

Literacy in India: The Gender and Age Dimension

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ABSTRACT This brief examines the literacy landscape in India between 1987 and 2017, focusing on the gender gap in four age cohorts: children, youth, working-age adults, and the elderly. It finds that the gender gap in literacy has shrunk substantially for children and youth, but the gap for older adults and the elderly has seen little improvement. A state-level analysis of the gap reveals the same trend for most Indian states. The brief offers recommendations such as launching adult literacy programmes linked with skill development and vocational training, offering incentives such as employment and micro-credit, and leveraging technology such as mobile-learning to bolster adult education, especially for females. It underlines the importance of community participation for the success of these initiatives.

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INTRODUCTION

Literacy is one of the most essential indicators of the quality of a country's human capital. Latest data¹ puts India's adult literacy rate^a at 73.2 percent. While the country has made significant progress in improving literacy over the years, it continues to be home to 313 million illiterate people; 59 percent of them are women.²

The high rates of illiteracy among Indian women—and the corollary gender gap in literacy attainment—are attributable to many social, economic and cultural factors. Even as the benefits of female education are public—including a more productive workforce, lower fertility and lower infant mortality—the costs such as tuition fees and school supplies as well as opportunity costs of forgone child labour, are privately borne by households.³ This leads to underinvestment in women's schooling.⁴ Accentuating the disadvantage for women are the social restrictions on their mobility that prevent an educated woman from entering the labour force and offering support to her household. The educational gender gap, therefore, is not only a reflection of the low economic returns to female education but is also a symptom of the entrenched biases that discourage the aspirations of women and other marginalised communities.⁵

Current literature is less clear about the correlation between household income and female education. One study of urban literacy and gender disparity across India,⁶ finds that

“neither in terms of absolute levels of literacy nor distributive justice, i.e., reduction in gender and caste disparities, does per capita income have any statistically significant positive bearing upon literacy status of states.” Similarly, another study observes that the importance of poverty as a cause of persistent illiteracy and widening gender gap has been inflated.⁷ Meanwhile, the World Bank highlights that the gender gap is affected more by social and cultural factors and less by absolute poverty.⁸ It recommends demand-linked measures to address the gender gap, such as awareness campaigns, childcare centres, and the hiring of more female teachers. Similar policy prescriptions are echoed by the Draft National Education Policy 2019 which recommends setting up a Gender-Inclusion Fund to build the nation's capacity to provide quality and equitable education for all girls.⁹

Most official reports focus on studying the adult literacy rate which measures literacy among individuals aged 15 years and above. However, a focus on just adult literacy is likely to underestimate the progress India has made in improving its literacy outcomes. The adult literacy rate for both males and females increases at a relatively sluggish rate since most of the progress in literacy occurs through improvement in child and youth literacy.¹⁰ Therefore it is important to study the gender gap in literacy for different age cohorts to get a clear understanding of the literacy landscape in the country and identify the key challenges constraining a convergence between male and female literacy. It is the primary aim of this brief.

a The adult literacy rate, as defined by UNESCO, is the percentage of the population aged 15 years and over who can both read and write with understanding a short simple statement on his/her everyday life.

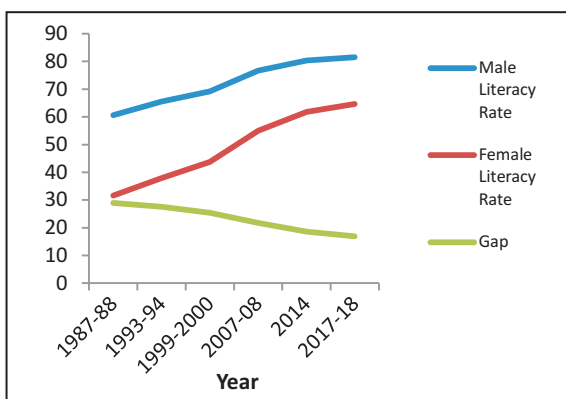
Data shows that the gender gaps in education, occupation and wages have shrunk sharply between 1983 and 2010 in most indicators; the gaps have narrowed most sharply for the youngest cohorts in the workforce.¹¹ However, these data are aggregate India-wide; given the variation in policies and outcomes across states, it would be worthwhile to analyse disaggregated data to better identify the causal channels at work.¹² This brief examines the gender gap in literacy in both national and state levels. It uses National Sample Survey Office (NSSO) data from rounds 43, 50, 55 and 64 of the Employment and Unemployment Survey, round 71 of the Social Consumption (Education) Survey and the Periodic Labour Force Survey (2017-18).

GENDER GAP IN LITERACY

Overall Gender Gap in Literacy

About three decades ago, the adult male literacy rate in India was almost twice that for adult females. While this gap has narrowed substantially over the years, adult male literacy rate still surpasses the adult female literacy rate by 17 percentage points. (See Figure 1 and Table 1.)

Figure 1: Trends in male and female literacy



Source: National Sample Survey @ Observer Research Foundation's India Data Labs

To put these numbers in perspective, the current gender-gap in literacy in India is more than twice the 2016 global average and is also higher than the 2016 average for lower-middle-income countries.¹³ There are currently 186 million females in India who cannot even read and write a simple sentence in any language.¹⁴ These numbers are a reminder that India is still a long way from meeting Goal 4 of the UN SDGs (Sustainable Development Goals) of ensuring “inclusive and equitable quality education” and “lifelong learning opportunities for all” by 2030.¹⁵

Gender Gap in Literacy by Age

The literacy gender gap was studied for age cohorts 15-24 years (youth), 25-64 years (working-age population) and 65 years and above (elderly) as per the standard age brackets studied by UNESCO.¹⁶ In addition, a category for 6-14 years (children) was also included since Indian laws establish free and compulsory education for this age group as a fundamental right.¹⁷

Figure 2 shows male and female literacy rates as well as the gap between the two for children, from 1987-88 to 2017-18. Literacy

Table 1: Trends in male and female literacy

	1987-88	1993-94	1999-00	2007-08	2014	2017-18
Male Literacy Rate	60.6	65.5	69.2	76.6	80.3	81.5
Female Literacy Rate	31.6	37.9	43.8	54.9	61.8	64.6
Gap	28.9	27.6	25.4	21.7	18.5	16.9

Figure 2

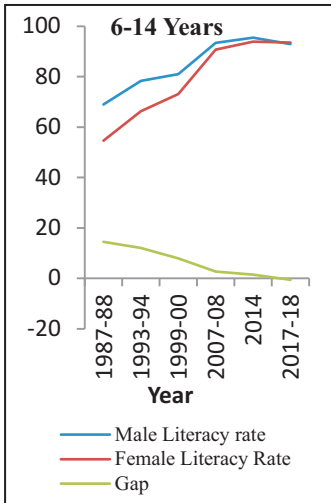


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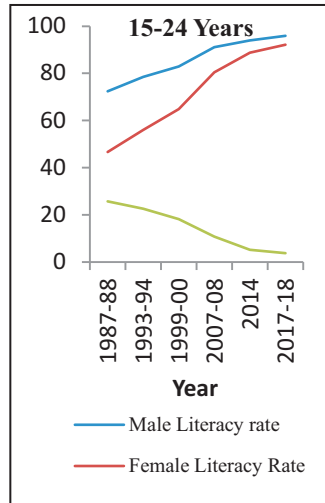


Figure 4

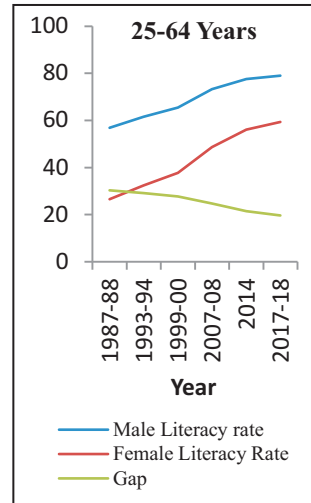
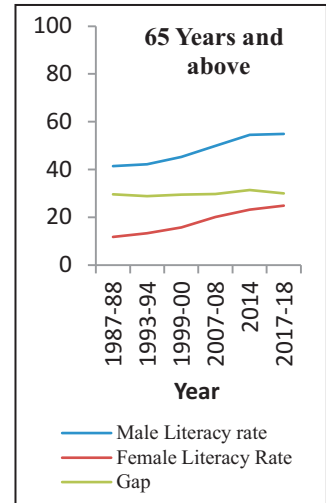


Figure 5



Source: National Sample Survey @ Observer Research Foundation's India Data Labs

rates for children are the highest in the country across all age groups. The same figure also shows that the literacy gender gap in children has been successfully closed, possibly reflecting a change in attitudes and mindsets.¹⁸ This can be attributed to the spirited literacy efforts by government and non-governmental organisations (NGOs) to get more girls, in particular, to attend school.¹⁹

Figure 3 shows the literacy trends for youth in India (15-24 years). The current gender gap for this age group is 3.7 percentage points, which is almost one-fifth of the overall gender gap for India. This shows that among Indian youth, female literacy is catching up fast with male literacy. Figures 4 and 5 show the literacy trends for the working age population (25-64 years) and the elderly (65 years and above). The literacy gender gaps for the two age categories are 20 and 30 percentage points, respectively—significantly higher than the average literacy gender gap for India.²⁰ This shows that gender disparities in literacy skills are wider for older adults and the elderly and are improving less quickly as

compared to the patterns for children and youth.

KEY FINDINGS AND IMPLICATIONS

1. India in 2017 is far more literate than India in 1987.

India has successfully broken out of the “low literacy trap”²¹ in which the illiteracy of parents leads to poor literacy outcomes for the successive generation. Child and youth literacy numbers for both males and females show that sustained efforts to improve literacy have borne fruit over the years. The introduction of the Mid-Day-Meal Scheme (1995),²² for example, and the Sarva Shiksha Abhiyan (2001),²³ as well as the enactment of RTE (Right to Education Act, 2009)²⁴ have contributed significantly to improving literacy. According to latest available data,²⁵ child and youth literacy in India stands at 93 percent and 94 percent, respectively. If India is able to sustain this momentum, then the country might be able to achieve universal literacy for children and youth by 2030.

2. The gap between male and female literacy rates for children and youth has been shrinking steadily, signalling greater gender parity in literacy attainment.

The problems in female education are not confined to issues of increasing access, expanding coverage and improving quality. Rather, the biggest hurdle is to transform mindsets and convince parents to send their daughters to school.²⁶ Indeed, programmes such as NPGEL (National Programme of Education for Girls at Elementary Level, 2003)²⁷ have played an instrumental role in improving female literacy, alongside cash-incentive schemes such as Dhanlakshmi (2008),²⁸ initiatives such as construction of toilets for girls (under the Swachh Vidyalaya Initiative²⁹) and campaigns such as ‘*Beti Bachao, Beti Padhao* (literally, Save the Daughters, Educate the Daughters)’.³⁰ These interventions were designed to identify and overcome the various hurdles associated with the education of girls, and today, far more Indian girls are literate as compared to their mothers.

3. The illiteracy of older adults and the elderly is driving down the overall literacy numbers of India.

Child and youth literacy has always been high on the development agenda. However, illiteracy among older adults is also a pressing concern, as illiterate adults are more susceptible to ill health, exploitation and human rights abuse. They are more likely to remain unemployed and earn lower wages.³¹

The National Literacy Mission (NLM) launched in 1988 included adult education as one of its key components. It focused on imparting functional literacy to non-literates in the age group of 15-35 years.³² More recently, a

new variant of the NLM called *Saakshar Bharat* (2009) was introduced to bolster adult education and skill development.³³ Furthermore, as an auxiliary to the formal education system, night schools have been playing an important role in educating those adults who work during the day or those who have crossed the age of formal education. The education of older adults, therefore, has not been completely neglected by Indian policymakers, although it deserves more attention.

The progress that India has made in the realms of child and youth literacy often gets offset by its poor performance in the literacy of older adults. This is one of the reasons why India still ranks low in most of the global human capital indices.³⁴

To achieve universal literacy by 2030, literacy campaigns and initiatives should be integrated with non-formal education programmes for older adults. These initiatives need to be creatively designed so that India is able to nudge³⁵ older adults towards becoming literate. Awareness campaigns must focus on breaking social stereotypes that prevent older adults, and women in particular, from becoming literate. At the household level, as the younger generation becomes more educated than their elders, the onus of creating literate homes should shift from the older generation to children and youth.

4. The wide literacy gender gap for older adults and the elderly is masking the progress made with regards to the gender gap for children and youth.

Latest NSS data reveals that female literacy for the working-age population is 59 percent, 20

percentage points lower than the male literacy rate for the same group.³⁶ While educating young girls will continue to be India's top priority, policymakers must keep in mind that educating and empowering mothers is just as important as "*betipadhao*".

5. India is on track to achieve universal literacy for youth by 2030. The need is to focus on education quality, digital literacy, and skilling.

Even as India has its fundamentals in place, the country must ensure that the younger generation is able to benefit from digitisation and not suffer its costs. In order to make youth employable and train them for jobs that have not even been created yet, digital literacy must become a priority.

THE SITUATION ACROSS STATES

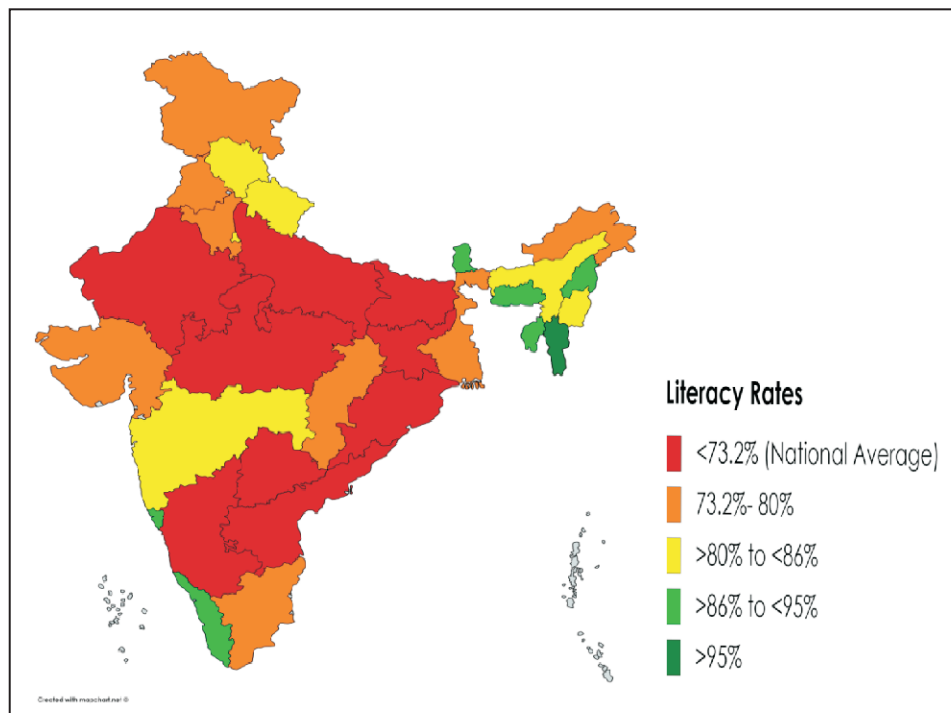
This section examines the trends for the states and investigates the outliers, if any.

State-wise Adult Literacy Performance

Latest NSS Data found Mizoram to be the most literate state in India, with an adult literacy rate of 98 percent; Andhra Pradesh, meanwhile, is the least literate state, with an adult literacy rate of 61 percent.³⁷

As shown in Figure 6, the five states with the highest rates of illiteracy are UP, Bihar, Rajasthan, West Bengal and Maharashtra. These states make up 34 percent of the country's total population of illiterate adults. These numbers highlight the lack of improvement in literacy at the state level. It is noteworthy that these states have historically had extremely low literacy rates. Data from the 43rd NSS Round (1987-88)³⁸ and the Periodic Labour Force Survey (2017-18)³⁹ show that all states have been able to make remarkable progress in literacy. Thus, all states conform to the first finding from this analysis: that literacy in India has improved over the past three decades.

Figure 6: State-wise Adult Literacy Performance in India



Source: Periodic Labour Force Survey(2017-18), NSSO @ Observer Research Foundation's India Data Labs

Literacy Gender Gap by State

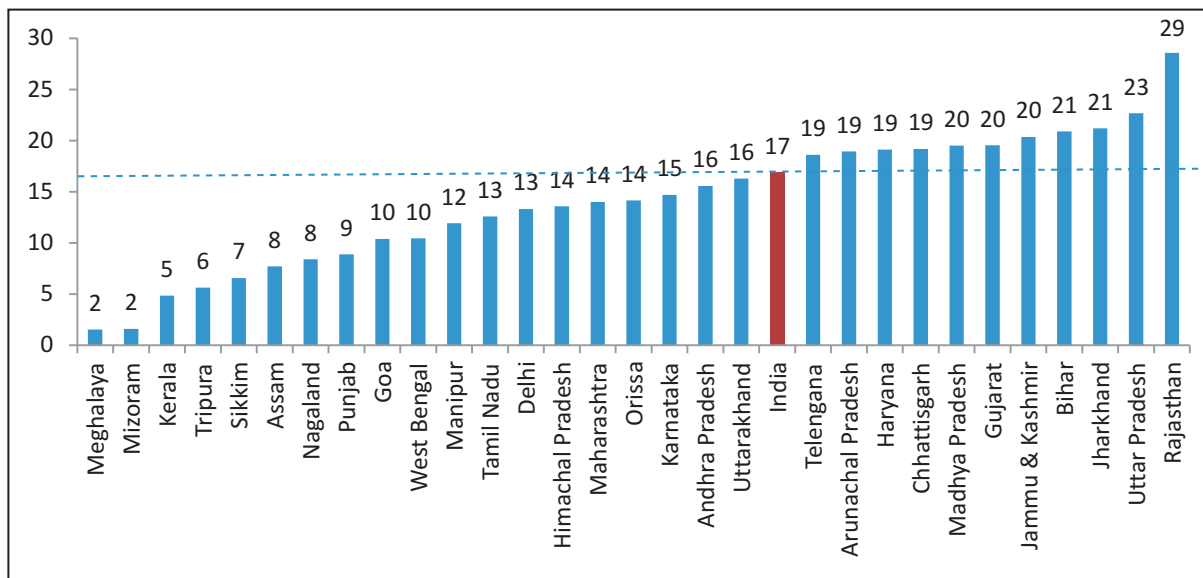
Rajasthan is the worst performer in terms of the literacy gender gap. At 29 percentage points,⁴⁰ the literacy gender gap in Rajasthan is more than four times the 2016 global average gap. The female literacy rate in the state stands at 49.3 percent⁴¹—meaning that one of every two females in Rajasthan is illiterate. On the other end of the scale, Kerala and northeastern states such as Meghalaya, Mizoram, Tripura, Assam, and Nagaland have a literacy gender gap of less than nine percentage points, making them the top performers among all of India’s states. Such exemplary performance by these states can be attributed to various historical

and socio-cultural factors, and not solely the successes of specific policy initiatives.^b

Literacy Gender Gap by Age and by State

Figure 8 shows the reduction in the literacy gender gap for children, for each state over a span of 30 years (from 1987-88 through 2017-18). Rajasthan has made extraordinary progress in this category. As per the 43rd NSS Round (1987-88), the male and female literacy rates in Rajasthan were 63.5 percent and 30 percent, respectively. However, data from the Periodic Labour Force Survey (2017-18) shows a convergence in male and female literacy rates for children in Rajasthan, with

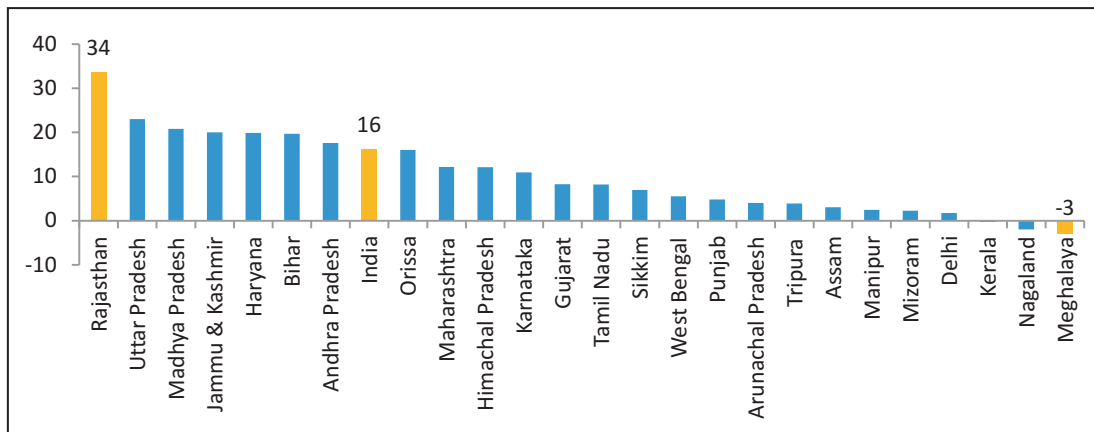
Figure 7: Gender Gap in Literacy Rates (2017-18)



Source: Periodic Labour Force Survey (2017-18), NSSO @ Observer Research Foundation’s India Data Labs

b In Kerala, the benevolence of native princes and their progressive policies triggered educational development in the state. These initiatives were reinforced by the efforts of Christian missionaries and indigenous churches during the major part of the 19th century and social reform movements such as the SNDP Yogam (1903) and SJP Sangham (1907) during the first half of the 20th century. In the northeastern states, relatively high literacy rates are attributable to the efforts of various missionary groups such as the American Baptist Mission, the Dutch Baptists, Presbyterian groups and the Roman Catholics. Their most significant contribution was that they converted tribal dialects into written languages and prepared primers for schools. Among the non-Christian missionary groups, Ramakrishna Mission and Vivekananda Society worked extensively to promote education in the north-east region.

Figure 8: Reduction in the Literacy Gender Gap over 30 Years in the Age Group 6-14 Years (1987-88 to 2017-18)



Source: National Sample Survey @ Observer Research Foundation's India Data Labs

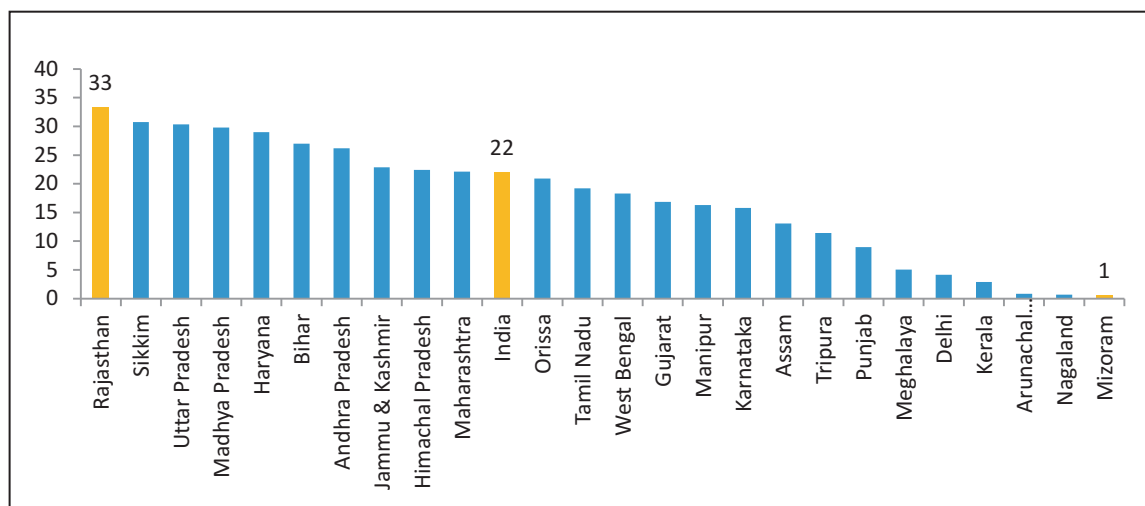
male literacy rate standing at 95.3 percent and that for females at 95.4 percent. The numbers for states such as Uttar Pradesh and Madhya Pradesh paint a similar picture.

The trends for youth literacy are similar to those for children. Rajasthan is again the top performer, having reduced the literacy gender gap from 43 percentage points to nine percentage points over three decades. While the gender gap in Rajasthan is still more than twice the national average, there has been a

significant improvement in literacy in this state, in absolute as well as relative terms. The lowest reduction in the gender gap during the same period has occurred in Mizoram, because to begin with, the gap was already negligible 30 years ago.

Thus, even a state-level analysis confirms that the gap between male and female literacy rates for children and youth has been shrinking steadily, thereby signalling greater gender parity in literacy attainment.

Figure 9: Reduction in the Literacy Gender Gap over 30 Years in the Age Group 15-24 Years (1987-88 to 2017-18)



Source: National Sample Survey @ Observer Research Foundation's India Data Labs

As discussed earlier, illiteracy and prevalence of a wide literacy gender gap among older adults has been obscuring the progress made with regard to child and youth literacy. Figure 10 shows that all northeastern states (barring Nagaland), along with Himachal Pradesh, West Bengal, Tamil Nadu, Punjab, and Kerala have been able to reduce the gender gap by more than 60 percent over a span of 30 years. Therefore, it would be fair to conclude that progress has been made in improving literacy and reducing the gender gap at the state level. At the same time, it cannot be ignored that for this age cohort, the literacy numbers are woefully low and the gender gap is alarmingly wide. Even though most states have made great strides in improving literacy and reducing the gender gap for children and youth, they have not been able to make progress with older adults.

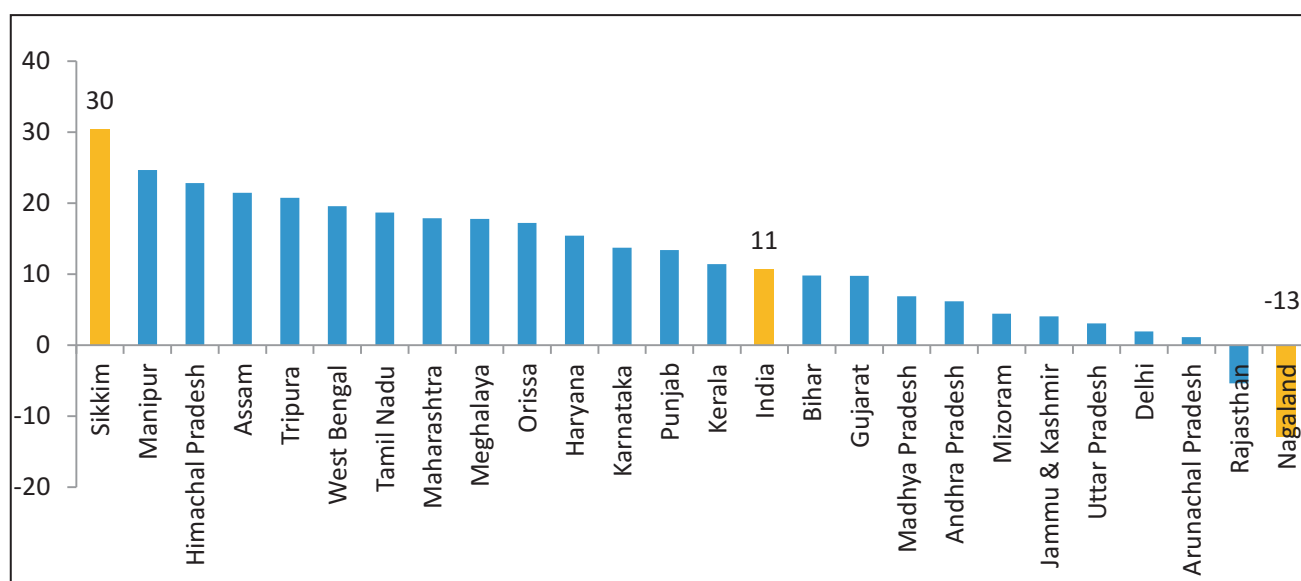
For example, while Rajasthan is the top performer in achieving gender parity in

literacy for children and youth, it is one of the worst performers in older adults. Since older adults are a significantly large proportion of the total population of the state, that makes Rajasthan the worst performer among all states when it comes to the overall gender gap in literacy. The numbers for Uttar Pradesh and Madhya Pradesh tell a similar story.

Among the elderly, more than 50 percent of the states show an increase in the literacy gender gap over three decades. Illiteracy among the elderly and the steadily widening gender gap serves as a reminder of the failure of India's primary education and adult education programmes over the years.

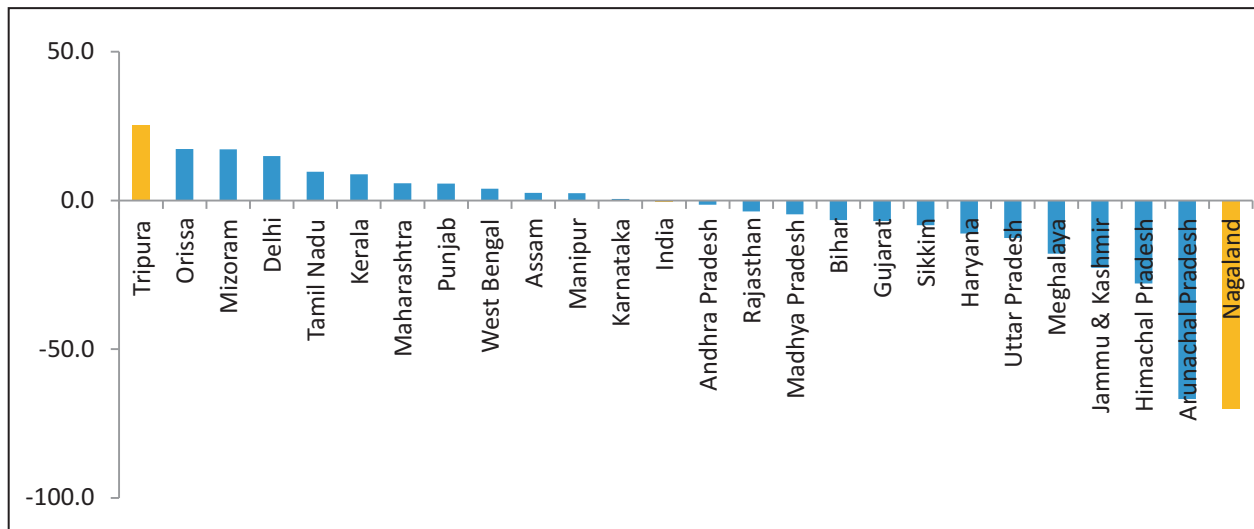
These numbers conform to the findings at the national level. Literacy skills are generally acquired through formal education at a young age. Even for those who had participated in adult education programmes, literacy skills may be lost over time due to lack of practice.⁴²

Figure 10: Reduction in the Literacy Gender Gap over 30 Years in the Age Group 25-64 Years (1987-88 to 2017-18)



Source: National Sample Survey @ Observer Research Foundation's India Data Labs

Figure 11: Reduction in the Literacy Gender Gap over 30 Years in the Age Group 65+ Years (1987-88 to 2017-18)



Source: National Sample Survey @ Observer Research Foundation's India Data Labs

Moreover, females have historically had a lower literacy rate as compared to males, which explains the existence of the wide gender gap.

POLICY PRESCRIPTIONS

Over a span of three decades, the nature of the hurdles India has been facing with regard to literacy has changed. As new challenges have emerged, the country's goalposts have shifted and so should its policies. Promoting literacy among older adults while paying special attention to gender parity are issues that can no longer take a backseat.

The solution seems simple: focus on making older adults literate. However, putting this idea into action is far more difficult than it may sound. There are multiple barriers that have to be overcome to ensure participation in adult literacy programmes—including institutional roadblocks (lack of night schools or high entry fees); situational hurdles (related to family); and dispositional as well (psychological factors that may impede an

individual's decision to participate).⁴³ The following paragraphs offer policy recommendations to tackle these barriers.

Embed Skill Training into Adult Literacy Programmes

One of the biggest dispositional barriers preventing older adults from engaging in literacy programmes is that they see little utility and relevance for the same. However, if such programmes are linked to learning additional skills such as vocational training, then they are likely to solicit wider participation. Taking a cue from other countries, programmes can be designed that place literacy learning in the context of rights awareness, health and food security (such as in Zambia), reproductive health, community mobilisation and communication (Gambia), and learning skills that support income-generating activities (Sierra Leone).⁴⁴ In order to close the literacy gender gap for older adults, adult literacy programmes that also offer women training in skills such as bangle-

making, block-painting, jute-work and other handcrafts should be designed to elicit greater participation. In India, the three states that need such programmes the most, especially for older adults are Arunachal Pradesh, Rajasthan and Nagaland. (See Figure 10)

Link literacy with employment schemes and offer additional incentives

Participation in adult education programmes should be linked to eligibility for the various employment schemes offered by the government. Additional incentives such as the provision of micro-credit facilities and grants to participants should also be offered.⁴⁵

Leverage technology to promote literacy among older adults

In Eritrea in Africa, radio programmes are broadcast in four local languages to support literacy, post-literacy, agricultural and health programmes.⁴⁶ In a similar spirit, literacy programmes in local languages can be broadcast on the radio to reach older adults even in distant parts of India. Moreover, the rapid growth in mobile phone coverage in India can be leveraged to launch mobile-learning programmes for older adults. As per the telecom statistics report released by TRAI,⁴⁷ India had 1,026.37 million active mobile users on 2G, 3G and 4G networks in 2018. A field experiment done in Niger found that training adults to use mobile phones improves their learning outcomes when added to a standard adult education programme. By teaching them how to use mobile phones, adult learners were able to practice these skills outside of class by text messaging, making phone calls, and using mobile money.⁴⁸ Thus,

incorporation of mobile phones into adult education programmes can improve skill acquisition of adult learners.

Incidentally, there are several literacy programmes that have been launched in India that have leveraged technology successfully in the past. The Satellite Instructional Television Experiment (SITE) was an experimental satellite communications project launched in India in 1975, designed jointly by the US' NASA and the Indian Space Research Organization (ISRO).⁴⁹ The one-year project made informational television programmes available to rural India. Similarly, EDUSAT was another satellite launched by ISRO in 2004 which facilitated distance-learning and teacher training programmes for six years until it was decommissioned in 2010.⁵⁰ Even as such programmes offered creative and innovative solutions, they were not able to move the needle on literacy in India, primarily because they were discontinued too soon. Therefore, it is important to not just design such programmes but also ensure that they are implemented at a large scale and continued for a sufficiently long period.

Encourage community participation and volunteerism

The National Literacy Mission (1988) was based on a foundation of community engagement and volunteerism. Apart from imparting basic literacy and numeracy skills, the NLM also sparked off discussions and dialogue on relevant social issues such as women empowerment, domestic abuse and alcoholism. However, towards the end of the mission, the voluntary nature of the mission got diluted, and the mission lost efficacy.⁵¹ It is

therefore crucial to mobilise volunteers and seek community participation for the success of any adult literacy campaign. As mentioned in the draft of the National Education Policy 2019, if every literate member of the community could commit to teaching one student/person how to read, it would change the country's landscape very quickly.⁵²

CONCLUSION

“Literacy is a bridge from misery to hope,” once said former UN Secretary-General Kofi Annan. “It is a tool for daily life in modern society. It is a bulwark against poverty and a building block of development, an essential complement to investments in roads, dams, clinics and factories.”⁵³ More than two decades since Annan said these words, they still ring true. As India climbs the development ladder, literacy must occupy a high spot on the policy agenda since it not only has a high intrinsic value but is also a powerful force multiplier.

This study assessed the literacy landscape in India by analysing the literacy gender gap for different age cohorts over a span of three decades. The findings of this study show that India has not only made substantial progress with regard to literacy but has also achieved greater gender parity in literacy attainment. India is on track to achieve universal literacy among children and youth by 2030. Moreover, there has been a convergence in the male and female literacy rates for children and a consequent closing of the literacy gender gap; there will likely be similar success for youth in the years to come. However, the third key finding of this study points out that growth in overall literacy numbers is likely to be tepid

owing to the prevalence of widespread illiteracy among older adults and the elderly. Furthermore, the literacy gender gap for older adults and the elderly is much wider than that for youth, thereby showing a lack of gender parity in their literacy attainment. The same patterns are seen at the state level.

As a nation, India must aim to conquer the hurdles posed by illiteracy, not only to preserve its economic vigour but also to ensure that every individual has a full range of opportunities for personal fulfilment and participation in society. For older adults and the elderly in particular, literacy plays an essential role in enabling them to remain in or rejoin the work force, to contribute to society through volunteerism and civic participation, and to live full, independent, and productive lives through their later years.⁵⁴

As India develops into a 21st-century knowledge economy, the definition of literacy must evolve to reflect the changing needs of society. Literacy must no longer be confined to the basic, foundational skills of reading and writing but linked to the broader notions of financial, digital, civic and multicultural literacy. These evolving definitions of literacy must be integrated into the policy discourse to ensure economic progress and social advancement of both individuals and the society.

The analysis of the literacy trends and gender gap in this study tells a story; it is important to listen to the story and understand its nuances so that India can readjust its policies. There is no dearth of problems when it comes to the state and status of education in India and no issue is less

important than the other. However, literacy is not just valuable by itself but is necessarily linked to all aspects of education. In India, thousands of women and men enter adulthood without possessing the ability to read and write and consequently miss out on

opportunities that would have enabled them to improve their lives and contribute to the country's growth. If this unfortunate trend is to be arrested, policymakers need to re-examine their development agendas and make adult education a priority. [ORF](#)

ABOUT THE AUTHOR

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23. Sarva Shiksha Abhiyan (SSA) is Government of India's flagship programme for achievement of Universalization of Elementary Education (UEE) in a time bound manner, as mandated by 86th amendment to the Constitution of India making free and compulsory Education to the Children of 6-14 years age group, a Fundamental Right.
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27. The NPEGEL (National Programme for providing education of Girls at Elementary Level), launched by the Indian Government in July 2003, aims at providing education to the girls who are residing in the most remote areas of India.
28. Dhanalakshmi was a conditional Cash Transfer Scheme for Girl Child, launched on 3rd March, 2008 on a pilot basis to provide a set of staggered financial incentives for families to encourage them to retain the girl child and educate her.

29. Under Swachh Vidyalaya Initiative which aimed to provide separate toilet blocks for girls and boys in each school, 4,17,796 toilets were constructed in a period of one year from 15.8.2014 to 15.8.2015, thus ensuring that every single government school now has separate toilets for girls and boys.
30. Beti Bachao Beti Padhao is a joint initiative of Ministry of Women and Child Development, Ministry of Health and Family Welfare and Ministry of Human Resource Development. This is being implemented through a national campaign and focuses on multi-sectoral action in 100 selected districts low in child-sex-ratio, covering all states and Union Territories.
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