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Bridging Old Gaps, Building New Barriers: A Study of Online Admissions under the Right to Education Act in Bangalore Urban Private Unaided Schools

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Abstract: India continues to face the challenge of ensuring free and equitable access to school education. In the last decade, technology has been increasingly utilised in education to enhance access to it, improve its quality and ensure better management of the education system. In this paper, we examine the role of technology in education and whether it widens or bridges the already existing gaps of access, quality and equality in education, especially in the context of urban areas. We use a detailed review of the online admissions procedure under the Right to Education quota in private, unaided schools of the Bangalore Urban district as the prime means to examine the use of technology. We conclude that in urban areas where communities are vulnerable and unorganised, the use of technology does not necessarily convert itself into greater inclusion. Rather, it can exacerbate exclusion unless designed and implemented carefully with the intent of reducing exclusion errors.

Keywords: Urban Education, Technology in Education, Online Admissions, Right to Education Act, Elementary Education

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1. Introduction

Despite the constitutional commitment made through Directive Principles and reaffirmed through the Right to Education (RTE) Act of 2009¹ making eight years of free and compulsory education a fundamental right, India is still struggling to ensure free and equitable access to basic education for all its children. The country is also experiencing a fast pace of urbanisation, compounding the challenge as urban areas add to the complexity of ensuring equitable access. The process of urbanisation in India is clearly marked by large-scale rural-to-urban as well as urban-to-urban migration to cities, which, some argue, needs to be understood better to be integrated into understanding of urban transition and development.² Urban deprivation is multidimensional in nature and there is a need for new ways of understanding vulnerability in urban areas.³ Recent literature in urban sociology clearly reflects the need to go beyond slums to understand deprivation and vulnerability, especially in cities.⁴ Wacquant's ground-breaking study, based on a comparison between different American and European 'ghettos', points to the need to understand marginality in relation to complex and situated legacies of social inequality informed by structural relations and uneven access to urban services, labour and life chances, as experienced on a daily basis in a city. 'Marginality is... produced, and persists in relation to the particular roles of the state, access to urban services and labour markets, and everyday habitation in the city'.⁵

Against this background, this paper examines access to a particular public service – primary education – in one of the largest and fastest growing cities in India: Bangalore, capital of a southern state, Karnataka. The paper considers whether the institutional mechanisms adopted to ensure equal access to educational services in Karnataka are really equitable and addresses issues of structural inequalities as well as the daily experiences of marginality, especially in the context

¹ Government of India, *The Right of Children to Free and Compulsory Education Act, 2009* (The Gazette of India Extraordinary, 2009) https://mhrd.gov.in/sites/upload_files/mhrd/files/upload_document/rte.pdf ([hereinafter 'Right to Education Act' or 'RTE Act'](#)). Accessed 7 May 2019.

² Ram B. Bhagat, *Migration and Urban Transition in India: Implications for Development* (UN/POP/EGM/2017/3, UN Expert Group Meeting on Sustainable Cities, Human Mobility and International Migration, 05 September 2017).

³ Gautam Bhan and Arindam Jha, "Reading Spatial Inequality in Urban India," *Economic and Political Weekly* 50, no. 22 (May 2015): 49.

⁴ Tatiana Thieme, Michele Lancione and Elisabetta Rosa, "The City and Its Margins: Ethnographic Challenges Across Makeshift Urbanism," *City* 21, no. 2 (2017): 127-34. Loic Wacquant, "Designing Urban Seclusion in the Twenty-First Century. The 2009 Roth-Symonds Lecture," *Perspecta* 43, *TABOO. The Yale Architectural Journal* (2009): 164-75.

⁵ Loic Wacquant, "Designing Urban Seclusion".

of the RTE Act. The paper also goes deeper into the aspect of using technology as a means of governance from the perspective of reaching more vulnerable sections of society. Karnataka has introduced an online admission procedure to facilitate the implementation of a specific provision of the RTE Act, which has made it mandatory for private unaided schools to admit a quarter of children at entry stage from economically weaker and socially disadvantaged sections through support from public resources.⁶ These schools are not supposed to charge any fee from children from disadvantaged backgrounds and the government compensates the private schools by paying them the equivalent to what the state spends per student in a state-run school.⁷ This provisioning of the Act has special significance for Bangalore in particular and urban areas in general, where the majority of private unaided schools are located.

Bangalore, popularly known as the Silicon Valley of India due to a dominant presence of the IT sector in the city, was initially developed as a hub of scientific innovation, research in aeronautics, electronics and research wings of public sector industries with a large number of technical education institutions in post-Independence India.⁸ The boom of the IT sector gave it global visibility. About 80% of the commercial space developed since 1985 has been taken up by the IT sector, which has led to rises in rent and the capital value of land.⁹ The urban agglomerate of Bangalore is spread across 151 square kilometres with about 16,400 inhabitants per square kilometre radius. It is a high-population city with about 9.6 million¹⁰ people and a high migrant population.¹¹ In 2011, Karnataka witnessed 18.8% of the rural to urban migration taking place in India, a major portion of which was received by Bangalore.¹² About 27.3% of Bangalore's population lived in slums¹³ while a large percentage of the poor also lived outside slums. In

⁶ 'Unaided schools' in the Indian context refers to schools that do not receive any form of state support for its recurrent expenses.

⁷ Under the Right to Education Act 2009, private unaided schools have to keep aside 25% of total class strength for children from disadvantaged (based on caste categories) and weaker (based on defined economic criteria) sections. A particular kind of government-run school, known as Kendriya Vidyalayas and funded by the union government, has also been brought under this provision but their number remains very low, and this paper is focused on private unaided schools.

⁸ Rolee Aranya, "Globalisation and Urban Restructuring of Bangalore, India: Growth of IT industry, its Spatial Dynamics and Local Planning Responses" (presented at 39th ISOCARP Congress, 17-22 October 2003).

⁹ Rolee Aranya, "Globalisation and Urban Restructuring of Bangalore".

¹⁰ Census 2011.

¹¹ K. C. Smitha and Barun Deb Pal, "Spatial Reproduction of Urban Poverty in Global City: Gender, Informality and Mobility in Bengaluru," *Economic and Political Weekly* 53, no. 3 (January 2018): 67-78.

¹² Census 2011, calculated using Table D5 on Migration.

¹³ Census 2011. Government of Karnataka. *District-wise Slum Details*. <http://ksdb.kar.nic.in/slums.asp>. Accessed September 20, 2018.

January 2007, the Karnataka Government issued a notification to merge areas under existing Bangalore Mahanagara Palike with seven City Municipal Councils (CMCs), one Town Municipal Council (TMC) and 111 villages around the city to form a single administrative body. The process was completed by April 2007 and the new body was named ‘Bruhat Bengaluru Mahanagara Palike’.¹⁴ There are administrative overlaps, and district administrations also exist alongside the city council. Two districts, Bangalore Rural and Bangalore Urban, largely make up the greater city of Bangalore with its suburbs. Huge differences exist in child development indicators among the *taluks* of these two districts, which have four *taluks* each.¹⁵ Using a *taluk*-wide index, the Human Development Report showed that all eight *taluks* rank low on the education index, with these values being relatively lower for Bangalore Urban *taluks*. This indicates a high presence of children who have dropped out of school in these places.¹⁶ Given that the lives of children among the sizable and fast-growing population of the urban poor are challenging and marked by extreme deprivation, it is important to examine the policy and institutional measures that have been put in place to enable them to claim their right to education.

This paper, therefore, examines a technology-driven public policy instrument – the provision for online admission to private unaided schools using the RTE Act – from the perspective of marginality in urban areas, especially in a fast-growing, large city experiencing massive and continuous in-migration. The frame of understanding marginality in urban areas is derived from taking children’s lives and vulnerability into account, which in turn is informed by considering existing structural as well as administrative bottlenecks which lead to exclusion from public services.

The working paper is divided into three major sections. Following the introduction, the first section describes the lives of vulnerable children in urban India and identifies challenges that they face in accessing schooling. The second section discusses the RTE Act and the status of education in Karnataka, especially in Bangalore. The third section goes into detail regarding admissions to private unaided schools through the RTE and identifies the challenges that led to the introduction of the online admission procedure in a fast-growing city like Bangalore. The

¹⁴ “About Us”, Bangalore Bruhat Municipal Corporation, <http://www.bbmp.gov.in/en/web/guest/about-us>. Accessed December 26, 2018.

¹⁵ A *taluk* is a sub-district administrative area. Karnataka has 227 *taluks* in 30 districts overall.

¹⁶ The education index here refers to the percentage of drop-out children who have been mainstreamed. Nutrition refers to percentage of moderately and severely malnourished children and health refers to child mortality rate.

paper then discusses the experiences of the use of technology and inclusion in social development to identify the challenges before examining people's experience of using online admission procedure in Bangalore.

With the emergence of Information and Communication Technology (ICT), technology is viewed as a major part of solution for overcoming inefficiencies in public service delivery in many sectors, including education. Technology is often viewed as naturally equitable as it is considered neutral in terms of the various other forms of structural divides that exist in a society, especially in urban areas (based on a questionable assumption of higher literacy and access in urban areas). In our conclusion, we argue that this is not true. We conclude that when accessing essential public services such as education – which relate to aspirations of mobility and change – the use of technology, especially a technology that focuses on fixed identities and addresses, can be counterproductive and lead to enhanced exclusions because of the varied abilities to access a digital language and other forms of divides that mark the lives of the urban poor, and especially their children.

2. Understanding the lives of vulnerable children and challenges for their schooling in urban India

Urban is a relative concept defined with reference to rural; urban exists because rural does. Urban spaces are also often defined differently in each country. The official definition of 'urban' in India takes the presence of a municipality or a combination of demographic characteristics including the size and density of population and the proportion of non-agricultural employment among the male population living in that area into account.¹⁷ This definition makes the notion of urban space itself fluid and dynamic, with large number of areas qualifying to becoming 'urban' all the time. Given that employment opportunities have grown much more in cities and large

¹⁷ In the Census of India 2011, the definition of urban area is as follows:

1. All places with a municipality, corporation, cantonment board or notified town area committee, etc.
2. All other places which satisfied the following criteria:
3. A minimum population of 5,000;
4. At least 75 percent of the male main working population engaged in non-agricultural pursuits; and
5. A density of population of at least 400 persons per sq. km.

Data from Census 2011,

http://censusindia.gov.in/2011-prov-results/paper2/data_files/India2/1.%20Data%20Highlight.pdf.

Accessed August 2, 2018.

towns in India, leading to large-scale human migration from rural areas to these places, the pace of urbanisation has been high in India and other South Asian countries in the last three decades. In India, the urban population contributed towards 18% of the total population in 1960 as compared to 34% in 2017.¹⁸

Similar trends have been observed for South Asian countries, where less than 20% of the population lived in urban areas in 1960s as compared to about 35% in 2017.¹⁹ However, the rate of urbanisation in South Asia has been slower than that observable in several other regions, for example East Asia. This could be because of tight official definitions of urban areas where significant hidden urbanisation is not captured in official statistics. The reclassification of rural settlements into census towns was probably responsible for 30% of India's urban population growth between 2001 and 2011.^{20, 21}

Urbanisation and structural transformation in many South Asian countries are driven by services rather than by manufacturing, making it difficult to exploit the full range of agglomeration economies, as witnessed elsewhere in East Asia or Europe. Therefore, the process of urbanisation has been messy with poor livability, as evidenced by the prevalence of slums and sprawl, and, poverty and pollution, with severe implications for lives of the poor and new immigrants. Also notable is that these numbers are very high because of the fact that the region includes three of the most populated countries of the world. This has translated into population pressures on their infrastructure, basic services, land, housing and environment. The strength of congestion forces can be mitigated at least to some extent if the investments in infrastructure and basic services keep pace with demand as more people and firms congregate in urban areas. Without sufficient investment, urban infrastructure and services become stretched, reducing

¹⁸ Data from the World Bank, https://data.worldbank.org/indicator/SP.URB.TOTL.IN.ZS?end=2017&name_desc=false&start=1960&view=chart. Accessed August 2, 2018.

¹⁹ United Nations Population Division, *File 21: Annual Percentage of Population at Mid-Year Residing in Urban Areas by Region, Sub-region, Country and Area, 1950-2050*. <https://esa.un.org/unpd/wup/Country-Profiles/>. Accessed August 2, 2018.

²⁰ Between Census 2001 and 2011, there seems to be a 30% growth in urban population in India. However, this could be partly due to change in definition of "urban" and re-classification of rural settlements into urban areas. Hence, it is difficult to estimate the real growth of urban population for the decade.

²¹ Peter Ellis and Mark Roberts, *Leveraging Urbanization in South Asia: Managing Spatial Transformation for Prosperity and Livability* (The World Bank Group, 2016).

quality and access.²² As per Census 2011, nearly 14 million slum households in India, which translates to about 76 million people, live with inadequate basic amenities, poor health outcomes, insecurity and unstable incomes.

Of the 377 million urban Indians, 32% (about 120 million) are children below 18 years of age and around 10% (36.5 million) are children under six.²³ This means more than eight million children under six live in slums in India. This number could be even higher, as a good proportion of the poor also live outside the slums in Indian cities. Recent research examining the status of poor children in urban areas concludes that ‘the major urban development schemes in India do not adequately consider the issues related to children’s health, education, growth, safety and participation’.²⁴ Based on a review of urban schemes for poverty and livelihood, the report finds that,

...it does not include specific needs of the child, especially the deprived one. In particular, lack of funds for basic services (water supply, solid waste management, and street lighting), civil works (parks and playgrounds, slum improvement and construction of primary schools) and prevention of food adulteration have a direct implication on their growth and development.²⁵

One of the major reasons for fast urbanisation in India has been rural-to-urban migration. Indian urbanisation has been very haphazard with no minimum urban infrastructure, a weak economic base, a demographic explosion and poverty-induced rural-to-urban migration.²⁶ The cities are overcrowded and nearly half of the urban migrants are among the poorest in terms of consumption expenditure (Census 2011). According to a report by Indian Institute of Human Settlements (IIHS), ‘for the last 30 years, migration [to urban areas] has contributed about a fifth of population increase; natural population growth has contributed about 60% and the rest is evenly split between the formation of new towns due to reclassification and urban boundary

²² Ellis and Roberts, “Leveraging Urbanization in South Asia”.

²³ PWC and Save the Children, *Forgotten Voices. The world of urban children in India* (2015), <https://www.pwc.in/assets/pdfs/publications/urban-child/urban-child-india-report.pdf>. Accessed August 2, 2018.

²⁴ PWC and Save the Children, *Forgotten Voices*, 10.

²⁵ PWC and Save the Children, *Forgotten Voices*, 10-11.

²⁶ Kapil Kumar Gavsner, “Urban Restructuring and Change: Planning Development Practices and Impacts on the Urban Poor,” *Institute of Town Planners India Journal* 8, no. 2 (April - June 2011): 24-44.

expansion or sprawl'.²⁷ In absolute terms, however, the population increase in urban areas due to migration is a substantial 21.8 million. Natural population growth also often includes families that are made up of only first or second-generation migrants who, though not officially referred to as migrants, retain all social features and disadvantages of neo-migrants in a growing city.

Although in the past, the migration of landless and land-poor peasants has mainly been due to rural distress,²⁸ it increasingly also takes place with the aim of gaining upward mobility through education, skill development and training and access to better health facilities.²⁹ An increase in family migration to urban areas in recent years as compared to single migration also points towards aspirations of fulfilling dreams of higher income and good education for children. In this context, it becomes critical to examine whether urban public policies and institutional mechanisms allow such families to make their dreams a reality. One major hardship comes from loss of access to entitlements that they usually have in rural areas. A large proportion of migrant labourers do not have identity papers such as caste certificates, election cards, Below Poverty Line (BPL) cards, or the digital identity cards known as Aadhar cards.³⁰ This hinders their access to a large number of entitlements, and in this entire process, the lives of children are adversely affected. They are forced to drop out of school or are never able to enrol in one.

When migration takes place as a family unit, each member of the family unit (excluding infants), contributes to the family's subsistence in one way or another: in work or as part of the household 'care' economy. For children, the work environment means hardship and deprivation. Studies show that seasonal migrants are in prime working age groups (15–45 years).³¹ Since these migrants come from the poorest and most economically vulnerable sections of the working

²⁷ PWC and Save the Children, *Forgotten Voices*, 27.

²⁸ Jan Breman, "The Great Transformation in the Setting of Asia" (address delivered on 57th Anniversary of the International Institute of Social Studies, The Hague, The Netherlands, 29 October 2019).

²⁹ Amitabh Kundu and Lopamudra Roy Saraswati, "Migration and Exclusionary Urbanisation in India," *Economic and Political Weekly* 47, no. 26-27 (30 June 2012): 219.

³⁰ The Aadhar Card is a unique 12-digit number issued by the Unique Identification Authority of India, which holds a person's biometric details such as iris scan and fingerprints and demographic information such as date of birth and address. There has been an ongoing controversy about using Aadhar cards to access provision of subsidies by the government and how it has led to denial of services to the most marginalised. Some of the issues related to use of the Aadhar card for availing government subsidies are related to the use of technology, e.g. network issues due to which fingerprint verifications could not be done, issues related to One Time Password being sent to mobile phones for verification etc. A large number of writ petitions were filed in the Supreme Court against the mandatory use of Aadhar for providing subsidies to the marginalised.

³¹ Kunal Keshri and R. Bhagat, "Temporary and seasonal migration in India," *Economic and Political Weekly* 47, no. 4 (January 2012): 81.

population, their educational attainment is nil or negligible. A majority of them who are married in this age group have young children. Single migration's impact on children's lives can go either way – additional income may help in continuing with the schooling of children, or absence of a father may mean more responsibilities leading to irregularity or withdrawal from school. But whenever both men and women migrate, more often than not children also migrate and contribute to the family's sustenance. Most families work on piece-rate payment-based jobs, e.g. brick kilns, construction, etc. and need everyone in the family to contribute to be able to earn a little more.³²

In general, the urban poor depend on unorganised sector jobs which are largely insecure, leading to a number of challenges for children. One of the major challenges in schooling children is the language of instruction in schools for those whose mother tongue is not the same as the state's official language (usually the medium of instruction in state-run schools). The language taught in government schools also poses a challenge with domicile population using different dialects/language or those residing in border districts and speak a confluence of two languages. Tribal languages are also neglected in development of curriculum and hence students belonging to Scheduled Tribe groups face learning challenges as they are unable to comprehend the medium of classroom teaching.³³ It also poses a major challenge for teachers in schools that serve multiple linguistic groups in one classroom. For such children, communication becomes a major cause of dropping out of school.³⁴ A study conducted on the issue of migrants from Bihar to Punjab identified language as a major reason for children, especially girls, not attending schools. Even when children are attending government schools, it is mainly for food and the learning becomes difficult because of the issues linked with language of the textbooks and the

³² Jyotsna Jha and Dhir Jhingran, *Elementary Education for the Poorest and Other Deprived Groups: The Real Challenge of Universalization* (New Delhi: Manohar Publishers, 2005). Ajay Singh, "Education of Urban Children," in PWC and Save the Children, *Forgotten Voices*, 112-27.

³³ Centre for Budget and Policy Studies, Bangalore, *Reviewing the Status of Education in Tribal Areas in Maharashtra*, Bangalore, 2017, http://cbps.in/wp-content/uploads/CBPS_TribalReport_UNICEF_FINAL-.pdf. Accessed September 20, 2018. K.A. Shaji, "Pre-primary Education in Tribal Language," *The Hindu*, May 23, 2016. <https://www.thehindu.com/news/national/kerala/preprimary-education-in-tribal-language/article6525625.ece>. Accessed September 20, 2018.

³⁴ "Tribal Language Books introduced to check dropout in Odisha," *Times of India*, August 12, 2015, <https://timesofindia.indiatimes.com/home/education/news/Tribal-language-books-introduced-to-check-dropout-in-Odisha/articleshow/48450520.cms>. Accessed September 20, 2018.

medium of instruction³⁵. Girls are kept at home for sibling care, and the period of migration not matching the school calendar poses problems too.³⁶

Studies have identified the lack of legal ‘identity’ of vulnerable children (street children, children in slums, orphanages, and other kind of institutions like correctional homes, suffering from terminal diseases and physical/mental disabilities, children of migrants) as a cross-cutting issue that affected and still affects the schooling of urban children, even after the RTE. Although the RTE has mandated that birth registration certificates and other kind of identity documents are no longer needed for admissions, many schools still insist on documentation to prove the minimum age of children, other aspects of their identity and the type of disadvantages faced, which often cannot be provided easily by those at the periphery.³⁷

The very processes of urbanisation, especially in the context of fast-growing Asian cities, has pushed even existing resident groups of the population towards marginality, creating new groups of vulnerable communities. Bangalore Rural district, for instance, acts as a feeder district for Bangalore Urban as it houses Bangalore International Airport and Special Economic Zones, which has also led to large scale deforestation, land alienation, high decline in land under cultivation and areas which were previously bodies of water but have now been drained or filled to provide land for construction.³⁸ The very processes of development, while leading to greater efficiencies on one hand, have also opened ways for greater exploitation of those who lack the tools to reap the benefits. For instance, Karnataka was the first state to computerise land records, made available to citizens for a fee, which has also been widely used by real estate and other groups to gain access to small and marginal farmers. Once they have possession of this data, such groups pressurise farmers to sell their land by providing misleading information.³⁹ Such processes have created a community of landless urban poor who are trying to find new forms of livelihoods, and in absence of reliable public services are far more vulnerable than previously, although macro level statistics often hide the plight of such people.

³⁵ Singh, “Education of Urban Children”.

³⁶ Singh, “Education of Urban Children”, 125; Jha and Jhingran, “Elementary Education for the Poorest”.

³⁷ Jha and Jhingran, “Elementary Education for the Poorest”. Singh, “Education of Urban Children”.

³⁸ Government of Karnataka, Bengaluru Zilla Panchayat and Planning, Programme Monitoring and Statistics Department, *Human Development Report for Bengaluru Rural District*, Bangalore, 2014, 190.

³⁹ Government of Karnataka, *Human Development Report for Bengaluru*, 190.

Urban education is often equated with better provisions and higher quality of schooling as compared to its rural counterpart.⁴⁰ Although urban figures for almost all educational participation indicators are still better than rural areas, differences in these aggregates do not reveal challenges faced by the urban poor and huge inequalities that exist. Urban spaces are often characterised by different kinds of multiplicity in terms of social, economic, political, cultural and educational backgrounds.⁴¹ This multiplicity is also reflected in access to services such as health and education. It is now well known that there are disparities between urban and rural areas, but there are also wide disparities within urban areas⁴² leading to social stratification, segregation and segmentation.⁴³ Often, these disparities within urban spaces are based on the economic status of individuals, with those belonging to economically weaker sections being at a disadvantage. Such urban-urban divides have pushed the ‘urban poor’ to ‘greater social and spatial relegation’,⁴⁴ while they are also often neglected in the process of policy development.

In the case of schooling, this divide is often clearly reflected in the choice of schools in urban India. With the entry of so-called budget private schools on one end and the high-end ‘international’ schools offering IB (International Baccalaureate) curriculum or the British General Certificate of Education (GCE), giving O (Ordinary) and A (Advance) level certificates on the other, the choice of schools almost looks like an unforced apartheid where each class is concentrated in one kind of school:

while the high-end ones emphasized a deep inquiry-based approach aimed at developing thinking, analytical and reflective skills amongst students using highly qualified, well-paid teachers, the lower-end budget schools have been looking for approaches that encourage the use of technology-based or/and structured teaching-learning, tool-based ‘learning’ solutions with the help of low-paid, less-trained

⁴⁰ Geetha B. Nambissan. “Private Schools for the Poor: Business as Usual,” *Economic & Political Weekly* 47, no. 40 (October 2012): 51.

⁴¹ William T. Pink and George W. Noblit (eds.), *International Handbook of Urban Education: Part I*, Springer International Handbooks of Education 19 (The Netherlands: Springer, 2007).

⁴² Rangachar Govinda, *Status of Primary Education of the Urban Poor in India: An Analytical Review*. IIEP Research Report No. 105 (Paris: UNESCO, 1995).

⁴³ Angela Calabrese Barton, “Science Education in Urban Settings: New Ways of Praxis through Critical Ethnography,” *Journal of Research in Science Teaching* 38, no. 8 (2001): 899-917; Pink and Noblit (eds.), *International Handbook of Urban Education: Part I*.

⁴⁴ Anita Rampal, “Ducked or Bulldozed? Education of Deprived Urban Children in India,” in *International Handbook of Urban Education: Part I*, ed. William T. Pink and George T. Noblit, 285-304, at 292.

teachers. The rich shifted from the traditional private schools and patronised the high-end alternatives as a deviation from the rigid, rote-learning-based schooling system, whereas the budget private schools, run largely by ‘education managers’, were advocated vociferously as an ‘affordable and effective’ alternative to the ‘dysfunctional, low-quality state schools’ for the poor.⁴⁵

These low-end, English-medium private schools are also playing upon the aspirations of the poor who view English education as a major means to achieve mobility and to break the cycle of poverty.⁴⁶ The state, on the other hand, is slowly withdrawing from urban areas in most states, with Delhi in the recent past being an exception, citing as a reason low enrolment and the consequent non-viability of these schools. One estimate suggests that overall in India approximately 27.4% children in the age group of 7 to 18 years reside in urban areas, but only 17% schools are located in urban areas.⁴⁷ In Karnataka, 28,847 government and aided schools are reported to be shutting down due to an inadequate number of students in these schools. The existing students in these schools are expected to move to nearby schools.⁴⁸

3. The Right to Education Act and the status of enrolment in private schools in urban Karnataka

The RTE is critical as it made earmarking of 25% seats in fee-charging private schools for underprivileged children mandatory. This provision becomes important in the context of the increased concentration of homogenous groups in specific kinds of schools and poor people’s aspirations for English-medium education. Closure of public schools and the resulting movement towards greater privatisation also makes this provision important.

Although apparently intended to promote diversity in private schools, the law is seen more as a quota for poor children in otherwise unaffordable unaided schools. That it was supposed to enable an inclusive school is based on two sets of evidence: (i) the Statement of Objects and

⁴⁵ Jyotsna Jha, “Education India Private Limited,” *Education at the Crossroads* (Winter 2015 - Spring 2016): 39-51.

⁴⁶ Nambissan, “Private Schools for the Poor”.

⁴⁷ PWC and Save the Children, *Forgotten Voices*, 13.

⁴⁸ “28,847 government and aided schools across Karnataka to be shut down,” *The New Indian Express*, July 6, 2018. www.newindianexpress.com/states/karnataka/2018/jul/06/28847-government-and-aided-schools-across-karnataka-to-be-shut-down-1839071.html. Accessed 7 August, 2018.

Reasons (SOR) attached to the RTE Act, which states the following, and (ii) the Ministry of Human Resource Development (MHRD) clarification used for the legal battle for this provision when private providers went to the court objecting to this proposal:

The Right of Children to Free and Compulsory Education Bill, 2008, is anchored in the belief that the values of equality, social justice and democracy and the creation of a just and humane society can be achieved only through provision of inclusive elementary education to all. Provision of free and compulsory education of satisfactory quality to children from disadvantaged and weaker sections is, therefore, not merely the responsibility of schools run or supported by the appropriate Governments, but also of schools which are not dependent on Government funds.⁴⁹

The MHRD later issued a detailed clarification and won the legal battle on the arguments that are summarised here. It was argued that the currently used term ‘inclusive education’ implies, as did earlier terms like ‘common’ and ‘neighbourhood’ schools, that children from different backgrounds and with varying interests and ability will achieve their highest potential if they study in a shared classroom environment; the idea of inclusive schooling was considered consistent with Constitutional values and ideals, especially with the ideals of fraternity, social justice and equality of opportunity. It was also argued that 25% quota is to ensure that children of socio-economically weaker backgrounds form a substantial proportion or critical mass in the class they join. It was also argued that ‘diversity enhances learning and development, while segregation impoverishes the classroom environment of all schools, private or government.’ The diversity argument applies to all – the 25% and the remaining 75% who would also be exposed to other ways of living, knowledge bases and experiences.⁵⁰ All of the policy makers may not have shared this official version of the rationale at that point, as has been pointed out by Srivastava and Naronha,⁵¹ but it is important to note that this was the official version of the defence and therefore part of the state’s vision.

⁴⁹ Government of India, *The Right of Children to Free and Compulsory Education Act (RTE), 2009: Clarification on Provisions* (Ministry of Human Resource Development, n.d.) https://www.mhrd.gov.in/sites/upload_files/mhrd/files/upload_document/RTE_Section_wise_rationale_rev_0.pdf, Accessed 29 April 2019.

⁵⁰ Ibid.

⁵¹ Prachi Srivastava and Claire Noronha, “Institutional Framing of the Right to Education Act: Contestation, Controversy and Concessions,” *Economic and Political Weekly* 49, no. 18 (May 2014): 51-58.

However, when the Act was implemented, although it contained several provisions with important implications for public as well as private providers, this single sub-section of the Act received maximum attention and faced opposition from varied quarters. The implementation of this provision also posed serious challenges to governments, especially in states where private schools are large in number and they share a substantial proportion of enrolment. The share of private school enrolment is disproportionately higher in urban areas in all states. Enrolment in private schools covers half of the total enrolment in Karnataka and this percentage goes up to 85% of total enrolment for the capital city, Bangalore (Table 2). Accordingly, enrolment in private schools in Bangalore amounts to more than one quarter of the total enrolment in private schools in Karnataka. This means that the analysis of RTE implementation in Bangalore can be indicative of the situations that exist elsewhere as well.

The distribution of enrolment across public and private schools changes at various levels but the proportion of enrolment in private schools remains much stronger in urban areas at all levels in Karnataka. While in rural areas, the use of private schools goes up at secondary level, it still remains much lower than that in urban areas where the use is higher from primary level onwards. A good percentage of students also go to private aided schools in urban areas where the fees charged are usually much lower than private unaided schools. The availability of such schools is also higher in urban areas (Table 3).

As in most other Indian states, education-related indicators are better for urban areas as compared to their rural counterparts in Karnataka, but the latest data from 2015 shows that rural/urban differences reduced between the period 2007 and 2015. Tables 3 and 4 illustrate that though the literacy rates in urban areas are higher than state average for both males and females, the rural-to-urban differences in two important indicators of schooling, Gross Attendance Ratios (GAR, defined as a ratio of the number of persons attending a particular level of school (primary, upper primary, elementary, secondary or higher secondary) as against the estimated population in the corresponding official-age-group for that level) and Net Attendance Ratios (NAR, defined as ratio of number of persons in an official age-group attending a particular level to the total estimated population of persons in that age-group) are not high at any level. NARs are, as might be expected, always lower than GARs at lower levels indicating the presence of younger or higher age-group populations in varying degrees at all levels of schooling. Both these ratios

show a declining pattern as one goes to upper levels, reflecting the incidence of drop-out being higher at secondary and higher secondary levels. Although not discussed in this paper, an important point is that gender disparities in GARs and NARS are sharper than locational (rural-to-urban) disparities for these post-elementary stages.

The average expenditure per student is much higher for urban areas in comparison to rural in Karnataka. Although rural students receive a higher percentage of free incentives to attend school,⁵² there is more spending on urban students, especially on private coaching and transport.⁵³ On average, about four times more is spent per child in an urban area than per child in rural areas in Karnataka at the primary, upper primary and secondary stages of schooling. At the higher secondary stage, the expenditure goes up in rural areas as well but the difference comes down: about twice as much is spent on a student in an urban area than on a student in a rural area (Table 6).

Migration from both rural and urban environments to urban areas in Karnataka is mainly due to work/ employment, marriage and moving with the household (Table 8). Children may form a good proportion of the ‘moving with household’ category, which covers nearly one-quarter of rural-to-urban and urban-to-urban migration. While young girls could make up a major proportion of those who migrate after marriage, young boys could be part of the population who reported to have migrated for the sake of jobs and employment.

As stated earlier, such migration is also reflected in the languages spoken by the migrants, which adds challenges for the urban education system. In most cases, the Indian states are multi-lingual but it is especially true for Karnataka, which was carved out as a state by amalgamating portions of erstwhile Bombay and Hyderabad with the princely state of Mysore. While Kannada was the main language, Tamil and Telugu were also spoken widely in Mysore state and Marathi and Urdu also become important after Karnataka was formed. Thus, in Karnataka, schools run by the state government (directly or through aided institutions) include Tamil and Telugu-medium institutions in some places, but the state does not necessarily address the needs to many new

⁵² Jandhayala B.G. Tilak, “How Free is ‘Free’ Primary Education in India?”, *Economic and Political Weekly* 31, no. 6 (February 1996).

⁵³ National Sample Survey, “NSS 71st Round Key Indicators of Social Consumption in India: Education in India” Report No. 575 (71/25.2/1) (Ministry of Statistics and Programme Implementation, Government of India, 2015). http://mospi.nic.in/sites/default/files/publication_reports/nss_rep_575.pdf. Accessed on 29 April 2019.

immigrants coming to Bangalore. Bangalore, as a consequence of its IT sector, has seen the development of a range of ancillary industries and services, which, in turn, has led to high immigration of people coming to the city in search of a livelihood from various parts of the country including Rajasthan, Bihar and Odisha, speaking a variety of languages. While a good number of migrants coming from Bihar and Rajasthan speak Hindi, workers coming from Northern Karnataka often speak Marathi. But Bangalore does not report any enrolment at any level in Hindi and Marathi, the two most common languages for newly arrived migrant labourers (Table 7).

The literacy data from Census 2011 indicates that though Bangalore has a lesser percentage of illiterates as compared to the state average and a higher percentage of people who have completed secondary/higher secondary and who have a graduate degree, more than one fifth of the city's population remained illiterate (Table 9). To an extent, this is a rough indicator of the most marginalised population of the city, which includes large number of people coming from various parts of the country including other districts of Karnataka. These are the people for whom the realisation of rights and claiming of public services is most crucial and challenging. Considering the lives of children from marginalised groups in urban areas, any review of the role of the RTE Act in enabling their access to schools needs to consider whether it addresses the problems associated with identity, proof of age and languages or not. The Act addresses these issues in various ways, but it is important to see how it unfolds in practice.

The next section therefore examines the provisions of the Act, the related rules in Karnataka and their interpretation and implementation on the ground in Bangalore city. Considering that one quarter of all enrolment in private schools in Karnataka is in Bangalore, this is significant as a means of deducing what might be happening elsewhere. This analysis is followed by an examination of people's experiences with the online admissions system for the 25% space in private unaided schools. The use of technology is increasingly being perceived and used as a solution to address the issue of inefficiencies in governance, but it is not yet fully understood how it unfolds when the challenge includes ensuring that vulnerable citizens are able to claim their entitlements while also reducing or eliminating inefficiencies in the delivery of services. There is perhaps no unique answer but we need to create a good body of literature to understand the patterns better. This paper is a small step in that direction.

4. Accessing private schools through the Right to Education route

In order to implement the RTE Act, all states passed their own rules and regulations, especially with regard to defining various terms and procedures. Section 12(1)(c) of the Act states that a school ‘...shall admit in class I, to the extent of at least twenty-five percent of the strength of that class, children belonging to weaker sections and disadvantaged groups in the neighbourhood and provide free and compulsory elementary education till its completion’. The Act further states that schools imparting pre-class I education (such as nursery or kindergarten) would take admissions in the entry level class. Section 2 (d) and (e) of the Act defines who constitutes the disadvantaged groups and weaker sections. However, states were given the flexibility to further define the sub-groups and assign the minimum percentage of places to be allocated to each sub-category.⁵⁴

Karnataka State Rules for the RTE Act, which came into force in April 2012, define “disadvantaged groups and weaker sections” and indicate allocations of seats for the sub-categories. The percentage of allocation across various categories specified are: 7.5% and 1.5% seats for children from Scheduled Castes and Scheduled Tribes respectively, with the remaining 16% seats to be provided to other categories of children belonging to disadvantaged sections (Category I, IIA, IIB, IIIA, IIIB, orphans, migrant children, children with special needs, HIV affected/infected children) and weaker sections (children whose parents/guardians have an annual income of less than Rs. 3.50 lakh).⁵⁵ It is important to note that Karnataka went beyond the letter of the Act and included HIV-infected/affected children in the disadvantaged section category.

The RTE allows the state to devise a common pattern of admission to bring about uniformity in the procedure, especially for private unaided schools. Section 35(1) of the RTE gives clear guidelines regarding the admission procedure in schools under sections 13(1) and 12(1) (c). Section 13(1) briefly states that no student or parent should be subjected to any screening procedure. The objective of this provision is to ensure schools adopt an admission procedure

⁵⁴ The Act defines a child belonging to disadvantaged section as those belonging to the SC, ST, socially and educationally backward classes or such other groups having disadvantage owing to social, cultural, economic, geographical, linguistic, gender or other factors (RTE Act Section 2 (e)). A recent amendment has included children with disabilities in this group. A child belonging to the weaker section is defined as a child belonging to such parent or guardian whose annual income is lower than the minimum specified limit by the government (Section 2(d)).

⁵⁵ This income limit is set by the State Government. In Karnataka, this limit is set as Rs 1 lakh only. Source: Government of Karnataka, Department of Public Instruction, “Notification No. ED 27 MAHITI 2012”, Bangalore, May 8, 2012.

which is non-discriminatory, rational and transparent and that schools do not subject children and their parents to admission tests and interviews in order to decide whether they will admit a child or not. Also, section 9 of the Act very clearly states that in absence of any proof of birth such as birth certificates or other documents, self-certified statements from parents would be accepted as proof for the child's date of birth. Violation of any provision is considered an affront to the fundamental rights of a child.

In Karnataka, admissions under this provision began in the academic year 2012-13. For the first three years (2012-13, 2013-14 and 2014-15), categorised as Phase I in our paper, the state adopted a manual procedure for admissions, anchored at school level. Every school was requested to notify the Block Education Officer (BEO, the administrative head of the education department at sub-district level) of the number of seats available under the 25% provision for their entry level class. The BEO notified the dates for submission of forms and other requisite documents to neighbourhood schools. Schools accepted applications (soft copy available online for download and hard copies available at BEO offices) along with necessary documents (proof of age of the child, proof of income and address for the parents and caste certificate wherever applicable) and assessed them based on the eligibility criteria of age, neighbourhood schools and those belonging to disadvantaged and weaker sections. The responsibility for selecting eligible candidates was delegated to the school management. If the number of eligible candidates was more than the number of places available in the school, a lottery was drawn, in presence of the BEO (or a representative from the BEO's office) and parents/guardians.

At this stage, provisional admissions were approved for students. Final confirmations were made after the scrutiny of documents by the BEO's office. In case places remain vacant after the allotment, applicants from outside the neighbourhood could be considered.⁵⁶ However, there were a number of issues related to the manual system. A 'neighbourhood school' was defined as any non-minority (as minority schools were exempted) private unaided school within 1 km radius of the registered residence or within the municipal ward. In case schools were not present within 1 km radius/municipal ward, certain exceptions were allowed.⁵⁷ We conducted a research

⁵⁶ Government of Karnataka, Department of Public Instruction, "Method of Admission and Reimbursement of Fees in Non-Minority Unaided Institutions (No. RTE/02/2012-13)", Bangalore, May 10, 2012.

⁵⁷ Government of Karnataka, Department of Public Instruction, "Circular No.Sashia/Shihako/Registration/07/2014-15", Bangalore, November 21, 2014.

study in Bangalore and found that there were serious gaps in the admission procedure. Even the norms laid down for eligibility differed between and within educational blocks. These norms seemed arbitrary and no formal documentation was available citing the reasons for relaxing the norms. Lack of clear definitions meant that parents were not sure which schools their child was eligible to apply to, leading to out-of-ward applications. Such applications were rejected by the schools, removing any probability of getting selected even for those within the eligible categories.⁵⁸

Similarly, though the definitions for those belonging to disadvantaged sections were clear and were also reflected in the breakdown of the places indicated by the government for admissions, the definition of who constituted the ‘weaker sections’ was fuzzy. The upper limit of Rs. 3.5 lakh per annum for income for seeking admissions under the weaker section category, was changed in response to a PIL filed in February 2013; the state government stated that those with an annual family income of less than Rs.1 lakh would be given highest preference.⁵⁹ This category could also, by definition, include those from social groups not defined under ‘disadvantaged sections’: i.e., a poor upper caste family with a low income could qualify as belonging to ‘weaker section’ but this possibility was not accounted for. As a result, in certain cases, the school considered a student eligible under the weaker section category due to low-income group but the BEO office denied admission since the applicant did not belong to the disadvantaged social category.⁶⁰ The system, based within the school, also became quite inaccessible for the highest priority groups (HIV, orphans, migrants, street children, Children with Special Needs) as the breakdown of places included them within the Other Backward Class (OBC)⁶¹ category. Hence, no separate percentage was assigned for admitting children from these highest priority sections.

As per the rules, income certificates were mandatory for those applying under the weaker section category only. However, all applicants were expected to submit them. The vagueness of ‘preference to those with income less than Rs 1 lakh per annum’ led to under-reporting of annual income. Under the manual system, parents had to undergo the application process in multiple

⁵⁸ Centre for Budget and Policy Studies (CBPS), *A Study of the Quality of Acceptance of Disadvantaged Children admitted under RTE Act 12(c) in Private Unaided Schools in Bangalore Urban*, Bangalore, 2013.

⁵⁹ “RTE: Priority for children from weaker sections,” *The Hindu*, February 27, 2013.

⁶⁰ CBPS, *A Study of the Quality of Acceptance*.

⁶¹ Other Backward Class (OBC) is a collective term used by the Government of India to classify castes which are educationally or socially disadvantaged.

schools. Often these applications were rejected by schools as they fell outside the prescribed norm of ‘neighbourhood school’ due to lack of clarity and awareness. The CBPS 2013 study⁶² documented incidences where schools reported that places were allotted but not claimed as the student was also admitted under the same provision in some other school. This increased the workload of the schools and the BEO’s office due to multiple reviews of the same applicant and increased numbers of places for reallocation. The system therefore was definitely not efficient and also caused hardship to parents. Parents were expected to navigate multiple government offices to assimilate the necessary documents to be submitted along with their application. Parents found this challenging and many reported being forced to pay bribes to get the documents.⁶³

The shortlisting of eligible candidates was not monitored by the BEO’s office on a regular basis, leading to some manoeuvring in relation to this provision by the school managements. Almost all schools surveyed in the above mentioned research study had utilised this provision to re-admit their pre-primary students (if they met the eligibility criteria) under this provision, depicting this as an incentive for those who already had access to schooling.⁶⁴ Mehendale et al.⁶⁵ also identified ‘excessive bureaucratisation and lack of transparency’ as a major barrier in Karnataka and Delhi. The Act mentions that it is the responsibility of the school to provide free entitlements and the school shall not levy any fees, charges or expenses on the parents of children admitted under clause 12(1)(c). Several studies have pointed out that this was not actually observed in a number of states⁶⁶ and the same was true for Karnataka. Therefore, the studies examining the RTE admission processes in Phase I expressed the need for greater need for simplification of such procedures such that there is a decentralised application and verification procedure, while admissions can be centralised at block level ‘to allow parental choice and maximise

⁶² CBPS, *A Study of the Quality of Acceptance*.

⁶³ Ibid.

⁶⁴ Ibid.

⁶⁵ Archana Mehendale, Rahul Mukhopadhyay and Annie Namala, “Right to Education and Inclusion in Private Unaided Schools: An Exploratory Study in Bengaluru and Delhi,” *Economic and Political Weekly* 50, no. 7 (14 February 2015): 43.

⁶⁶ K.C. Deepika, “The Challenge Begins Now for ‘RTE Children’,” *The Hindu*, 1 April 2013, <https://www.thehindu.com/news/cities/bangalore/the-challenge-begins-now-for-rte-children/article4567558.ece>. Accessed August 22, 2018. Claire Noronha and Prachi Srivastava, *India’s Right to Education Act: Household Experiences and Private School Responses* (ESP Working Paper Series No. 53, Privatisation in Education Research Initiative (PERI), 2013). Ankur Sarin and Swati Gupta, “Quotas Under the Right to Education,” *Economic and Political Weekly* 49, no. 38 (20 September 2014).

opportunities for admission'.⁶⁷ They also suggested exploring the use of technology for conducting admissions at Block/District level to counter irregularities of different kinds.⁶⁸

During the academic year 2015-16, the Karnataka government introduced an online system of admission under the 25% quota with the intention of ending the complaints of irregularities in the selection process. Karnataka was the second state⁶⁹ to introduce the online admissions system for the entire state. This was initially being planned for academic year 2014-15 but the preparations could not be completed on time and hence it was deferred to the next academic year i.e. 2015-16. This new system required extensive preparation on part of the Directorate and the schools. Use of technology is not new to Karnataka, as it was the first state to introduce software-based recruitment and transfers of teachers, and admissions for teacher training courses, so the government in general and the department in particular is at ease with the use of technology for various processes. The state has been identified as the Indian state with the best practice of teacher management through use of IT in terms of ensuring greater transparency, efficiency and accountability.⁷⁰ However, the success of the use of technology for a particular purpose depends heavily on the capacity of the end users and their access to technology, and hence success in one internal governance procedure may not guarantee success in another, especially if it relates to delivery of services to the most marginalised.

We, therefore, next examine the use of online admissions for the RTE from the perspective of protecting rights of eligible children and ensuring equity and inclusion, and conclude that though the answer is not straightforward, it is clear that huge exclusion errors are occurring. Though these are being addressed, it is not adequate. We argue that this is because the state is far more concerned about correcting inclusion errors and enhancing efficiency rather than guaranteeing that no child's right to education is violated.

⁶⁷ Mehendale et al., "Right to Education and Inclusion in Private Unaided Schools".

⁶⁸ CBPS, *A Study of the Quality of Acceptance*.

⁶⁹ Rajasthan started the online process in July 2013. However, Maharashtra had also piloted the online process for academic year 2014-15 in Pune (Pune Municipal Corporation, Pimpri Chinchwad Municipal Corporation and Haveli Zila Parishad) and Mumbai (Mumbai West, Mumbai North, Mumbai South and Panvel).

⁷⁰ Jyotsna Jha and Puja Minni, "Can Technology Enable Inclusion: A Historical Analysis of Reforms in Teacher Recruitment and Transfers in Karnataka" (working paper, forthcoming).

5. Technology as mediator for accessing private schools through the Right to Education route

The Government of Karnataka issued a set of instructions through Government Orders (GOs) to introduce and regulate the online system of admissions to ensure fair admission procedures under Article 12 (1) C of the RTE Act. However, an examination of provisions, procedures and experiences clearly suggest that although this led to a reduction in certain inefficiencies of the manual process, it failed to make the process fairer and more equitable. In the following section, we discuss the framework that we used to understand the inclusiveness of the online process for admissions to private schools using the RTE route. The framework has been derived through the review of literature looking at the use of technology in the social sector in general and in India in particular.

5.1. Use of technology for inclusion in social development

The concepts of inclusion and exclusion are not alien to the field of education. There exists a wealth of literature that talks about inclusiveness in education across varied themes. A review of themes indicates that inclusion has almost always been viewed from a single stakeholder's perspective – the student. The debates over inclusion revolve largely around the idea of covering every possible 'category' of children. These themes focus on those students belonging to weaker and disadvantaged sections of society, students who are physically or mentally challenged or those who suffer from particular diseases (e.g. HIV). In the last decade, increasing use of technology in education, in different types of processes like teacher management, academic support and admissions, has expanded the concept of inclusion in education. Increase in use of ICT is mainly due to ensure availability of low-cost options for education and to manage various processes within the education system. Use of technology for social development has the potential of acting as enabling factor that ensures that those from weaker and disadvantaged sections are reached and included in the system. However, this is subject to the way in which ICT is used and approaches to its use. Interlacing inclusion and technology is complex and needs to be unpacked to understand whether use of technology, of any kind or of a particular kind, leads to enhancing of inclusion or deepens exclusion. Such an analysis requires understanding the various factors that govern use of technology for social development.

As is well known, caste, class, gender and religion are the main markers of inclusion and exclusion in any Indian context, whether with or without the use of technology. Article 16 of the Indian Constitution provides for ‘equality of opportunity for all citizens in the matters relating to employment or appointment to any office under the state’ while Article 46 directs the state to promote the educational and economic interests of the weaker sections, with a focus on the vulnerable social groups. These provisions have led to reservation⁷¹ in education, employment and legislature in state-run/state-supported sectors.⁷² Inclusion in the education sector is a presupposed variable in discussions on inclusive growth (that is, economic growth that takes into account the social development of the socially and economically disadvantaged). The last two Five-Year Plans (the Eleventh⁷³ and Twelfth⁷⁴) emphasised the need for inclusive education or growth. However, in this context, this is mainly seen as inclusion of those who largely remain outside the realm of social development. With the increasing digitisation of various social development processes, it is critical to expand this definition to those who are considered excluded from the system; even those who are considered covered could be excluded if they are not able to negotiate technology and use it for the purpose it is meant for. Such definitions of inclusion/exclusion can cut across social categories and income divide, the traditional parameters that defined inclusion and exclusion.

In the government school system, the focus of inclusive practices has been the participation of students from disadvantaged and weaker sections. This literature spans over various themes: inclusion from the perspective of children with physical/mental disabilities,⁷⁵ universalisation of education,⁷⁶ children from varied social categories⁷⁷ and perspectives and practices of inclusion

⁷¹ Broadly speaking, ‘reservation’ in India means the practice of reserving access to seats in government jobs, educational institutions, and even legislatures to certain sections of the population. Also known as affirmative action, reservation can also be seen as positive discrimination. Reservation in India is a government policy, backed by Article 46 of the Indian Constitution.

⁷² Sukhadeo Thorat and Chittaranjan Senapati, “Reservation in Employment, Education and Legislature: Status and Emerging Issues,” Indian Institute of Dalit Studies Working Paper Series, New Delhi, 2007.

⁷³ Planning Commission of India, Government of India, *Eleventh Five-Year Plan 2007-2012, Vol. II, Social Sector* (New Delhi: Oxford University Press, 2008).

⁷⁴ Planning Commission of India, Government of India, *Twelfth Five-Year Plan 2012-2017, Vol. III, Social Sector* (New Delhi: Sage Publications, 2013).

⁷⁵ Tanmoy Bhattacharya, “Re-examining Issue of Inclusion in Education,” *Economic and Political Weekly* 45, no. 16 (April 2010): 18.

⁷⁶ Jyotsna Jha et al., “Challenges in Implementing the Right to Education: The Karnataka Case,” Centre for Budget and Policy Studies Working Paper, Bangalore, 2013, http://cbps.in/wp-content/uploads/CBPS_Working-Paper-on-RTE_25Nov2013l.pdf. Accessed August 22, 2018.

by teachers.⁷⁸ In order to ensure that use of technology is conducive to social development, it is critical to understand the socio-economic-cultural context of the target population and the factors that govern effective use of technology.

Divides and exclusion in the context of technology can be understood through various lenses. While lack of access to Information and Communication Technology or ICTs (and to information) and the digital divide continue to be a major reason for exclusion, the understanding of exclusion in the context of technology is now more nuanced. Halfkin and Huyer⁷⁹ elaborate that use of ICT has different kinds of impact on different social groups, depending upon the disadvantages they face. They list various Potential for Digital Opportunity Index Indicators, which includes access/coverage, infrastructure and utilisation as the most critical indicators. Often the presence of computers/internet in a particular household does not translate into usage by all, especially women, as ICT impacts men and women differently.⁸⁰ What is also critical is the stakeholder support and input and adequate training to use ICT effectively.⁸¹ Walsham⁸² draws upon a capabilities approach and suggests theorising connections between development and technology in order to expand the way technology usage in social development is applied, while Heeks⁸³ stresses upon ‘connecting the excluded’ through technology. Tinio⁸⁴ explains how careful deliberation on the introduction of ICTs in education is essential as it can further marginalise those who are already under-served or disadvantaged. A wide set of researchers lay special emphasis on the localisation of technology for effective use in social development: Hepp et al.⁸⁵ emphasise the need for local ICT for education efforts; Ale & Chib⁸⁶ explain how lack of

⁷⁷ N. Ajith Kumar and K. K. George, “Kerala’s Education System: From Inclusion to Exclusion,” *Economic and Political Weekly* 44, no. 41 (October 2009): 55.

⁷⁸ Alan Hodgkinson and Chandrika Devarakonda, “Conceptions of Inclusion and Inclusive Education: A Critical Examination of the Perspectives and Practices of Teachers in India,” *Research in Education*, no. 82 (2009): 85-99. Francisca González-Gil et al., “Teaching, Learning and Inclusive Education: The Challenge of Teachers’ Training for Inclusion,” *Procedia – Social and Behavioral Sciences* 93 (2013): 783-8.

⁷⁹ Nancy J Hafkin and Sophia Huyer, “Women and Gender in ICT Statistics and Indicators for Development,” *Information Technologies and International Development* 4, no. 2 (Winter 2007): 25-41.

⁸⁰ Hafkin and Huyer, “Women and Gender in ICT”.

⁸¹ Jayson W. Richardson, “ICT in Education Reform in Cambodia: Problems, Politics and Policies Impacting Implementation,” *Information Technologies and International* 4, no. 4 (2008): 67-82.

⁸² Geoff Walsham, “Development Informatics in a Changing World: Reflections from ICTD 2010/2012,” *Informational Technologies and International Development* 9, no. 1 (2013): 49-54.

⁸³ R. Heeks, “Development 2.0: The IT-enabled Transformation of International Development,” *Communications of the ACM*, (2010): 22-24.

⁸⁴ V.L. Tinio, *ICT in Education: e-Primers for the Information Economy, Society and Policy* (New York, United Nations Development Programme, 2003).

⁸⁵ P. Hepp et al., *Technology in Schools: Education, ICT and the Knowledge Society* (The World Bank, 2004).

information in local languages can hinder diffusion of ICT in marginalised communities for social development. It is meaningful access rather than just the access to technology that is important.⁸⁷ Meaningful access faces barriers on several counts, language being one of the serious ones.

Deen-Swarray,⁸⁸ Sinha & Hyma⁸⁹ and Mioduser et al.⁹⁰ outline different types of literacies/skills required to access ICT for development. Four stages of literacies are: (1) Reading capability in any language; (2) Writing capability in any language; (3) English language literacy, and (4) E-skills to navigate through the computer/internet for information. Deen-Swarray⁹¹ further analyses that lack of English language literacy does not present a barrier for mobile phone adoption but the same is not true for computer and/or internet use, maybe due to the user interface and greater degree of accessibility as it reduces the fear of the unknown. Stork & Schmidt⁹² in their paper also reflect that the absence of necessary skills marginalises even those who can access and afford to use ICT services. Gurumurthy and Singh⁹³ recommend using local information behaviour before placing technological models at the heart of social development plans. It is critical to undergo ‘a process of developing, tailoring and/or enhancing capability of the hardware and software to process input and output information in language, norms and metaphors used by the community’.⁹⁴

⁸⁶ Komathi Ale and Arul Chib, “Community Factors in Technology Adoption in Primary Education: Perspectives from Rural India,” *Information Technologies and International Development* 7, no. 4 (2011): 53-68.

⁸⁷ Mark Warschauer, “Digital Divide”, in *Encyclopedia of Library and Information Sciences*, vol. 1, ed. Marcia C. Bates and Mary Niles Maack (2010), 1551-6.

⁸⁸ Mariama Deen-Swarray, “Toward Digital Inclusion: Understanding the Literacy Effect on Adoption and Use of Mobile Phones and the Internet in Africa,” *Information Technologies and International Development* 12, no. 2 (2016): 29-45.

⁸⁹ Chaitali Sinha and Raymond Hyma, “ICTs and Social Inclusion,” In *Connecting ICTs to development: the IDRC experience*, ed. Laurent Elder et al. (2013): 91-116

⁹⁰ David Mioduser, Rafi Nachmias and Alona Forkosh-Baruch, “New Literacies for the Knowledge Society”, in *International Handbook of Information Technology in Primary and Secondary Education Part One*, ed. Joke Voogt and Gerald Knezek (2008): 23-42

⁹¹ Deen-Swarray, “Towards Digital Inclusion”.

⁹² C. Stork and J.P. Schmidt, “Towards evidence-based ICT policy and regulation: E-skills,” *Research ICT Africa* 1, no. 3 (2009).

⁹³ Anita Gurumurthy and Parminder Jeet Singh, “ICTD – Is it a New Species of Development?” (IT for Change Perspective Paper, March 2009).

https://www.academia.edu/23019283/ICTD_Is_it_a_New_Species_of_Development. Accessed 29 April 2019

⁹⁴ S. Hussain and R. Mohan, “Localization in Asia Pacific,” in *Digital Review of Asia Pacific 2007–2008*, ed. International Development Research Centre (IDRC), New Delhi (2008), 43.

In conclusion, it does become critical to understand what triggered the shift to a technology-driven admissions procedure to private schools in Bangalore under the RTE provision, and how this shift been informed by the status and needs of the most marginalised population. In urban areas, multiple layers of challenges complicate how these policy decisions need to be taken and implemented. It increases the responsibility of the planning and implementing bodies to understand the nature of the urban space and address such issues of inclusivity when embedding technology for delivery of an entitlement-based service delivery. The questions that need to be answered include: Is the design of the intervention (in this case online admissions to private unaided schools using the RTE provision) informed by local behaviour and tailored to the target audience? Is the highest priority focused on making processes simpler and plain sailing for those managing it, with or without considering its impact on marginalised populations? Is the intervention procedure designed to combine technology and the needs of the people who were going to be the prime users? In the end, is the process likely to make the system more inclusive, as intended by the RTE Act, or not? In urban areas, where children and their families anyway struggle with multiple disadvantages of isolation, language, lack of identity documentation and crises of identity, does the use of technology for admission process in private schools enable their inclusion? These are the main questions that we seek to answer while examining the online admission procedure for RTE-related admissions in unaided private schools in Bangalore.

5.2. Online admissions: how efficient and how inclusive are they?

A perusal of the online procedure over a period of three years (that is, while it was in the initial evolving phase), shows that it indeed succeeded in bringing greater clarity in definitions of many terms and processes, and also in streamlining the roles and responsibilities of various government functionaries at different levels. In that sense, it succeeded in removing anomalies and consequent inefficiencies. Whether that translated in responding to the hardships faced by parents in the manual process or not is another matter. The use of technology called for clearly defining a number of terms without which the application itself was not possible. For instance, Bangalore city includes areas that remain officially ‘rural’ and in the pre-technology phase, geographical locations for application in rural areas were defined by Gram Panchayat limits, but these definitions were fluid in urban areas, leading to exemptions given without any rationale or explanations. Now, for urban areas, municipal wards became the only geographical location

within which applications could be made. For rural areas, this was restricted to the Village Panchayat limits. Clear definitions did make the process efficient.

But greater efficiency came at the cost of greater centralisation. Introducing technology to implement the admissions for the seats under the RTE Act in private unaided schools in Karnataka also changed the roles of the Block, District and state Department officials, shifting control to the state department and consequently reducing the roles and responsibilities of the district and sub-district levels significantly. The online system was stationed within the Directorate of school education. The Software Development Centre, located within the e-Governance Cell of the Directorate, was responsible for developing the software for conducting the admissions online. This required updating the school database at the levels of the school and the ward: number of schools in each ward, the medium of instruction, entry level class and the number of places available in the school under the 25% of places offered by each school under the RTE Act.

While the software was being developed, the Directorate was entrusted with ensuring uniformity in the definitions that guide these admissions, standardising the documents to be submitted, outlining guidelines for schools and applicants, and providing instructions for the officials at different levels. The Directorate, through the RTE Cell, provided helpline services as well. They were also the designated authority to address any issues related to RTE admissions. The role of the BEO's office in the RTE admission procedure was minimised and restricted to providing helpdesks and managing helpline numbers for applications. They were also expected to carry out awareness drives through the cluster and block resource staff. Like the BEO's office, the role of schools in the RTE online admission procedure was also minimised to providing guidance to parents who approached them and providing services to convert offline forms to online submissions. Schools were also instructed to display necessary information in their notice boards for the benefit of applicants. However, most schools indicated that they did not have adequate resources to extend help for online submission of forms and therefore they could not fulfil this

expectation.⁹⁵ The online system also brought some relief to parents, as they did not have to apply to multiple schools.

The centralised processes ensured that all information was available so that the parents could access the list of schools within their ward/area boundary and choose according to the entry class and medium of instruction desired. The online system made certain processes efficient and transparent: it concretised definitions for eligibility for application, gave importance to the preference of the parents and reduced the workload of the parents (who no longer had to visit each school for separate applications) and the workload of the Department related to verification of documents as it slowly moved from manual verifications to links with existing databases, increasing the speed with which the entire process of allocation and reallocation of places was undertaken. The use of randomisation software for final selection and school allocation made it difficult to tamper with the selection process. Nevertheless, while this process speeded up the pace and removed the chances of incorrect inclusion, it also led to practices that were exclusionary in nature. The need for clear definition and demarcation for technology-based intervention led to several identity-related measures and clauses that made the process exclusionary rather than inclusive.

Some of these provisions were contradictory to the RTE Act both in letter and spirit. The Act was attempting to enable children from difficult situations to access schooling by making the demand for supporting documents not mandatory. However, the online admission procedure made the need for supporting documents for identification stringent. For instance, from the 2016-17 admissions round, a strict cut-off date for the age of the child was specified and was controlled by the software (i.e. the online application form did not accept any date beyond this specified period), which was not the case for the earlier round of online admissions during the previous year. What made it worse was that starting in 2016-17, use of Aadhar ID or Aadhar Enrolment Number (indicating that the applicant has applied for an Aadhar ID) was made mandatory. Accordingly, controls were setup in the online application form that did not allow the applicants to proceed to the main form without giving the Aadhar ID/enrolment number. While the RTE had made provisions for accepting parents' self-certificate as proof of the child's date of

⁹⁵ Centre for Budget and Policy Studies (CBPS), "Review of Newly Introduced Online Process for Admissions Under Right to Education Act Section 12 (1) (c) in Private Unaided Schools in Karnataka," Bangalore, 2016, http://cbps.in/wp-content/uploads/RTE_FinalReport_29July2016.pdf. Accessed August 22, 2018.

birth, the first two years of online admissions had allowed any government-issued ID card to be used as proof, but now only one form of identity was allowed. Making Aadhar mandatory and inserting a control in the software which ensures that those with no Aadhar ID or enrolment number for Aadhar cannot apply for the provision, is not only exclusionary in nature but also a clear violation of the RTE Act that states that no child may be denied education and admission due to lack of documents.

What makes it worse is that the Aadhar card is also used for proof of residency. Those migrants who are registered in their native hometown are thus unable to apply.⁹⁶ It is also important to note that on one hand, the Government of Karnataka has issued an order prohibiting all kinds of schools under various management systems (government/aided/unaided) not to deny admissions to any student or prevent a student to appear for examinations due to non-registration with Aadhar,⁹⁷ but on the other hand, the online admission through the RTE route was not possible without this enrolment. To mandate use of Aadhar as the only valid ID to ease verification of documents is definitely in contradiction with this circular issued by the same authority, showing that those coming from most economically weaker and socially disadvantaged sections are being forced to comply with provisions that violate the intent of the Act.

A recent Supreme Court judgement has made it clear that Aadhar cannot be made mandatory for school admissions, but it allowed states to make the use compulsory for ‘subsidised’ public services.⁹⁸ The judgement can be interpreted either way for the online admission through the RTE route, as it comes under both categories – it is admission to school but it is also a subsidy as the state government pays to the private school the compensation for the loss of tuition fee. However, the Government of Karnataka continued to use Aadhar as a mandatory identification for online admission through the RTE route for the academic year 2019-20⁹⁹ showing that they treat this just as a subsidy.

⁹⁶ *Akshatha*, February 13, 2017, <http://bengaluru.citizenmatters.in/bangalore-rte-admissions-aadhaar-compulsory-9067>. Accessed April 09, 2019.

⁹⁷ Government of Karnataka, Department of Public Instruction, “Circular no. ADM.3(3) HRC: 5768/B3/16-17”, Bangalore, June 27, 2016.

⁹⁸ Supreme Court of India, “Writ Petition (Civil) No. 494 of 2012”, https://www.supremecourtindia.nic.in/supremecourt/2012/35071/35071_2012_Judgement_26-Sep-2018.pdf. Accessed December 26, 2018.

⁹⁹ Government of Karnataka, *RTE 2019 Application Submission Process* (Department of Public Instruction), see [http://164.100.133.126/RTELOTTERY19/\(S\(zckh0rbijglfp5nduh3qaaf2\)\)/RTEResult19.aspx](http://164.100.133.126/RTELOTTERY19/(S(zckh0rbijglfp5nduh3qaaf2))/RTEResult19.aspx).

The online admission procedure also posed a number of new challenges to aspiring parents. In addition to the task of arranging necessary documents, which required manoeuvring a way through different state government departments, they were also expected to ensure availability of and access to internet and computer for online submission of application forms. Guidance was available through multiple sources but the knowledge of ‘where to go’ was necessary for successful submission; most parents did not know where to go.¹⁰⁰ It was not technology alone that acted as a barrier; the language used by the technology also added to the barriers faced by aspiring parents. As discussed earlier, Bangalore is a cosmopolitan city with a high migrant population from the surrounding rural areas. Nearly 40% parents who had successfully admitted their children under the manual system did not speak Kannada (main language spoken in Karnataka) as their native language.¹⁰¹ This group also is mostly illiterate or semi-literate and therefore mostly does not possess any English skills either.

The first page of the online form is in Kannada and then it moves to English, meaning only those with competencies in both languages are able to use it for application. This is again inconsistent with the state’s own measures that acknowledge the presence of multiple languages such as running schools with different mediums of instructions (Kannada, Urdu, Tamil, Marathi, Telugu, Hindi and English). Also, a large number of Kannada speakers do not necessarily know English and cannot negotiate the form themselves. The presence of these multiple barriers in the form of language, access to internet and social capital to be able to access Aadhar enrolment forced many parents to be dependent on others (friends, family, agents, computer centres etc.) leading to high out-of-pocket expenditure. Middlemen surfaced and parents started paying them for their services: downloading and filling the form, uploading the documents and at times also getting fake documents made. Converting the process to online gave way for the mushrooming of agents who managed computer centres/internet cafes, gathered information, entered online forms and finally submitted them. Parents have been reported to have paid in the range of Rs 20 to Rs 100 for internet charges (single or multiple attempts), Rs 500 to Rs 1000 for assisted form filling, Rs 10 to Rs 30 for scanning and printing and Rs 100 to Rs 1000 for obtaining certificates (CBPS 2016). Moreover, this amounts to a violation of the justiciable fundamental right enshrined in the RTE, which emphasises the need for removing the need for such documentation. Emergence of

¹⁰⁰ CBPS, “Review of Newly Introduced Online Process for Admission”.

¹⁰¹ CBPS, *A Study of the Quality of Acceptance*.

rent-seeking middlemen has been found to be common in situations where digital processes are made compulsory for admission to educational institutions in other similar cases in India.¹⁰²

What emerges from the analysis of experiences with online admissions for the RTE route to private unaided schools is that though it removed a few inefficiencies and made the process more transparent, it also made the process more difficult for parents, especially those who were most marginalised: illiterate or semi-literate with no Kannada or English skills, with no or limited access to technology and lacking the wherewithal to deal with the mighty market or bureaucracy. The analysis reinforces earlier conclusions that the use of technology interventions without considering structural and social factors, and localising the technology to be sensitive to the needs of the target population, can have adverse effects on social inclusion.¹⁰³

Such measures make poor households in urban areas even more vulnerable as the majority of them are struggling to find a new identity in the first place. The above mentioned mechanisms add to their struggles for establishing themselves as legitimate partners of the urban transition process. The rationale for the use of technology for finding solutions is based on reducing costs, enhancing efficiency and transparency in management of services, and various kinds of improvements in educational outcomes¹⁰⁴ but the design of such public policy instruments remains completely uninformed by the needs of communities it is trying to reach. The fact that the urban poor live an uncertain life with insecure jobs and reduced social networks, and that their access to and ability to use technology that can be as limited or non-existent as in rural areas, has not been taken into consideration at all.

6. Conclusion: reduced inclusion errors, enhanced exclusion errors

The above discussion on the issue of online admissions to private unaided schools using the RTE route in Karnataka makes it clear that though the online mechanism enhanced efficiency in several ways and perhaps reduced the chances of inclusion error, it also exacerbated the divide and enhanced the potential for exclusion error. As a result of online admissions for the RTE

¹⁰² Jyotsna Jha et al., *Open and Distance Learning in Secondary School Education in India: Potentials and Limitation* (Routledge International, forthcoming).

¹⁰³ Chaitali Sinha and Raymond Hyma, "ICTs and Social Inclusion."

¹⁰⁴ C. Dede, *Six Challenges for Educational Technology* (ASCD Yearbook, George Mason University, 1998). Katie McMillan and M.H. Culp, *A Retrospective on Twenty Years of Education Technology Policy* (US Department of Education, Office of Educational Technology, 2003).

route, efficiency increased for both the parents and the government. Because of the single application procedure, parents saved their time and efforts that they would have spent in going to several schools in the pre-online era.

The government saved time, energy and resources in the processing of the application and verification of documents. The clarity that emerged in definition of terms also helped in enhancing the efficiency. However, the governance also became far more centralised. The state level Directorate became more important, as they handled the software development and use, software support, and also the helpline. This meant that the block-level offices became much less important in this process and this partially addressed the issue of rent-seeking behaviour that was reported earlier. But this also made the block offices powerless vis-à-vis local private schools.

More importantly, the mandatory use of Aadhar for establishing identity, date of birth and proof of residency went against the very core of the RTE and its prime objective of ensuring that every child goes to school. The provision 12(1)(c) was inserted in the RTE Act with an intent to ensure that every school must have a diverse studentship. In other words, all schools, whether public or private, must be inclusive by catering to children coming from diverse social, economic, linguistic and regional backgrounds. Given that the concentration of private schools is much higher in urban areas, the significance of this provision for ensuring diversity is much higher in urban areas. In its design and operation, the use of technology in the form of online admissions missed this important intention of the Act by focusing on inclusion errors rather than on ensuring that exclusions do not take place. Knowing that a city like Bangalore receives migrant labourers in large numbers from the rest of Karnataka and also other parts of the country, it could be foreseen that making Aadhar mandatory for proof of residency would be discriminatory towards them. Linking of Aadhar to entitlement-based services such as Public Distribution Services in a short period of time without paying heed to various kinds of glitches that could occur in the process have led to large-scale exclusion elsewhere and these need to be considered for social policy making in other sectors as well.¹⁰⁵

The online admission process also did not take the well-documented aspect of the digital divide into consideration in its design and implementation. Although the provisions were made for local

¹⁰⁵ Jean Dreze et al., “Aadhaar and Food Security in Jharkhand: Pain without Gain?”, *Economic and Political Weekly* 5, no. 50 (December 2017): 50-59.

level support in submission of online forms, the non-implementation of this aspect, as experienced by parents, was not taken as a serious lapse. The language barrier is also a big divide not only for non-Kannada-speaking citizens but also for those who know Kannada but do not know English. Hence, it is not surprising that it has led to the rise of middlemen and high out-of-pocket expenditure on the part of vulnerable parents. What clearly surfaces is that the well-known barriers faced by marginalised sections in accessing and using technology did not inform the design of the online admission process.

Three important conclusions emerge from this analysis. One: in situations where the population that one wants to reach is vulnerable and powerless, the use of technology can deepen their exclusion unless the process is designed and implemented with utmost care to address the barriers they face. This often means that the technology intervention needs to be supported by a number of non-technology support interventions. But the technology often becomes an aim in itself, and the non-technological components, even if part of the original design, are neglected and even forgotten. This is not a new finding but it does reinforce some of the existing findings in other contexts.

Two: public service providers need to change their focus from just reducing inclusion errors to also reducing exclusion errors; it is important that reduction of exclusion errors takes precedence over reduction of inclusion errors alone, especially if the service delivery in question relates to a fundamental right and an entitlement. This is not to say that removing inclusion errors is not important, but to emphasise that this alone is not enough.

Three: coming to the specific issue of education of children in urban areas, especially in cities where large population of neo-migrants join the unorganised service sectors on a daily basis, and where the city expands routinely to integrate the hitherto rural areas, changing the socio-economic characteristic and nature of those areas, it is important to understand the lives of these diverse groups fully before designing an intervention. Even if the urban poor may have access to more cash on a more regular basis, their lives are probably more chaotic and more insecure than the lives of the poor in rural areas. Given that the life of the urban poor is characterised by ever-increasing divides on the labour market and digitally, along with makeshift lives and unreliable public services, it becomes critical not to use digital technology-based processes, especially in combination with digital identity, as a basis for accessing schools and exercising the fundamental

right to education. This becomes even more important when we consider that education is largely viewed as a means to overcoming these very divides, especially in urban areas where education divides are also far more visible and marked.

The provisions of the RTE Act have also become far more significant for poor people in urban areas for two reasons: one, aspiration for English-medium education and two, the declining number of public schools in urban areas has made it almost unavoidable that everyone will need to access private schools, which remain unaffordable otherwise. Given that public service is declining in education in urban areas such as the city of Bangalore, the state is under a moral obligation to ensure that provisions guaranteed as fundamental rights actually work, and moreover, that they work with ease and without exacerbating social/educational gaps.

Given the fast pace of urbanisation, it is also important for states to realise that such needs will grow in the future, and therefore to prepare policies and institutional responses accordingly. Since schooling demands a long-term commitment from parents, and also shapes aspirations for the future; it is more important to guarantee that no child is deprived of an opportunity that is lawfully hers rather than to merely ensure that no child is undeservedly using public resources. It is also important for state to break the cycle of reproduction of increasing inequalities by making public services accessible to those who are at the bottom of the ladder. Such a transformation is not possible unless public policy mechanisms are designed with greater care and with attention to the social structures and barriers faced by the poor in urban areas.

Table 1: Child Development Index (CDI) across Taluks with dimensional index values and ranking in Karnataka, 2014

District	Taluks	Health Index		Nutrition Index		Education Index		CDI	
		Value	Rank	Value	Rank	Value	Rank	Value	Rank
Bengaluru Rural	Devanahalli	0.795	26	0.763	70	0.643	75	0.741	37
	Doddaballapur	0.663	78	0.812	39	0.637	76	0.731	40
	Hoskote	0.651	84	0.768	67	0.645	73	0.708	50
	Nelenangala	0.783	32	0.878	14	0.644	74	0.796	19
Bengaluru Urban	Anekal	0.663	78	0.93	2	0.616	79	0.785	28
	Bengaluru East	0.988	2	0.676	103	0.485	108	0.706	51
	Bengaluru North	1.000	1	0.810	41	0.428	120	0.762	33
	Bengaluru South	0.892	13	0.877	15	0.523	101	0.792	22

Source: Government of Karnataka. *Human Development: Performance of Districts, Taluks and Urban Local Bodies in Karnataka, 2014 – A Snapshot*. Bangalore: Human Development Division, Planning, Programme Monitoring and Statistics Department, Government of Karnataka, 2014.

Table 2: Total Number and Percentage of Government / Private Elementary Schools and their Enrolment (2014-15)

	Bangalore		Karnataka	
	Total Number	%	Number	%
Private Schools	3,3	69.68	16,157	26.17
Government Schools	1,42	29.98	45,556	73.79
Total Enrolment	12,19,801	100	83,40,373	100.00
Enrolment in Private Schools	10,34,165	84.78	40,89,590	49.03
Enrolment in Government Schools	1,84,418	15. Dez	42,49,264	50.95
Total Schools	4,736	100	61,739	100.00

Source: UDISE State and District Report Cards 2015-16

Source: National Sample Survey. "NSS 71st Round Key Indicators of Social Consumption in India: Education." 2015.

	Primary				Upper Primary			Sec/HS				
	Govt	Govt Aided	Private Unaided	Total	Govt	Govt Aided	Private Unaided	Total	Govt	Govt Aided	Private Unaided	Total
Rural	72.95	Dez 32	14.73	100	81.78	Nov 21	07. Jan	100	64.64	22.81	Dez 55	100
Urban	28. Jul	30.48	41.44	100	31.55	34.47	33.98	100	25.63	42.86	31.51	100
Total	56.64	18.80	24.56	100	62.86	20.00	17.14	100	50.59	30. Apr	19.37	100

Table 4: Literacy rates (%) for persons above 7 years of age for Karnataka

	Males	Females	Total Population
Rural	76.3	60.7	68.5
Urban	91.7	81.5	86.8
Rural + Urban	82.5	68.6	75.5

Source: National Sample Survey. “NSS 71st Round Key Indicators of Social Consumption in India: Education.” 2015.

Table 5: Gross and Net Attendance Ratio for Different Levels of Education

			Primary (P)	Upper Primary (UP)	Elementary (P+UP)	Secondary	Higher Secondary
Gross Attendance Ratio	Rural	Males	101	86	95	100	60
		Females	93	90	92	98	64
	Urban	Males	105	87	98	97	63
		Females	101	90	97	100	76
Net Attendance Ratio	Rural	Males	93	72	91	72	44
		Females	89	77	88	75	51
	Urban	Males	90	71	92	70	42
		Females	91	73	91	77	53

Source: National Sample Survey. "NSS 71st Round Key Indicators of Social Consumption in India: Education." 2015.

Table 6: Average Expenditure (in INR) per student pursuing general education during current academic session for levels of education for Karnataka

	Primary	Upper Primary	Secondary	Higher Secondary
Rural	3,045	3,112	3,512	10,877
Urban	11,581	12,654	12,333	20,622
Total	6,728	6,737	6,737	14,434

Source: National Sample Survey. “NSS 71st Round Key Indicators of Social Consumption in India: Education.” 2015.

Table 7: Enrolment by Medium of Instruction (2015-16), Karnataka, India

Medium of Instruction	Location	School Category							
		Primary Only	Primary and Upper Primary	P+UP+Sec +HS	Upper Primary Only	UP+Sec+HS	P+UP+Sec	UP+Sec	Total
Kannada	Bangalore Urban	38,386	2,10,578	38,362	528	22	1,10,103	1,103	3,99,082
	Bangalore Rural	14,075	45,338	1,152	85	252	15,392	147	76,441
	Karnataka	8,88,851	4,132,809	51,421	19,519	4,707	4,67,866	33,26	55,98,433
English	Bangalore Urban	14,177	1,38,691	2,49,634	101	658	4,14,486	1,166	8,18,913
	Bangalore Rural	948	9,719	2,448	0	0	23,569	544	37,228
	Karnataka	69,307	5,79,004	2,94,541	16,699	7,268	7,46,124	70,1	17,83,043
Urdu	Bangalore Urban	3,763	22,489	912	0	0	2,858	0	30,022
	Bangalore Rural	611	2,224	0	103	0	63	0	3,001
	Karnataka	67,98	274,391	912	1,108	0	33,78	901	3,79,072
Marathi	Bangalore Urban	N.R	N.R	N.R	N.R	N.R	N.R	N.R	N.R
	Bangalore Rural	N.R	N.R	N.R	N.R	N.R	N.R	N.R	N.R
	Karnataka	8,236	64,68	0	931	0	2,397	0	76,244

Table 7: Enrolment by Medium of Instruction (2015-16), Karnataka, India

Hindi	Bangalore Urban	N.R.	N.R.	N.R.	N.R.	N.R.	N.R.	N.R.	N.R.
	Bangalore Rural	N.R.	N.R.	N.R.	N.R.	N.R.	N.R.	N.R.	N.R.
Telugu	Karnataka	163	1,675	941	0	0	1,787	0	4,566
	Bangalore Urban	146	508	0	0	0	0	0	654
	Bangalore Rural	46	127	0	0	0	0	0	173
Tamil	Karnataka	N.R.	N.R.	N.R.	N.R.	N.R.	N.R.	N.R.	N.R.
	Bangalore Urban	263	3,13	96	0	0	0	0	3,489
	Bangalore Rural	N.R.	N.R.	N.R.	N.R.	N.R.	N.R.	N.R.	N.R.
Kashmiri	Karnataka	N.R.	N.R.	N.R.	N.R.	N.R.	N.R.	N.R.	N.R.
	Bangalore Urban	0	0	401	0	0	0	0	0
	Bangalore Rural	N.R.	N.R.	N.R.	N.R.	N.R.	N.R.	N.R.	N.R.
	Karnataka	N.R.	N.R.	N.R.	N.R.	N.R.	N.R.	N.R.	N.R.

Source: State and District Report Cards 2016-17;

Note:(i) UDISE reports enrolment in top five medium of instruction in the district / state. Hence, certain languages are not reported in some districts or at the state level. N.R.: Not Reported in the District/State Report Cards; (ii) P: Primary, UP: Upper Primary, Sec: Secondary, H.S.: Higher Secondary.

Table 8: Size and Reasons for Migration in Karnataka - All Ages, 2011 (Percentages in parentheses)

Last Residence Location	Current residence Location	Reason for Migration						Total Migration
		Work/Emp loyment	Business	Education	Marriage	Moved after birth	Moved with house- hold	Others
Rural	Rural	570965 (5.32)	40147 (0.37)	199871 (1.86)	6545389 (60.94)	1860259 (17.32)	876153 (8.16)	647563 (6.03)
Rural	Urban	1087773 (25.72)	82973 (1.96)	190601 (4.51)	1103938 (26.11)	389673 (9.21)	956868 (22.63)	416856 (9.86)
Urban	Rural	121596 (7.73)	10310 (0.66)	37191 (2.36)	513619 (32.64)	563363 (35.80)	222601 (14.15)	104747 (6.66)
Urban	Urban	1248414 (21.02)	128200 (2.16)	230513 (3.88)	1231662 (20.74)	709378 (11.95)	1419947 (23.91)	970328 (16.34)
Total Migration		3028748 (13.47)	261630 (1.16)	658176 (2.93)	9394608 (41.79)	3522673 (15.67)	3475569 (15.46)	2139494 (9.52)
								22480898 (100)

Note:

(1) Migration is defined as the following as per Census India: “When a person is enumerated in census at a different place than his / her place of birth, she / he is considered a migrant.” http://censusindia.gov.in/Census_And_You/migrations.aspx (last access: 07 August 2018)

(2) Percentages are given in parentheses

Source: Compiled from Census 2011 data (Provisional Table D-5 on Migration)

Table 9: Percentage of Literates and levels of Literacy

	Bangalore			Karnataka		
	Total Males	Total Females	Total	Total Males	Total Females	Total
Illiterate	18.81	25.32	21.92	27.31	39.80	33.47
Literate without educational level	Jan 95	Jan 25	Jan 54	54.43	74.87	62.29
Literate but below primary	Jul 38	Jul 62	Jul 49	Nov 81	Okt 85	Nov 33
Only primary Education	Nov 93	Dez 88	Dez 38	15.97	15. Okt	15.54
Only Elementary Education	Jul 85	Jul 92	Jul 89	Aug 99	Jul 63	Aug 32
Secondary	Jun 71	04. Jun	Mai 16	Aug 99	Jul 63	Okt 31
Higher Secondary	16. Nov	15.41	15.78	Nov 54	09. Mai	Okt 31
Non-technical Diploma	0.76	0.18	0.42	26. Aug	25.75	26.00
Technical Diploma	Okt 78	Mrz 83	Jul 57	24.53	Nov 73	19.61
Graduate and above	18.98	15.35	17.24	08. Apr	Mai 16	Jun 62
Total	100	100	100	100	100	100

Source: Calculated using Census 2011 data.

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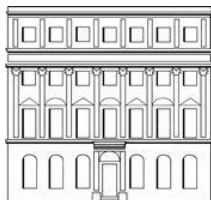
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