



Insecurity among Indigenous People in the Attainment of Basic Education: A Brief Review of Purulia District of West Bengal

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ABSTRACT

Education is the basis of social and economic development of a society. But, unless and until a society is literate and aware, it can never progress further. According to the Indian Census, a person who can read and write a simple message in any language with understanding is considered literate. The present paper tries to analyse the difference in literacy between male and female tribal people in the different blocks of Purulia district of West Bengal, where the concentration of indigenous people is higher, and the study also focuses on the gender gap in the literacy level of the tribal people with the spatio-temporal changes from 2001 to 2011. The study is based on secondary data analysis using statistical methods and GIS techniques for cartographic presentation, highlighting the gender differential in the achievement of basic literacy and suggesting possible measures for reducing this gap to promote educational security among indigenous communities

Keywords: Basic Education, Gender Gap, Literacy Achievement, Importance-Performance Analysis.

1. Introduction

Gender disparity in the achievement of basic literacy is very vivid among the indigenous groups. Basic Literacy is an indicator of the Physical Quality of Life index, as per UNDP, which refers to the attainment of Universal Elementary Education in India. Numerous studies have revealed the constraints to the achievement of basic literacy, and this problem is more acute among the indigenous groups. Bhuriya(1985) discussed the issues that hinder the growth of inclusive tribal education in the mainstream education system of Indian society. Many micro-level analyses have been carried out at the village level to understand the causes of poor literacy among tribal females. Pathania et.al. (2005) in their study on the problems of tribal students in education of the tribes of Kinnaur district of Himachal Pradesh, identified the multiple constraints to their educational attainments, like constraints at home, at school, personal and community constraints that are responsible for lower literacy rates and a low level of education. Poor infrastructure in schools in tribal areas, cost of schooling, non-availability of books, teachers' behaviour, stress and fears in the mind of tribal students and the curriculum affect the drop-out rates. Mukherjee (2009) revealed in his study that the modern education system makes little attempt to address the cultural specificities in designing educational policies for the tribal students, which results in the development of a negative self-image. Although it is claimed to be free by the Indian government, achieving success in the education system involves subsidiary costs like private tuition, which represents an obstacle for poverty-stricken tribal families. The problem is further complicated due to the unempathetic attitudes and beliefs of the teachers and the ill-conceived developmental policies designed by educational planners that fail to incorporate curricular elements compatible with tribal culture. Hati et. al. (2012). In their study on Proximate Determinants of School Dropout of rural West Bengal revealed that gender differences in education, mother's education, distance of school, family size and parental occupation emerge as important factors that affect school dropouts and the study outlined some policies – short and long term to reduce school dropouts in rural West Bengal. Maji (2016) attempted to focus on the disparity in education of tribal women in West Bengal and discussed the problems associated with tribal women's educational achievement.

Brahmanandam & Babu (2016) also made an elaborate study on the various commissions and specific programs for tribal educational development during the different five-year plan periods. They too found that drop-outs among tribal children are persisting despite government initiatives. They concluded in their study that it might be that the approach of the government to tribal education paid a little attention to their specific needs, culture and lifestyle, which have directly impacted their overall educational status. The study found that drop-outs increased in the season of agricultural activity when their family demanded the labour of these children rather than going to school for education. Mishra & Chatterjee (2017) in their study applied fuzzy logic in shaping a model -the multiple input variables used in the study are prevailing level of illiteracy in the society, presence of known marginalized people, workforce characteristics, prevailing level of income insecurity, stress due to distance of school from residence, access to urban educational goods and services, degree of connectivity and isolation, household expenditure towards educating children and the output of which are the various ranges of the Index of Susceptibility of School Drop-out which is employed in mapping the spatial variation of the susceptibility of school dropout in Purulia district. High dropout susceptibility zones have been found in blocks like Jhalda-II, Arsha, Bagmundi, Balarampur, Barabazar, Manbazar-II, Bundwan, Kashipur and Pancha.Daripa (2017) reviewed the educational status of the tribals of Purulia District and of the gender disparity prevalent in the literacy rate from 2001 to 2011 by estimating the change of total, male and female literacy from 2001 to 2011. The tribal literacy rate in Purulia ranked far below the state average and possible reasons that were recommended for educational backwardness among the tribal people are poverty, willingness of parents to involve children at work rather than sending to school which is considered a luxury, lack of awareness of parents, lack of adequate school in tribal areas, and reluctance of teachers to work in tribal areas. Shelly (2017) in her work revealed that tribal students have adjustment problems in the educational, emotional and social areas. The language factor, teaching methods and syllabi are leading to poor educational adjustments in the area of education. For improving the adjustment level of tribal students in school, conducting life-skill-based education and mental health-related programmes through combined efforts of the school, students, parents and the community can be successful. Moreover, if schools can arrange for non-formal education through their outreach activities, then it will be more effective in helping to educate disadvantaged groups of people like the tribes, as it is more learner-centric than the formal education imparted in schools.(Basha, 2018) focused on the literacy rate of tribal women in Tamil Nadu and its issues and prospects and highlighted the enormous disparity in literacy rate between male and female scheduled tribes and suggested measures to overcome this issue. Sabu (2019) attempted to examine the level of disparity in literacy rate among the tribal communities in Kerala. Since the study revealed that the literacy rates of the tribal communities are extremely diverse, the author recommended that the government initiatives should not be general for the scheduled tribes but should be specifically planned and targeted for each tribal community, since their needs are different. Ethnographic and ecosystem approaches to girl education among Oraon tribes in India undermined barriers and facilitators to the successful completion of girls' school education (Nayak & Kumar, 2022). Literacy rate of ST communities of Paschim Medinipur district outlined that the female literacy is markedly lower than the male literacy because of the unwillingness and unresponsiveness of scheduled tribe females to education. Language gap, social and political factors, environmental and geographical factor, traditional and cultural factors have along-reaching impact on the educational backwardness of these tribal communities of the district (Chakraborty, 2019); status of rural literacy in Purulia district and highlighted that the male-female differential is more prominent in rural areas among schedule castes and schedule tribes in 2001-2011. The authors used UNDP Range Equalisation by Goal Post Index Method to measure the relative achievement of the rural literacy rate in the blocks of Purulia district. Mukherjee & Laha (2019); various possible reasons for increasing drop-outs in the education of ST girls and measures like motivating them through counselling and motivational talks (Mohapatra, 2020). The literacy trends and literacy differential among various scheduled tribe communities of West Bengal in 2001 and 2011 revealed that the literacy gap (male-female) is generally decreasing or has remained the same for certain communities like the Chakma and Savara and Ho tribe, while the gap has increased for Birjia, Karmali and Bediya tribes(Dutta & Bishai, 2020).Tribal dropouts in selected villages of Jhargram district highlighted on various problems faced by tribal students like language barrier, poor economic condition, long distance of schools from home, engagement of children in household works, lack of learning environment in Santhali medium schools due to poor infrastructure of the schools, lack of awareness of parents and community towards schooling that encourage drop-outs of the tribal children(Murmu et. al., 2020). The distribution of block-wise literacy rate of Purulia exhibits huge differences between total male and female literacy; low literacy among the tribal women is responsible for the huge gap between achievement of desired male and female literacy rates (Patra et. al., 2021).The female literacy rate is the lowest in India among Primitive Vulnerable Tribal Groups (PVTGs); feeling of insecurity, lack of empathetic female teachers and incidents of abuse are barriers while language, lack of parent support and poor infrastructure are challenges which can be overcome with infusion of traditional knowledge into national curricular framework to foster inclusion (Apparao et.al., 2020).The current status and challenging issues of tribal education in India: the nature of problems associated with school-going tribal children and their parents; removing the language barrier, recruiting tribal teachers for tribal students and changing the mentality of their parents can solve these issues to some extent (Velusamy, 2021). The contemporary challenges faced by the indigenous people of India - higher concentration of poverty, weak resource base, low position in socio-economic and political hierarchy, illiteracy, relative lack of access to facilities provided by developmental measures and inadequate participation

in institutions are mainly responsible for their backwardness as well as access to education (Reddy, 2021); spreading awareness to develop authentic community support and framing educational planning and governance to implement inclusive educational policies and encouraging educational infrastructural investment with innovative educational services can make realise the targets of Sustainable Development Goal (SDG) 4.2 Equal Access to Quality Pre-primary Education and inclusive Early Childhood Education and Care (Radet.al., 2022). Generalised policy interventions in education for assimilation of indigenous communities to the mainstream society, irrespective of the specific social needs, interests and traditional values and cultural differences of different communities, have further aggravated social exclusion that generated a sense of insecurity and reluctance to education. So, respecting cultural differences from one community to another and developing community-specific, need-based curriculum can promote the sense of security among parents in educating the children for a better future (Sucharita, 2023).

All the above literature highlighted that literacy among indigenous groups has been remarkably low, especially among indigenous females. But the gender disparity about the block-wise concentration of literates needs to be examined to get a clear picture of the exact geographical distribution of the concentration of scheduled tribe male and female literacy levels. The present study is an attempt to analyse the spatial concentration of male and female literacy levels of various blocks of Purulia district in 2011 and identify the gender gap in concentration of tribal literacy from 2001 to 2011, and address specific causes of educational insecurity among indigenous communities

Objectives

- To focus on the spatial distribution and concentration of literates of the tribes in various blocks of the district
- To make a spatio-temporal analysis of the gender gap in the concentration of literates in the study area from 2001 to 2011.
- To identify the achievement level of male and female literacy of the indigenous groups, and
- Suggest measures for reducing the gender disparity in the achievement of universal elementary education in promoting tribal development at the micro-level by fostering a sense of educational security among indigenous communities.

2. Study Area

The district of Purulia in West Bengal is selected as the area of study. The district is selected as the area of study as it is the home to many indigenous groups like the Santhals, Sabars, Lodhas and many others. Purulia district is located between 22°42'35" and 23°42'0" North latitude and 85°49'49' to 86°54'37" East longitude. The total geographical area of this district is 6259 sq.km (Census 2001). The district is bordered on the east by Paschim Medinipur, Bankura District, North by Bardhaman district of West Bengal and Dhanbad, Bokaro, Ranchi district (Jharkhand) on the Western side and South by West Singhbhum and East Singhbhum. The main rivers are Kangsabati, Darakeswar, Subarnarekha, Kumari and Damodar, and the important hills are Ajhodya hill, Panchet hill and Joychandi hill. There are 20 Community Development Blocks, 20 police stations, and 3 municipalities located in this district.

3. Methodology

The study has been carried out at the district level on the basis of available data on literates at the block level from the District Census Handbook of Purulia, 2011 and Statistical Handbook of Purulia, 2013 and 2014 and the District Survey Report, Purulia, 2021. The data have been analysed statistically with the help of Location Quotient to show the concentration of literates and then represented with maps with the help of ArcGIS. Various statistical tools have been applied in this study,

- i) Location Quotient for concentration of male literates = $(\text{Male literates} / \text{Total literates of block}) / (\text{Male population of block} / \text{Total block population})$
- ii) Gender gap in concentration of ST literates has been calculated as = L.Q. value of male literates – L.Q. value of female literates
- iii) Basic Literacy Rate as per the Physical Quality of Life Index is used to find out the Literacy Achievement level, which has been calculated as per UNDP.

Achievement Level of Literacy for i^{th} block = $(\text{Actual Value of } i^{\text{th}} \text{ block} - \text{Minimum Value}) / (\text{Maximum Value} - \text{Minimum Value})$. Where the maximum value of Basic Literacy Rate is 180, the minimum value is 0, and the Range is 100.

- iv) Gender Differential in Achievement Level of Basic Literacy for i^{th} block = Achievement Level of male literacy for i^{th} block - Achievement Level of female literacy for i^{th} block

This gender differential for literacy achievement level has been calculated for each block of the district to show the spatial variations in the achievement of literacy between male and female STs and identify blocks where the gender disparity in the achievement level of literacy is more acute so that specific measures can be targeted to reduce gender disparity in literacy among the indigenous people of these blocks of the district.

- v) The Importance-Performance Analysis model (James and Martilla, 1977) has been applied in this study to understand the nature of performance that is level of literacy achievement and importance that is percentage of literates to ST population of males and females respectively and to identify specific blocks where literacy is very low so that universal elementary education can be encouraged and promoted through awareness of various schemes among the indigenous people of the district for their socio-economic development.

The study focuses on the status of literacy among the indigenous people of the district, highlighted on the concentration of the male and female literates, the gender differential in literacy achievement in the various blocks of the district Purulia, and also employed the Importance-Performance Analysis to identify specific blocks with have low literates and thereby suggest measures to promote the growth of literacy in those identified blocks.

Table 1: Block-wise distribution of population and literacy of the scheduled tribes of Purulia district, 2011

Block	ST Male	ST Female	ST Population	Male ST Literate	% of ST male literates to ST males	Female ST Literate	% of ST female literates to ST females
Jaipur	6678	6396	13074	3493	52.31	1838	28.74
Purulia-II	4145	4068	8213	2276	54.91	1383	33.99
Para	5285	5050	10335	3436	65.01	1939	38.4
Raghunathpur-II	3704	3598	7302	2297	62.01	1290	35.85
Raghunathpur-I	6380	6219	12599	3459	54.22	2044	32.87
Neturia	11459	11157	22619	6533	57.01	3764	33.74
Santuri	12532	12551	25083	7385	58.93	4525	36.05
Kashipur	24776	24761	49537	16069	64.86	10457	42.23
Hura	18204	18357	36561	11759	64.59	7473	40.71
Purulia-I	6439	6216	12655	3756	58.33	2178	35.03
Puncha	15231	15410	30641	9562	62.78	5947	38.59
Arsha	16777	16791	33568	8243	49.13	4440	26.44
Jhalda-I	7957	7651	15608	4767	59.91	2792	36.49
Jhalda-II	9615	9302	18917	4840	50.33	2424	26.06
Bagmundi	17270	16768	34038	8762	50.73	4593	27.39
Balarampur	22141	21597	43738	11538	52.11	6024	27.89
Barabazar	16681	16415	33096	9651	57.85	5176	31.53
Manbazar-I	17044	16898	33942	10626	62.34	6111	36.16
Manbazar-II	23836	23744	47580	14568	61.11	8282	34.88
Budwan	24488	24744	49232	14193	57.96	8599	34.75

Source: District Census Handbook, Purulia, 2011

To get a spatial overview of distribution as well as the concentration of literates in the district, Location Quotient has been used as a statistical measure to compute the concentration values of total literates, male and female literates of the blocks of the district (Table 2)

Table 2: Spatial distribution of concentration of male, female and total literates of Purulia, 2011

Block	L.Q. values for ST literates		
	Total	Male	Female
Jaipur	0.8819	0.89958	0.84038
Purulia-II	0.96356	0.94436	0.99421
Para	1.12483	1.11814	1.12286
Raghunathpur-II	1.06245	1.06654	1.04849
Raghunathpur-I	0.94468	0.93243	0.96116
Neturia	0.98472	0.98051	0.9866
Santuri	1.02696	1.01349	1.05433
Kashipur	1.15814	1.11544	1.23503

Hura	1.13722	1.11019	1.1905
Purulia-I	1.01416	1.0032	1.02467
Puncha	1.09471	1.07971	1.12858
Arsha	0.81718	0.845	0.77329
Jhalda-I	1.04746	1.03035	1.06717
Jhalda-II	0.83051	0.86573	0.76207
Bagmundi	0.84859	0.87257	0.80104
Balarampur	0.86843	0.89623	0.81569
Barabazar	0.96894	0.99503	0.92213
Manbazar-I	1.0665	1.07222	1.05758
Manbazar-II	1.03868	1.05112	1.02004
Bundwan	1.00128	0.9968	1.01628

Source: Computed from District Census Handbook, Purulia, 2011

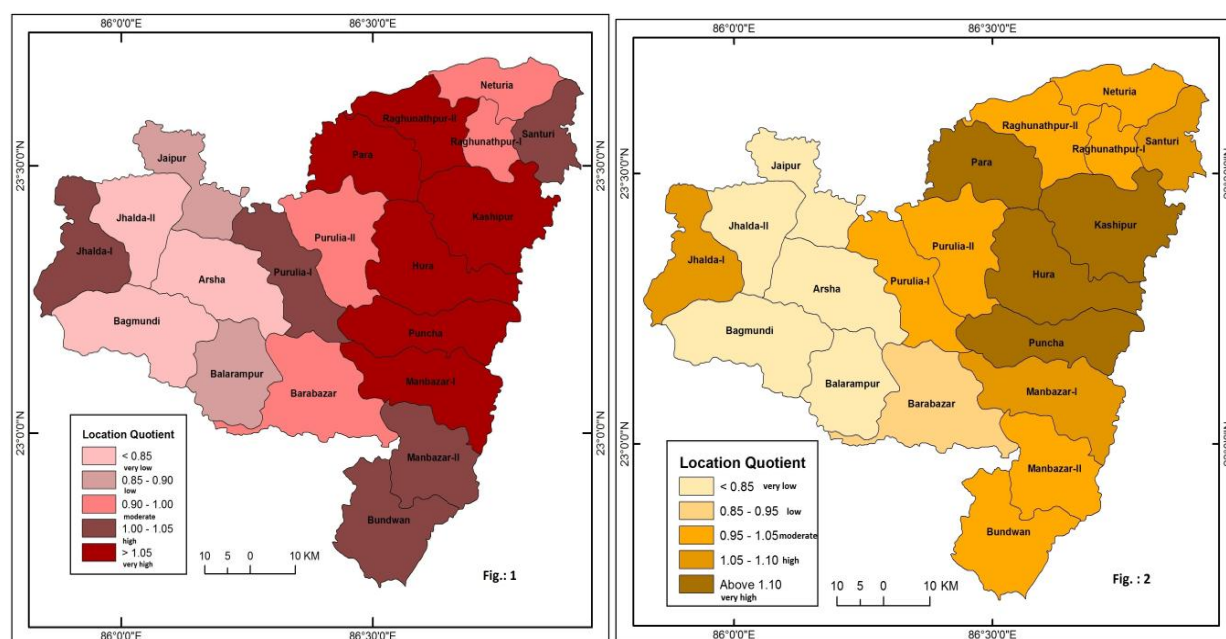


Fig.1 & Fig. 2: Block-wise Concentration of Male and Female Literates, Purulia, 2011
Source: Computed from District Census Handbook, Purulia, 2011

The concentration of male ST literates to total male population is moderately low in blocks of Balarampur and Jaipur and very low in Jhalda-II, Arsha and Bagmundi blocks and higher concentrations of male literates is seen in Raghunathpur-II, Para, Kashipur, Hura, Puncha and Manbazar-I (Fig.1) Low concentration of female ST literates to total female population of block is seen in blocks namely Jaipur, Jhalda-II, Arsha, Bagmundi and Balarampur and higher concentrations is observed in Para, Kashipur, Hura and Puncha (Fig.2). Jhalda-II, Arsha and Bagmundi are quite backward in spread of literacy in the district.

Analysis of the gender gap in the growth of literacy among indigenous groups of the district in 2001-2011 reveals that the gender gap has decreased remarkably in Manbazar-II and Bundwan blocks, which can positively reduce gender disparity in the concentration of literates in the district.

Exceptions are Purulia-I, Para and Raghunathpur-I block where the figures for the data of 2001 and 2011 are almost the same with too little decrease in the gender gap while in Raghunathpur-II block this gender gap is slightly increasing which is really very alarming (Table-3, Fig.3) But, if the magnitude of this gender disparity is to be quantified with the help of achievement level of literacy among ST male and female literates, then the data from Table-4 reveals the gender disparity in male-female differential in the achievement level of literacy among the STs in Purulia district in 2011 based on which zoning has been done to identify acute blocks like Manbazar-II, Kashipur, Balarampur and Bundwan which are facing the problem of high gender differential in achieving basic literacy (Table 4 and 5).

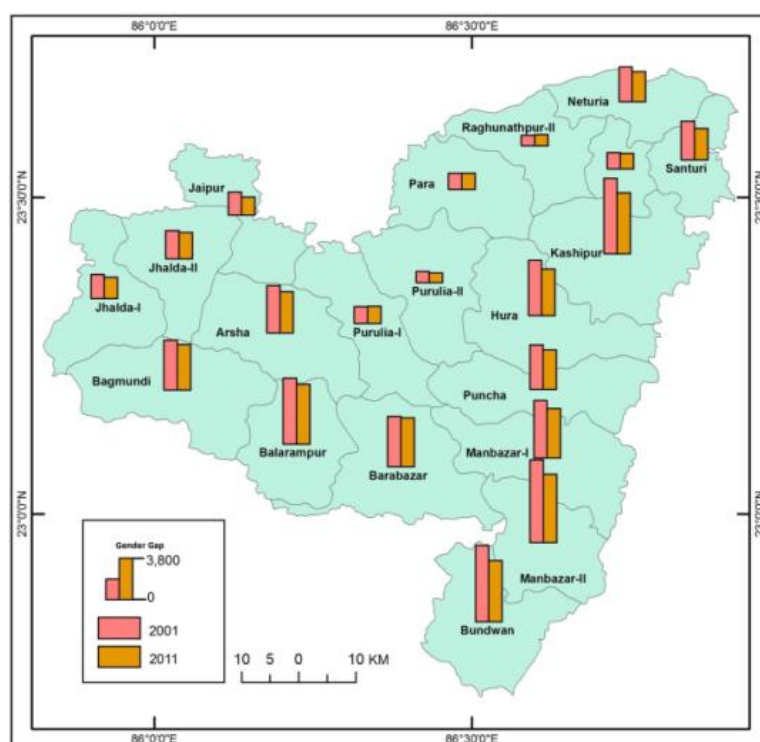


Fig. 3: Gender gap in concentration of ST literates in blocks of Purulia, 2001-2011
Source: Data compiled from the District Census Handbook, Purulia, 2011

Table 3: Gender gap in concentration of ST literates in blocks of Purulia, 2001-2011

Block	Gender Gap in the concentration of ST literacy	
	2001	2011
Jaipur	2106	1655
Purulia -II	1034	893
Para	1517	1497
Raghunathpur - II	970	1007
Raghunathpur - I	1492	1415
Neturia	3184	2769
Santuri	3548	2860
Kashipur	6948	5612
Hura	5072	4278
Purulia -I	1554	1578
Puncha	4074	3615
Arsha	4336	3803
Jhalda - I	2223	1975
Jhalda - II	2589	2416
Bagmundi	4568	4169
Balarampur	6047	5514
Barabazar	4609	4475
Manbazar - I	5268	4515
Manbazar - II	7597	6286
Bundwan	6992	5594

Source: Data compiled from the District Census Handbook, Purulia, 2011

Table 4: Block-wise variations in gender disparity in achievement of literacy, Purulia, 2011

Block	Literacy Achievement for Male	Literacy Achievement Level for females	Male-Female Differential in Achievement of Literacy
Jaipur	34.93	18.38	16.55
Purulia-II	22.76	13.83	8.93
Para	34.36	19.39	14.97
Raghunathpur-II	22.97	12.9	10.07
Raghunathpur-I	34.59	20.44	14.15
Neturia	65.33	37.64	27.69
Santuri	73.85	45.25	28.60

Kashipur	160.69	104.57	56.12
Hura	117.51	74.73	42.78
Purulia-I	37.56	21.78	15.78
Puncha	95.62	59.47	36.15
Arsha	82.43	44.4	38.03
Jhalda-I	47.67	27.92	19.75
Jhalda-II	48.4	24.24	24.16
Bagmundi	87.62	45.93	41.69
Balarampur	115.38	60.24	55.14
Barabazar	96.51	51.76	44.75
Manbazar-I	106.26	61.11	45.15
Manbazar-II	145.68	82.82	62.86
Bundwan	141.93	85.99	55.94

Source: Data compiled from the District Census Handbook, Purulia, 2011

Table 5: Zoning of gender differential in achievement of literacy among STs, Purulia, 2011

Gender differential in the achievement of basic literacy	Magnitude of gender differential	C.D. blocks of Purulia district
Very High	Above 60	Manbazar-II
High	50-60	Kashipur, Bundwan, and Balarampur
Moderately high	40-50	Manbazar-I, Barabazar, Hura and Bagmundi
Medium	30-40	Arsha, Puncha,
Moderately low	20-30	Jhalda-II, Santuri and Neturia
Low	10-20	Jhalda-I, Purulia-I, Raghunathpur-I, Jaipur, Para, Raghunathpur-II,
Very Low	Below 10	Purulia-II

Source: Data compiled from the District Census Handbook, Purulia, 2011

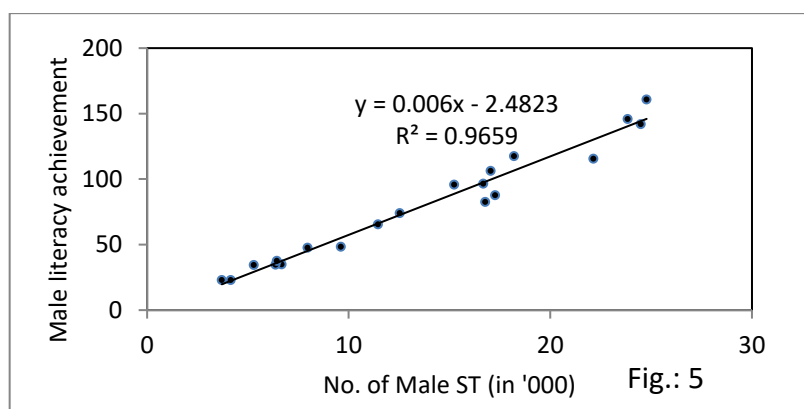
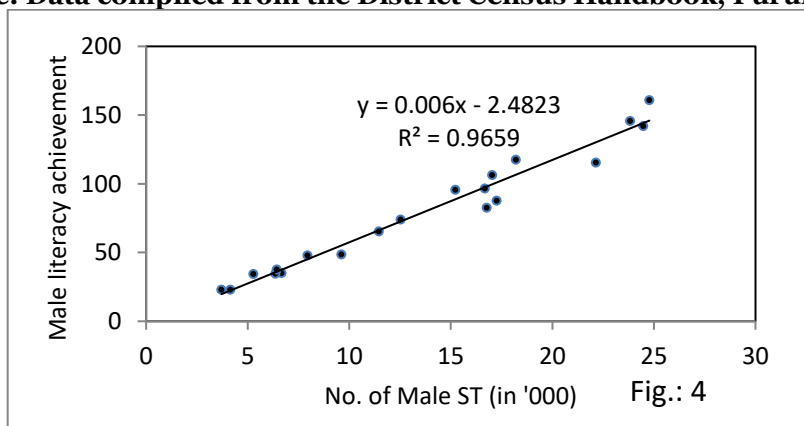


Fig.4 & Fig. 5: Correlation between ST male and female literates and achievement of male and female literacy, Purulia, 2011

Source: Prepared based on data of Importance-Performance Analysis

The above correlations reveal that the relation is stronger and positive for males than for female ST literates. Still, a gender differential in basic literacy is noticed in certain blocks of the district. With more mass awareness

campaigns, this gender differential in such blocks in the achievement of basic literacy among ST groups can be eliminated shortly.

For identifying specific blocks of Purulia district where the female literacy among the indigenous people is quite less and there is an urgent need for mass awareness about the need for literacy, Importance-Performance Analysis has been done to show the performance of ST male and female literates of the district. (Table 6)

Table 6: Data of Importance-Performance Analysis of ST male and female Literacy, Purulia, 2011

Sl. No.	Block	Literacy Achievement Level for males	% of ST Male Literates to ST males	Literacy Achievement Level for females	% of ST Female Literates to ST females
1	Jaipur	34.93	52.31	18.38	28.74
2	Purulia-II	22.76	54.91	13.83	33.99
3	Para	34.36	65.01	19.39	38.4
4	Raghunathpur-II	22.97	62.01	12.9	35.85
5	Raghunathpur-I	34.59	54.22	20.44	32.87
6	Neturia	65.33	57.01	37.64	33.74
7	Santuri	73.85	58.93	45.25	36.05
8	Kashipur	160.69	64.86	104.57	42.23
9	Hura	117.51	64.59	74.73	40.71
10	Purulia-I	37.56	58.33	21.78	35.03
11	Puncha	95.62	62.78	59.47	38.59
12	Arsha	82.43	49.13	44.4	26.44
13	Jhalda-I	47.67	59.91	27.92	36.49
14	Jhalda-II	48.4	50.33	24.24	26.06
15	Bagmundi	87.62	50.73	45.93	27.39
16	Balarampur	115.38	52.11	60.24	27.89
17	Barabazar	96.51	57.85	51.76	31.53
18	Manbazar-I	106.26	62.34	61.11	36.16
19	Manbazar-II	145.68	61.11	82.82	34.88
20	Bundwan	141.93	57.96	85.99	34.75

Source: Data compiled from the District Census Handbook, Purulia, 2011

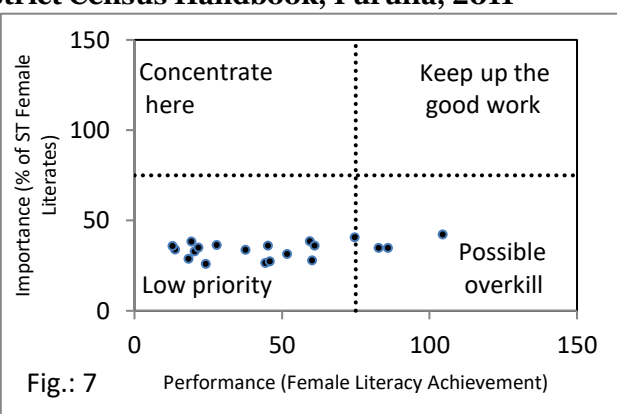
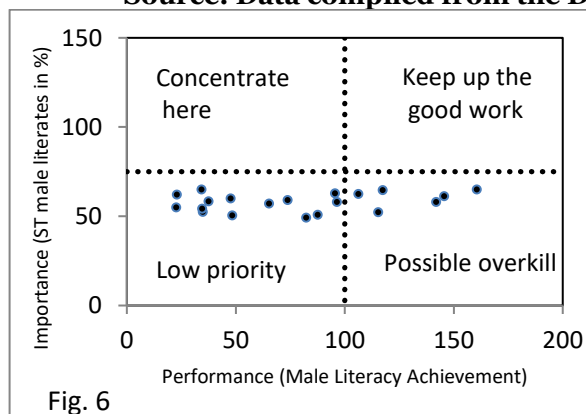


Fig.6 & Fig.7: Importance-Performance Analysis for ST Male and Female Literates
Source: Prepared by authors from Importance-Performance Analysis

Table 7: Block-wise variations of male ST literates from the mean, Purulia, 2011

Sl. No.	Blocks	% of ST Male Literates to ST Males	Mean	Variation from the Mean (Y- \bar{Y})	Zones of (-) Variation from Mean	Blocks in each zone
1	Jaipur	52.31	55.46	-3.15	High (> - 6)	Arsha
2	Purulia-II	54.91		-0.55		
3	Para	65.01		9.55		
4	Raghunathpur-II	62.01		6.55		
5	Raghunathpur-I	54.22		-1.24		
6	Neturia	57.01		1.55		
7	Santuri	58.93		3.47	Moderate (-3 to - 6)	Jhalda-II Bagmundi Balarampur Jaipur
8	Kashipur	64.86		9.4		
9	Hura	64.59		9.13		
10	Purulia-I	58.33		2.87		
11	Puncha	62.78		7.32		
12	Arsha	49.13		-6.33		
13	Jhalda-I	59.91		4.45	Low (0 to -3)	Raghunathpur-I Purulia-II
14	Jhalda-II	50.33		-5.13		
15	Bagmundi	50.73		-4.73		
16	Balarampur	52.11		-3.35		
17	Barabazar	57.85		2.39		
18	Manbazar-I	62.34		6.88		
19	Manbazar-II	61.11		5.65		
20	Bundwan	57.96		2.5		

Source: Data compiled from the District Census Handbook, Purulia, 2011

Table 8: Block-wise variations of female ST literates from the mean, Purulia, 2011

Sl. No.	Block	% of ST Female Literates to ST Females	Mean	Variation from Mean (Y-Ȳ)	the Zones of (-) Variation from Mean	Blocks in each zone
1	Jaipur	28.74	33.89	-5.19	High (>-7)	Jhalda-II Arsha
2	Purulia-II	33.99		0.1		
3	Para	38.4		4.51		
4	Raghunathpur-II	35.85		1.96		
5	Raghunathpur-I	32.87		-1.02		
6	Neturia	33.74		-0.15	Moderate (-5 to -7)	Bagmundi Jaipur
7	Santuri	36.05		2.16		
8	Kashipur	42.23		8.34		
9	Hura	40.71		6.82		
10	Purulia-I	35.03		1.14		
11	Puncha	38.59		4.7	Low (0 to -5)	Barabazar Raghunathpur-I Neturia
12	Arsha	26.44		-7.45		
13	Jhalda-I	36.49		2.6		
14	Jhalda-II	26.06		-7.83		
15	Bagmundi	27.39		-6.5		
16	Balarampur	27.89		-6		
17	Barabazar	31.53		-2.36		
18	Manbazar-I	36.16		2.27		
19	Manbazar-II	34.88		0.99		
20	Bundwan	34.75		0.86		

Source: Data compiled from the District Census Handbook, Purulia, 2011

The Importance-Performance Analysis (IPA) approach applied to study the performance of ST males and females in literacy has been graphically plotted with male and female literacy achievement on the horizontal axis and % of ST male and female literates, respectively, on the vertical axis of the scatter plots. The IPA reveal that most of the blocks concentrate in the Low Priority quadrant with both low performance and low importance, both for male and female literacy, indicating a very miserable picture of literacy in the district. Even a few blocks are seen in the Possible Overkill quadrant, indicating high performance but low importance (Fig. 6 & Fig. 7), namely blocks like Manbazar-I and II, Balarampur, Hura, Bundwan and Kashipur fall in the possible

overkill quadrant for male literates. For female ST literacy blocks in the possible overkill quadrant are Manbazar-II, Bundwan and Kashipur. These blocks are comparatively in a better position regarding awareness of the need for literacy among ST males and females of Purulia district.

The analysis of variations of ST male and female literates in various blocks of Purulia district reveals that we can identify some blocks of the district namely Arsha, Jhalda-II, Bagmundi, Balarampur and Jaipur where literates is low both among male and female (even below mean showing negative variation from mean) indicating the need for literacy awareness campaign for spreading universal elementary education for all in these blocks. High variation is noticed for female literates than for males, indicating that not all indigenous people are interested in educating the females of their family, which indicates the gender disparity in the achievement of basic literacy. High variation for male literates is noticed in Arsha block only, while high variation for female literates is noticed in Jhalda II and Arsha block. It is very striking that there is a low negative variation of female literates from the mean in Neturia block, wherein there is positive variation from the mean for male literates (Tables 7 & Tables 8).

4. Results and discussion

From the study, some important findings that can be noticed are: the concentration of female ST literates is low in blocks Jaipur, Jhalda-II, Arsha, Bagmundi and Balarampur. But, comparatively, the concentration of male ST literates is moderately low in Jaipur and Balarampur, while it is very low in Jhalda-II, Arsha and Bagmundi. So, naturally, the gender gap between the concentration of ST male and female literates will be greater in Balarampur and Jaipur.

Gender differentials in the achievement of basic literacy are quite high in some blocks of Purulia, and the district can be zoned on the basis of this gender differential. This differential is very high in Manbazar-II block, high in Bundwan, Kashipur and Balarampur, where there is a huge difference in basic literacy achievement level among the males and females of the indigenous groups (Apparao et.al., 2020) (Mukherjee & Laha, 2019). The correlation between the number of ST males and male literacy achievement is also stronger than the correlation between the number of ST females and female literacy achievement.

The IPA also revealed a dismal picture of literacy in the district, showing a concentration of most of the blocks in the Low Priority quadrant for both male and female literacy. The analysis clearly showed that female literacy is lagging behind male literacy in the district (Patra et.al., 2021) and enabled in identifying blocks, namely Arsha, Jhalda-II, Bagmundi, Balarampur and Jaipur with a low number of literates for both male and female STs and also identified Neturia block where female literates are below the mean but male literates are above the mean.

4.1 Literacy and variations in gender disparity in the achievement of basic literacy in the identified blocks

Low literacy achievement and lower literacy rates among males and more in the case of females have been identified in blocks, namely Arsha, Jhalda-II, Bagmundi, Balarampur and Jaipur blocks. Most of the Balarampur block and parts of the Jhalda-II block are forested and underdeveloped. Bagmundi, Arsha, Jaipur have a tribal population who are very poor and still unaware of the need to be literate.

The results of block-level gender disparity in the achievement of literacy reveal that the gender disparity is highest in Manbazar-II block, followed by a high male-female differential in achievement level of literacy in Kashipur, Bundwan, and Balarampur blocks, moderately high differential in Manbazar-I, Barabazar, Hura and Bagmundi blocks due to the remote geographical location of blocks like Balarampur, where the topography is too rugged and forested, the remote location of Bundwan and Bagmundi blocks, which are thereby underdeveloped. This underdevelopment and remote location, difficulty to access these blocks from major towns of the districts have led to lack of awareness among ST females about Sarva Shiksha Abhiyan scheme, the ST matric and pre-matric scholarships, no awareness of the need for education and right to education, vicious cycle of poverty among ST families which prompt families to engage children in labour especially engaging female children in domestic work and nursing babies rather than sending female children for preliminary education which is considered a luxury.

Lower gender disparity in literacy achievement is noted in Purulia-II and Raghunathpur-II blocks which may be due to their proximity to Purulia town where naturally the popularising of Sarva Shiksha Abhiyan, Universal Elementary Education scheme and other educational schemes like spreading of Adult Literacy implemented successfully at the village level through Panchayats have been very systematic or it may be the progress by the work of the NGOs in these blocks.

The gender gap in the concentration of ST literacy is lowest in Bundwan block, which is the highest ST concentrated block of the district, but the gender disparity in achievement of literacy is high in Bundwan, as it is a backwards block of the district.

4.2 Policy implications of the research

Female literacy among the indigenous people of the district has dwindled due to a lack of a sense of educational security that can be promoted to reduce gender disparity in literacy by:

1. Giving importance to the traditional knowledge (Apparao et. al., 2020) and heritage of indigenous culture in school curriculum:
 2. To promote educational security and inclusivity in the real sense, the curriculum of schools in tribal areas should cater to the needs (economic as well as social) of the specific tribal community, the natural ecosystem in which they dwell (Nayak & Kumar, 2022) and highlight on their culture and heritage and at the same time inculcate in children respect for other cultures also such the child feels secure and parents realise the need for educating the children with the community cultural values (Sucharita, 2023)
 3. The school holidays should be arranged according to the tribal festivals and customs and the peak agricultural activity periods when there is demand for labour, since most poor tribal families thrive on cultivation for livelihood (Mishra & Chatterjee, 2017)
 4. Teachers of schools in tribal areas must be from the tribal community who are well acquainted with the tribal culture and customs to foster inclusivity; be friendly and empathetic (Apparao et.al., 2020) to the needs of the students so that stress, fear and anxiety may not develop in the child that can lead to drop-out. Schools with students from diverse indigenous communities should have teachers experienced in dealing with diversity efficiently, popularising Government Schemes and pro-inclusive policies for education (Rad, 2022).
- (a) Popularising and spreading awareness about various government schemes like the Sarva Shiksha Abhiyan scheme for literacy for all, Pre-matric and Matric and post-Matric scholarships, nutritious mid-day meal in schools for their ward, popularising the Shiksha Shree scheme for ST day scholars to minimise drop-outs, hostel grant and Ashram hostels in Ashram residential schools and Eklavya model residential schools for ST students, Merit-Scholarship schemes for meritorious ST students, distribution of bicycles to students to come to school under the Shabuj Sathi scheme
 - (b) The government should take the initiative to provide education in the Olchiki language in schools located in tribal villages so that the tribal children can follow what is being imparted to them
 - (c) Proper monitoring of the educational development schemes and education provided to tribal students in the Ashram schools and Eklavya Model Residential schools in Tribal Sub-Plan areas is highly essential on the part of the government to promote literacy and educational development amongst the tribal groups.

Popularising Government Schemes for Economic Development by:

Aware the families of tribal students of the local employment opportunities and provide training in newer livelihood options in their area, so that they can come out of poverty through engagement in such economic activities.

Popularise schemes like 100 days job under Rashtriya Sam Vikas Yojana and Mahatma Gandhi National Rural Employment Guarantee Programme, and Job cards, Kisan Credit Card.

Spreading awareness to;

- Enable ST parents to realise the need for literacy (Rad et.al., 2022) through frequent counselling and motivational talks (Mohapatra, 2020) so that they may be able to take wise decisions socially and economically – such schools must have social-outreach units to reach out to the parents of the tribal children to undertake such social activities
- Help ST families to realise the need for educating their children for their own family's betterment and also for the development of their community
- Each tribal child must be counselled and trained to take the responsibility of upgrading and educating their community
- Attract public as well as private educational investment (Rad et.al., 2022) to boost infrastructural development of rural, remote schools.

5. Conclusion

Literacy and Education are vital pillars on which a society grows and develops. Gender disparity in literacy is a great threat to the tribal society because a mother is the primary teacher to a newborn. An ignorant, illiterate mother can never impart basic education to a child. A backwards, ignorant family will create a backwards, ignorant, poverty-ridden society. Though indigenous people are a storehouse of indigenous knowledge, yet proper education will further enable them to enrich their knowledge, strengthen them with a feeling of self-reliance and security and develop themselves socio-economically. So, it is very urgent to remove gender disparity in literacy among the Scheduled Tribes to enable them to become self-sufficient and independent, for promoting quality inclusive education – the mission of SDG 4.

6. Declaration of conflicting interest

The Authors declare that there is no conflict of interest concerning this study.

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8. Notes

Basic Education with relevance to tribal education is developing foundational competency skills like reading, writing, listening and speaking that are required by humans to perform simple and everyday literacy activities and develop respect for cultures of diverse indigenous communities

Importance-Performance Matrix (IPMA) is a tool that helps identify the most important areas for action by prioritising constructs to improve a target construct; here used to study the importance of literacy amongst the ST male and female population

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