



BIROn - Birkbeck Institutional Research Online

Kapur, Sandeep and Murthi, M. (2009) Literacy in India. Working Paper. Birkbeck College, University of London, London, UK.

Downloaded from: <https://eprints.bbk.ac.uk/id/eprint/7615/>

Usage Guidelines:

Please refer to usage guidelines at <https://eprints.bbk.ac.uk/policies.html>
contact lib-eprints@bbk.ac.uk.

or alternatively

ISSN 1745-8587



School of Economics, Mathematics and Statistics

BWPEF 0907

Literacy in India

Sandeep Kapur

Birkbeck, University of London

Mamta Murthi

World Bank, Washington DC

August 2009

Literacy in India

August 2009

Sandeep Kapur¹
Department of Economics
Birkbeck, University of London

Mamta Murthi
World Bank
Washington, DC

This note examines the long-term trends in literacy in India, assesses the argument for public intervention and the efficacy of policy approaches.

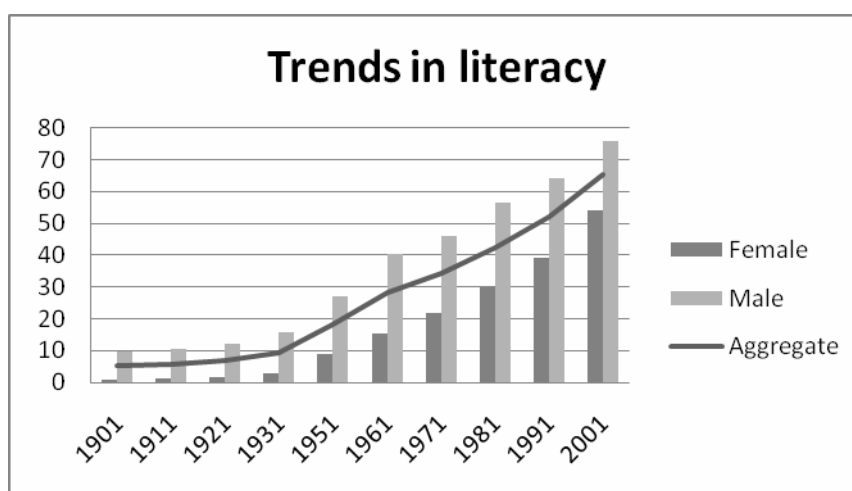
¹ Department of Economics, Mathematics and Statistics, University of London, Malet St, WC1E 7HX, UK; email s.kapur@bbk.ac.uk

Introduction

Literacy refers to an individual's ability to communicate through reading and writing. The literacy rate for any population measures the fraction of the population, above a certain cut-off age, that is literate. Based on the most-recent statistics compiled by UNESCO, more than one in three Indians above the age of 15 years is unable to read and write. Further, the roughly 268 million adult illiterates in India constitute one-third of the global population of illiterates. International comparisons show that the Indian literacy rate is well below those for other populous countries like China and also below those for developing countries in general.

The main source of information on literacy in India is the decennial Census. The Census enumerates a person as literate if they can 'read and write with understanding in any language'. Currently the Census reports aggregate literacy rates for the population aged 7 years and above. As Figure 1 shows, the literacy rate has risen significantly, especially in the post-Independence period. From a low level of 18.3 percent of the population in 1951, it rose to 65.4 percent in 2001. The recorded improvement in the most recent decade is notable in that with a 13 percentage point increase in literacy, the absolute number of illiterate people fell for the first time since Independence (from 328 million in 1991 to 296 million in 2001).

Figure 1



Source: Census of India, various years.

This data carries some caveats. One, the determination of literate status is based on self-reporting by respondents, or on inference by the census enumerator, with little attempt to verify actual literacy skills. Literacy tests administered as part of household surveys carried by the National Sample Survey Organization (NSSO) in 1991 found that more than a third of self-declared literates in the sample were illiterate (Govinda and Biswal, 2005). This suggests that the estimates provided by the Census of India may be biased upwards. Two, the current '7+ years' threshold for computing aggregate literacy rates differs from that used by the Census till 1971 ('5+ years') and from that used commonly in international comparisons ('15+ years'). The difference matters. Aggregate literacy can be viewed as a weighted average of age-specific literacy rates. If the age-specific literacy of 5-6 year olds is lower than the average literacy of the '7+' age groups, a switch to the higher threshold can

overstate improvements in literacy. Despite these caveats, estimates of the trends may be broadly accurate.

The Many Dimensions of Disparity

The distribution of literacy in India is uneven. As Figure 1 shows, the literacy rate for males has been consistently higher than the rate for females. In 1951 less than 9% females were literate while the corresponding number for males was over 27%. The gender literacy gap has narrowed in recent decades, but remains large: in 2001, the female literacy rate of 54.2% was significantly below the male rate, 75.9%. Two, there is strong regional variation in literacy rates. Broadly speaking, the populous states of north India have lower literacy levels (and also greater gender disparity) than the southern states. Comparing states in 2001, Kerala had the highest literacy rate of 90.9% (94.2% for males, 87.9% for females) while Bihar had the lowest with 47.5% (60.3% for males and 33.6% for females).

Three, urban literacy is higher than rural literacy. In 1951, only 12.1% of rural population was literate relative to 34.6% of the urban population. For 2001 the literacy rate was 59.4% in rural areas compared to 80.3% in urban areas. Four, literacy rates vary across age groups: younger cohorts, such as those aged between 10-20 years have higher literacy rates than older cohorts because of recent improvements in access to education. There is also a strong socio-economic dimension to literacy. Current literacy rates for Scheduled Castes (54.7%) and Scheduled Tribes (47.1%) are significantly lower than the population as a whole, though Scheduled Tribes in the north-eastern states are an exception. Lastly, the 2001 Census released literacy rates by religion for the first time – literacy among the Muslim population (both men and women) was found to be lower than the national average.

While Census statistics are built around a simple, self-reported, binary classification (literate or illiterate), broader notions of literacy exist. For UNESCO literacy is ‘the ability to identify, understand, interpret, create, communicate, compute and use printed and written materials associated with varying contexts. Literacy involves a continuum of learning to enable an individual to achieve his or her goals, to develop his or her knowledge and potential, and to participate fully in the wider society.’ Notions of functional literacy focus on the ability to use literacy in daily life. Unfortunately, there is no good quality, systematic assessment of such broader notions of literacy in India at the state or national level.

Why does literacy matter?

Arguably literacy is an essential determinant of the quality of life. By enhancing cognitive skills, literacy enables fuller development of human potential, and helps to promote a sense of self-worth and dignity. As such literacy is often proclaimed as a human right and measures of literacy are included directly in indices of human welfare. For instance, a country’s adult literacy rate is a significant component of UN’s Human Development Index. Literacy also plays a prominent role in social development. In India, literacy, especially female literacy, is the single most important factor associated with lower fertility and higher child survival, far outweighing in statistical significance other factors commonly associated with economic development such as income and urbanization. Female children have significantly higher chances of survival relative to male children in districts with

high levels of female literacy and, more generally, greater female empowerment (Murthi, Guio and Drèze, 1995).

In addition to its intrinsic value and wider social benefits, literacy is essential to economic transformation. A minimal level of literacy and numeracy for is essential for participation in market transactions and fuller realization of economic potential. In particular, it enables greater and more effective participation in labour markets. Literacy is often a pre-requisite for the acquisition of many other skills. The extent to which illiteracy poses a barrier to economic participation may depend on other considerations: for instance, an illiterate person with access to at least one literate household member (proximate illiterate) may not be as disadvantaged as one who belongs to a household where all members are illiterate (isolated illiterate). Also, while literacy can be achieved in any one of many languages, it may be advantageous to be literate in a language that is commonly used in economic interactions. At the aggregate level, there is considerable evidence of a positive link between investment in human capital and rates of economic growth. More specifically for India, there is evidence that states with higher initial levels of literacy have experienced stronger poverty reduction since the 1960s, other things being equal, than states with weaker starting positions (Datt and Ravallion, 1998).

The need for public intervention

While these benefits of literacy seem self-evident, at least to those who are already literate, the advantages of literacy can be less obvious to illiterate people. The acquisition of literacy requires sustained individual investment in time and effort to develop cognitive skills (to decipher written text) and fine motor skills (to be able to write). Such skills are more readily acquired at a relatively young age when learning is easier and the opportunity cost of time is low but children themselves are not best placed to assess the merits of literacy. In many countries, cultural biases lead even parents to underestimate the benefits of literacy for their children, especially for girls. More generally, gaining literacy involves a beneficial externality in that others gain through enhanced communication possibilities with those who choose to become literate. If so, the social return to investment in literacy is likely to exceed the private return.

Not surprisingly, extension of literacy has been the subject of considerable effort around the world, both by the state and increasingly by non-state actors. Education for All, an international initiative, was launched in 1990 to accelerate progress with achieving universal primary education and raising adult literacy. Most countries around the world aspire to providing universal primary education, but in many cases the achievement of this goal has been limited by supply constraints (not enough schools and teachers) or less than universal take-up even in the absence of tuition fees. Governments have sought to make attendance at primary school level mandatory, or use other means to nudge the population to enrol. Incentives such as Conditional Cash Transfers (monetary payments made to households contingent on their children attending school regularly) and free school meals can enhance school attendance, especially in deprived sections of the population.

Why has it taken so long to reduce illiteracy?

Addressing illiteracy in a population requires extension of literacy among the stock of illiterate adults (through adult education) and among the flow of entrants (via education of children). The relative size of the two populations determines the magnitude of effort and resources needed in each

category. As listed in Table 1, in India roughly 263 million adults (those aged 15 years or above) and 33 million children of school-going age (7-14 years) were classified as illiterate in 2001. In addition, there were 164 million illiterate children between 0 to 6 years of age. Reducing illiteracy among children requires that the large cohort of children entering school-going age enrol and complete basic education. Helping the 33 million 7-14 year olds who are illiterate is important, as is encouraging the 167 million literate 7-14 year olds to complete school. But even with high enrolment and progression rates, aggregate illiteracy rate is likely to remain high without efforts directed specifically at reducing adult illiteracy. We review recent progress in each of these categories.

Table 1: Age Distribution of population by literacy in millions, 2001

Age (in years)	Population	Literate population	Illiterate Population
0-6 years	164	0	0
7-14	200	167	33
15+	664	401	263
All	1028	732	296

Source: Census of India 2001 for population totals and total number of illiterates. Age-specific literacy rates are not available from the 2001 Census, so we use estimates provided by Govinda and Biswal (2005) based on National Sample Survey and National Family Health Survey data.

In India, a recent surge in enrolment rates of children of school-going age has begun to reduce flows into illiteracy. As part of the worldwide 'Education for All' programme, a range of initiatives launched by the government and various non-government organisations (NGOs) pushed the school enrolment of children aged between 6 and 14 years to 79 percent in 2000. Enrolment rates have since risen further under *Sarva Shiksha Abhiyan* (SSA) launched in 2001 to raise enrolment of children in this age-group to 100 percent and encourage all children to complete eight years of school. The SSA is financed in part by a surcharge of 2 percent on tax receipts collected since 2004. Central government funding of SSA has financed improvements in school infrastructure, and the recruitment and training of more teachers. Related schemes have encouraged school attendance in other ways, notably through mid-day meal schemes. By some estimates enrolment of children aged 6-14 stood at over 95 percent in 2004. It is expected to be boosted further by the recent enactment of the *Right to Education Act* which makes education compulsory and free for all 6-14 year olds.

Despite this surge in enrolment, learning outcomes remain weak. In part, this is because drop-out rates remain high. According to government statistics, over a third of enrolled children are estimated to drop out at the primary school level (Standard 1-5), with the figure rising to over 50 percent by the time students reach the lower secondary level (Standard 6-8). Drop-out rates are even higher for categories such as Scheduled Caste and Scheduled Tribes which are more vulnerable to the risk of remaining illiterate. Besides, there are questions of whether enrolled children are able to acquire basic literacy skills. There are no nation-wide standardized assessments of learning outcomes at the primary level. However, non-official assessments such as the report series compiled by *Pratham*, a non-government organisation, point to serious shortcomings in reading skills of rural children: in 2008 only 56 percent of children in Standard V were found capable of reading a Standard II text (a short paragraph) with fluency.

What factors contribute to the poor learning outcomes of primary school students in India? A wide variety of factors come into play including the poor quality of schooling infrastructure, non-

availability of textbooks, inappropriate curricula, and shortcomings in teacher competencies and effort. Of all these, teacher effort is the factor which has been the most widely studied. The Public Report on Basic Education in India found teacher absenteeism to be a widespread problem. Even where the teacher is present, there is little reward (or punishment) for teaching effectively. Greater information – such as that provided by standardized assessments – could help stimulate public debate and pressure for change from parents and non-governmental organizations. Greater monitoring of teacher presence, tied with financial incentives to reduce absenteeism, has been found to have beneficial effects on both teacher presence and learning outcomes in pilot studies. It remains to be seen if these successes can be replicated in the many state-level initiatives that aim to improve learning in schools.

Non-government organisations can help too, by improving incentives and supplementing public effort. The Learning Guarantee Program in Karnataka, supported by the *Azim Premji Foundation*, provides financial rewards to schools where students achieve certain levels of learning or improvements in learning. Such schemes have to be carefully designed: where teachers' unions oppose schemes that measure performance of individual teachers, structuring incentives at the level of schools may help. But even when such schemes succeed in eliciting greater effort from schools that choose to participate, they run the danger of increasing inequality between schools by targeting "out" some of the weaker schools that chose not to opt in to the scheme. Using such schemes to improve student learning would need to go hand in hand with other schemes to improve performance of weaker schools. Where weak learning outcomes within schools can be attributed to weaknesses in pedagogy, it may help to supplement teacher effort with remedial instruction. The Balsakhi program organized by *Pratham* in urban areas provides additional support teachers (Balsakhis) to schools to augment instruction to weaker students during school hours. As Balsakhis are local secondary school graduates trained by *Pratham*, their services cost a fraction of that of regular teachers. The program has been found to improve basic literacy and numeracy skills (Banerjee et al. 2007). Once again, the challenge is to sustain and scale up such programmes, especially as many NGOs rely quite significantly on volunteer effort.

The progress on addressing adult illiteracy has been weaker. The National Literacy Mission (NLM) was launched in 1988 to impart functional literacy to non-literates in the age group of 15–35 years. Its principal tool is the *Total Literacy Campaign (TLC)*, an area-specific, time-bound, volunteer-based, mass-mobilization style program inspired by the TLC from Ernakulum, Kerala. In the Ernakulum campaign, under the leadership of the Kerala Shastra Sahitya Parishad, careful efforts were made to identify every illiterate person in the district between 6 and 60 years, and then volunteers were used as instructors to help them attain literacy. Standards were set for literacy and numeracy and a primer, called *Aksharam*, was developed which imparted information on a range of socially-relevant issues. While TLCs have expanded nationwide and are followed by Post-Literacy Programs to support relapse into illiteracy among the newly literate, to date Kerala remains the only state for which every district has been declared as wholly literate by NLM. For the other states, there are pockets of progress but systematic progress remains elusive. However, even when TLCs have been less than successful in raising adult literacy, they may have had indirect benefits through encouraging adults to enrol their children in schools. The *Continuing Education Scheme* provides further learning opportunities for those who graduate from TLCs and Post-Literacy Programs.

Progress on adult literacy has been impeded by various factors. The pressure from civil society to improve adult literacy and the flow of public resources is not as strong as in the case of primary education. Also, where literacy contributes to social and economic empowerment of marginalised groups, efforts to sponsor adult literacy may face resistance from those who benefit from the prevailing order. Finding creative channels to enhance adult literacy and to prevent relapse of literate adults into illiteracy would benefit from careful research and systematic evaluation of current programmes.

To summarise, the ability to read and write is an essential skill, both for human development and economic transformation. While literacy has improved in India especially since Independence, a third of the population remains illiterate. Policy effort must focus not only on extension of primary education and improvement in its quality, but creative means to reduce adult illiteracy.

References

- Banerjee, A., S. Cole, E. Duflo and L. Linden, 2007. "Remedying Education: Evidence from Two Randomized Experiments in India," *Quarterly Journal of Economics*, 122(3), 1235-1264.
- Datt, G. and M. Ravallion, 1998. "Why Have Some Indian States Done Better Than Others at Reducing Rural Poverty?," *Economica*, 65(257), 17-38.
- Govinda, R. and K. Biswal, 2005, "Mapping Literacy in India: Who are the illiterates and where do we find them", background paper for the Education for All Global Monitoring Report 2006, Literacy for Life, UNESCO.
- Murthi, M., Guio, A-C. and J. Drèze, 1995. "Mortality, Fertility and Gender Bias in India", *Population and Development Review*.
- Public Report on Basic Education in India, Oxford University Press, New Delhi, 1999.