, Section 11.2)*

## **Elevating Higher Order Thinking, Creative Insight in Research and Innovation**

### ***Innovative and transformative projects:***

NEP places more of an emphasis on learning than on studying; by stepping outside of established frameworks and exploring uncharted territory, research can be both innovative and transformative (See fig. 1.). Innovative and creative ideas give rise to disruptive initiatives (Facione, 2011).

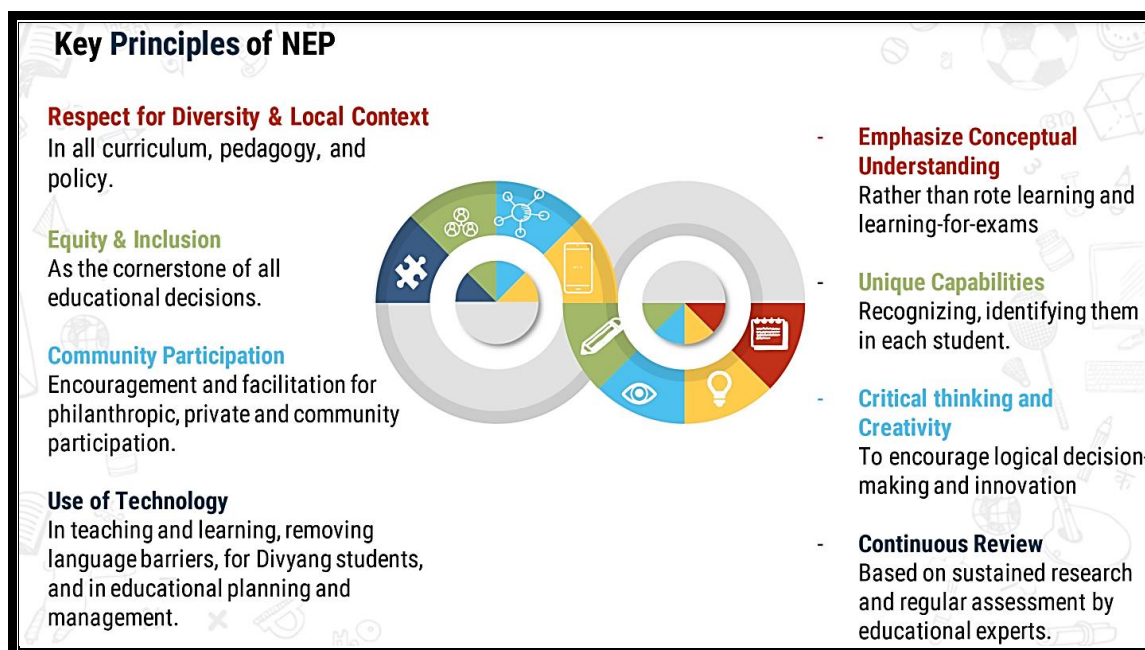


Fig. 1. Principles of NEP- 2020

Finding new fields and specialised areas for study and invention is crucial. Holistic learning, which places a focus on vocational training at the high school and college levels, will take the role of rote learning in order to improve a child's life skills, cognitive, social, and emotional development, as well as their foundational literacy and numeracy. Formative evaluations are to take the place of summative ones. To overcome linguistic obstacles, DIKSHA (Digital Infrastructure for Knowledge Sharing) will provide a nationwide repository of excellent resources on the foundation of literacy and numeracy. Innovation in AI will come from early phases of mathematics and computational reasoning. In addition, literature in the local and Indian languages will be developed and made available in public libraries and schools through the use of high-quality translation technology. Gain experience in a variety of fields with professional technical education to advance in higher education (Sharma and Kapoor, 2018). In order to improve planning, administration, assessment, and learning at the school and postsecondary education levels, the National Education Technology Forum (NETF), an independent organisation, will offer a forum for the open exchange of ideas. NEP will prioritise competency-based instruction in order to achieve the learning objectives. Additionally, the reach of distant and open learning in schools via NIO will grow. Vocational training experienced growth. The National Education Policy suggests that by 2025, a minimum of 50% of students should be exposed to vocational studies. There is also a push for adult education.

***Remain alert and aware of difficult circumstances at all times:***

Competitive environments foster competencies on the one hand and rivalry on the other. An inventive spirit can also be produced by competition and the struggle for existence, which push people outside of their comfort zones and enable them to demonstrate their value. People must use creative experimentation and investigation to uncover answers in their environment.

According to Gupta and Chakraborty (2023), Higher education institutions (HEI) also need to concentrate on developing innovative environments by establishing centres for frontier research, technology development centres, and incubators, among other things. In order to encourage contact between students and communities, HEI creates unique hand holding methods and competitions. Through funding and mentorship programmes, NRF in NEP would support exceptional research efforts at the college and university levels in an effort to promote and accelerate high-quality research with social relevance. Additionally, the policy suggests a number of important projects, including content creation, digital repositories, and dissemination.

***Return to your roots and your basics:***

Examine the foundational techniques for being inventive and creative. It's critical to conduct study to have a fundamental understanding before innovating. Never disregard the Indian tradition of making observations, asking questions, and looking for answers. In all community, the evolution of history, art, language, and culture is a result of this curious nature. In NEP, social knowledge and scientific temper are given the appropriate weight.

***Reinvent:***

NEP focuses on resurrection, reimagining in technologically driven new environments using fresher ways. The current problems must be resolved by implementing creative learning using contemporary techniques like artificial intelligence, gamification, and applications (apps). The NEP's emphasis on regional languages would cause current knowledge to be reinvented.

***Interdisciplinary approach:***

Understanding knowledge as a whole requires an interdisciplinary approach. Discipline boundaries that have been established obstruct the dissemination of diverse viewpoints and views. NEP focuses on this feature, provides instruction outside discipline-specific areas, and allows for a variety of study combinations and modifications (Singh and Kapoor, 2021).

***Collaborate, communicate, contextualise:***

Working together creates connections through communication, which paves the way for success and innovation. The exchange of knowledge greatly fosters innovation. High-achieving institutions would be able to work together and open campuses abroad thanks to NEP. There will also be an encouragement for the world's best universities to visit India.

***Anticipate:***

Education teaches us to anticipate and be ready for life's most difficult circumstances and emergencies. In any situation, it's critical to be objective and clear in determining the root issues. We have learned the same lesson from the continuing pandemic, which has also brought attention to the necessity for alternate channels for exchanging and transmitting knowledge. NEP acknowledges the benefits and drawbacks of technology and advises taking preventative action before it's too late (Narayan et al., 2023).

***Having self-belief to empower oneself:***

Developing and possessing an inventive spirit and temperament are the sources of self-empowerment. NEP provides ample room for academic, administrative, and financial autonomy, which would empower professors. They could develop excellent, imaginative, and creative products if they used more recent teaching techniques and conducted study in

specialised fields. The structure and purpose of education would be expanded by having the freedom to create curriculum, pedagogy, and assessment methods (Joshi and Kumar, 2022).

***Spiritual aspects:***

Never discount the human brain's capacity for intuition. Put it on a spiritual path to explore the domain of undiscovered truths. A spiritual perspective solves problems objectively and transcends self-interest. Creative and original thoughts come from a free mind. This would then set the country on the correct path and result in a progressive, enlightened approach with a true grasp of things. The NEP places a strong emphasis on scientific temper as a means of producing independent and reasoned thought, which essentially results from an objective and spiritual worldview.

***Novel and important fields for investigation and creativity:***

Mishra and Singh, (2023) stated that NEP emphasises how critical it is to adapt to the changing times, particularly in education. It is necessary to investigate the more recent fields of innovative courses, such as robotics, pharmaceutical engineering, augmented reality, simulation, cyber security, internet of things, satellite technologies, people management, environmental studies, big data analytics, data mining, data visualisation, data journalism, and robotics.

**NEP 2020 and India's Educational Heritage**

India has a long history of education dating back thousands of years. These were passed down orally or in writing from generation to generation (Singh, 2018). The revered Vedas have been passed down to us; they were known in India about 2,000 years before they were created. It was believed that the process of creating man was artistic rather than mechanical. Thousands of monks committed to study, philosophy, and meditation were housed at Nalanda, one of the first residential-cum-teaching institutions. The university was home to about 10,000 residents and students, including teachers. Except from China, Korea, India, and Central Asia, they were from all around the world. Hiuen-Tsang records that although Nalanda was essentially a Buddhist university, its curricula encompassed Hindu scriptures, philosophy, and medicine. According to the Katha Upanishad (iii, 6), "He who is possessed of supreme knowledge by concentration of mind, must have his senses under control, like spirited steeds controlled by a charitoteer." Indian education has always been based on the fundamental belief that it provides illumination and appropriate guidance in all aspects of life, dating back to the Vedic era. According to one philosopher, knowledge is man's third eye, providing him with insight into all situations and teaching him how to behave.

(Page 194, Subhishitaratnasandhoha). According to the ancient Indian saying, "Sa vidya ya vimuktaye" (knowledge is the means by which we are set free). Throughout history, education has been valued and sought after in India, but not for its own purpose; rather, it has been a component of religion.

(It was pursued as a path to mukti, or emancipation, the ultimate goal in life, and as a way of self-realization. Hence, the individual's highest responsibility is to realise his or her self-fulfilment and expansion into the Absolute, since they are divine sparks and potential gods. Education should support this self-fulfilment rather than just imparting external knowledge (Smith, 2017).

We contend that education is both an evolutionary and a liberating force that lifts people up from lower states of material consciousness to higher states of intellectual and spiritual awareness. NEP acknowledges the value of freedom in the creation and exchange of knowledge. "There knowledge called him to her mystic peaks where feeling swims across a sea of peace and vision climbs beyond the reach of Time, where thought is held in a vast internal sense" (Sri Aurobindo, Savitri, p. 299, 1999) The realisation of a learning society and lifelong learning must receive a lot of attention. More and more imperatively, complete education is needed to emphasise the entirety of the human psyche. Only until human nature is conditioned for reciprocal goodwill and an innate impulse for cooperation—conditions that can only be established in human consciousness via higher education—will contemporary challenges be overcome (Sharma and Singh, 2021). NEP, which is ingrained in the Gandhian philosophy of education, can assist realise the urgent need for the construction of a new society that is non-exploitative and non-violent in character due to integrated education techniques that support uninterrupted sustainable human growth. The goal of NEP is the harmonious development of the individual's moral, intellectual, spiritual, and physical qualities. It emphasises learning through experience (Kumar and Kapoor, 2019).

Author of "A History of Sanskrit Literature," British Sanskrit scholar Arthur Anthony Macdonell (1854–1930), states that "some hundreds of years must have been needed for all that is found" in her culture. The ultimate goal of education was to elevate humankind to the pinnacle of knowledge and to manifest divinity in them. Additionally, the entire educational approach was built on the Indian cultural ideal of "simple living and high thinking" in order to achieve the goal. In the Indian framework, education—which elevates the social being to ultimate realities beyond societal planes—is the means by which perfection is to be attained.

The definition of education is "*enabling the mind to discover that ultimate truth which sets us free from the bonds of the dust and bestows upon us wealth, not of material possessions but of*

*inner light, power, and love, giving expression to this truth and making it its own."*

Rabindranath Tagore. If we are not taught to contribute to society and take care of the environment we live in, which is what gives us our life and well-being, then no education is truly complete.

## Conclusion

Knowledge evolves constantly, and today's understanding can become outdated tomorrow. The greatest challenge for the learned is not ignorance itself but the illusion of complete knowledge. It is essential to continually seek new knowledge, explore the unknown, and foster innovation. Embracing this mindset where acquiring, unlearning, and re-learning is a continuous process ensures that we do not stagnate but instead thrive through innovation and creativity.

NEP 2020 is a comprehensive policy designed to overhaul India's educational system to foster innovation and creativity. It aims to inspire students to develop original and imaginative skills by creating an environment that supports experimentation and interdisciplinary learning. Addressing challenges such as infrastructure and teacher training is crucial for the policy's success. By doing so, NEP 2020 aspires to position India as a global leader in knowledge and education. The policy's focus on holistic and innovative education is vital for shaping a brighter future and advancing India's status as a "Global Knowledge Superpower."

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## Perception of Females about their Menstrual Hygiene and Environment

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### **Abstract**

*The basic amenities of a healthy human life include nutritious food, clean drinking water, shelter, and sanitation facilities. Health and sanitation are concerns for individuals and environment. There is a lack of adequate facilities for sanitation for females, who are considered half of the human population. Menstrual hygiene is one of the concerns and products like sanitary pads and tampons are commonly used by the majority of females in countries like India. Several reports and researchers suggest that due to a lack of awareness of menstrual hygiene, an ample number of sanitary pads are disposed of in an improper manner which leads to poor waste management in the country. Therefore, this research study tries to understand the awareness of menstrual hygiene, products & their alternatives, and waste in females living in urban areas. Convenient sampling was done. 120 females were sent the questionnaire through Google Forms and focus group discussions were done with 30 females to collect the data. Findings suggest that there is a lack of awareness regarding the menstrual hygiene and proper disposal management of sanitary pads which led to harmful effects on sanitation and health. It was also found that females were hesitant to switch to the alternative option of the menstrual cup as there is a lack of awareness, taboo associated with virginity and menstruation, prices and accessibility are also the aspects related to it. It is concluded that some different measures need to be taken towards the awareness and sensitivity of menstrual hygiene and the environment.*

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**Keywords:** Menstrual Hygiene, Sanitary pads, Menstrual Cup, Disposal, Environment.

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### **Introduction**

Nutritious Food, clean drinking water, Shelter, and sanitation facilities are basic human amenities for a healthy life. Sanitation facilities play an important role in living a healthy and dignified human life. When we count sanitation facilities as basic human life amenities, we somehow forget the important need of larger strata of the world population, which is menstrual hygiene. For women, a safe menstrual hygiene practice is very important to live a healthy life as it decreases the risk of vaginal infection and diseases related to unhygienic conditions. Negation of menstrual hygiene and sanitation facilities creates trouble and challenges for females in every aspect of life from life expectancy to career. Diseases caused by dirty water, lack of sanitation, and hygiene are the fifth biggest killer of females, almost 8,00,000 women die each year from these diseases (WaterAid Global, 2017). On the educational front, nearly 23 million girls drop

out of their school education annually worldwide due to a lack of proper menstrual hygiene management facilities at their respective educational institutes (Spot on, 2014, p.11).

Single-use Sanitary pads, Tampons, and reusable cotton cloth pads are commonly used products as healthy and safe options for menstrual hygiene and from these available options, females in India use single-use sanitary pads. Single-use sanitary pads which are produced on the commercial level hand it is safe for menstrual hygiene during menstruation but on the other hand as it is a one-time-use product it is creating a problem for the environment. In the vicinity of 12,30,00,00,000 sanitary pads are dumped every year into Indian landfills and the material by which these single-use sanitary pads are made consists of 90% plastic which is Non-biodegradable (Down to Earth, 2021).

Indians produce more than 33,00,000 tons of plastic waste every year (Central Pollution Control Board, 2019, p.14) and the waste in tons due to sanitary pads is 1,13,000 tons (Down to Earth, 2021). As mentioned above, a single-use sanitary pad contains 90% plastic of its total weight, so plastic waste produced by sanitary pads would be 1,01,700 tons. So plastic waste generated by sanitary pads is roughly 3% of total plastic waste generated by Indians per year. This 3% seems to be very low but there are two major points of concern, 1. Plastic waste takes hundreds of years to decompose and 2. In India, 62% of young women are using old clothes and rags during their menstruation cycle (National Family Health Survey, 2017, p.82). This means a very small strata of women population are using safe menstrual products and as mentioned earlier single-use sanitary pads are a popular choice among them and the number of females using single-use sanitary pads is increasing (Singh, et al., 2022).

As much as safe menstrual hygiene practice is a matter of concern for women's health, Plastic waste generation is a matter of concern for the earth and environment. A society should not compromise either of one; both these matters of concern should go hand and hand. For this society has to find environment-friendly options for safe menstrual hygiene practices. After sanitary pads tampons and organic sanitary pads are easily available and popular options for menstrual hygiene but there are some environmental and health issues with these products such as:

- a. Both these products are single-use, so not only do they end up in landfills but their plastic packing as well.
- b. Tampons contain plastic as well.

- c. Organic sanitary pads replaced the main key ingredient of conventional single-use plastic such as Superabsorbent polymer and wood mesh but there is still some amount of plastic in it to make it leakproof.
- d. Staphylococcus or Staph is a bacterium that is often found in the human body. During menstruation, it tends to overgrow and release toxins. Studies depict the usage of menstrual products that use superabsorbent polymer in their making could lead these toxins to a lethal condition which is called 'Toxic shock syndrome'. In this condition, people face a sharp drop in blood pressure and sometimes it leads to death.

Single usage and presence of plastic material are two main drawbacks of menstrual hygiene products due to which the environment is affecting, so the world needs an alternative option to practice safe menstrual hygiene which could be use multiple times, efficient and comfortable during menstruation and effective to cut plastic waste.

Menstrual Cup is an emerging option for menstrual hygiene and could be an answer to this plastic waste problem. Menstrual cup is a cup shaped flexible product which is meant for safe menstrual hygiene. It is made out of medical-grade silicon. Though it is made out of silicon or rubber, menstruating females can reuse it multiple times. In comparison to other menstrual hygiene products, the usable time span of a menstrual cup is way high and it can go up to 10 years (Van Eijk et al., 2019). The durability and reusability of menstrual cups make them a better option for a better and green tomorrow. These characteristics of menstrual cups could help to cut down the plastic waste caused by single menstrual hygiene product waste.

### **Research Questions and Objectives**

The research questions of the study are:

1. What are the perceptions of females for using menstrual hygiene products like Menstrual Cup?
2. Are they comfortable in using menstrual cups? How do they see it as an alternative product in comparison of sanitary napkins or tampons for the sustainable environment?

The present study aims to find out possibilities of emergence of menstrual cups as alternative safe menstrual hygiene products with reference to environment.

## **Methodology**

The study is done under descriptive research design and is qualitative in nature. It includes 120 females of the age group of 19-50 years of age from urban and rural areas. The convenient sampling was opted for the selection of the sample. The data collection has been done through open-ended questionnaires which were distributed to the participants through Google Forms. The questionnaire was formulated by the researcher to fulfill the objective of perceptions of females. The participants who responded were 120 and also Focus Group Discussions were organized for the 30 females. This study is done during the month of October to December 2021. The responses of questionnaire were analyzed in the form of percentage and focus group discussion narratives were analyzed thematically.

## **Findings and Discussion**

The data depicts that the majority of participants (84.2%) use sanitary pads and 15.0 % of the participants use Menstrual Cup during the menstruation. Interestingly, it was found that only one participant responded that tampons were used during menstruation. Majority of participants prefer using the sanitary pads as they are more comfortable with it and they are using them during the menstrual cycle. It was observed that they have the exposure of sanitary pads around them and females who are using it told them to use it as per the responses. The study done by researchers like (Meghana and Gomathy, 2021) also found that the majority of females use sanitary pads in India.

### ***Awareness regarding safe disposal of sanitary pads***

As the figure depicts that the majority (60%) of participants responded that they are not aware regarding the non-disposal of sanitary pads in the environment. Some of them (35% of female respondents) answered that they know about the effects of not disposing of the sanitary napkin in the proper way as it is unhygienic and also it led to various sanitation concerns in the environment. The females (5.0%) who were in the age range of 40-50 years, mentioned that they were not aware about the menstrual hygiene products and their effect on environment. It was also found that some of them use cloth pads which are not harmful in terms of biodegradability as it is eco-friendly and they are reusing the cloth to save the environment. It is observed that they are mentioning that they are not aware about the effect of non-disposal of sanitary pads on the environment, they are using the eco-friendly products as per the responses.

It was found that proper disposal of used sanitary pads is still inadequate. Most females mentioned that they manage their garbage waste, but due to a lack of menstrual management practices, most women discard their sanitary pads or other menstrual articles in domestic solid waste or garbage bins, which eventually become part of solid waste. The majority of females mentioned that they dispose of sanitary pads by wrapping and throwing them in the dustbin along with other domestic waste.

### ***Methods of Disposal of Sanitary Pads***

Participants have been asked, who are using sanitary pads, now or used sanitary pads earlier, how they dispose or used to dispose of their used sanitary pads. On the basis of their feedback, researchers made four categories out of it.

- a. Without any wrap disposed of in the household trash bin.
- b. Wrap in newspaper and dispose of it in the household trash bin.
- c. Wrap in newspaper and then pack in a plastic bag then dispose in the household bin.
- d. Dispose in a trash bin dedicated to Dry waste.

On the question of disposal of sanitary pads 10% of participants said that they dispose of their used sanitary pads with their household waste without any wrap. The percentage of participants who dispose of their used sanitary pad by wrapping it in newspaper and disposing of it in a household bin is 18%. 44% participants mentioned that first they wrap their used sanitary pad in newspaper and then pack it in a plastic bag and then dispose of it with their household waste. Only 6% participants said that they dispose of their used sanitary pad in a separate trash bin which is dedicated for day waste only.

This data depicts that a large chunk of participants wrapping used sanitary pads first in newspaper and then in plastic bags. So by this process not only the used sanitary pads are ending up in landfills but its wrapping as well which contains plastic bags. Not only sanitary pads are creating plastic waste but this process is adding more plastic waste to the environment.

For a safe and green tomorrow it is pivotal to have awareness in people regarding safe disposal of any kind of waste whether it is degradable or non-degradable. When it comes to waste management, safe and segregated disposal of the waste is the key. In this research participants asked if they dispose of their sanitary pads with dry waste or with household waste. 60% of the participants accepted that they are not aware of environmental harms caused by non-segregation

of used sanitary pads and they dispose of it with household waste. So, it is necessary to create awareness in society about environmental issues caused by sanitary pads.

***Awareness Regarding the Sanitary Napkins Affecting Vaginal Health:***

The findings suggest that 50% of participants were aware that sanitary pads are affecting their vaginal health as they can cause fungal infections, infections of the reproductive system, and infections of the urinary tract. Some (31.7% of participants) mentioned that it is not necessary that they will affect health as they are the necessities during the menstruation and the remaining 18.3% of participants mentioned that they were not aware about it. Therefore, there is a lack of awareness regarding the sanitary products used by females during menstruation which also affect their health and hygiene.

The participants in the focus group discussion mentioned that they were not comfortable with the product they were using during menstruation as it causes irritation on vaginal skin and inner thigh areas which also lead to inflammation and pain caused by itchiness on skin.

The majority of participants (65.0%) were aware about the menstrual cup and 35.0% of participants were not aware regarding the product. It was noted that most participants (who are below 20 and 45 years of age) are not aware of the menstrual cup. It is similar to the findings of researches like (Van Ejik, et al., 2021) where the respondents were not aware about the menstrual cup.

***Familiar with the idea of menstrual cup and consideration to adapt it:***

Some (8.3%) of participants were willing to switch on to using the menstrual cup during menstruation. Some (75.0%) of participants were not comfortable using the menstrual cup and 16.7% of participants mentioned that they would gather more information about it as they are not aware about it. The participants who were using it recommended it to use as they said it is more eco-friendly. There were social stigmas related to it as per the responses of females and they have concerns regarding the loss of virginity, leakage, foreign objects inserted in the body, uncomfortableness with the object, lack of knowledge about the product and how to use it during menstruation.

Researchers found that there are four types of responses when participants ask whether they will switch to menstrual cups soon or not.

- a. Familiar with the menstrual cup and will switch to it.
- b. Not familiar with the idea of menstrual cups and will not switch to it.

c. Aware and will not switch to it.

d. Aware and maybe switch to a menstrual cup.

Percentage of participants who were familiar and will consider it as an option for their menstrual hygiene during their menstruation cycle is only 8.33% and the participants who knew what a menstrual cup is and they were in doubt for choosing it as alternative, were 16.67%. 30% of participants said that they are not aware of the menstrual cup so they will not use it. Participants who said that they are familiar with menstrual cups but will not use it were 20% of the participants.

***Tried menstrual cup once but not using now:***

During the research, researchers found that 12% of the participants tried to use a menstrual cup initially but after one or two uses they stopped using it. These participants add that

- a. They did not feel comfortable with the process of wearing a menstrual cup because it takes more time and effort as compared to sanitary pads and tampons.
- b. They were not totally aware about the proper process of inserting a menstrual cup in a manner that it could become leak proof so that is why there was leakage problem of menstrual blood.

***Thoughts on menstrual cup:***

Participants were asked about their opinions regarding menstrual cups, what they think about it. Researchers got various different views on it. These views were open ended, so researchers developed some themes to simplify the views in data form.

**Safety-** 20% of participants raised their matter of concern that use of menstrual cups could be unsafe and harmful to them and this 20% stratum of sample never use menstrual cups during their menstruation cycle.

**Budget-friendly-** During this research, researchers found that budget is also a consideration for participants. 16% of participants said that a menstrual cup could be a budget friendly option during menstruation because it could be reused for a very long-time span.

**Lack of Accessibility** – 20% of participants mentioned that menstrual cups are out of their reach because of its accessibility. This means menstrual cups are not easily available to them as sanitary pads are commonly available in the market.

**Lack of popularity** – According to 16% of the participants, the concept of menstrual cup is less popular and it needs to be popularized so that they can know more about it.



**Ease in use when you are out for long** - 16% of the participants accept that menstrual cups are a more convenient option when the user is out from their home for long hours and 2% of the participants count it as a non-convenient option. These are the participants who are using a menstrual cup or used it before.

**Fear of foreign objects inside vagina** – Researcher discovered that there was a fear or worry among participants when it comes to usage of menstrual cups because for using it the user has to insert it into vagina. 16% of the sample mentioned this fear. According to a few of them “it has to insert like male genitals into the vagina”. This fear could be associated with the social construct of Virginity.

**Cut down the price** – Few (4%) females responded regarding the price being lesser as compared to now as it is not affordable for everyone.

**Awareness about the harmful effect of sanitary pad then switched to menstrual cups** – Out of a total sample, 4% of participants mentioned that they switched to menstrual cups after they came to know the harmful effects of sanitary pads on the environment.

As it is observed with this response that awareness regarding the menstrual products would lead to switching on to menstrual cups, it is important to make people aware regarding menstrual cups for a better environment.

**For working females** - Responses of few participants adhered that participants who were not aware about the menstrual cup perceived it as an object used by working females (preferably who are working in office) during menstruation as per the responses.

## **Conclusion**

This study aimed towards the perception of females regarding the usage of menstrual cups. It was found that the majority of females were using sanitary pads in urban and rural areas which were of single-use leading to harmful effects on the environment. The participants were wrapping the pads with the newspaper and then packing it in polythene and then disposing of it with regular household waste which is causing more plastic waste (non-biodegradable in nature). As it is disposed of with regular waste of the household and not segregated as dry waste will lead to hazardous conditions. It is related to People who live along river banks pour menstrual material into bodies of water, contaminating them. Germs and dangerous organisms thrived in these materials that have menstrual blood. Sanitary pads soaked in the blood of an infected woman/girl may carry hepatitis and HIV viruses, which can survive in the soil for up to six

months and keep their infectivity as also mentioned by (Kaur et al., 2018). Without suitable protection or gear, the clogged drainage containing pads must be manually cleared and cleaned by conservancy employees with their bare hands. Workers are exposed to dangerous chemicals and microorganisms as a result of this. Although incineration is a superior method of disposing of menstrual waste, burning pads emits toxic gases that are hazardous to one's health and the environment.

With this thought, the menstrual cup is considered as an alternative for females and also for the betterment of the environment. As this product is reusable and its life expectancy is around a decade. It offers sustainable, practical, and cost-effective alternatives where sanitation conditions are not good (Kaur et al., 2018). However, there are many challenges regarding the usage of menstrual cups which includes the unawareness, social stigmas, fear of females and accessibility around them. There is a need to take certain steps for the environment and better health and hygiene conditions for females. Seminars and workshops for menstrual cups need to be taken for the students who are studying in the school and higher education institutions, certain advertisements for mainstream media to be shown as they are there for sanitary pads on national televisions, Awareness campaigns and sessions for females can be conducted in rural areas, etc. Certain policies and committees need to be formed to include the various steps for environment friendly products to be used during menstruation to facilitate an adequate environment for health and sanitation to make society a better place.

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## **Root Knot Formation by *Meloidogyne incognita*: Chemosignals Alteration in Carrot Plants under Climate Change Conditions**

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### **Abstract**

*Climate change is exerting significant impacts on various ecological processes, including plant-microbe interactions. One such interaction involves the parasitic nematode Meloidogyne incognita and its interaction with carrot plants (Daucus carota). This chapter explores the influence of climate change on root knot formation affected by M. incognita and the role of chemo-signals in altering the responses of carrot plants. Understanding these dynamics is crucial for developing sustainable management strategies in the face of changing environmental conditions.*

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**Keywords:** Climate change, Meloidogyne incognita, carrot plants, root knot formation, plant-microbe interactions.

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### **1. Introduction**

*Meloidogyne incognita*, a destructive root-knot nematode species, damages plants by forming specialized feeding sites within the roots, resulting in galls or knots. This disrupts plant physiology, leading to stunted growth and reduced productivity (Sehgal et al., 2021). Carrots (*Daucus carota*) are particularly vulnerable to *M. incognita* infestation, causing significant yield losses (Pinheiro et al., 2019; Tabassum et al., 2023a). Despite earlier research on plant-nematode interactions, the impact of climate change remains unclear (Tabassum et al., 2023a). Climate change affects the temperature and CO<sub>2</sub> content of the surrounding air, which impacts the chemical signals that plants send to pests. Climate change could impact the significance of chemo-signals in the interactions between plants and nematodes, according to (Manosalva et al., 2015). For agriculture to be sustainable, it is imperative to comprehend this link. Climate change severely disrupts the interactions between plants and nematodes, notably affecting the root-knot nematode *Meloidogyne incognita*. Changes in rainfall patterns, elevated temperatures, and increased CO<sub>2</sub> concentrations all have the potential to improve the nematode's life cycle, spread, and virulence. These changes may directly impact the health and yield of crops like carrots, potentially leading to an increase in root knot formation (Dutta, and Phani, 2023b). Nematode populations may spread into new regions as a result of their adaptation to warmer climates, making agricultural difficulties worse. The

interaction of various meteorological variables affects nematode biology and weakens plant defences, ultimately leading to lower crop yields and higher agricultural losses (Somasekhar and Prasad, 2011).

Research aims to elucidate mechanisms governing plant-pest interactions under different climatic scenarios by examining the response of carrot plants to nematode infestation (Rosenzweig et al., 2007). By exploring changes in carrot chemo-signals under climate change and their impact on root-knot formation by *Meloidogyne incognita*, this study could inform pest management strategies and promote sustainable crop production amidst climate change (Skendžić et al., 2021; Tabassum et al., 2023a).

Climate change significantly impacts plant-microbe interactions, affecting plant health, development, and defense mechanisms. Temperature shifts and CO<sub>2</sub> concentrations alter growth rates, phenology, and the timing of interactions. Changes in plant physiology and metabolism can disrupt chemo-signals, potentially causing root knot disease in agricultural crops (Jones et al., 2017; Skendžić et al., 2021).

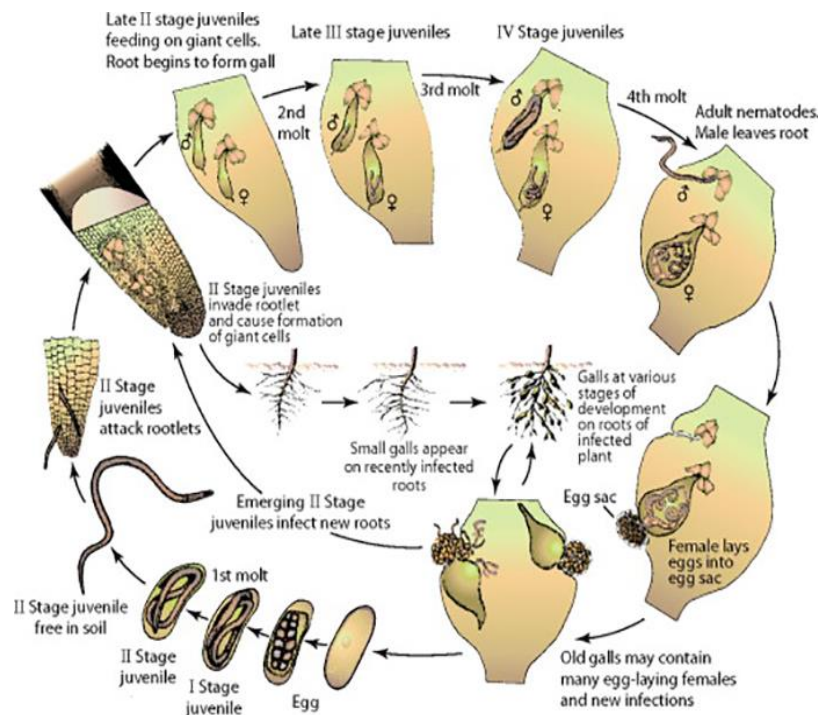


Fig 1: *Meloidogyne* nematodes are the source of the root knot disease cycle (Agrios, 2005).

## 2. *Meloidogyne incognita*'s response to climate change

Climate change significantly affects ecological systems, including pest-host interactions. *Meloidogyne incognita*, or root-knot nematode, is a parasitic nematode that impacts various plants, including carrots (Berliner et al., 2023). Altered environmental conditions due to climate change can affect the life cycle, distribution, and virulence of *Meloidogyne incognita*,

impacting both the nematode and host plants (**Dutta and Phani, 2023**). Elevated temperatures can accelerate nematode development and reproduction, leading to increased populations and root-knot formation in carrots. Longer growing seasons may promote higher infestation levels and damage (**Berliner et al., 2023**). Changes in rainfall patterns affect nematode survival and movement, with excessive rainfall promoting dispersal and drought reducing mobility. Elevated CO<sub>2</sub> levels stimulate plant growth, making carrots more susceptible to infestation (**Tileubayeva et al., 2021**). Climate change can accelerate nematode life cycles, affecting egg hatching rates and reproduction. Increased temperatures may alter the production and release of chemo-signals in infested carrot plants, influencing nematode behavior. Understanding these effects is crucial for developing effective management strategies to mitigate nematode damage and ensure agricultural sustainability in a changing climate (**Dutta and Phani, 2023; Tabassum et al., 2023a; Brosset and Blande, 2022**).

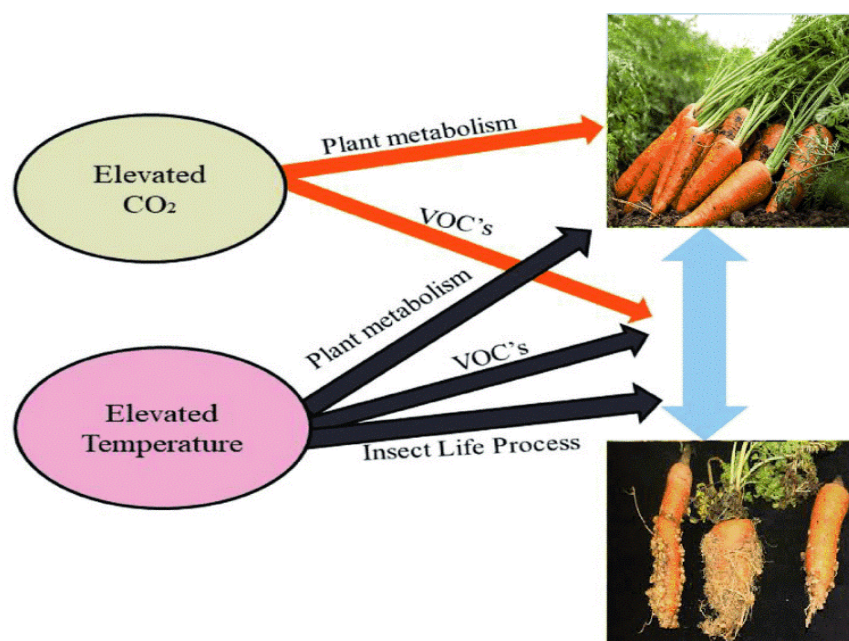
### **3. Climate Change Effects on Carrot Plants**

Climate change is causing significant changes in the environment, making carrot plants more susceptible to nematode infestations such as *Meloidogyne incognita* (**Shakeel et al., 2023**). These nematodes infect carrot roots, causing damage, reduced nutrient uptake, and stunted growth. Climate change can also disrupt the balance of the soil microbiota, which is crucial for plant health and defense against pests and diseases. The geographical spread of nematode species can increase the prevalence of these pests, exposing carrot plants to infestations in previously unaffected regions (**Zhou et al., 2023**). The combined effects of nematode infestations and climate change may result in lower crop output and poorer-quality harvests. To mitigate these effects, farmers and researchers may need to explore adaptive measures such as nematode-resistant varieties, integrated pest management strategies, optimized irrigation techniques, improved soil health, and sustainable agricultural practices. Further research is needed to understand these complex interactions and develop effective strategies for managing these challenges (**Raza et al., 2019; Brosset and Blande, 2022**).

### **4. Chemo-signals and Alteration of Carrot Responses**

*Meloidogyne incognita*, a parasitic roundworm, affects carrot plants by releasing chemo-signals that initiate root knots. Climate change can alter these interactions, leading to alterations in carrot plant responses (**Pedroche et al., 2009; Tabassum et al., 2023a**). Furthermore, significant damage to agriculture is caused by the root-knot nematode *Meloidogyne incognita*, which uses chemical cues to find and infect carrot roots. The

chemical cues play a vital role in the nematode's capacity to recognize appropriate hosts and begin the process of infection (Ahamad et al., 2023). Nonetheless, climate change presents a possible peril to the creation and emission of these chemical signals, which could modify the behavior of nematodes and the progression of root knot formation. Fluctuations in temperature and moisture can impact the metabolic processes responsible for signal synthesis, which may result in higher occurrences of nematode infestations or modified interactions with host plants (Deshar et al., 2019). Therefore, it is crucial to comprehend the interaction between climate change and nematode chemo signaling in order to devise efficient management techniques for crops such as carrots that are susceptible to these pests (Ahamad et al., 2023; Aparajita et al., 2024) Further research is needed to understand these complex interactions and their implications for crop productivity and management strategies (Deshar et al., 2019).



**Figure 2:** The effects of increased CO<sub>2</sub> and temperature on carrot, *Meloidogyne incognita*, and their interactions.

#### 4.1. Chemical communication in plant-microbe interactions

*Meloidogyne incognita* releases chemical signals, known as chemo-signals, to locate suitable host plants, invade roots, and establish feeding sites (Curtis, 2008). These signals attract nematodes towards the roots of the host plant, guiding them with specific chemical cues. Once they reach the root system, they penetrate plant tissues using enzymatic secretions and mechanical force (Tabassum et al., 2023a). *Meloidogyne incognita* also secretes additional chemo-signals, causing the creation of giant cells, which serve as nutrient-rich feeding sites.

The nematodes use their stylets to extract nutrients from these cells, damaging the root system and affecting the overall growth and development of the carrot plant. Understanding the chemical communication between plants and nematodes is crucial for developing strategies to mitigate the damage caused by these parasitic pests (**Skendžić et al., 2021**).

#### **4.2. Root exudates and their role in attracting nematodes**

*Meloidogyne incognita*, a nematode, poses a significant threat to crops like carrots due to climate change. Changes in root exudates, organic compounds released by plant roots, can affect nematode behavior. In *M. incognita*, these exudates contain specific chemicals that attract nematodes. Climate change can also influence root exudation patterns and composition, affecting nematode behaviour (**Fatima and Senthil-Kumar, 2015**). Increased temperatures and precipitation patterns can affect plant physiology, root growth, and exudation rates, affecting the quantity and quality of root exudates available to nematodes. Understanding these interactions is crucial for developing sustainable nematode control strategies, such as breeding crop varieties with reduced susceptibility to infestations or optimizing agricultural practices (**Sehgal et al., 2021; Tabassum et al., 2023a**).

#### **4.3. Implications of altered chemo-signals on nematode behaviour and root knot formation**

Climate change can impact plant physiology and interactions, including the emission of chemo-signals. These chemical compounds can attract or repel organisms, such as insects, pathogens, or beneficial ones. In carrot plants, climate change can alter the quantity, composition, and timing of these chemo-signals, potentially affecting their interactions with plant-parasitic nematodes like *Meloidogyne incognita* (**Meents et al., 2020; Mbaluto et al., 2021**). Climate change-induced alterations may attract or repel nematodes, affecting their behaviour and responses. Carrot plants can also respond to nematode infestations by modifying their chemo-signals as a defense mechanism. However, the specific effects of climate change on chemical signals and their interactions with *Meloidogyne incognita* are still under active research. Further studies are needed to understand the precise mechanisms and consequences of climate change on chemo-signals and their influence on root knot formation in carrot plants (**Tabassum et al., 2023a**).

### **5. Sustainable Management Strategies**

Climate change can affect root knot formation by *Meloidogyne incognita*, a plant-parasitic nematode, by altering nematode physiology and behaviour, potentially influencing chemo signals and carrot plant responses (**Pinheiro et al., 2019; Tabassum et al., 2023a**).



## **5.1. Sustainable nematode control methods under climate change**

*Meloidogyne incognita* and other plant-parasitic nematodes are affected by climate change, which alters their range, population dynamics, and behaviour (Velásquez et al., 2018). Skendžić et al. (2021) found that it affects plant responses to nematode infections, including susceptibility and defensive mechanisms. Consider these options for sustainable nematode control under climate change:

**5.1.1. Crop Rotation:** Rotating carrot crops with non-host plants disrupts nematode life cycles, lowering their population over time.

**5.1.2. Resistant Varieties:** Developing resistant carrot types reduces root knot development and crop loss.

**5.1.3. Biological Control:** Predatory nematodes, fungus, bacteria, and parasitic wasps all naturally regulate nematode populations.

**5.1.4. Soil Management:** Practices such as composting and tillage improve soil health and minimize nematode populations.

**5.1.5 Integrated Pest Management (IPM):** Using cultural, biological, and chemical control strategies decreases reliance on a single methodology.

**5.1.6 Climate-Resilient Farming Practices:** Improved irrigation, mulching, and nutrition increase plant resistance to worm attacks (Karlik et al., 2003).

The efficiency of these treatments varies depending on the climate, soil, and nematode populations; thus, it is best to contact local specialists for site-specific tactics.

## **5.2 Manipulating plant chemo-signals for nematode management**

The root knot nematode is a major agricultural pest that disrupts nutrient and water uptake in crops like carrots. Climate change can alter plant behaviour and physiology, including the release of chemo-signals, which play a crucial role in interplant communication. Researchers are exploring manipulating plant chemo-signals for nematode management using synthetic compounds or natural substances (Brosset and Blande, 2022). One approach involves identifying specific volatile organic compounds (VOCs) emitted by plants, while another involves genetically modifying plants to enhance specific compounds (Huang et al., 2020; Brosset and Blande, 2022). However, this research is still ongoing, and practical applications may take time.

## **5.3 Breeding resistant carrot cultivars using climate-influenced chemo-signals**

Climate change could potentially enhance the development of resistant carrot cultivars by incorporating climate-influenced chemo-signals into breeding programs (Sehgal et al., 2021). This could help identify compounds that can act as repellents or disruptors to interfere with

nematode-host interactions (**Tabassum et al., 2023a,b**). Understanding the complex interplay between climate change, chemo-signals, and host-pathogen interactions is crucial for developing effective and sustainable agricultural practices in the face of ongoing climate challenges. This approach holds promise for mitigating nematode-induced damage and ensuring sustainable carrot production (**Kim et al., 2017; Velásquez et al., 2018**).

## 6. Future Perspectives

The interaction between *Meloidogyne incognita* and carrot plants in the context of climate change and chemo-signals is an interesting topic that requires further research. Here are some potential research directions that could be explored:

**6.1. Impact of climate change on nematode behaviour:** Investigate how climate change affects *Meloidogyne incognita* behavior and life cycle, influencing its ability to infect carrot roots.

**6.2. Chemo-signals and nematode perception:** Explore the specific chemo-signals emitted by carrot plants in response to both climate change and nematode infestation. This research could involve analysing VOCs emitted by the plants and studying nematode behaviour in response to different concentrations of these compounds (**Huang et al., 2020; Brosset and Blande, 2022**).

**6.3. Carrot plant defense mechanisms:** Study the molecular and physiological mechanisms underlying the carrot plant's response to nematode infestation and climate change. This research could involve transcriptomic and proteomic analyses to identify genes and proteins involved in defense responses.

**6.4. Ecological consequences of nematode infestation:** Assess how *Meloidogyne incognita* infestations affect carrot plants, soil microbes, pests, and pollinators, and their broader ecological consequences.

**6.5. Integrated pest management (IPM) strategies:** Develop and optimize IPM strategies, including crop rotation, biocontrol agents, soil amendments, and resistant cultivars, considering climate change effects for sustainable carrot production (**Baidoo et al., 2017**).

**6.6. Genetic adaptations:** Carrot plants may undergo genetic adaptations as a result of extended exposure to climate change. These changes may affect how the plants interact with nematodes and may contribute to the emergence of resistant cultivars.

**6.7. Modelling and forecasting nematode outbreaks:** Develop predictive models using climate, nematode behaviour, and plant responses to predict *Meloidogyne incognita* outbreaks. These models could help farmers and policymakers choose crop management and

resource allocation methods. These research directions are broad; therefore, specific methodologies and approaches would need to be tailored based on available resources, expertise, and research objectives (Batra and Gandhi, 2021). Interdisciplinary collaborations between plant scientists, nematologists, ecologists, and climate scientists may help address the complex interactions between nematodes, plants, and climate change.

**6.8 Potential impacts on agricultural practices:** *Meloidogyne incognita*, chemo-signals, and climate change pose challenges to agricultural practices, particularly carrot cultivation. Understanding chemo signals and developing nematode-resistant varieties can mitigate losses. Sustainable and environmentally friendly approaches to nematode management are needed. Monitoring and early detection are crucial due to climate change dynamics. Research and innovation are needed for effective strategies.

**6.9. Importance of integrated approaches for climate-resilient agriculture:** Climate-resilient agriculture strategies, such as crop rotation, nematode-resistant cultivars, biological control, soil management, and integrated pest management, can effectively manage nematode infestations and tackle climate change challenges. These methods protect crops from *M. incognita*, reduce pesticide use, and maintain sustainable agricultural production by considering climate change's effects.

## 7. Conclusion

The research article discusses the impact of climate change on root knot formation by *Meloidogyne incognita* in carrot plants. It emphasizes the role of chemo-signals as modulators of plant-nematode interactions under changing conditions. The study suggests that climate change can further exacerbate the damage caused by root knot formation. The chemo-signals released by *Meloidogyne incognita* mediate the parasitic relationship between nematodes and carrot plants, causing changes in gene expression, hormone levels, and defense mechanisms. Climate change factors like temperature, rainfall patterns, and CO<sub>2</sub> levels can also affect the population dynamics and behaviour of *Meloidogyne incognita*. Higher temperatures and increased moisture can favour the survival and reproduction of nematodes, leading to higher infestation rates and more severe root knot formation. The findings underscore the need for sustainable management strategies to mitigate the negative impacts of root knot nematodes on carrot crops, especially in the context of a changing climate.

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## The Importance of Education in Improving the Status of Women in India

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### **Abstract**

*Education serves as a fundamental cornerstone in the process of nation-building since it facilitates the advancement and development of a nation. In a nation characterized by diverse racial demographics, males and females experienced significant advancements in their socio-economic progress due to their exposure to schooling. Through the collective efforts of both genders, with a particular emphasis on the contributions of women, a nation paves the way toward achieving prosperity. The fundamental requirement for achieving success lies in the empowerment of women. Once again, it may be argued that education is a potent tool for empowerment since it engenders a heightened state of awareness that ultimately fosters empowerment. Therefore, education assumes a crucial and unavoidable position to facilitate the progress of women's liberation and advancement. According to Pandit Jawaharlal Nehru, teaching a masculine man leads to their education. The statement posits that providing education to a woman effectively educates an entire family. Educated and empowered women demonstrate a propensity for success across various societal, professional, and familial domains. Women empowerment encompasses enhancing women's social, economic, and educational agency. The term "gender equality" pertains to a societal setting characterized by the absence of gender bias and equitable rights for individuals within the community, society, and professional environments. Education is crucial in enhancing women's consciousness of their entitlements, inherent worth, and prospects. It allows individuals to engage in more profound decision-making processes about political engagement and life choices. Consequently, the promotion of gender parity within an organization or institution can facilitate educational advancements through the augmentation of self-confidence, self-efficacy, and decision-making capabilities.*

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**Keywords:** *Women's Empowerment, Economic Empowerment, Education, Gender Parity, Women's Education.*

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### **Introduction**

According to Prof. A P J Abdul Kalam, as reported in The Times of India, individuals who exhibit responsible citizenship, with a particular emphasis on women, play a crucial role in the progress of a nation. This is attributed to their unique perspectives, lifestyles, and value systems, which contribute to the establishment of solid familial units, cohesive societies, and, eventually, the advancement of the nation as a whole. Consequently, it is imperative to remember that women possess inherent power and strength and contribute to many cultural contexts. The woman assumes the responsibility of nurturing the forthcoming cohort of society, influencing the development of

children's traits, and fulfilling a significant role as a valuable labor force within familial and national contexts. Women have a crucial role as a valuable human resource in any nation. The advancement of women in various domains and roles globally needs to catch up to that of men. Education has a pivotal role in developing and cultivating these fundamental elements. When women with a formal education possess knowledge of their rights, they are easiest to address any given matter. Subsequently, the woman would be able to achieve achievement in several domains of her life. Education plays a crucial role in empowering women and facilitating their transition into active and contributing members of society. The Government of India (GOI) reported that the literacy rate among males is 84%, while the literacy rate among females is below 70%. Based on the latest labor force surveys conducted by the National Sample Survey Office (NSSO), the percentage of female workers in the country, categorized by employment status, was 29.6% in 2013-14 and 25.8% in 2015-16.

Consequently, education assumes a pivotal and inescapable role in facilitating the trajectory towards women's autonomy and empowerment. The attainment of education and empowerment among women is associated with their ability to attain success in various domains, including society, business, and familial relationships. Women's empowerment pertains to the augmentation of women's social, economic, and educational influence. Education is crucial in enhancing women's consciousness regarding their entitlements, inherent worth, and potential opportunities. It allows individuals to make more substantial decisions about political engagement and life choices. Therefore, promoting gender parity within an organization or institution might potentially contribute to the advancement of education by enhancing self-confidence, self-efficacy, and decision-making abilities.

### **Review of related literature:**

This research examines the importance of education in women's empowerment in India. The following review has been made. Sundaram, Sekar, and Shubbraj (2014) realized in their work 'Women Empowerment: Role of Education' that Such power comes from the process of empowering women, and empowerment comes from education. The primary goal of the research was to increase female awareness of various forms of empowerment and to evaluate the influence of academic achievement on women's overall strength.

Shetty (2015) presented their article 'Role of Education Women Empowerment and Development: Issue and Impact' - Emancipation of women is a process that allows for and contributes to



economic autonomy and engagement in politics and social growth for women. Ways to overcome impediments to women's empowerment via education were also suggested.

Engida (2021) investigated 'The Three-Dimensional Role of Education for Women Empowerment.' The study's principal goals were to learn that education is one of the most successful means of helping women to fully engage in the growth process with awareness, skills, and self-confidence.

The article "Reflections on A Survey of Women: The Importance of Knowledge in The Empowerment of Women in A District of West Bengal, India" was recently published. According to Mukhopadhyay (2008), paying a dowry is seen as a form of social discrimination against well-educated and financially independent women. (Source: Sodhganga@INFLIBNET)

Rahimain, Mirzamani, and Zehtabi (2010) investigated the impact model of women's empowerment; the study explores whether women's empowerment is crucial in relieving global poverty and preserving human rights. This notion is accompanied by independence, self-determination, and power, all essential for women worldwide.

### **Background of the study**

Women's educational attainment in India remains significantly lower than their male counterparts. Consequently, their awareness of their rights, dignity, and potential must be improved. The need for awareness regarding their rights, dignity, and opportunities prevents them from attaining empowerment. Education is crucial in fostering awareness among women regarding the imperative nature of empowerment. Consequently, the present study examines the impact of education on women's empowerment in India. A notable aspect of the study involves examining the impact of education on enhancing women's comprehension of their rights, dignity, and prospects. Women who have received a formal education are the primary catalysts for experiencing marital happiness.

### **Objectives**

The following goals have been established to gain a better knowledge of the significance of education in improving the status of women in India:

1. To study the present status of women's empowerment through education.
2. To study the literacy rate and employment rate of women in India.
3. Find out the impact of education on Indian women's socio-economic empowerment.
4. To study the necessity and significance of Women's Education.
5. Find out the Steps to enhance women's education status.

### **Research methodology**

The researcher utilized secondary data in their study. The secondary data utilized in this study was sourced from various scholarly journals, articles, census data surveys, official Government of India (GOI) publications, reputable dictionaries, and reliable websites. The researcher utilized the methodology of percentage analysis.

### **Strengthening Women Through Education**

Promoting women's empowerment is widely recognized as a pivotal factor in fostering the growth and prosperity of a nation. The concept of empowerment is intrinsically linked to the notion of power. When used by women, it signifies the acknowledgment and facilitation of their ability to exercise authority, enabling their active involvement in decision-making. Promoting women's empowerment is contingent upon attaining education and active economic participation. The significance of women's education resides in its inherent status as a fundamental human right and its substantial impact on developing a wide range of competencies. The concept of women's empowerment often encompasses five key components: 1) The topic of inquiry pertains to the self-esteem levels among women. 2) The entitlement to exert autonomy over one's existence. 3) The individuals' entitlement to exercise authority over their residence. 4) Their entitlement to exercise authority outside the confines of the domestic sphere. As mentioned earlier, the peach component facilitates women's empowerment. Women can attain the five elements mentioned above through the pursuit of education.

Education has an important role to play in facilitating the progress of women's empowerment in all countries. Consequently, women's higher education attainment is crucial for the country's overall economic and social progress. Education is crucial to raising awareness among girls and women of their rights and dignity, equipping them with the knowledge and confidence necessary to claim and defend their rights. Additionally, women's empowerment through education has the potential to contribute to reducing infant mortality rates and reducing population growth. Gaining knowledge is an essential catalyst for women's emancipation, as it empowers them to exercise agency, challenge societal expectations, and live more expansive and empowered lives.

Promoting women's empowerment is pivotal for the socio-economic prosperity of society, and the government is actively striving to incorporate women into the core of national development. Women can exercise autonomy in decision-making due to their possession of information.

Education possesses the capacity to liberate women's intellectual concepts. The development of

women's libertarian thought can be facilitated through educational interventions. Consequently, women who have received a formal education will experience a state of emancipation. Education cuts through all hurdles (social, political, religious, linguistic, and geographical). Individuals possess the capacity to exercise agency in several aspects of their lives, owing to the influence of education. This includes but is not limited to lifestyle choices, occupational pursuits, selection of life partners, sexual orientation, dietary preferences, and other related domains.

As mentioned earlier, the discourse indicates that the significance of education in women's empowerment cannot be exaggerated. Education and the empowerment of women are intrinsically linked.

### **Necessity and significance of female's education**

Consensus among global researchers exists about the significance of an improved education system in promoting the advancement of women's rights. This viewpoint is reinforced by the International Encyclopedia of Women (1999), which emphasizes the pivotal importance of education, particularly within the Indian context. In order to effectively empower women, it is imperative for any project to prioritize the provision of women's education, given the crucial role that women's employment plays in enhancing their societal status. According to the study conducted by Dominic and Jothi in 2012, Investing in the education of a young Indian woman can provide significant and wide-ranging impacts on both the economy and society of the country. The potential contributions of educated Indian women could significantly positively impact the Indian economy and culture.

The Indian government has prioritized the goal of achieving universal education. However, it is essential to highlight that the country currently has the lowest female literacy rate in Asia. India is presently seeing a decelerated pace of advancement due to the inability to attain the aspired level of achievement.

The subsequent illustrations highlight the importance of education for women.

Education provision is widely recognized as an inherent human right, and this entitlement applies to both men and women. Every female individual, irrespective of their socio-economic or sociocultural background, marital or reproductive circumstances, or age, is entitled to an equitable chance to pursue their formal education. A high-quality education is a fundamental necessity rather than a mere entitlement.

There is a strong emphasis on the promotion of societal parity. Prejudice and inequality are often understood to stem from local or community-based sources when analyzing them as issues of significance. For example, a male child may develop a sense of superiority over females when he observes his sister remaining at home while he attends school. Nevertheless, this educational approach instructs individuals of all genders on how to promote the principles of democracy and equality.

Access to education is crucial as it facilitates the acquisition of essential skills for employment and self-sufficiency while fostering personal growth, empowerment, and increased self-assurance. Women who have attained educational qualifications and possess the means to support themselves financially are not dependent on their families or other individuals. This practice fosters independent thinking among children and facilitates their ability to acknowledge their intrinsic value and unique qualities.

### **Indian Women's Status Basis on The Literacy Rate and Employment Rate**

The interconnection between women's empowerment and education is undeniable. Furthermore, these two phenomena are intricately linked. In a society that upholds principles of non-discrimination, there must be no differentiation or bias based on gender. Both individuals can derive pleasure from wealth and benefit from their interactions within society. The issue of gender equality stands as a paramount concern in contemporary society. The attainment of gender equality in a nation is most effectively facilitated by providing education to women. The need for sufficient education is a significant barrier to women's economic, social, political, and cultural advancement within a given culture. Promoting women's empowerment is crucial for the future progression of education. The statement above highlights the need for a comprehensive education for women, as it can impart knowledge and skills to all those within her familial sphere. To foster a moral society, the task of instructing other family members must be entrusted to a woman with a sound education. The active participation of women in the building of society and the sustained development of education can be facilitated through the empowerment achieved by utilizing quality education. Educated women can confidently express their opinions and discern the societal implications of specific actions or ideas. Consequently, acquiring reading skills among women is crucial in fostering their empowerment within the nation.

According to the Indian constitution, it is mandated that all children below the age of 14 get an Education that is both free and obligatory. In contrast, the current literacy levels among women

are significantly lower than men's. Women's educational attainment has been increasing, yet a gender disparity in literacy rates persists, as evidenced by the data in the table. According to the Indian census data,

**Table 1: The Literacy Rate of male and female In India 1951-2011**

Census Year	Total (%)	Male (%)	Female (%)
1951	19.34	28.17	9.87
1961	28.31	41.41	16.39
1971	35.44	46.98	22.96
1981	44.52	57.39	29.78
1991	53.22	65.16	39.25
2001	65.83	76.27	54.69
2011	74.04	83.15	65.45

Source: Office of The Registrar General and Census Commissioner, Government of India, census table, 1951-2011

**Table 2: Female Employment Rate**

Name of state / all India	YEAR (%)		
	2012-13	2013-14	2015-16
WEST BENGAL	20.6	17.2	20.5
ALL INDIA	25.0	29.6	25.8

Source: The Press Information Bureau, Government of India, 2021-22

The primary cause of this period of unemployment can be attributed to the level of literacy and education, which enable individuals to be productive and valuable members of society. According to the Census data, female representation in the labor force in 2011 accounted for 25.51 percent, while male representation accounted for 53.26 percent. In contrast to the urban sector, which exhibits a male labor participation rate of 53.03%, the rural sector demonstrates a comparatively higher level of female workforce engagement, with a rate of 30.02%. Himachal Pradesh exhibits the most elevated proportion of female workforce engagement in rural regions, at 47.4 percent, whereas Tamil Nadu demonstrates the lowest rate at 21.8 percent. The level of male workforce engagement in both rural and urban locations exhibits a similar pattern. However, a notable disparity is observed in female employment involvement. According to the NSS 68th Round (2011-12), rural India has a higher proportion of employees, approximately 40%, engaged in

formal salaried and self-employment, in contrast to urban India, where self-employment constitutes over 50% of the workforce.

### **Female Literacy: Factors that Affect it**

The issue of women's education has been a topic of significant discussion and contemplation in international discourse for a prolonged duration. Education is often advocated as a crucial tool for governance and attainment. This specific item exhibits an intrinsic characteristic that makes it resistant to theft. To augment the education of the younger cohort, many educational institutions, encompassing institutes, universities, colleges, and schools, have been built. Nevertheless, it is essential to acknowledge that women comprise about two-thirds of the worldwide illiterate populace, totaling more than 796 million persons. The issue at hand is the priority of an individual's education about its effects on their family rather than its wider ramifications for the nation.

The decline in female literacy rates can be attributed to several causes acknowledged in scholarly discourse.

- Occupational discrimination
- Differences in gender
- A young girl's job as a child is to do household chores.
- Exploitation of money
- Other frequently claimed reasons for why girls drop out at such high rates in elementary and middle school include the following:
  - Excessively high
  - Less enthusiastic about academics
  - Young age at first marriage
  - There must be work on the family farm or company.
  - To perform domestic duties

### **The primary issues with their education are:**

- Moral decay
- Lack of appropriate curricula for females' education;
- Women's lack of social awareness;
- A lack of female teachers;
- A lack of suitable physical infrastructure;

- Female instructors' reluctance to work in rural locations;
- Financial challenges;
- A transport issue;
- Wastage and stagnation issue;
- Co-educational issue;
- The indifference and lack of enthusiasm of the responsible parties of instruction

Despite the prominent individual accomplishment among Indian women and a discernible improvement in their general circumstances over the previous century, it remains a verifiable fact that women in India continue to constitute a significant proportion of the underprivileged demographic. Women do not form a homogeneous caste or class entity. Nevertheless, they possess distinctive challenges that necessitate specific attention. In 1953, the Backward Classes Commission of the Government of India officially classified Indian women as a marginalized group requiring specific attention and support. (source: Ministry of Social Justice and Empowerment, Government of India, National Backward Classes Commission (NCBC),1993)

### **Steps to enhance women's education status**

The attainment of the objectives mentioned above necessitates the initial provision of women with equitable access to education of superior quality. Consequently, women will acquire the necessary knowledge, skills, attitudes, and other capacities for national development engagement. The stated aims for the improvement of women's education are as follows:

- The enhancement of women's productivity will contribute to an improvement in the living standards of their families. Women currently have the opportunity to utilize advanced technology and engage in collaborative management practices.
- The user's text does not contain any information to rewrite. Promote the elevation of women's status within society and culture.
- They are strengthening women's ability to carry out their duties effectively.
- Assist women in addressing their challenges and subjective feelings of insufficiency.
- The primary aim is to offer a holistic education to women, addressing multiple dimensions of their development, including cognitive, interpersonal, physical, emotional, spiritual, and financial components.

## **Programs for Women's Education and Welfare**

India has made significant strides in the provision of education to its populace. According to available data, the literacy rate among Americans is 73.2 percent, with a specific breakdown indicating that 59 percent of women possess literacy skills. The Indian government has implemented several initiatives to promote and facilitate women's education.

Several welfare programs encompass the following:

- **Beti Padhao and Beti Bachao:** These well-known social initiatives for women's empowerment were launched on January 22, 2015. The program aims to end female feticide and give girls and women equal educational opportunities.
- **Training and employment support programs** equip women with the necessary resources to establish firms or secure employment across many sectors. As mentioned earlier, the course is accessible to those who identify as female and are 16 years of age or older.
- **'The 'Mahila' initiative** was introduced by the Ministry of Women and Child Development in 2016. The formal designation of the program is 'MAHILA-E-HAT'. The platform allows female entrepreneurs and business proprietors to showcase and market their products.
- **2002, the Union Ministry for Women and Child Development** introduced the 'Swadhar Greh' program. The program assists women with difficulties accessing housing, sustenance, healthcare, and apparel. Consequently, women who have experienced familial abandonment or have endured the aftermath of a natural disaster are afforded the essential provisions for sustenance and well-being.
- **An In-depth and Holistic Approach the One-Stop Centre project** was initiated by the Ministry of Women and Child Development on April 1, 2015, utilizing funds from the "Nirbhaya" budget. Victims of violence have access to a range of essential resources, encompassing mental health services, legal aid, police support, housing, and sustenance, provided in both public and private domains.
- **'The Ministry of Women and Child Development'** initiated the 'Nari Shakti Prasar' initiative to acknowledge and empower women while honoring their exceptional contributions to society.

*(Sources of all programs: Ministry of Women and Child Development. 22 JUL 2022, Press Information Bureau (PIB))*

## **Conclusion**

In light of the prevailing circumstances, it is evident that women are deprived of opportunities in critical domains such as nutrition, education, and employment. This study provides evidence



suggesting that there exist disparities between genders in India, with women being perceived as inferior to men. The importance of women's education cannot be overstated concerning women's empowerment. Education has the potential to offer women equal rights, dignity, and opportunities. The relationship between education and female empowerment is inherently interconnected. An additional significant factor to be considered pertains to the formidable obstacles that the pursuit of women's empowerment encounters within these societies. These challenges arise due to entrenched detrimental norms and attitudes, including the prevalence of child labor, child marriage, limited access to education, familial biases, and female feticide. Consequently, the imperative of prioritizing women's empowerment becomes evident.

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## **A Study of Present Status of Foundational Learning of Students in Primary Schools of Aurangabad District**

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### ***Abstract***

*Considering the contemporary educational situation in Maharashtra, which has a background of educational and social transformation since the pre-independence period, even if it is satisfactory, it is necessary to increase the fundamental learning ability of primary-level students. Because earlier reports in Maharashtra regarding fundamental learning are negative. Many experimental schools and experimental teachers are working in Maharashtra today, so there is a need to universalize the different study teaching processes developed by the experimental schools and experimental teachers in Maharashtra to improve the fundamental learning ability of the students. Considering the primary goal of language and mathematical education, listening, reading, speaking, writing, number recognition, reading comprehension, addition, subtraction, multiplication, and division are the foundations of basic education. It is necessary to develop. To study the current status of foundational learning study considering the basic literacy of primary school students in Aurangabad district, students have been assessed through different means. Through that evaluation, as the picture in terms of basic literacy in Aurangabad district is hopeful, even though the current status of the primary schools in Aurangabad district and the quality of the students studying in them is positive, there is a need for many improvements.*

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**Keywords:** Foundational, Learning, Marathwada, Primary School.

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### **Introduction**

In March 2020, all schools, colleges, and universities were closed due to the nationwide lockdown. Therefore, the question of how to educate their children was facing the parents. Due to the closure of schools and colleges, the education of students suffered a lot during that time. As a solution, the government tried to provide online education to schools and students. That is why all schools and colleges in Maharashtra started teaching students through digital platforms. But students in villages far from cities face many hurdles in their education due to lack of internet connectivity or smartphones. Even though the task of removing all those obstacles is mainly done by the government, public representatives and teachers

After the coronavirus crisis in the country, considering the basic education of primary school students, in many surveys conducted by the education departments of many states of the country, as well as NGOs, many different conclusions have come out regarding the consideration of basic

education. Considering the primary objective of language and mathematical education, listening, reading, speaking, writing, recognition of numbers, reading comprehension, addition, subtraction, multiplication, and division are the foundations of basic education. Capacity development is essential. Keeping in mind that it is necessary to provide quality education while considering basic literacy, the Maharashtra government has decided to select 488 schools as ideal models in the state for increasing the quality of education in 2021. In that, 17 schools were selected in Aurangabad district. Under this Adarsh School initiative, quality buildings, well-arranged classrooms, sports materials, playgrounds, ICT labs, library science laboratories, libraries, supplementary reading books, and reference books will be provided for these schools. From that point of view, to study the current status of foundational learning study considering the basic literacy of primary school students in Aurangabad district, students have been assessed through different means. Through that assessment, as the picture in terms of basic literacy in Aurangabad district is promising, even though the current status of the primary schools in Aurangabad district and the quality of the students studying in them is positive, there is a need for many improvements.

#### **Aurangabad - At a glance:**

Aurangabad district is the most important district of the Marathwada region in the Maharashtra state. This district is situated at the center of the Maharashtra state and is known as the gateway of Marathwada. Aurangabad is the capital of Marathwada and is known as a major center of educational and revolutionary movements. Aurangabad District is located mainly in the Godavari Basin and it's some part towards North West of the Tapi River Basin. This District's general down level is towards the South and East and North West part comes in the Purna-Godavari River basin. The Aurangabad district's North Longitude (Degree) is 19 and 20 and East Longitude (Degree) is 74 to 76. The Aurangabad District's total area is 10,100 Square Kilo Meter out of which 141.1 Square Kilo Meter is an urban area and 9,958.9 Square Kilo Meter is Rural Area. In Aurangabad district, as per the Census 2011 total population is 3,701,282 and peoples mainly speaks Marathi, Hindi, English, and Urdu language.

- Total Geographical Area: 10,100 Km
- Total Population (According to Census 2011): 37,01,282
- Rural Population: 20,81,112
- Total No. of Talukas: 09

- Total No. of Villages: 1341
- Total No. of Gram Panchayats: 861
- Total Average Rainfall: 725.8 mm
- Aurangabad district is divided into Aurangabad, Khultabad, Soygaon, Sillod, Gangapur, Kannad, Phulambri, Vaijapur, Paithan 9 talukas. These 9 talukas consist of a total of 1344 villages.

### **Foundational Learning**

Education is seen as the foundation of national development. From that point of view, the government spends a lot on education. Today, when India is seen as the country of youngest in the world, providing quality education to those youth is the need of the hour and our country must provide them with good quality education opportunities because the future of the nation of tomorrow lies in the hands of the youth through education. The Education Strategy 2020 has started with the view that to achieve the goals of the Global Education and Development Action Program for Development, it is necessary to promote well-planned inclusive, and equal quality education for all. Because of the principles of this policy, it mainly emphasizes the following.

Recognizing, identifying, and fostering the unique capabilities of each student, by sensitizing teachers as well as parents to promote each student's holistic development in both academic and non-academic spheres & flexibility, so that learners can choose their learning trajectories and programmes and thereby choose their own paths in life according to their talents and interests.

Also, concerning school education, the following aims are mainly set in this educational policy. The overall aim of ECCE will be to attain optimal outcomes in the domains of physical and motor development, cognitive development, socio-emotional-ethical development, cultural/artistic development, and the development of communication and early language, literacy, and numeracy.

Overall, the National Education Policy 2020 has considered the principles and key objectives for the development of school-going students from the point of view of competence and basic education. Therefore, the development of basic literacy and numeracy skills among primary-level students has been given top priority. For that

Ministry of Education launched the National Initiative for Proficiency in Reading with Understanding and Numeracy (NIPUN) Bharat in July 2021. NIPUN was announced as a national mission to enable all children at the end of Grade 3 to attain foundational skills by the

year 2026-2027. As a crucial step towards strengthening efforts for Foundational Literacy and Numeracy (FLN), a large-scale Foundational Learning Study (FLS) was undertaken by the National Council of Educational Research and Training (NCERT) in March 2022.

### Objectives of the study

1. To study the present status of Foundational Learning of primary school students in Aurangabad district.

### Study of Methodology

This research focuses on foundational learning areas such as reading, listening, writing, communication, basic numeracy, number identification and comparison, number operations, multiplication, and division. The study employs survey, descriptive, and analytical methods.

For data collection, the researcher designed an evaluation questionnaire, ensuring its validity before use. An assessment test was conducted, and the students selected as the sample were evaluated based on their performance. The collected data were categorized into quantitative and qualitative forms, with the quantitative data being analyzed using percentage-based methods.

### Sample Selection Methodology

Aurangabad district has a total of 318fx1 schools of all management in 9 talukas as of 2021- 22. Its statistical information can be stated as follows.

Table 1

Statistical Information of Primary Schools in Aurangabad District 2021-22

S.no	Taluka	Total number of schools	Boyes	Girls
1	Heels	370	24097	21737
2	Soyegaon	112	6957	6381
3	Silload	399	24808	22689
4	phulambri	230	8916	8350
5	Aurangabad	906	109652	98890
6	Khultabad	132	7777	7011
7	Vaijapur	357	17601	16546
8	Gangapur	350	34131	29554
9	Paithan	325	22345	19667
	Total	3181	256284	230825

Source: District Social and Economic Review, 2021-22 Aurangabad.

The sample has been randomly selected from all management primary schools in Aurangabad district. There are a total of nine talukas in Aurangabad district out of which two talukas were randomly selected and two talukas namely Paithan and Gangapur were selected as samples.

There are a total of 675 schools in Paithan and Gangapur talukas out of which 34 schools have been selected through lottery. The school sample is five percent. A total of 1020 boys and girls were selected randomly out of 34 schools selected as a sample, 10 students each from classes three to five. The students selected as the sample were tested in reading, listening, speaking, writing, number recognition, addition, subtraction, multiplication, division, etc. They have been directly evaluated by giving an assessment test of 100 marks each to know the fundamental learning in the case.

### Analysis and Discussion of the Findings

Table 2

#### Percentage Analysis of Each component for students

S.No	Component	Less than 40 marks	41 to 50 Marks	51 to 60 Marks	61 to 70 Marks	71 to 80 Marks	Above to 81	Total Response
1	Textbook oral reading ability	102	80	280	530	21	7	1020
		10%	7.84%	27.45%	51.96%	2.05%	0.68%	100%
2	The ability to understand the meaning of language	120	90	355	399	47	6	1020
		11.76%	8.82%	34.80%	39.12%	4.60%	0.58%	100%
3	The ability to communicate	156	110	398	332	17	7	1020
		15.29%	10.78%	39.01%	32.54%	1.66%	0.68%	100%
4	ability to Writing	120	141	403	338	12	6	1020
		11.76%	13.82%	39.50%	33.17%	1.17%	0.58%	100%
5	Ability to recognize numbers	125	163	383	337	6	6	1020
		12.25%	15.98%	37.54%	33.03%	0.58%	0.58%	100%
6	Ability to add up	138	150	390	322	12	8	1020

		13.52%	14.70%	38.23%	31.56%	1.17%	0.78%	100%
7	Ability to subtract	145	114	399	330	20	12	1020
		14.21%	11.17%	39.12%	32.35%	1.96%	1.17%	100%
8	Ability to multiply	152	121	392	331	15	9	1020
		14.90%	11.86%	38.43%	32.45%	1.47%	0.88%	100%
9	Ability to divide	125	115	357	388	24	11	1020
		12.25%	11.27%	35.00%	38.03%	2.35%	1.07%	100%
	Overall total & Percentage	1063	1084	3357	3317	174	72	
		11.57%	11.80%	36.56%	36.13%	1.89%	0.78%	

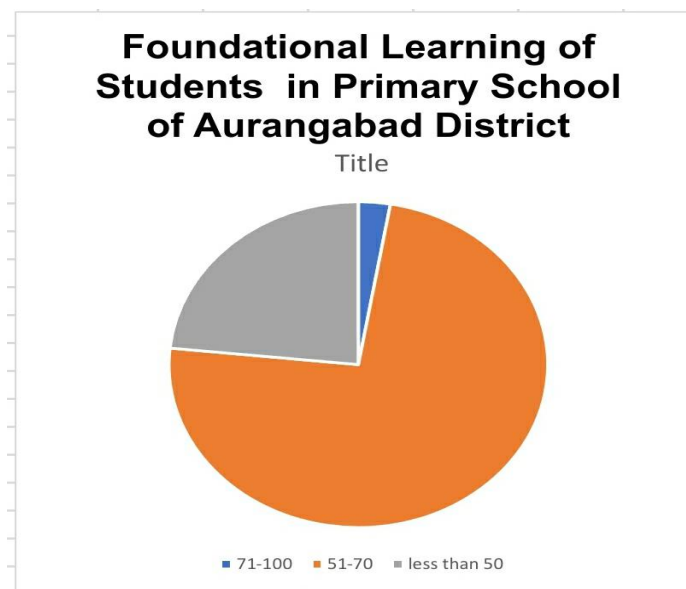


Fig.1

Below is a concise discussion of the percentage analysis for each component as revealed in Table-2

i. **Textbook Oral Reading Ability:**

- a. The majority (51.96%) score between 61 and 70 marks, suggesting a strong performance in this area.
- b. A small percentage (0.68%) score above 81 marks, indicating a high level of proficiency.

ii. **Understanding the Meaning of Language:**

- a. A significant portion (39.12%) score between 61 and 70 marks, showing a good grasp of language comprehension.
  - b. Only 0.58% score above 81 marks, which might suggest room for improvement in higher levels of understanding.
- iii. **Ability to Communicate:**
- a. Most respondents (39.01%) score between 51 and 60 marks, reflecting decent communication skills.
  - b. A very small percentage (0.68%) score above 81 marks, indicating few individuals reach the highest proficiency.
- iv. **Ability to Write:**
- a. 39.50% score between 51 and 60 marks, demonstrating solid writing abilities.
  - b. A negligible percentage (0.58%) score above 81 marks, showing that fewer excel in writing.
- v. **Ability to Recognize Numbers:**
- a. 37.54% score between 51 and 60 marks, showing general competence in number recognition.
  - b. Only 0.58% score above 81 marks, suggesting a need for more focus on higher proficiency.
- vi. **Ability to Add Up:**
- a. 38.23% score between 51 and 60 marks, indicating strong basic arithmetic skills.
  - b. A very small percentage (0.78%) score above 81 marks, highlighting limited advanced proficiency.
- vii. **Ability to Subtract:**
- a. 39.12% score between 51 and 60 marks, reflecting good subtraction skills.
  - b. Only 1.17% score above 81 marks, suggesting fewer achieve advanced subtraction skills.
- viii. **Ability to Multiply:**
- a. 38.43% score between 51 and 60 marks, showing solid multiplication skills.
  - b. Only 0.88% score above 81 marks, indicating limited high-level multiplication proficiency.



ix. **Ability to Divide:**

- a. 38.03% score between 61 and 70 marks, showing competence in division.
- b. A small percentage (1.07%) score above 81 marks, highlighting that advanced division skills are less common.

Thus, it can be concluded that the distribution across components shows most respondents score between 51 and 60 marks (36.56%) and 61 and 70 marks (36.13%), as illustrated in Fig. 1. Additionally, the percentage of individuals scoring above 81 marks is quite low (0.78%), indicating that achieving the highest level of proficiency is rare across all components.

**Conclusion and Future Directions**

Reading, listening, speaking, writing, number recognition, addition, subtraction, multiplication, division, etc. In terms of foundational learning, the number of students getting marks in 51-70 is the highest. Also, the number of students scoring less than 50 marks is around 23% so this number is significant. The number of students who get 71 to 100 marks is very low. Students scoring less than 50 marks should be brought in the range of 50 to 70 marks. Students who are in the range of 50 to 70 should be moved to the range of 71 to 100. For primary school students in Aurangabad district Foundational learning abilities are satisfactory.

Considering the contemporary educational situation in Maharashtra, which has a background of educational and social transformation since the pre-independence period, even if it is satisfactory, it is necessary to increase the fundamental learning ability of primary-level students. Because earlier reports in Maharashtra regarding fundamental learning are negative. Many experimental schools and experimental teachers are working in Maharashtra today, so there is a need to universalize the different study teaching processes developed by the experimental schools and experimental teachers in Maharashtra to improve the fundamental learning ability of the students. Teachers, who are the most important component of the educational process in Maharashtra, have to do a lot of extra-curricular activities, so they do not get enough time to teach. Therefore, it is necessary to reduce the large number of extracurricular activities of teachers. Even though the government is conducting a large number of different types of training for teachers today, the training given in that training and the impact of that training on those teachers is very low. Therefore, the responsibility of training should be given to experimental schools and experimental teachers. At the same time, it is necessary to motivate the teachers through experimental teachers. Since the fundamental learning ability is not fully developed in

the students, a lot of depression is created in the students, due to the lack of ability, the students do not feel interested in the education, which increases the dropout rate of the students in the school. Therefore, it is necessary to get the cooperation of students who have good fundamental learning ability to bring these students along with those students whose fundamental learning ability is good. Today we see many out-of-school children turning to criminal behavior due to a lack of development of fundamental learning abilities.

Overall, while paying attention to the basic education of the students, it is necessary to change the training given to the teachers to enable the students in the basic education and while making that change, the trend of mental development of the students should be taken into account. Also, keeping in mind the mental abilities of the students, there is a need to make major changes in the curriculum according to the local and regional areas. Also, considering the mental abilities of the students, it is necessary to teach them according to their preferences, only when the basic abilities of the students are enabled.

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## European Union and Far-Right Politics: A Case Study of Poland

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### **Abstract**

*The contemporary dominant political pattern in Europe reflects a struggle for power between anti-communists and post-communists in various Central and Eastern European democracies. The Republic of Poland too is experiencing such dominance of far-right politics since its inception in the European Union. The post-communist left parties left the wide gap that the far right has captured since 2005 by Poland's ruling Law and Justice Party (PiS). Moreover, there has been a populist rise of the right-wing parties that appeal to national feelings all over Europe. Due to this, there is an ongoing tussle between the former statist and conservative parties and, the liberal European Union shouting to promote democracy, freedom, cosmopolitanism, and multiculturalism in general.*

*Moreover, it is also presumed that the European Union is heading towards far-right politics, by undermining the latter principles. These are some of the prominent research questions for this paper, which are analysed through the content analysis methodology. This paper further seeks to understand and examine the rise of the far-right parties in Poland and the response of the European Union over the same in the contemporary political scenario.*

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**Keywords:** *Cosmopolitanism, Ethno-regionalism, European Union, Euro-whiteness, Far-Right, Poland.*

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### **Introduction**

European Politics is undergoing a paradigm shift with the rise of the far right in Europe. They are successful either in forming a government or by supporting the same from within Parliament. This can be seen in states like Poland, Italy, Sweden, and Finland (Marsili and Tassinari 2023). Moreover, states like Germany and Spain are also experiencing the surge of far-right parties with an expectation of becoming a kingmaker in the forthcoming elections (Vohra 2024).

European Union resembled European Unity, multiculturalism, and a greater cosmopolitanism, which is being threatened by the rise of the far right in Europe. There is a fear that such a surge of the far right may result in "ethnoregionalism" which is defined as the appeal to safeguard and defend the European Civilisation (Kundnani 2023). The EU stood for cosmopolitanism; the opposite of nationalism as projected by the far right.

The relationship between the far-right and the EU needs to be analyzed in contemporary politics. It has been examined whether the surge of far-right is transforming the EU. If yes, in what manner and on what terms? What kind of future EU is going to have? Such questions have been addressed by Hans Kundnani where he examines the notion of 'Eurowhiteness',

which is defined as reflecting the pro-European' tendency while thinking of the EU as an expression of cosmopolitanism which ultimately, has created a kind of blind spot around the possibility of what Kundnani calls 'ethnonationalism'. He defines it as an ethnic/cultural version of European identity analogous to ethnonationalism, a concept closely connected to the idea of whiteness. For him, a far-right EU is theoretically possible given such an understanding (Vohra 2024).

Initially, the far-right parties in European societies often opposed the idea of European integration promoted and practiced by the EU, seeking to disrupt the latter. However, the situation has changed a lot in the contemporary political scenario with the rise of radical right in many European member states. The far right in European societies positions itself as the champion of a strong European identity, one premised on the ethno-nationalist idea of a white, Christian, and Western Civilisation (Marsili and Tassinari 2023).

### **Literature Review**

**Graham Pollock (2001)** in his article "Civil Society Theory and Euro-Nationalism" has outlined a correlation between the two in a banal state nationalism, which is masked by the hypocritical anti-national rhetoric employed by the state mainly against minorities. Debates over civil society have been central within European politics and are used to legitimise political positions, projects, and practices both by the left and right-wing parties.

**Hans Kundnani (2023)** in the book "Euro-whiteness: Culture, Empire and Race in the European Project" argues that the European Union is an expression of regionalism and analogous to nationalism having a variety of kinds. EU is more of an expression of ethnic/cultural elements and is more complicated even after 1945. The formation of European identity was defined as against various non-European Others, and regionalism identifies the dangers of a pro-European appropriation of far-right tropes which Kundnani calls "Ethnoregionalism".

**Arun K. Pokhrel (2016)** in an article entitled "Eurocentrism" defines how the understanding of European superiority and dominance termed as "eurocentrism" views the history and culture of non-European societies from a Western perspective. It is considered anti-universalist by falsely presenting itself as a universalist phenomenon based on Western values like individuality, equality, free markets, democracy, etc.

**Helene Bienvenu (2023)** in an article "Nationalist, Libertarian far-right alliance takes root in Poland" analyses how the 2023 elections in Poland will be a tough one for the ruling ultra-

conservative Law and Justice Party (PiS) ruled the state for 8 long years. Moreover, various electoral predictions are also made based on the campaigning issues raised by various parties.

### **Content Analysis Methodology**

This study is primarily based on secondary sources, using the content analysis method to analyse qualitative and quantitative data. For this purpose, various articles from different websites, academic articles, electoral data, media reports and a few speeches particularly covering the topic were selected. Such contents were analysed through the Content Analysis method, which rests on the assumption that text and contents are a rich source of data having great potential to reveal valuable information about a particular event. Moreover, it facilitates the reduction of phenomena or events into defined categories for better analysis and interpretation (Harwood and Garry 2023).

### **Characteristics of Far-Right Politics in Europe**

Many Far-right parties and their leaders seem more interested in securing populist tendencies and issues instead of implementing public policies that deliver results. If they seek power, they are often assumed to enhance the divide of an already divided European continent in a very short period (Marsili and Tassinari 2023). However, tension within far-right thinking over the question of nationalism and civilisationism is also visible. According to Hans Kundnani, the far right in Europe not merely speaks on behalf of the nation against Europe, but it also does so on behalf of Europe, resembling a different kind of imagined community, located in a different cultural and political setup other than the nation (Kundnani, A far-right EU? 2023) (Pokhrel 2016) .

Furthermore, it was presumed that given their ideological interests, far-right parties in Europe would hardly cooperate across borders, and they would be more engaged in fighting with each other. However, by defying such understanding and by falsifying such claims, far-right parties stand up and cooperate, and many of them are also willing to accept further integration if their terms and conditions are being fulfilled or accepted.

Far Right in European politics is experiencing a surge due to multiple reasons, like-

1. A backlash against multiculturalism, ever-deepening cost of living crisis, “woke” cultural wars, etc. (Marsili & Tassinari, 2023).
2. Failure of European leaders in addressing the people’s consistent demand for security, control and protection.
3. Situations like global conflict and climate emergency.

4. Incapability and powerlessness of small European nation-states to ensure a sense of stability and security.
5. Reluctant attitude of European elites in taking necessary steps towards political union.
6. Lack of effective and humane migration management in Europe.
7. Lack of a single powerful actor that can address and steer such issues.
8. Overt, aggressive and ethnic nationalism offered by far-right politics.

### **Center Right's Shift towards the Far-Right: A Civilisational Turn?**

European Politics has two versions of Rightist parties- one, which believes in extreme Rightist (Far-Right) ideologies and seeks to completely oppose the European Union and its principles like Cosmopolitanism and multiculturalism; while the other which is mainly Centrist party with some rightist orientation having a pro-European approach. The so-called far right in European politics that is also called as 'Eurosceptic' far-right parties are being suspicious of encapsulating within themselves the 'pro-European' center-right parties (Marsili and Tassinari 2023) (Gera 2023). It has become a matter of analysis and observation whether the two are going to be unified followed by their policy-level dilutions or convergence.

Given the refugee crisis of 2015 and other identity-based issues, it has been observed that the center-right is gradually shifting towards the right. This shift is also based on issues like Islamism and immigration in European states. Nevertheless, interestingly, a chunk of the far right itself is busy moderating, or at least reframing its strategies of Euroscepticism (Kundnani, 2023). For example, many far-right parties are hardly voicing over leaving the EU, instead, they are working to transform and modify the latter. Like Meloni has a healthier and harmonious relationship with the EU than Viktor Orban.

Other than such identity-based issues, a shift of the center-right towards the right can also be seen in cultural issues. The former seems to draw various elements of its agenda from issues like Populism, voiced by the latter. A sense of compromise is reflected in such issues between the two parties. However, such compromises further reflect a unified agenda of safeguarding European civilisation (Pollock 2001).

European Union has a history of being ruled by a de facto coalition against the opposition of such Eurosceptic far right and far left, which now seems to be changing. Furthermore, such compromise also reflects a 'pro-European' version of far-right ideas, called as a 'civilisational turn' in the European project (Kundnani, 2023).

## **The Polish Case**

Poland, officially the Republic of Poland, is a parliamentary republic country located in Central Europe. It became a member of the EU in May 2004. Poland has a very interesting history of the rise of the right-wing parties. Its history is inextricably linked with the history of the struggle against the communist regime and the democratic transition (Tomaszewska 2010). Moreover, it is also being advantaged by the identity crisis faced by the left. Because of the failure of left to reinvent itself, the right seems to be dominating the politics of Poland. The history of the right and left Polish parties narrates a very interesting story. Since the early 1990s, the Polish right was extremely divided on multiple factors; whereas the post-communist left appeared united within one stable political entity. But later on, this scenario was changed and the right experienced two major currents.

Two major right-wing parties in Poland are PiS (Prawo i Sprawiedliwość-- Law and Justice) and PO (Platforma Obywatelska- Civic Platform). PiS is often described as “radical conservatives or Statists”, while PO is called “free market liberals” (Tomaszewska 2010). Since 2005, their opposition among themselves replaced the succession of the right-wing and left-wing governments, which traditionally characterised the first fifteen years of Poland’s young Democracy.

PiS was founded in 2001 by Lech and Jarosław Kaczyński and has ruled Poland since 2015. It favours a strong state with far-reaching prerogatives, often characterised by a powerful repressive security apparatus along with a highly developed welfare state. On domestic policies, the party seeks to involve the aspiration towards a certain moral order and state control of state industries’ (Fella 2024). It is socially conservative and shows a strong attachment to family, religion and patriotism. The party believes that a quasi-omnipotent state resembles the solutions to all the problems; therefore, it seeks to protect the interests of the nation-state (Ohanes 2024). In its approach, PiS is not so Eurosceptic.

PO, on the other hand, ruled the state in 2007 followed by its victory in the parliamentary elections. It believes in the free market’s capacity to guarantee prosperity for the Polish state. Therefore, it seeks to strongly support privatisation and foreign investment. It is also believed to be a pro-European party based on its aspiration of ensuring a quick membership of the eurozone for Poland (Tomaszewska 2010).

The Polish left represented by SLD (*Sojusz Lewicy Demokratycznej*- Alliance of the Democratic Left) after losing the parliamentary elections in 2005 is marginalised and is grappling with its issues.

### ***Solidarnosc*: A Melting Pot of the two Polish Right parties**

However, the divide between PiS and PO mimics a left-right divide, which is reflected in their approach and ideology in the way that the former seeks to enforce welfare-intensive policies, while the latter supports privatisation and small government (Tomaszewska 2010).

The rise of the Polish right parties can be traced back to the opposition movement around the 1980s against the communist regime. Their movement was consolidated around the workers' union *Solidarnosc*, which resembled a heterogenous movement where people from different horizons participated. *Solidarnosc* included groups, that were strongly nationalist and catholic and were staunchly anti-communist. However, this movement saw a break-up during the 1990s, mainly due to the political rift between Lech Walesa and Tadeusz Mazowiecki for the political leadership, after the formation of the first non-communist head of the government in September 1989.

As a Christian democrat, Mazowiecki was leading a government mainly composed of communists and free-market reformers. He is known to implement a series of reforms including the introduction of a market economy, which is popularly termed "shock therapy" (Tomaszewska 2010).

Later on, Mazowiecki and Walesa contested against each other in Poland's first presidential election in November 1990, in which the former suffered a considerable political drawback. Such events resulted in the creation of a new political party stemming from *Solidarnosc*- *Unia Demokratyczna* (Democratic Union), which in 1994 became *Unia Wolnosci* (Freedom Union-UW) under the prominent leadership of Tadeusz Mazowiecki, Leszek Balcerowicz and Bronislaw Geremek sought for free market economy and centrism (Tomaszewska 2010). However, its gradual decline throughout the 1990s encouraged some of its members to create a new free-market liberal party, PO in 2001.

On the other hand, a new party called *Porozumienie Centrum* was created by the Kaczynski brothers (Jaroslaw and Lech Kaczynski), two close aides of Lech Walesa within *Solidarnosc* in 1990, which strongly criticized Mazowiecki's free-market reforms and conciliatory attitudes towards communist representatives. However, this support turned into an open political battle between the Kaczynski brothers and Lech Walesa in 1992, and the former joined the ranks of the opposition against the latter. Following this setback, the twin brothers formed a new party PiS in the 2000s.



### **One Platform, Two Aspirations: Political Currents within the Right**

As far as Poland's transition to democracy is concerned, both PiS and PO have played very important roles, though have multiple differences in their attitudes and approaches mentioned below-

- a. PO represents the free-market liberals and considers Round Table negotiations and agreements as a founding gesture of Polish democracy. They support the market reforms of Leszek Balcerowicz and the Third Republic.
- b. PiS represented the conservatives who view Round Table as a betrayal and a sin of Polish democracy, which for them has skewed the formation of the young republic since its very beginning (Fella 2024). Against the invalidation of the Third Republic, they proposed to build the Fourth Republic, especially after coming to power (2005-2007).
- c. Both the parties, even after being the two major currents of the Polish right, lack a common vision of their origin, and towards *Solidarnosc*. For PiS, *Solidarnosc* was a movement designed to win back national sovereignty but was betrayed by some of its leaders. They have managed to enjoy its political support to date. While on the other hand, PO seems to lose its connection to the movement even after its leaders become active members of it. For PO, *Solidarnosc* is a liberation movement that is credited with introducing capitalism in Poland, especially by the Mazowiecki government.

### **Far Right Coalition in Contemporary Poland**

The Polish far-right coalition is known as the Confederation Liberty and Independence (Polish- *Konfederacja Wolność i Niepodległość*), frequently shortened to just Confederation (Polish- *Konfederacja*). Founded in 2018 as a political coalition for the 2019 European Parliament election in Poland, it was later transformed into a political party. It won 11 seats in the Sejm after the 2019 Polish parliamentary elections. It expresses right-wing populist rhetoric and skepticism towards the European Union and immigration (Walker 2023). It believes in economic liberalism and seeks to lower taxes. It is also known to express a conservative and Polish nationalist stance for Polish society.

The Hard-right Confederation party is quite popular among young Polish citizens who are fed up with the political parties that have dominated Poland for most of the post-Communist era.

### **The 2023 Parliamentary Elections in Poland**

2023 Parliamentary elections showed a battle between Jaroslaw Kaczynski's right-wing nationalist Law and Justice party, in government since 2015, and Civic Coalition, led by

former prime minister Donald Tusk, which is in alliance with other opposition parties: the progressive Left and the center-right Third Way (Kostrzewa 2023). Meanwhile, the rising far-right party Confederation is setting to swing the balance between right-wing incumbents Law and Justice, and the liberal opposition (Vohra 2024).

The Confederation party made their case for issues like lower taxes, less regulation an anti-European Union, and anti-Ukraine foreign policy. It further criticised governments' social spending and regulations, which for them increase double-digit inflation (Gera 2023). Despite its popularity, some prominent leaders are known for their critical standings. Leaders like Janusz Korwin-Mikke was suspended as a lawmaker in the European Parliament for making Nazi salutes during sessions. He believes that Poland should have cooperated with Adolf Hitler, and repeated a false claim that Hitler did not know about the Holocaust (Gera 2023).

He also questioned whether women should have the right to vote, claiming wrongly that they are "less intelligent." He further defended Russian President Vladimir Putin after the invasion of Ukraine. Another leader of Confederation, Grzegorz Braun, has falsely claimed that there is a plot to turn Poland into a "Jewish state" and has called for homosexuality to be criminalized (Gera 2023).

On the other hand, the Centrist Parties were contesting under the leadership of Donald Tusk who were in opposition in 2023. The Polish voters turned the entire proposition of rightist parties by offering a mandate to the Centrist parties, a historic mandate as centrist opposition parties managed to win after 8 years of nationalist rule in Poland. The result was a disappointment for the Law and Justice Party (PiS) and its leader Jarosław Kaczyński, who has governed Poland for eight years with a conservative, nationalist, and sometimes anti-EU agenda, however, it remains Poland's biggest party (Fella 2024).

The mandate further reflected those suggested voters had grown tired of the ruling party after eight years of divisive policies that led to frequent street protests, bitter divisions within families and billions in funding held up by the EU over rule of law violations. Donald Tusk declared the end of Law and Justice rule and beginning of a new era for Poland. However, Poles were possibly facing weeks of political uncertainty as Law and Justice said it would still try to build a new government led by Prime Minister Mateusz Morawiecki (Gera and Scilowska 2023).

Some of the prominent promises made by the opposition parties included-

- a. To reverse democratic backsliding and
- b. repairing the nation's relationship with allies including the European Union and Ukraine

Nevertheless, even if the opposition parties take power, they will face difficulties in putting forward their agenda. The president has veto power over laws, while the constitutional court, whose role is to ensure that legislation does not violate the basic law, is loyal to the current governing party. President Andrzej Duda, an ally of Law and Justice, must call the first session of the new parliament within 30 days of the election and designate a prime minister to try to build a government.

### **EU and Poland: What is Coming Next?**

European Union has often been sought by many for a complete structural transformation. However, many leaders have also tried to make Europe a united force capable of deciding its course of action. French President Emmanuel Macron has often mentioned building a “Europe that protects” with ideas like “sovereign, united and democratic practices”, which was disliked by few European leaders (Marsili and Tassinari 2023).

Even the European Commission tried to lay down and implement ambitious plans for joint climate financing, which was torpedoed by some member states. However, the future of far-right taking over of the EU depends totally on the will of the Europeans whether they want to oppose it or simply defend it on the ground of European unity.

The 2023 Parliamentary elections of Poland have profound effects not just for Poland, but for the European Union at large: It could usher in a pro-European government, revive fruitful cooperation between Warsaw and Brussels, bring back the rule of law, or it could entrench Poland’s populist semi-authoritarianism and bring about an even more confrontational approach towards the EU. However, it can be presumed that the Centrist opposition’s win has a responsibility towards safeguarding people’s democratic aspiration towards a cosmopolitan European Union. Rest is a matter of analysis as the government formation in Poland remains a task. It goes with the other EU member states with their electoral performances in the forthcoming elections. However, it is presumed that under the leadership of Donald Tusk, Poland can improvise its ties with the European Union. He sought that Poland win. back its freedom (Byrska 2024).

At present, the country represents 52 members in the European Parliament, which reflects its spectacular development with the EU. It ranks as the European Union’s sixth-largest economy, despite not being a part of the Eurozone which is called a “civilizational leap” (Iwaniuk 2024). Moreover, the European Commission also decided to close the Article 7 Procedure against Poland which was invoked in 2017 in response to the political takeover of the country’s justice system and its challenge to the primacy of EU over national law during

the then Law and Justice Party's (PiS) rule. Article 7 is the EU's primary treaty-based mechanism which seeks to hold accountable EU member states who undermine its values, including the violation of the rule of law (Kirova and Gall 2024). Such an initiative of the EU showed a restoration of not merely the rule of law in Poland but also reflects the friendly future that both are going to have.

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## **The Relationship Between Culturally Responsive Teaching Strategies and The Achievement Gap Within Inclusive Classrooms in India**

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### **Abstract**

*The present paper deals with the study of the effect of culturally responsive teaching strategies on the achievement gap in inclusive classrooms in India. In NEP2020, policymakers remarked that for enhancing the effectiveness of learning outcomes for all students of every student of school without any discrepancies and differences. “The Goal 4 (SDG 4) of the 2030 global Agenda for Sustainable Development, adopted by India in 2015 – seeks to ensure inclusive and equitable quality education and promote lifelong learning opportunities for all by 2030”. – NEP2020. The study also explores the impact of culturally responsive teaching on narrowing the achievement gap in inclusive classrooms in India. Culturally responsive teaching strategies focus on integrating student’s cultural backgrounds into the learning process. These strategies involve tailoring instruction to student’s cultural contexts, using inclusive materials, and creating an inclusive and respectful classroom environment. This approach enhances engagement, motivation and learning outcomes for all students, particularly those who might otherwise struggle due to cultural disconnects or biases. Inclusive classrooms in India should adopt culturally responsive teaching strategies as they enhance the learning outcomes of the students. Through a comprehensive literature review and empirical research, the paper investigates how culturally relevant instructional strategies and materials can enhance educational outcomes for students from diverse backgrounds. The findings highlight the potential of culturally responsive teaching to create a more inclusive and equitable learning environment, ultimately contributing to improved academic performance and reduced disparities among students.*

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**Keywords:** *Culturally Responsive Teaching, Achievement Gap, Inclusive Classroom, Equitable Learning Environment, Learning Outcomes, Sustainable Development Goals.*

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### **Introduction**

The culture of India has been shaped by its long history, unique geography, diverse demographics and the absorption of customs, traditions and ideas from some of its neighbours as well as by preserving its ancient heritages, which were formed during the Indus Valley Civilization and evolved further during the Vedic age, the south Indian Iron Age, rise and decline of Buddhism, Golden age, Muslim conquests and European colonization. India’s diversity is visible in its people, religions, climate, languages, and customs. And traditions that differ from place to place within the country, but possess a commonality. The culture of India is an amalgamation of diverse sub-cultures spread all over the country and traditions that are millennia-old. (Appadurai, A. 2004)

The social system in India is complex, due to the interface between caste and class. The caste system in India has had a long history and many different interpretations. It originated as a system for demarcating different occupations. Caste-based discrimination, although illegal, is not uncommon in modern India. There is also a strong realization of the suffering faced by many Indians simply because of their caste. India is a land of contrasts. Some of the richest people in the world live side by side with some of the poorest. Hence, inequality and inequity as a result of caste, class, poverty and discrimination on the grounds of religion, disability, gender and ethnicity are critical issues facing contemporary India.

### **Background and Context of the study**

The educational landscape in India is characterized by its rich diversity in terms of culture, language, and socioeconomic backgrounds. While the country's commitment to providing inclusive education has expanded in recent years, a significant challenge persists in the form of the achievement gap. This gap reflects disparities in academic performance between different student groups, often defined along the lines of socioeconomic status, linguistic diversity, and cultural background.

The culturally responsive teaching strategies recognize that students' cultural backgrounds influence their learning experiences and outcomes. Culturally responsive teaching involves adapting curriculum, teaching methods, and classroom interactions to acknowledge and incorporate students' cultural identities and experiences. By doing so, educators aim to engage students more effectively, enhance their sense of belonging, and ultimately address the achievement gap.

The Indian education system has seen increasing recognition of the need for culturally responsive teaching, particularly within the context of inclusive classrooms. This study seeks to fill that gap by investigating the impact of culturally responsive teaching on student outcomes within inclusive classrooms in India.

Understanding how culturally responsive teaching strategies can mitigate the achievement gap is essential for designing effective interventions and informing educational policies.

### **Meaning and concept of culturally responsive teaching strategies**

Culturally responsive teaching strategies are educational approaches that consider the diverse cultural backgrounds and experiences of students. These strategies aim to create an inclusive and equitable learning environment by integrating students' cultures and perspectives into the curriculum, teaching methods, and classroom interactions. This approach fosters deeper engagement, understanding, and respect among students while enhancing their academic

achievement. Some examples of culturally responsive teaching strategies include incorporating diverse texts, using cooperative learning structures, and promoting open discussions about cultural topics.

Inclusive education in India seeks to ensure that every student, regardless of their differences, receives quality education in the same classroom setting (Kumar, S.,2014). However, the achievement gap remains a formidable obstacle to achieving this goal. Students from marginalized and culturally diverse backgrounds often face barriers that hinder their access to quality education and hinder their academic success.

The achievement gap has been a matter of concern for policymakers, educators, and researchers alike. This gap not only hampers individual students' potential but also has broader societal implications, perpetuating inequalities and hindering the nation's progress toward a more equitable future.

### **Inclusive Education in India**

Inclusive education in India aims to provide equal educational opportunities for all children, regardless of their abilities or disabilities. The government has taken steps to promote inclusivity, such as the Right to Education Act, which mandates free and compulsory education for all children aged 6-14. Additionally, programs like the Sarva Shiksha Abhiyan work towards improving access to quality education, especially for marginalized communities.

However, there are still challenges. Many schools lack the necessary infrastructure and trained teachers to support diverse learning needs. Stigma and discrimination against children with disabilities persist, hindering their participation in mainstream education. Efforts are being made to address these issues, but there is still progress to be made in achieving truly inclusive education across the country. (Kumar, S.,2014).

### **Achievement Gap in Indian Education**

The achievement gap in Indian education refers to the disparities in academic performance and educational outcomes between different groups of students. These gaps can be observed along various dimensions:

1. **Socioeconomic Disparities:** Children from economically disadvantaged backgrounds often face challenges in accessing quality education. Limited resources, lack of adequate infrastructure, and insufficient teaching staff in government schools contribute to this gap.
2. **Rural-Urban Divide:** Rural areas, especially in remote regions, tend to have fewer educational resources compared to urban areas. This can lead to discrepancies in the quality of education and opportunities available to students.



3. **Gender Disparities:** Despite progress, gender disparities persist in certain parts of India. Girls, especially in rural areas, may face barriers to education, including cultural norms, safety concerns, and limited access to facilities.
4. **Regional Disparities:** There are significant differences in educational outcomes between states and regions. Some states have made substantial progress in improving access to quality education, while others lag.
5. **Linguistic and Cultural Diversity:** India is a linguistically and culturally diverse country. Students whose first language is not the medium of instruction may face challenges in understanding and engaging with the curriculum.
6. **Access to Special Education:** Children with disabilities often face difficulties in accessing appropriate educational resources and support. While efforts have been made to promote inclusive education, there is still work to be done to ensure that all students, regardless of ability, receive a quality education.
7. **Inadequate Teacher Training:** Some schools, particularly in rural areas, may lack well-trained teachers. This can have a detrimental effect on the quality of education provided.
8. Efforts have been made by the government and various NGOs to address these disparities. Initiatives like the Sarva Shiksha Abhiyan (SSA) and the Right to Education Act (RTE) have played a significant role in improving access to education. However, challenges persist, and more targeted interventions are needed to bridge the achievement gap and ensure equitable educational opportunities for all children in India.
9. **Culturally Responsive Teaching Strategies in Inclusive Classrooms-** Culturally Responsive Teaching Strategies include all aspects of education. For implementing Culturally Responsive Teaching Strategies, one can apply the incorporation of a culturally relevant curriculum, Fostering Cultural Awareness and Sensitivity, collaborative and inclusive classroom practices and differentiated instruction to Address Diverse Learning Styles.

### **Incorporating Culturally Relevant Curriculum**

Incorporating a culturally relevant curriculum involves integrating diverse perspectives, experiences, and knowledge into educational materials and practices. This helps students connect their learning to their backgrounds and fosters inclusivity. It's essential for promoting a more equitable and enriching educational experience. This can be achieved through various methods, such as:

1. **Diverse Content Selection:** Include literature, history, art, and other materials from various perspectives.

2. **Inclusive Language and Imagery:** Ensure that textbooks, presentations, and visuals reflect a diverse range of cultures and identities.
3. **Community Engagement:** Involve local communities and experts to share their knowledge and experiences with students.
4. **Culturally Responsive Teaching Strategies:** Use teaching methods that acknowledge and respect different learning styles and cultural backgrounds.
5. **Critical Thinking and Multicultural Analysis:** Encourage students to critically analyze and discuss cultural differences and their impact on society.
6. **Reflection and Discussion:** Create spaces for open and respectful discussions about cultural diversity and its relevance.
7. **Professional Development for Educators:** Provide training and resources for teachers to effectively implement culturally relevant curriculum.
8. **Ongoing Evaluation and Adaptation:** Regularly review and update the curriculum to ensure it remains inclusive and reflective of evolving cultural perspectives.
9. Remember, a culturally relevant curriculum is not just about checking boxes, but about creating a more inclusive and enriching educational experience for all students.

### **Fostering Cultural Awareness and Sensitivity**

Fostering cultural awareness and sensitivity is crucial for creating a more inclusive and understanding society. Here are some strategies to achieve this:

1. **Education and Training:** Provide workshops and training sessions for students, educators, and staff to learn about different cultures, traditions, and perspectives.
2. **Exposure to Diversity:** Organize events, activities, and field trips that expose individuals to various cultural experiences and communities.
3. **Open Dialogue:** Encourage open and respectful conversations about cultural differences and similarities, creating a safe space for questions and discussions.
4. **Cultural Celebrations:** Celebrate and acknowledge cultural holidays and festivals to promote understanding and appreciation.
5. **Inclusive Language and Practices:** Promote the use of inclusive language and practices that respect and acknowledge diverse identities and backgrounds.
6. **Cultural Competence in Curriculum:** Ensure that educational materials and curriculum reflect a wide range of cultural perspectives and contributions.
7. **Role Models and Representation:** Highlight and celebrate individuals from diverse backgrounds who have made significant contributions to society.

8. **Active Listening and Empathy:** Encourage active listening and the development of empathy to better understand and connect with people from different cultures.
9. **Addressing Stereotypes and Biases:** Provide resources and tools to recognize and challenge stereotypes and biases, fostering a more inclusive environment.
10. **Community Engagement:** Collaborate with local communities and organizations to promote cultural awareness and sensitivity.
11. Remember, fostering cultural awareness and sensitivity is an ongoing process that requires continuous learning and active engagement. It's a crucial step towards building a more inclusive and harmonious society.

### **Collaborative and Inclusive Classroom Practices**

Collaborative and inclusive classroom practices are essential for creating a supportive learning environment where all students can thrive. Here are some strategies to implement:

1. **Diverse Grouping:** Mix students of different backgrounds, abilities, and learning styles in collaborative activities to promote teamwork and mutual understanding.
2. **Clear Expectations:** Set clear guidelines for group work and ensure that all students understand their roles and responsibilities.
3. **Varied Assessment Methods:** Use a variety of assessment methods (e.g., projects, presentations, discussions) to accommodate different learning styles and abilities.
4. **Flexibility in Assignments:** Allow students to demonstrate their understanding in different ways, considering their strengths and preferences.
5. **Universal Design for Learning (UDL):** Design lessons and materials that are accessible to all students, taking into account different learning needs.
6. **Culturally Relevant Materials:** Include diverse perspectives and materials from various cultures to make all students feel valued and represented.
7. **Scaffolded Learning:** Provide support and guidance as students work on collaborative projects, gradually allowing them to take more ownership of their learning.
8. **Encourage Active Listening:** Teach and model active listening skills to ensure that all voices are heard and respected in group discussions.
9. **Reflective Practices:** Encourage students to reflect on their learning experiences, including their contributions to group work, to foster self-awareness and growth.
10. **Conflict Resolution Skills:** Provide tools and strategies for resolving conflicts that may arise in group work, emphasizing respectful communication and problem-solving.

11. **Feedback and Assessment for Growth:** Offer constructive feedback that helps students improve and grow, focusing on their progress rather than just outcomes.
12. **Create a Safe Space:** Foster an environment where students feel comfortable expressing themselves and sharing their perspectives without fear of judgment or discrimination.

Remember, inclusive classroom practices not only benefit students academically but also promote a more accepting and empathetic community within the classroom. It's important to continually assess and adapt these practices to meet the evolving needs of your students.

### **Differentiated Instruction to Address Diverse Learning Styles**

Differentiated instruction is a teaching approach that recognizes and accommodates the diverse learning needs, preferences, and abilities of students. Here are some strategies to implement it effectively:

1. **Pre-Assessment:** Use diagnostic assessments to understand students' prior knowledge and skills, allowing you to tailor instruction to their specific needs.
2. **Flexible Grouping:** Group students based on their readiness, interests, and learning profiles. This allows for targeted instruction and support.
3. **Varied Learning Materials:** Provide a range of materials, including texts, videos, hands-on activities, and digital resources, to cater to different learning styles.
4. **Tiered Assignments:** Offer tasks at varying levels of complexity to challenge advanced learners while providing support for those who need it.
5. **Adjusting Pace and Timing:** Allow students to progress through content at their own pace, providing extensions for those who grasp concepts quickly and additional support for those who require more time.
6. **Choice and Voice:** Offer students choices in assignments and projects to allow them to pursue topics of interest and demonstrate their learning in ways that resonate with them.
7. **Flexible Assessment Methods:** Use a variety of assessment tools and formats to gauge student understanding, such as quizzes, projects, presentations, and discussions.
8. **Scaffolding:** Provide additional support, prompts, or guidance to help students access and master challenging content or skills.
9. **Frequent Check-Ins:** Regularly monitor student progress and provide timely feedback to address any misconceptions or areas of difficulty.
10. **Collaborative Learning Opportunities:** Encourage peer learning and collaboration, allowing students to benefit from each other's strengths and perspectives.

11. **Individualized Learning Plans (ILPs):** Create customized plans for students with specific learning needs, outlining tailored goals and strategies.
12. **Professional Development for Teachers:** Offer training and resources to help educators develop the skills needed to implement differentiated instruction effectively.

Remember, the goal of differentiated instruction is to meet students where they are and help them progress. It requires ongoing assessment, flexibility, and a commitment to providing the necessary support and challenges for each student's growth.

### **Implementation of culturally responsive teaching strategies in the curriculum**

For Implementation of the culturally responsive teaching strategies in the classroom, we educators and teachers need to develop the expression and imagination in inclusive classrooms in the context of culturally sensitive teaching. In India, culture is deeply rooted in the world of students. Deeply ingrained cultural socialization becomes problematic in education when the schooling process operates on one cultural model to the exclusion of all others, or when culturally different children are expected to set aside all their cultural habits as a condition for succeeding in school. Such a demand is not only unreasonable but is impossible to achieve. Attempts to comply with it may lead to cultural adaptation, marginality, alienation, and isolation. Except for adaptation, none of these responses is conducive to maximizing the human well-being and academic success of students. The incompatibilities or discontinuities between the culture of the school and those of different ethnic groups need to be major issues of analysis in making decisions about educational programs and practices that reflect and promote cultural diversity. These incompatibilities or discontinuities are especially important to any understanding of the aspects of human behaviour that most directly affect teaching and learning, such as values orientation, interpersonal relations, communication styles, time usage, performance styles, procedural rules, and systems of problem-solving and cognitive processing.

### **Effect of culturally responsive teaching strategies on the achievement gap in inclusive classrooms in India**

Culture shapes human behaviour, attitudes, and values. Human behaviour results from a process of socialization, and socialization always takes place within the context of specific cultural and ethnic environments. The basic caretaking practices of human survival are essentially the same for everyone, but their pattern, organization, and learning are specific. Hence, humans are social beings who carry within them their individual biological and psychological traits as well as the legacies of their ethnic group's historical background,

collective heritage, and cultural experiences. When educators claim that their top priority is to treat all children like human beings, regardless of ethnic identity. Cultural background, or economic status, creates a paradox. A person's humanity cannot be isolated or divorced from his or her culture or ethnicity. One cannot be human without culture and ethnicity, and one cannot have culture and ethnicity without being human. Therefore, to acknowledge and respect one another, and to be fully human, requires mutual understanding and appreciation based on cultural understanding. So, there are questions arise about how a student can be comfortable and successful in the world and his or her life. For that purpose, culturally responsive teaching strategies are the most appropriate strategy of teaching for the teaching-learning process. These strategies involve tailoring instruction to student's cultural contexts, using inclusive materials, and creating an inclusive and respectful classroom environment. This approach enhances engagement, motivation and learning outcomes for all students, particularly those who might otherwise struggle due to cultural disconnects or biases. Inclusive classrooms in India should adopt culturally responsive teaching strategies as they enhance the learning outcomes of the students. Through a comprehensive literature review and empirical research, so many studies investigate how culturally relevant instructional strategies and materials can enhance educational outcomes for students from diverse backgrounds. The findings highlight the potential of culturally responsive teaching to create a more inclusive and equitable learning environment, ultimately contributing to improved academic performance and reduced disparities among students. Two case studies show that after using culturally responsive teaching strategies, students show a noticeable improvement in their academic engagement and achievement across all student groups. In the first case of "Harmony Heights School", students are from various linguistic, religious, and socioeconomic backgrounds in the urban area of Mumbai. The school administration recognized the need to address the achievement gap that was prominent among these diverse groups. The gap in test scores between different cultural groups narrowed significantly, indicating that culturally responsive teaching strategies were making a positive impact. The school initiated a professional development program for teachers focused on culturally responsive teaching strategies. Teachers were trained to integrate culturally relevant content into the curriculum and to create a more inclusive classroom environment. Teachers began incorporating diverse texts, including literature and history, that reflected the various cultures represented in the student body. They also encouraged students to share their cultural experiences through projects and presentations. Furthermore, teachers promoted cooperative learning structures, encouraging students to work together on assignments, which facilitated cross-cultural understanding and collaboration. Over a year,

Harmony Heights saw a noticeable improvement in academic engagement and achievement across all student groups.

There is another case study of Unity Public School, in which the Achievement Gap in a Secondary School Setting was considered for study. Unity Public School is a government-funded primary school located in a rural region of Karnataka, India. The student population is predominantly from the local Kannada-speaking community, with a few students from marginalized tribal communities. For the Implementation of Culturally Responsive Teaching, the school observed the importance of traditional stories, songs and art forms, which are related to the outcomes of the students' study. Recognizing the need to bridge the gap in educational outcomes, Unity Public School introduced a curriculum that integrated the cultural heritage of the tribal students. This involved incorporating traditional stories, songs, and art forms into the lessons. The school also organized cultural exchange programs, where students from the local community and tribal backgrounds had opportunities to learn from one another. Teachers received training on how to create a culturally sensitive and inclusive classroom environment. After the implementation of the strategy, they found improvement in self-confidence and educational outcomes. As a result of these initiatives, the school observed a significant increase in attendance and participation among the tribal students. Academic performance among this group also improved, and there was a noticeable increase in self-confidence and pride in their cultural identity. This case study exemplifies how culturally responsive teaching strategies can empower marginalized communities and promote a more inclusive learning environment (Upmanyu, M.C. 2016).

These case studies illustrate the positive impact of culturally responsive teaching strategies in diverse Indian educational settings. They demonstrate how incorporating students' cultural backgrounds into the curriculum and classroom interactions can lead to improved engagement, understanding, and academic outcomes.

## **Conclusion**

The present study concluded that the cultural experiences and diversities found in the classrooms of our schools should be adopted by culturally responsive teaching strategies. These strategies positively influence our educational experience and curriculum. The previous research suggested changes in the implementation of curriculum and instruction in schools by the teachers and administrators. As teachers recognize the cultural disconnect between what is taught in schools (curriculum), how it is taught (instruction), and the student's home environment, they can make a real difference in the educational achievement of all students.

Changes can happen when teachers choose a culturally responsive teaching pedagogy by demonstrating that they value the cultural differences of their students. It also suggested that students' relationships with their teachers are an important aspect of the children's education. Teachers' interactions with students are critical for the students' success in the classroom. The teachers reflect their cultural perspectives and beliefs in their relationships with their students. They tell their students what they believe about the different cultures by the way they teach, their attitudes, and their assumptions about learning. Teachers tend to implement their own cultural beliefs into the curriculum, and they ignore the cultural differences of their students. According to Banks (1988) teachers who developed cross-cultural competency improved their teaching abilities, attitudes, and understandings in diverse cultural settings. He stated that the "Global Competency" that individuals develop enables them to act within the global society. They internalize the values and principles of humankind, and they know how to act on those values. It was suggested that the relationship that the teacher develops with their students is the most important aspect of teaching. When the teachers develop their relationships with their students, the teachers become more focused on the teaching process. The important role of a teacher is to develop a responsive, respectful, and effective teacher. Teachers who teach in culturally diverse settings find themselves as "creators of curricula" because they are continually developing curricula and instruction that meet the strengths, needs, and values of a particular group of students. The role of the teacher becomes an essential element of teaching. By analysing culturally responsive teaching strategies one can mitigate the achievement gap is for designing effective interventions and informing educational policies.

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## Beyond the Status Quo: Reframing Accountability in Higher Education

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### **Abstract**

*The unrelenting emphasis on accountability in higher education casts a spotlight on teachers, who are now expected to demonstrate the effectiveness of their instruction. This research delves into the multifaceted nature of teacher accountability, exploring the challenges, responsibilities, and factors that influence it. The study utilizes qualitative and quantitative surveys. Surveys allow for broader data collection on a larger scale, revealing trends and patterns in how teachers perceive accountability measures. Through this comprehensive approach, the research aims to illuminate the complex interplay between teachers' responsibilities, the challenges they face in navigating accountability systems, and the various factors that influence this dynamic. These factors might include institutional policies, student demographics, and technological advancements. By shedding light on these intricate dynamics, the study aims to contribute to a deeper understanding of teacher accountability. The anticipated findings hold immense significance. Understanding the challenges teachers encounter due to accountability measures can pave the way for the development of more supportive systems. This could involve broadening the scope of accountability beyond standardized tests to encompass a wider range of learning outcomes. Additionally, the research reveals the need for increased resources and support for teachers, enabling them to adapt their teaching styles to cater to diverse student needs in today's classrooms. Ultimately, the insights gained from this research can be used to inform strategies that enhance teaching practices, empower teachers, and ultimately lead to improved student outcomes in higher education.*

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**Keywords:** *Accountability, Higher Education Teachers, Understanding of Teacher Accountability, Challenges of Higher Teachers.*

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### **Introduction**

The landscape of higher education is undergoing a significant transformation, characterized by a growing emphasis on accountability (McIntyre et al., 2017). Higher education teachers are increasingly called upon to demonstrate the effectiveness of their instruction and its impact on student learning outcomes (Garcia & Martinez, 2024). This pressure stems from a confluence of factors, including concerns about rising tuition costs (Jaschik, 2019) and the need to prepare graduates for a rapidly evolving job market (World Economic Forum, 2020). However, this focus on accountability should not overshadow the core responsibilities of higher education teachers. These educators are not only responsible for delivering instruction, but also for fostering critical thinking, creativity, and well-rounded student development (Bain, 2004). Striking a balance between these competing demands – accountability pressures

and core responsibilities – presents a significant challenge for teachers in today's higher education environment (Smith & Jones, 2023).

This paper delves into this complex issue by examining the current state of accountability in higher education through the lens of the experiences of higher education teachers. We will explore the challenges they face in navigating accountability measures, and the perceived consequences of these measures, and consider alternative approaches that can promote effective teaching and student success while ensuring faculty autonomy and professional development.

### **Background and Context**

Accountability in higher education extends beyond the classroom, encompassing a multifaceted web of responsibilities. Teachers are not only expected to deliver effective instruction but also contribute to scholarly research, participate in departmental service activities, and engage with the broader community (McMillan, 2018). However, the evolving landscape of higher education, characterized by factors like increased student diversity, technological advancements, and budgetary constraints, presents unique challenges for teachers in fulfilling these diverse accountability demands (Kezar, 2003).

Understanding these challenges necessitates a deeper examination of the factors influencing teacher accountability. Institutional policies play a significant role, with metrics like student evaluations, graduation rates, and research productivity often used to gauge teacher effectiveness (Gronlund, 2014). However, these metrics can be limited in scope, failing to capture the full spectrum of learning outcomes or the complexities of teaching diverse student populations (Hativa, 2008). Furthermore, societal expectations for higher education are constantly evolving, placing pressure on institutions and teachers to adapt their curricula and teaching methods to prepare graduates for a rapidly changing world (Marginson, 2016).

The interplay between these factors significantly impacts the way teachers approach their roles and responsibilities. For example, emphasizing research productivity may lead some teachers to prioritize research over classroom instruction, potentially neglecting student needs (McMillan, 2018). Similarly, while providing valuable feedback, standardized student evaluations may not adequately capture the nuanced nature of effective teaching or the challenges faced by teachers working with diverse student populations (Bainbridge, 2007).

A nuanced examination of teacher accountability is crucial for navigating these challenges. Finding a balance between the various accountability demands, while fostering a culture of innovation and continuous improvement in teaching practices, is essential. This requires

collaboration between faculty, administrators, and policymakers to develop more holistic and supportive accountability systems that empower teachers and prioritize student learning (Gronlund, 2014).

### **Research Questions**

1. How do higher education teachers navigate the competing demands of accountability (e.g., student outcomes, research productivity) and their core responsibilities (e.g., effective teaching, student mentorship)
2. What are the perceived consequences of current accountability measures on the teaching practices and well-being of higher education teachers?
3. What are the positive and negative effects that higher education teachers perceive from current accountability measures on their teaching and overall well-being?

### **Objectives**

1. To Identify the Key Responsibilities of Higher Education Teachers
2. To Explore the Challenges Encountered by Higher Education Teachers in Meeting Accountability Standards
3. To Examine the Factors Influencing Teacher Accountability in Higher Education

### **Review of Related Literature**

The higher education landscape is constantly evolving, with a growing emphasis on accountability for student success. This review examines recent research exploring the challenges and realities faced by higher education teachers navigating this complex environment. The conversation around teacher accountability in higher education is complex and multifaceted. While studies like Garcia and Martinez (2024) acknowledge the influence of accountability measures on teaching practices, concerns arise about potential downsides. One such concern is the narrowing of the curriculum. Research by Chen et al. (2021) and C. Johnson & D. Miller (2022) suggests that high-stakes testing and standardized evaluations can lead professors to prioritize content aligned with these metrics, potentially sacrificing broader learning objectives and critical thinking skills development. This aligns with the argument presented by E. Garcia & F. Hernandez (2021) regarding the tension between teacher autonomy and accountability. Overly rigid accountability structures can stifle innovation and limit the freedom to design effective courses that cater to diverse student needs. However, dismissing accountability altogether neglects its potential benefits. Smith & B. Jones (2023) highlights the multifaceted nature of teacher responsibility, encompassing teaching, research, and service. Lee (2024) offers a practical resource for educators to utilize



student feedback, a valuable source of information for improving teaching practices. Finding the right balance seems to be key. G. Lee & H. Park (2020) emphasizes the role of institutional policies in shaping how teachers are held accountable. Perhaps the answer lies in fostering a system that supports and empowers teachers through workload management, clear promotion criteria, and resource allocation, while still ensuring effectiveness through robust and multifaceted assessment practices. This would allow professors the space for innovation outlined by E. Garcia & F. Hernandez (2021) while still demonstrating accountability as highlighted by Smith & B. Jones (2023).

## Findings

### Responsibilities of Higher Education Teachers:

Qualitative analysis reveals that higher education teachers juggle multiple responsibilities, including teaching, research, advising, and institutional service. These responsibilities extend beyond the classroom, encompassing scholarly activities and administrative duties.

### Challenges Faced by Higher Education Teachers:

Survey results highlight several challenges encountered by higher education teachers in meeting accountability standards. These challenges include workload pressures, limited resources, institutional bureaucracy, and the lack of support for professional development.

### Factors Influencing Teacher Accountability:

Both qualitative and quantitative data underscore the influence of institutional policies, pedagogical approaches, and societal expectations on teacher accountability. Institutional cultures, tenure and promotion criteria, assessment practices, and changing educational paradigms shape the accountability landscape for teachers.

S. No.	Areas	Details	Sources
1.	Responsibilities of Higher Education Teachers	Teaching (various methods) Research & Scholarship Student Advising Institutional service	Qualitative analysis
2.	Challenges Faced by Higher Education Teachers	Workload pressures Limited resources Institutional bureaucracy Lack of professional development support	Survey results
3.	Factors Influencing Teacher Accountability	Institutional policies (standards, support) Pedagogical approaches (teaching methods) Societal expectations	Qualitative & Quantitative data

## Discussion

This research sheds light on the intricate aspects of teacher accountability in higher education. The findings highlight the crucial role of institutional support. Universities can empower teachers by providing resources, reducing workload burdens, and offering professional development opportunities tailored to navigating accountability demands.



Furthermore, a reevaluation of accountability frameworks is necessary. Moving beyond narrow metrics, these frameworks should encompass a broader range of learning outcomes and recognize the diverse realities of teaching in today's higher education landscape. By acknowledging the challenges faced by teachers and fostering a supportive environment, institutions can cultivate a culture that prioritizes effective teaching practices, innovation, and ultimately, student success.

### **Conclusion**

By shedding light on the intricate web of challenges, responsibilities, and influences surrounding teacher accountability, this research offers a critical lens for understanding its complexities. These insights empower policymakers, administrators, and educators to work collaboratively. They can develop supportive systems that address workload pressures, prioritize diverse student needs, and foster innovative teaching practices. Moving forward, exploring alternative accountability models and fostering a culture of continuous improvement is crucial. This collaborative approach can ensure teachers are empowered to deliver exceptional instruction and ultimately elevate student learning outcomes in higher education.

### **Further Research Considerations**

- How do different disciplines approach teacher responsibilities and accountability?
- What innovative practices can address challenges faced by higher education teachers?
- How can stakeholders collaborate to create a more effective teacher accountability system?

By exploring these questions, the researcher can contribute valuable insights to improve teaching and learning in higher education.

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# Measures of Good Corporate Governance in Insurance Sector in India by IRDAI

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## **Abstract**

*Corporate governance is often looked upon as a means to measure how well the companies are run. Investors use corporate governance as an indicator to judge the quality of a company's management and the effectiveness of its boards. Corporate governance relates to moral principles, values, and practices that facilitate the balance between economic and social goals. It aims to coordinate the interests of individuals, businesses, and society as a governance structure emphasizing the common interest as much as possible. The present paper describes the efforts taken and guidelines issued by IRDAI for a much efficient performance of the sector in India and will be based on ethical principles.*

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**Keywords:** Good Governance, Governance, Good Corporate, Governance, IRDAI, Insurance  
**JEL Code:** G0, G2, G3

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## **1. Introduction**

The terms 'governance' and 'good governance' are being increasingly used in development literature in present times all over the world. Governance is a concept of recent exposure to designate the efficiency, quality, and good guidance of the intervention of the state while good governance is the process of measuring how public institutions conduct public affairs manage public resources, and guarantee the realization of human rights in a manner essentially free of abuse and corruption and with due regard for the rule of law. Governance can be used in several contexts such as international governance, national governance, local governance, and corporate governance.

Corporate governance relates to moral principles, values, and practices that facilitate the balance between economic and social goals. It aims to coordinate the interests of individuals, businesses, and society as a governance structure emphasizing the common interest as much as possible.

There is no unique structure of 'corporate governance' in the developed world. Thus no one can design a code of corporate governance for Indian companies by mechanically importing one form or another. Indian companies, banks, and financial institutions can no longer afford to ignore better corporate practices. As India is continuously entering into globalization, Indian as well as international investors will demand greater disclosure, more transparent

explanations for major decisions, and better shareholder value. There are many aims and objectives of corporate governance. For example,

- To provide a regulatory framework and an environment conducive to effective economic activities,
- To ensure that businesses are in citizen's human rights, social responsibility, and environmental protection,
- Promote the adoption of codes of ethics in business to achieve the objectives of enterprises,
- Ensure that corporations treat all their stakeholders that is shareholders, employees, suppliers, and customers fairly and transparently, and
- To provide for the responsibility of management and directors

## **2. Objective of the Paper**

The objective of the study is to bring forth the effort of IRDAI in the quest of bringing good corporate governance in the insurance sector in India and establishing a more secure environment for customers.

## **3. Corporate Governance by IRDAI**

The Insurance Regulatory and Development Authority of India (IRDAI) has established a comprehensive corporate governance framework to safeguard the long-term interests of policyholders within the Indian insurance sector (Insurance Regulatory and Development Authority [IRDAI], 2016). This framework emphasizes key practices that promote:

- **Financial Stability:** Ensuring solvency through sound risk management and investment policies (IRDAI, 2016).
- **Effective Oversight:** Establishing clear roles and responsibilities for the Board of Directors, CEO, and key management personnel (IRDAI, 2016, Section 1.1).
- **Transparency and Accountability:** Encouraging robust disclosures, fostering positive stakeholder relationships, and maintaining open communication with IRDAI (IRDAI, 2016, Section 1.1).
- **Core Elements of the IRDAI Framework (IRDAI, 2016, Section 1.1):**
- **Governance Structure:** Defines a well-defined organizational structure with clear delegation of authority and accountability.
- **Board Composition and Responsibilities:** Establishes a competent Board of Directors responsible for strategic direction, risk oversight, and ensuring adherence to applicable regulations.

- **CEO and Key Management Functions:** Identifies critical management roles and outlines their responsibilities for effective day-to-day operations.
- **Appointed Actuaries:** Mandates the appointment of qualified actuaries to ensure sound financial and risk management practices.
- **External Audit:** Requires independent audits of financial statements for enhanced transparency and accountability.
- **Disclosure Requirements:** Promotes openness by mandating the disclosure of relevant financial and operational information to stakeholders.
- **Significant Owners and Controlling Shareholders**
- **Promoter Lock-in:** IRDAI mandates a minimum 5-year lock-in period for promoters' shares to ensure long-term commitment (Insurance Regulatory and Development Authority [IRDAI], 2016).
- **Foreign Investment Cap:** Foreign investment in Indian insurance companies is limited to 49%, and the company must remain Indian-owned and controlled (Insurance Act, 1938, Section 2(7A)).
- **Control Definition:** Control is defined as the right to appoint a majority of directors (Insurance Act, 1938, Section 2(7A)).
- **Governance Structure**
- **Board Composition:** While most insurers are yet to go public, their Boards are typically composed of a mix of executive and non-executive directors, with the role of the Chairman varying.
- **Group and Conglomerate Influence:** Insurers within financial groups or conglomerates may be subject to additional governance requirements and practices established at the group level.
- **Stakeholder Management:** Emphasizes the importance of building and maintaining positive relationships with policyholders, investors, and other stakeholders.
- **Interaction with IRDAI:** Ensures compliance with IRDAI regulations and facilitates constructive dialogue with the regulatory body.
- **Whistleblower Policy:** Provides a mechanism for reporting unethical practices within the organization.

#### **4. Board of Directors**

##### **4.1 Composition**

The Insurance Act stipulates that the insurance companies in India would be public companies and hence, would require a properly constituted Board.

- Insurance companies should ensure that the Board comprises competent and qualified Directors to drive the strategies in a manner that would sustain growth and protect the interests of the stakeholders in general and policyholders in particular.

As required under Section 149 of the Companies Act, 2013, there shall be at least one-Woman Director on the Board of every insurance company.

#### **4.2 The Role and Responsibility of the Board**

The specific areas of responsibilities of the Board of Insurers are detailed in Annexure 1. The Board would primarily concentrate on the direction, control, and governance of the insurer and in particular should articulate and commit to a corporate philosophy and governance that will shape the level of risk adoption, standards of business conduct, and ethical behaviour of the company at the macro level. The Board should also set a clear and transparent policy framework for the translation of the corporate objectives.

#### **4.3 Fit and Proper Criteria**

In line with the international and domestic norms, the Directors of insurers have to meet the “fit and proper” criteria. The criteria to be satisfied, at a minimum, would relate to integrity demonstrated in personal behaviour and business conduct, soundness of judgment, and financial soundness. The Insurance Act prohibits (i) an insurance intermediary/ agent to be the Director of an insurance company (except with prior approval of the Authority); and (ii) the common directorship among life insurance companies.

#### **4.4 Disclosures about Meetings of the Board and its Committees**

Insurers shall ensure compliance with the provisions of the Companies Act, 2013, and the Secretarial Standards issued by the ICSI from time to time as regards the conduct of the meetings of the Board of Directors and their committees.

### **5. Control Functions**

Given the risks that an insurer takes in carrying out its operations and the potential impact it has on its business, the board must lay down the policy framework to put in place. For example,

- robust and efficient mechanisms for the identification, assessment, quantification, control, mitigation and monitoring of the risks;
- appropriate processes for ensuring compliance with the Board approved policy, and applicable laws and regulations.

## **6. Delegation of Functions- Committees of the Board**

To provide adequate Board time for discharge of the significant corporate responsibilities, the Board can consider setting up of various Committees of Directors by delegating the overall monitoring responsibilities after laying down the roles and responsibilities of these Committees to the Board.

The roles and responsibilities of the Committees would generally be as detailed below:-

### **6.1 Audit Committee (mandatory)**

- Every Insurer shall constitute an Audit Committee as per Section 177 of the Companies Act, 2013.
- The Audit Committee shall oversee the financial statements, financial reporting, statement of cash flow, and disclosure processes both on an annual and quarterly basis. It shall set up procedures and processes to address all concerns relating to the adequacy of checks and control mechanisms.

### **6.2 Investment Committee (mandatory)**

The Board of every Insurer shall set up an Investment Committee comprising of at least two Non-Executive Directors, the Chief Executive Officer, the Chief of Finance, the Chief of Investment, the Chief Risk Officer, and, the Appointed Actuary.

### **6.3 Risk Management Committee (mandatory)**

It is now well recognized that the sound management of an insurance company, as in the case of other financial sector entities, is dependent on how well the various risks are managed across the organization. In pursuit of the development of a strong risk management system and mitigation strategies, insurers shall set up a separate Risk Management Committee to implement the company's Risk Management Strategy. The risk management function should be under the overall guidance and supervision of the Chief Risk Officer (CRO) with a clearly defined role.

### **6.4 Policyholder Protection Committee (mandatory)**

The Authority is mandated by statute to protect policyholders' interests and therefore adoption of sound and healthy market practices in terms of sales, marketing, advertisements, promotion, publicity, redressal of customer grievances, consumer awareness, and education is essential. Some of the important Regulations/Guidelines/Circulars are as follows:

- Protection of Policyholders' Interests Regulations, 2002;

- Insurance Advertisements and Disclosure Regulations, 2002;
- Master Circular on Insurance Advertisements in August 2015
- Guidelines on Public Disclosure for insurance companies
- Guidelines on Advertisements, Promotion & Publicity of Insurance Companies and Insurance Intermediaries in May 2007.

#### **6.5 Nomination and Remuneration Committee (mandatory)**

The Nomination and Remuneration Committee shall be constituted in line with the provisions of Section 178 of the Companies Act, 2013. Indian Insurance Companies which have constituted two independent committees for Nomination and Remuneration separately may merge these two Committees after seeking the Board approval, under intimation to the Authority, within 180 days from the date of issue of these guidelines.

#### **6.6 Corporate Social Responsibility Committee ('CSR Committee') (mandatory)**

Section 135 of the Companies Act, 2013 requires the constitution of a CSR Committee if certain conditions as mentioned in the said Section are fulfilled. For Indian Insurance Companies, a CSR Committee is required to be set up if the insurance company earns a Net Profit of Rs. 5 Crores or more during the preceding financial year. Further, the 'Net Profit' for this purpose shall be as under: -

“Net profit” means the “profit/(loss) before tax” as per its financial statements prepared following the applicable provisions of the Insurance Act, 1938 and the Regulations framed thereunder, but shall not include the following, namely

- i. Any profit arising from any overseas branch or branches of the company, whether operated as a separate company or otherwise; and
- ii. any dividend received from other companies in India, which are covered under and complying with the provisions of section 135 of the Companies Act.

#### **6.7 With Profits Committee**

The Authority has issued IRDA (Non-Linked Insurance Products) Regulations 2013, which lay down the framework for Profit Fund Management and Asset sharing, among other things. In terms of these Regulations, every Insurer transacting life insurance business shall constitute a With Profits Committee comprising of an Independent Director, the CEO, The Appointed Actuary, and an independent Actuary.

#### **6.8 Other Committees**

The other Committees which can be set up by the Board, include the Ethics Committee and ALM Committee (other than life insurers). In cases where the Board decides not to constitute



such Committees, their functions and responsibilities can be addressed in such manner as the Board may deem fit. However, once these Optional Committees are in place, the insurer is required to comply with the requirements on the “Role and Responsibilities” of such Committees as laid down under these Guidelines.

#### **6.8.1 Ethics Committee (not mandatory)**

Functions and Responsibilities of the Ethics Committee include monitoring the compliance function and the insurance company’s risk profile for compliance with external laws and regulations and internal policies, including its code of ethics or conduct, receiving reports on the above and on proactive compliance activities aimed at increasing the insurance company’s ability to meet its legal and ethical obligations, on identified weaknesses, lapses, breaches or violations and the controls and other measures in place to help detect and address the same, supervising and monitoring matters reported using the insurer’s whistleblowing or other confidential mechanisms for employees and others to report ethical and compliance concerns or potential breaches or violations.

#### **6.8.2 Asset Liability Management (ALM) Committee**

ALM is an ongoing process of formulating, implementing, monitoring, and revising strategies related to assets and liabilities to achieve an organization’s financial objectives, given the organization’s risk appetite, risk tolerances, and business profile. The need for ALM cannot be over-emphasized as it lays down the framework to ensure that the insurer invests in a manner that would enable it to meet its cash flow needs and capital requirements at a future date to mitigate liquidity risk and solvency stipulations.

**6.9** The mandatory committees, except the Nomination and Remuneration Committee, the Corporate Social Responsibility Committee, and the With Profits Committee shall meet at least four times in a year and not more than four months shall elapse between two successive meetings of such Committees. The quorum shall be two members or one-third of the members of the Committee, whichever is greater, however in case-independent director(s) is/are mandated to be in any of the Committees, at least one such independent director or his alternate director, should necessarily be present to form the quorum.

### **7. Key Management Persons**

#### **7.1 CEO/ Managing Director/ Whole-Time Director**

IRDAI requires prior approval for the appointment, re-appointment, or termination of the CEO and WTD. The CEO is responsible for ensuring the company's operations align with the Board's policies and are not detrimental to policyholders' interests.

## **7.2 Role of Appointed Actuaries**

IRDAI mandates prior approval for the appointment of an Appointed Actuary, who must meet rigorous qualifications and eligibility criteria outlined in the IRDA (Appointed Actuary) Regulations, 2000. These regulations detail the procedure for appointment, powers, duties, and obligations of Appointed Actuaries.

## **7A. External Audit - Appointment of Statutory Auditors**

The IRDAI (Preparation of Financial Statements and Auditors' Report of Insurance Companies) Regulations, 2002 empower the authority to issue directions/guidelines on the appointment, continuance, or removal of auditors of an insurer. These guidelines/directions may include prescriptions on the qualifications and experience of auditors, their rotation, period of appointment, etc. as may be deemed necessary by the Authority.

### **7A.1 Access to Board and Audit Committee**

The Audit Committee should have discussions with the statutory auditors periodically about internal control systems, the scope of the audit including the observations of the auditors (where applicable), and review the quarterly/half-yearly and annual financial statements as the case may be before submitting to the Board of Directors and also ensure compliance with the internal control systems. The statutory auditors should also have access to the Board of Directors through the Audit Committee.

## **8. Disclosure Requirements**

The IRDAI (Preparation of Financial Statements and Auditors' Report of Insurance Companies) Regulations, 2002, have prescribed certain disclosures in the financial statements and the Authority is in the process of finalizing additional disclosures to be made by insurers at periodical intervals.

## **9. Outsourcing Arrangements**

All outsourcing arrangements of an Insurer shall have the approval of a Committee of Key Management Persons and should meet the terms of the board-approved outsourcing policy. The Board or the Risk Management Committee should be periodically apprised about the outsourcing arrangements entered into by the insurer and also confirm to the effect that they comply with the stipulations of the Authority as well as the internal policy placed before them. An insurer shall not outsource any of the company's core functions other than those that have been specifically permitted by the Authority.

## **10. Interaction with the Regulator**

IRDAI conducts regular oversight to ensure insurance companies adhere to sound corporate governance practices. This includes assessing board members' qualifications, evaluating internal functions, and analysing the impact of group structures on governance. IRDAI will also communicate any concerns identified through supervisory activities to the Board and senior management.

### **10.1 Reporting to IRDAI**

The annual Report of insurers shall have a separate certification from the Compliance Officer in the format attached to Annexure 8. All insurers are required to file a report on the status of compliance with the Corporate Governance guidelines on an annual basis. This report shall be filed within 3 months from the end of the financial year, i.e., before 30 June. The report shall be filed as per the format in Annexure 9.

## **11. Whistle Blower Policy**

**11.1** Insurers are well advised to put in place a “whistle-blower” policy, where mechanisms exist for employees to raise concerns internally about possible irregularities, governance weaknesses, financial reporting issues, or other such matters. These could include employee reporting in confidence directly to the Chairman of the Board or of a Committee of the Board or to the Statutory Auditor.

## **12. Independent Directors**

As required under Schedule IV of the Companies Act, 2013, the independent directors shall meet at least once a year to evaluate the performance of other than independent Directors. Similarly, there shall be an evaluation of the Independent Directors by the other members of the Board of Directors as required in the Schedule.

## **13. Applicability**

These guidelines shall apply to all insurers granted registration by the Authority except that:

- i. Reinsurance companies may not be required to have the Policyholders' Protection Committee; and
- ii. Branches of foreign reinsurers in India may not be required to constitute the Board and its mandatory committees as indicated herein.

There are many more guidelines issued by IRDAI for good corporate governance in the insurance sector in India.

## Corporate governance structure of LIC

Life Insurance Corporation has been a dominant player in the life insurance sector. So, here is an example of the corporate governance structure of the LIC of India:

- Board Composition-
- Key Managerial Persons
- Board Committees
- Secretarial Compliance report
- Grievance Redressal Summary
- Share capital Reconciliation Audit Report
- Independent Directors:
  1. Terms and conditions of appointment of Independent Directors
  2. Familiarisation Programme of Independent Directors
- Training for Directors
- Meetings
- Board
- Shareholders
- Compliance Report on Corporate Governance
- Compliance
- RPT Disclosures
- Details of agreements entered into with the media companies and/or their associates

## **Conclusion**

The IRDAI, Companies Act, 2013, and the respected governing bodies of different insurance players have played immense roles in improving the service and establishing ethics and lawful attainment of the business of the insurance sector. Their efforts have ensured the consumer's welfare and the long-term growth of the sector. With these guidelines, the number of frauds and inefficient practices of the insurance players has decreased considerably. Consumers can have greater faith in the companies and can have trust in the different products and corporate agents. This environment is good for the twin growth of policyholders and the long-term development prospects of the insurers, policyholders, and ultimately the country.

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## आंचलिकता का दर्पण है 'मैला आंचल'

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### शोध सार

'मैला आंचल' को हिंदी का प्रथम आंचलिक उपन्यास माना जाता है। इसमें ग्रामीण जीवन का यथार्थ अंकन हुआ है। कथा में पूर्णिया जिले के मेरीगंज और उसके आस पास के क्षेत्र को केंद्र में रखकर रेणु जी ने भारतीय ग्राम्य जीवन का यथार्थरूप प्रस्तुत किया है। मेरीगंज की आर्थिक, सांस्कृतिक, भौगोलिक एवम राजनैतिक परिस्थितियों को रेणु जी ने यहाँ प्रस्तुत किया है। कथानक का आधार मिथिलांचल का गाँव मेरीगंज है, जहाँ के वातावरण में अशिक्षा, अंधविश्वास, आडंबर, जातिवाद, जमींदारी, शोषण, लिंग भेद सभी कुछ व्याप्त है। लेकिन इस कीचड़ में भी कमल खिलने की आशा रेणु जी नहीं छोड़ते हैं। मेरीगंज में विभिन्न जातियों के लोग रहते हैं। ब्राह्मण, यादव, ठाकुर, चमार आदि। यहाँ मजदूर भी हैं जमींदार भी, चोर भी हैं साहूकार भी, प्रेमी भी हैं और प्रेम के नाम पर शोषण करने वाले भी, भविष्यवाणी करने वाले ज्योतिषी भी हैं और गांधीवाद का झंडा फहराने वाले भी, खाऊ तहसीलदार भी हैं और निष्काम सेवा करने वाले डॉक्टर प्रशांत जैसे लोग भी, धर्म के नाम पर लोगों की आँख में धूल झोंकने वाले मठाधीश भी हैं और अंधभक्त भी। कथानक पूरी तरह आंचलिकता के कवर में लिपटा है। चाहे वह भाषा हो अथवा वातावरण, संवाद हों अथवा पात्र सभी आंचलिकता में डूबे हुए हैं। निश्चित रूप से यह हिंदी का पहला मौलिक उपन्यास है।

**बीज शब्द:** आंचलिकता, अशिक्षा, जातिवाद, लिंग भेद, राजनैतिक, सांस्कृतिक, बिंबात्मक, घूसखोरी, शोषण, शोषित, आदर्श

### प्रस्तावना

'मैला आंचल' हिंदी का प्रथम एवम श्रेष्ठ आंचलिक उपन्यास है जिसका प्रथम प्रकाशन 1954 में हुआ। इसमें आजादी से पूर्व से आजादी के बाद तक के समय का अंकन हुआ है। इसमें रेणु जी ने मिथिलांचल को केंद्र में रख कर भारतीय ग्राम्य जीवन का बड़ा ही सरल अंकन किया। टूटी हुई आस्थाएँ, बिखरता हुआ देश, कुत्सित राजनीति, भ्रष्ट धार्मिकता और अशिक्षा को रेणु जी ने यहाँ उजागर किया है। मेरीगंज में डॉ० प्रशांत एक नव आशा के

प्रतीक के रूप में नजर आता है। वह समाज में एक नवीन परिवर्तन लाने का प्रयास करता है। वहीं ममता आदर्श प्रेमिका और समाज सेविका के रूप में प्रस्तुत होती है।

**उद्देश्य** - प्रस्तुत शोध कार्य का उद्देश्य 'मैला आँचल' में उपस्थित आंचलिकता को उजागर करना है।

**अनुसंधान विधि** - प्रस्तुत शोध में विवेचनात्मक एवम विश्लेषणात्मक विधि का प्रयोग किया है।

## विषय विवेचना एवं साहित्यिक विमर्श

### आंचलिकता के सांदर्भिक अर्थ

जब कोई नया प्रयोग होता है तो उसमें कठिनाइयाँ भी आती हैं और उसकी आलोचना भी होती है। 'मैला आँचल' भी एक ऐसा ही प्रयोग था। 'रेणु' जी बिहार के गाँव से एक महानगर तक पहुँचते हैं और बीच के सफर में जो उन्होंने देखा उसे अपने उपन्यासों में उतार दिया। जीवन की गहरी समझ रखने वाले 'रेणु' जी ने आंचलिकता को सजीव करते हुए एक ऐसा रूप दिया जिस पर भावी आंचलिक कथाकारों ने अपने भवनों का निर्माण किया है। इससे पहले कि हम 'मैला आँचल' के विश्लेषण की ओर बढ़ें, हमें आंचलिकता के अर्थ को थोड़ा स्पष्ट कर लेना चाहिए। यँ तो आंचलिकता का अर्थ किसी क्षेत्र विशेष में पायी जाने वाली भौगोलिक, आर्थिक, राजनीतिक, सांस्कृतिक परिस्थितियों से लगाया जाता है। आंचलिकता के संबंध में अपने मत विद्वान अपने-अपने ढंग से प्रस्तुत करते हैं।

'आंचलिकता' शब्द का निर्माण अंचल शब्द से हुआ है। अंचल का सामान्य अर्थ किसी क्षेत्र विशेष से लगाया जाता है। वह अंचल विशेष जो अपनी अलग कुछ निश्चित विशेषताएं रखता है। एक निश्चित भौगोलिक सीमा में पाई जाने वाली सामाजिक, सांस्कृतिक, आर्थिक, भौगोलिक, राजनैतिक स्थितियों को उस क्षेत्र विशेष की आंचलिकता कहा जाता है।

शंभू सिंह अंचल के अर्थ को स्पष्ट करते हुए लिखते हैं- "अंचल शब्द मूलतः संस्कृत शब्द अचंचल है। जिसकी व्युत्पत्ति 'अंच' धातु में 'अलच्' प्रत्यय के योग से हुई है।"

वहीं देवेंद्र ठाकुर के अनुसार अंचल "सीमा या समीपवर्ती भाग" है।<sup>2</sup>

डॉ० राजकुमारी सिंह जी लिखती हैं -

"अंचल का अभिधामूलक अर्थ वस्त्र, प्रांत, भाग या पल्ला है, साहित्य में इसे देश के अर्थ में प्रयुक्त करते हैं। इस दृष्टि में कोई भी विशेष भाग या क्षेत्र जिसकी अपनी संस्कृति, रीति-रिवाज, सुख-दुख, जीवन प्रणाली, आचार-विचार व अपनी समस्याएँ एवं मान्यताएँ होती हैं, अंचल कहा जा सकता है।"<sup>3</sup>

इसका विभिन्न विद्वानों के मतों का अवलोकन करने पर यह स्पष्ट होता है कि अंचल शब्द का तात्पर्य किसी क्षेत्र विशेष से ही लगाया जाता है।

इसी प्रकार उपरोक्त परिभाषाओं एवं आलोचकों के मतानुसार आंचलिकता का तात्पर्य किसी क्षेत्र विशेष में पाई जाने वाली भौगोलिक, सांस्कृतिक, आर्थिक, राजनीतिक एवं सामाजिक मान्यताओं से है जहाँ निवास करने वाले लोगों की अपनी बोल-भाषा, खान-पान, रीति-रिवाज, तीज-त्यौहार, पूजा, मनोरंजन एवं अपना अलग पहनावा-ओढ़ावा होता है। अतः इस प्रकार हम देखें तो वे उपन्यास जिनमें किसी निश्चित भूभाग पर निवास करने वाले जन समूह की लोक-रीतियों, समस्याओं, मान्यताओं का अंकन किया जाता है, आंचलिक उपन्यास कहलाते हैं। इस प्रकार के उपन्यासों में संपूर्ण वातावरण ही नायकत्व की भूमिका में रहता है। उपन्यासकार उस अंचल विशेष के वातावरण को मूर्त कर देता है। दबा-कुचला, असहाय और कमजोर वर्ग अपनी पीड़ाओं के साथ उपस्थित होता है।

### **आंचलिकता की परिभाषा**

इस आंचलिकता को आधार बनाकर लिखे गए उपन्यास आंचलिक उपन्यास कहलाए। आंचलिक उपन्यास को परिभाषित करते हुए ब्रजविलास जी लिखते हैं "परिचित अंचल विशेष को कथा का आधार बनाकर लिखा गया उपन्यास आंचलिक कहा जाएगा। मेरे ख्याल से वही आंचलिक उपन्यास अधिक सफल सिद्ध हो सकता है जिसमें कथा बुनने के लिए किसी ऐसे अंचल को चुना गया हो जिसकी विशेषताओं से लोग कम परिचित हों।"<sup>4</sup>



इसी संबंध में मृत्युंजय उपाध्याय जी का कथन भी दृष्टव्य है “आंचलिक उपन्यासों में निश्चय ही किसी एक अपरिचित एवं उपेक्षित ग्राम या भूखंड की आशा-आकांक्षाएं, विशेषताएं-दुर्बलताएं बड़ी ईमानदारी से चित्रित होती हैं। उस अंचल विशेष के प्रति आत्मीयता आंचलिक उपन्यासकार के लिए पहली और आखिरी शर्त है।”<sup>5</sup>

हिंदी रिव्यू मैगजीन में आंचलिक उपन्यास को इस प्रकार परिभाषित किया गया है “आंचलिक उपन्यास में लेखक देश के किसी विशेष भूभाग पर ध्यान केंद्रित करके उसके जीवन को इस प्रकार प्रस्तुत करता है कि पाठक उसकी अन्य विशेषताओं, विशिष्ट व्यक्तित्व, रीति परंपराओं तथा जीवन विद्या के प्रति सचेष्ट व आकृष्ट हो जाता है।”<sup>6</sup>

हिंदी साहित्य कोश में आंचलिक उपन्यास को इस प्रकार परिभाषित किया गया है “कुछ उपन्यासों में किसी प्रदेश विशेष का यथा तथ्य और बिंबात्मक चित्रण प्रधानता प्राप्त कर लेता है तो उन्हें प्रादेशिक या आंचलिक उपन्यास कहा जाता है।”<sup>7</sup>

### **मैला आँचल एवं आंचलिकता के सामाजिक सरोकार**

समाज में होने वाली गतिविधियों का प्रभाव साहित्य पर सदैव परिरक्षित होता रहा है। साहित्य इतिहास के रूप में भी देखा जा सकता है। समाज के रूप को साहित्य सदैव ग्रहण करता रहा है और उसे पाठकों के सामने रोचक ढंग से प्रस्तुत करता रहा है। चाहे वह आदिकाल के युद्ध की विभीषिका हो या भक्तिकाल की टूटी आस्थाओं की पीड़ा, चाहे वह रीतिकाल की विलासिता हो अथवा आधुनिक काल की परतंत्रता की दुख भरी गाथा या स्वतंत्रता के लिए झटपटाती भारतीय आत्मा का दुख; भारतीय साहित्य समय-समय पर अपनी अलग-अलग विधाओं से समाज को मूर्त करता रहा है। जब आजादी की जंग लड़ी जा रही थी तो साहित्य भी उसमें अपना योगदान दे रहा था। रेणु जी ऐसे ही एक कथाकार हैं जिन्होंने इस क्रांति में प्रत्यक्ष रूप से भाग लिया। न केवल कलम उठाई बल्कि आवश्यकता पड़ने पर नेपाल क्रांति में पिस्तौल भी उठाई और छात्र संघ का भी उन्होंने नेतृत्व किया है। उनकी आंखों में स्वतंत्र भारत का स्वर्णिम चित्र सदैव बना रहा है। हर भारतीय की तरह वह भी यह सोच रहे थे कि आजादी का उज्ज्वल सूर्य उदय होगा और उसका प्रकाश भारत के

कोने-कोने तक जाएगा। देश का उद्धार होगा मगर कुत्सित राजनीति ने सबके सपनों पर पानी फेर दिया दुष्पंत कुमार जी की पंक्तियां इसका यथार्थ रूप प्रस्तुत करती हैं

“कहाँ तो तय था चिरागा हर एक घर के लिए।

कहाँ चिराग मयस्सर नहीं शहर के लिए।।”

आजादी का प्रकाश धुंधला पड़ गया। कुछ क्षेत्रों में तो वह भी नहीं पहुँचा। ऐसे में लोगों का मन पीड़ा और कड़वाहट से भर गया। कवियों ने कविता की तो कथाकारों ने अपनी कहानी में उनके दर्द को उजागर किया। भला रेणु जी जैसा भावुक हृदय लेखक चुप कैसे रह सकता था। उनका अशांत मन कथा भूमि को खोजते-खोजते निकल गया पूर्णिया जिले के मेरीगंज की तरफ। मेरीगंज ने रेणु जी को ऐसा वातावरण दिया कि उन्होंने मैला आँचल को आंचलिकता के शिखर पर पहुंचा दिया। मिथिलांचल सजीव सा हो गया है इस उपन्यास में। इसे हिंदी का पहला मौलिक आंचलिक उपन्यास होने का गौरव प्राप्त है। कथानक का आधार मिथिलांचल का गाँव मेरीगंज है, जहाँ के वातावरण में अशिक्षा, अंधविश्वास, आडंबर, जातिवाद, जमींदारी, शोषण, लिंग भेद सभी कुछ व्याप्त है। लेकिन इस कीचड़ में भी कमल खिलने की आशा रेणु जी नहीं छोड़ते हैं। मेरीगंज में विभिन्न जातियों के लोग रहते हैं। ब्राह्मण, यादव, ठाकुर, चमार आदि। यहां मजदूर भी हैं जमींदार भी, चोर भी हैं साहूकार भी, प्रेमी भी हैं और प्रेम के नाम पर शोषण करने वाले भी, भविष्यवाणी करने वाले ज्योतिषी भी हैं और गांधीवाद का झंडा फहराने वाले भी, खाऊ तहसीलदार भी हैं और निष्काम सेवा करने वाले डॉक्टर प्रशांत जैसे लोग भी, धर्म के नाम पर लोगों की आंख में धूल झोंकने वाले मठाधीश भी हैं और अंधभक्त भी। कथानक पूरी तरह आंचलिकता के कवर में लिपटा है। मेरीगंज और उसके आसपास का संपूर्ण वातावरण कथानक के विकास में सहायक रहा है। आंचलिकता का रंग इतना गहरा है कि पाठक सहज ही उसमें डूब जाता है। गाँव में जहां अंधकार ही अंधकार है वहाँ प्रकाश लेकर उपस्थित होते हैं डॉक्टर प्रशांत, समाज सेवी बलदेव और सत्य के लिए प्राण त्यागने वाले बावन।

## पात्र, कथोपकथन एवं कथा विन्यास

बड़ा उपन्यास होने के कारण इसमें पात्रों की संख्या अधिक है। फिर भी उनका अंकन बड़े सजीव ढंग से हुआ है। हर पात्र कोई न कोई उद्देश्य लिए हुए है। हर पात्र किसी न किसी वर्ग का प्रतिनिधित्व कर रहा है। कुछ पात्र प्रमुख हैं तो कुछ पात्र गौड़ हैं। अधिकांश पात्र ग्रामीण अंचल के हैं। उनका रहन-सहन, बोल भाषा सभी में स्थानीय रंग उभर कर सामने आए हैं। गाँव में यूँ तो लगभग हर जाति के लोग रहते हैं लेकिन तीन टोलियाँ प्रमुख रूप से हैं;

1. पहली राजपूत टोली जिसके मुखिया ठाकुर रामकृपाल सिंह हैं।
2. दूसरी है कायस्थ टोली जिसके मुखिया विश्वनाथ प्रसाद मल्लिक हैं। और
3. तीसरी टोली है यादव टोली जो नवनिर्मित है जिसके मुखिया खेलावन यादव हैं। एक अन्य प्रमुख टोली जिसको टोली का नाम नहीं दिया जाता जो तीसरी शक्ति का कार्य करती है वह ब्राह्मण टोली।

जैसा कि भारत के किसी भी गाँव में देखा जा सकता है कि आपस में किसी टोली की दूसरी टोली से नहीं बनती है और एक टोली ऐसी रहती है जो उनमें फूट डालने का कार्य करती है इस गाँव में ब्राह्मणों की संख्या कम है अतः वे सदा तीसरी शक्ति का कार्य ही करते रहे हैं जो सामंजस्य को भंग करने में लगे रहते हैं। गौड़ टोलियाँ इस प्रकार हैं; पोलियो टोली, तंत्रिमा टोली, यदुवंशी छत्री टोली, गहलोत टोली, अमात्य ब्राह्मण टोली, धनुर्धारी छत्री टोली, कुशवाहा छत्री टोली आदि।

प्रमुख पात्रों में नवीन आशा, नवीन विचारधारा, त्याग और समर्पण देखने को मिलता है जो उपन्यास का प्राण कहा जा सकता है। पुरुष पात्रों में पहला और केंद्र बिंदु में जो पात्र है वह डॉक्टर प्रशांत का चरित्र है। डॉक्टर प्रशांत उपन्यास का नायक कहा जा सकता है। वह सभी पात्रों में सबसे अधिक शिक्षित है। उसमें नव आशा, भावी भविष्य के प्रति आस्था है। कुछ कर गुजरने की चाह और हौसला है। वह कथा के केंद्र में है। अपने प्रकाश से वह संपूर्ण वातावरण को आलोकित करना चाहता है। डॉक्टर प्रशांत ममता से कहता है “ममता!

मैं फिर काम शुरू करूँगा - यहीं, इसी गाँव में मैं प्यार की खेती करना चाहता हूँ। आंसू से भीगी हुई धरती पर प्यार के पौधे लहलहाएंगे। मैं साधना करूँगा, ग्रामवासिनी भारत माता के मैले आँचल तले! कम से कम एक ही गाँव के कुछ प्राणियों के मुरझाए होठों पर मुस्कुराहट लौटा सकूँ, उनके हृदय में आशा और विश्वास को प्रतिष्ठित कर सकूँ।”<sup>8</sup>

वह पूरे मन से बीमार और लाचारों की सेवा करता है। उसका चरित्र आदर्शवादी है। वह रूढ़ियों का विरोधी एवम तर्क शक्ति का पोषक, शोषण का आलोचक है। कोमल हृदय, उदारता का प्रतीक है। पुरुष पात्रों में दूसरा पात्र बलदेव है। वह बहुत पढ़ा लिखा नहीं है किंतु स्वाधीनता के आंदोलन में उसने भाग लिया है और क्रांतिकारियों के साथ रहकर उसने बहुत सारे अनुभव इकट्ठे किए हैं। वह गांधीवादी विचारधारा का पोषक है। समाजवाद का अनुयाई है। हर जरूरतमंद की निस्वार्थ भाव से सेवा करना अपना प्रथम कर्तव्य समझता है। अशिक्षित होते हुए भी उसमें नव आशा का प्रकाश है। वह समानता का पोषक है। उसमें ग्रामीण एवं नगरीय दोनों लक्षण दिखाई देते हैं। यह उसके गहन अनुभव का परिणाम है। किरानी का यह कथन दृष्टव्य है “अरे यह तो बालदेव है। सर, रामकृष्ण कांग्रेस आश्रम का कार्यकर्ता है, बड़ा बहादुर है।”<sup>9</sup>

बलदेव का स्वयं ही यह कथन “पियारे भाइयो, आप लोग जो आंदोलन किए हैं, वह अच्छा नहीं। अपना कान देखे बिना कौए के पीछे नहीं दौड़ना अच्छा नहीं। आप ही सोचिए, क्या ये समझदार आदमी का काम है। आप लोग हिंसावाद करने जा रहे थे। इसके लिए हमको अनसन करना होगा। भारथमाता का, गांधीजी का यह रास्ता नहीं...”<sup>10</sup> उसके अहिंसावादी होने के प्रमाण है। तीसरे पुरुष पात्र की भूमिका में तहसीलदार विश्वनाथ प्रसाद हैं जो दूसरे सर्वाधिक शिक्षित व्यक्ति हैं। वे कायस्थ टोली के मुखिया हैं। घूसखोरी उनकी प्रमुख विशेषता है। डाली, चढ़ावा उनको मिलता ही रहता है इसकी दम पर ही वे धनी हैं। वह कथा की नायिका कमला के पिता हैं। रेणु जी लिखते हैं “कायस्थ टोली के मुखिया विश्वनाथ प्रसाद मल्लिक, राज पार बंगा के तहसीलदार हैं। तहसीलदारी उनके खानदान में

तीन पुस्त से चली आ रही है। इसी के बल पर तहसीलदार साहब आज एक हजार बीघा जमीन के एक बड़े काश्तकार हैं।<sup>11</sup>

उनके बाद ठाकुर रामकृपाल सिंह जिनके बारे में रेणु जी कहते कि वे अनपढ़ होते हुए भी एक बड़े घराने से होने के कारण गाँव में उच्च स्थान पर हैं। अन्य प्रमुख पात्र है खेलावन यादव जिसके बारे में रेणु जी लिखते हैं “यादवों का दल नया है। उनके मुखिया खेलावन यादव को दस वर्ष पहले तक लोगों ने भैंस चराते देखा है। दूध-घी की बिक्री से जमा हुए पैसे ही बात जब चारों ओर बुरी तरह फैल गई तो खेलावन को बड़ी चिंता हुई। महीनों तहसीलदार के यहां दौड़ते रहे सर्किल मैनेजर को डाली चढ़ाई, सिपाहियों को दूध-घी पिलाया और अंत में कमला के किनारे पचास बीघे जमीन की बंदोबस्ती हो सकी। अब तो डेढ़ सौ बीघा की जोत है।<sup>12</sup>

कालीचरण जोशीला नौजवान है जो गरम दल का पोषक, साम्यवादी विचारधारा अपनाने वाला व्यक्ति है। महंत धर्म के नाम पर सबको मूर्ख बनाने वाला पाखंडी, ढोंगी, कमी पुरुष है जो अपनी कामवासना के लिए लक्ष्मी का प्रयोग करता है और अंततः काम पीड़ा से ही मृत्यु को प्राप्त हो जाता है। वामन दास गांधी बात का पोषक है और देश के लिए अपने प्राण देकर अपना कर्तव्य पूरा करने वाला सच्चा देशभक्त है। रामदास मठ का सेवक और अंधभक्त है।

स्त्री पात्रों में कमला कथा की नायिका कही जा सकती है। वह नवीन विचारधारा की पोषक और सुशील विचारों वाली नायिका है। वह तहसीलदार की पुत्री है। डॉक्टर प्रशांत से उसे प्रेम होता है अंततः उसकी पत्नी हो जाती है। ममता दूसरी प्रमुख पात्रा है। उसके चरित्र में त्याग, आत्मसमर्पण कूट-कूट कर भरा हुआ है। वह कथा के उपनायिका है। वह आदर्श प्रेमिका है। डॉक्टर प्रशांत से अथाह प्रेम करती है फिर भी वह कमला के लिए और उसके बच्चे के लिए अपना सब कुछ निछावर करने को तैयार है। वह ममता से जरा भी नहीं जलती है। वह उसके बच्चे को अपना बच्चा मानती है। उसका यह त्याग सराहनीय है। ममता के

शब्द तो देखिए “मन करता है, किसी को आँचल पसारकर आशीर्वाद दूँ- तुम सफल होओ!  
मन करता है, किसी कर्मयोगी के बढ़े हुए चरणों की धूलि लेकर कहूँ....”<sup>13</sup>

लक्ष्मी मठ की दासी भी है और मालकिन भी। वह एक शोषित स्त्री है जो विरोध करना भी नहीं जानती। फिर भी वह देश भर में चल रही गतिविधियों से परिचित है। उसके चरित्र में स्थायित्व नहीं है। उसका जीवन धार्मिक होते हुए अधार्मिक है। अधिकांश पात्र ग्रामीण एवं अशिक्षित हैं। पात्रों के विषय में रेणु जी लिखते हैं “सारे मेरीगंज में दस आदमी पढ़े-लिखे हैं पढ़े-लिखे का मतलब हुआ अपना दस्तखत करने से लेकर तहसीलदारी करने तक की पढ़ाई। नए पढ़ने वालों की संख्या है पंद्रह।”<sup>14</sup>

गांव वाले सीधे जरूर हैं लेकिन उनकी चतुराई किसी से छुपी नहीं है। डॉ० प्रशांत के शब्दों में “गाँव के लोग बड़े सीधे दीखते हैं; सीधे का अर्थ यदि अपढ़, अज्ञानी और अंधविश्वासी हो तो वास्तव में सीधे हैं वे। जहां तक सांसारिक बुद्धि का सवाल है, वह हमारे और तुम्हारे जैसे लोगों को दिन में पांच बार ठग लेंगे और तारीफ यह है कि तुम ठगी जाकर भी उनकी सरलता पर मुग्ध होने के लिए मजबूर हो जाओगी।”<sup>15</sup>

### **भाषिक विन्यास में आंचलिकता का प्रतिबिम्बन**

उपन्यास के संवादों में मिथिलांचल की खुशबू सर्वत्र व्याप्त है। ग्रामीणों की जो भाषा होती है रेणु जी ने उसे ही चुना है जो संवादों को सजीव और मूर्त करने में सफल है। संवादों सहजता भी है और भावों की कोमलता भी। संवादों में स्थानीय रंग, अशिक्षा, भोलापन, व्यजनात्मकता और वाक् चातुर्य स्पष्ट दिखाई देता है। सीताराम को ‘सेत्ताराम’ प्यारे को ‘पियारे’, डॉक्टर को ‘डागडर’ कहते हैं गांव वाले।

कुछ संवाद देखिए.....

“तेरी जात को मच्छर काटे, चुप साले। चुप साले! कुत्ते के बच्चे! अभी कुलहाड़े से तेरा...! तेरी मां को...।”

“चुप रह बदमाश!”

जहां शिक्षित लोग बात करते हैं वहां संवादों में खड़ी बोली हिंदी (हिंदुस्तानी) का स्वरूप दिखाई देता है। संवाद भावानुकूल हैं। जहां उपदेशात्मक हैं वे कुछ लंबे हो गए हैं।

मिथिलांचल का एक गांव मेरीगंज कथा के केंद्र में। मेरीगंज के आस पास के क्षेत्र अंकन भी हुआ है। रेणु जी ने मेरीगंज के बाग, मकान, पेड़ पौधे, नदी, ताल बाजार, रेलवे स्टेशन आदि का चित्रण करते हुए उसे उपन्यास को सफल बना दिया है। वहां के वातावरण में अशिक्षा, अज्ञान, ढोंग, शोषण, जातिवाद, कुत्सित राजनीति, ओछी विचारधारा आदि तत्व उपन्यास को आंचलिक बनाने में महत्वपूर्ण रहे हैं। रेणु जी भूमिका में लिखते हैं “यह है मैला आंचल, एक आंचलिक उपन्यास। कथानक है पूर्णिया। पूर्णिया बाहर राज्य का जिला है; इसके एक ओर है नेपाल, दूसरी ओर पाकिस्तान और पश्चिम बंगाल।.....इसमें फूल भी हैं, शूल भी, धूल भी है, गुलाब भी; कीचड़ भी है, चंदन भी; सुंदरता भी है, कुरूपता भी- मैं किसी से दामन बचाकर निकल नहीं पाया।”<sup>17</sup>

अशिक्षित गांव वालों की भाषा में ग्रामीण शब्दों की अधिकता है तथा शिक्षित पात्रों में खड़ी बोली के शब्दों की। साथ ही हिंदी, अंग्रेजी, और आंचलिक शब्दों का प्रयोग किया गया है। संवाद मनोभावों को व्यक्त करने में पूर्णतः सफल हुए हैं। यथा-

“अरे बेटा रे! गौरी बेटा रे! आँगन में आ जा बेटा रे! गुअरटोली का कलिया पगला गया है।”<sup>18</sup>

भाषा में लोकगीत, मुहावरे एवं आंचलिक शब्दों के साथ वर्णनात्मक, काव्यात्मक एवं मनोवैज्ञानिक शैली का प्रयोग हुआ है, जिससे भाषा सजीव हो उठी है। होली, कीर्तन मंगलगीत जैसी लोक गीतों ने, मुहावरों कहावतों ने भाषा को सशक्त बनाया है। भाषा शैली पूर्णतः आंचलिक है। भाषा में कहीं बनावटीपन नहीं है। भाषा शसक्त एवम जीवंत है।

इस उपन्यास के माध्यम से लेखक ने पूर्णिया जिले को केंद्र में रखकर संपूर्ण भारत में फैले भ्रष्टाचार, ढोंग, सामाजिक, आर्थिक, राजनीतिक परिस्थितियों को उजागर करते हुए उनको







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