# *Everyday engagement with mobile phones in an urban slum in Delhi*

Simranjeet Kaur

*Brock University, Canada*

Sunita Singh

*Dr. B. R. Ambedkar University Delhi, India*

## ABSTRACT

This ethnographic case study presents findings of an 18-month research study focusing on the ways in which families residing in an urban slum were using mobile phones and how this use supported literacy practices. Data collection included participant observations and interviews with 42 participants including parents, children and community members. Results of the data analysis indicated that in this urban slum, most participants owned a mobile phone which provided multiple entry points to learning. The phones ushered in new ways of brokering knowledge where children acted as 'experts' and enabled parents to perform everyday tasks while parents mediated as cultural brokers and fostered religious and cultural practices and knowledge of the mother tongue. The implications of the study point to the evolving nature of literacy practices, the versatility of the device, the uneven landscape of smartphone use and the limitations posed by the schooling contexts.

**Keywords:** *digital literacy, sociocultural literacy, new literacies, technology as a placed resource, everyday literacies.*

## INTRODUCTION

The summer sun was at its peak. Its blazing rays heated the sand in the narrow lanes of the community. With the mercury soaring high above 40 centigrade, most individuals took shelter indoors, and emptiness gripped the area. However, the commotion made by a group of young boys broke the silence of the day. While the taller ones stood at the back, the shorter ones crouched owing to space constraints. From a distance, the group resembled "bobbleheads" tossing their heads from side to side. Adil, a seven-year-old, was seated in the centre, quite like a celebrity. He was dodging hurdles in a popular game called *Subway Surfer*. The other boys stood as spectators with their eyes glued to the screen. Neither the sun nor the dust bothered them.

Following is an excerpt from their conversation:

Rahman: Arre, dekh... bhaag... bhaag... Police aa gayi tere peche! (Hey, watch out! Run... run... The police are behind you!)
Adil: (irritatingly): Ruk na, mereko concentration nahi hota (Wait! I am not able to concentrate)
Rahman: Agar tu out hua toh mere ko khelne dega na? (If you lose this round, will you let me play?)
Adil: Tu nahi re, tu sikke nahi le sakta. Abhi tu mere ko dekh (Not you, you are not able to collect the coins. You should learn from me)

The adrenaline rush continues while the gaming is on. However, Adil is soon summoned by his mother to return her phone. She needs to take it with her to work. The other boys are clearly disappointed due to this sudden halt. However, Adil reassures them by saying, *"Kal fir khelenge"* (We will play again tomorrow).

### Background

Adil and the other boys were residents of an urban slum located in the Southern part of Delhi. Their parents had migrated from the city of *Cooch Behar* in the state of West Bengal with hopes of finding better economic opportunities in the national capital, Delhi. Delhi's mean per capita income was Rs. 3,89,143, approximately thrice the national average (Planning Department, 2020). Further, the economy grew 7.42 percent in 2019-20, which was higher than the national growth rate (Planning Department, 2020). Thus, the scorching pace of Delhi's economic growth acted as a magnet to pull more than 33 percent of people to leave their homeland and move to the city (Sharma, 2018) with the help of social networks consisting of acquaintances, friends or relatives already residing and working in the city. These networks provided a safety net that helped individuals become familiar with the life and challenges of the city and created a conducive community (Kipgen & Panda, 2019).

According to an estimate, approximately 90 percent of India's workforce is employed in the informal sector with no minimum wages or other benefits (Sharma, 2020). This revelation, coupled with the growing influx of migrants, affects the quality of life, including housing. With meagre incomes, approximately 33 percent of migrants are forced to live in slums (Government of India, 2013). To further aggravate the situation, migration brings with itself a set of challenges. According to Faetanini and Tankha (2013), migration leads to a crisis of identities, health issues, and legal aid. The absence of identity and residence proof often leads to migrants being unable to claim government benefits and schemes. Children too suffer due to this upheaval in their lives and are likely to face hindrance in their schooling (Faetanini & Tankha, 2013). Given these challenges in everyday lives, there is little documentation of how families are able to negotiate the social and cultural practices and schooling for young children in new settings, especially in the Indian context.

### Purpose

The present study emanated from a larger research project on community literacies conducted in 2019, documenting the literacy practices of families residing in an Urban Slum in Delhi. During the data collection we observed that digital devices such as mobile phones and television were becoming increasingly available in the area. The phones of today with their sophisticated design, interactive interphase and multimodalities, provide information of any kind at the click of a button. Estimates state that India's smartphone market will expand to one billion users by 2026, with the growth mainly propelled by the rural sector (Business Standard, 2022). While there has been a growing body of research focussing on digital technology, much of it has been around educated, middle-class populations (Alper et al., 2016). In spite of the low scores in literacy achievement year after year in the country (ASER, 2019), the focus of literacy practice and pedagogy has largely remained text-based (Singh, 2019). However, our field observations made it evident that literacy practices of our participants extended beyond the walls of the classroom. This interested us to document how families living in the urban slum employed the use of mobile phones that extended beyond communication.

The research questions for the study were:

1. What were the roles of smartphones in the everyday lives of children and families living in an urban slum?
2. How do these engagements with smartphones contribute towards the literacy development of children and adults?

## THEORETICAL FRAMEWORK AND LITERATURE

We situate this study in the sociocultural framework of literacy. Working within this framework, we understand literacy as a social practice (Heath, 1983; Gregory, 1997) that cannot be separated from what people are doing, how they are doing it, when, where, under what conditions and with whom they are doing it (Yeats, 1962). We build on a tradition of research in the New Literacy Studies that has argued literacy to be an ideological practice which is socially situated and tied with the larger power dynamics in the society (Street, 2003). The sociocultural researchers working within the paradigm of New Literacy Studies have documented home literacy practices of children (Li, 2002; Street, 1984). However, these studies have focussed mainly on children's engagement with oral language and print.

With societies becoming increasingly connected with each other, scholars of the New London Group (1996) reconceptualized the definition of literacy by encapsulating technical advancements into it. The term "multiliteracies" was coined by ten prominent literacy educators to broaden the definition of literacy from a pen and paper activity to include the multiplicity of communication channels and media which require meanings to be inferred using various modalities such as text, visuals and audio (Cope & Kalantzis, 2000). With ever-increasing technological invasion and the world becoming one big global village (McLuhan, 1962), it becomes imperative to recognize literacies as multiple, which vary according to time and space, and are contested in power relations. These studies, which fall under the umbrella of New Literacy Studies (Street, 2003), not only consider literacy to be a social practice but also problematize what counts as literacy at any time and place and ask "whose literacies" are dominant and marginalized or resistant (p. 77). Thus, scholars of New Literacy Studies grapple with the issue of cultural and linguistic diversity by placing importance on the context and document specific language and literacy practices across various settings.

It would not be an exaggeration to state that the digital turn has been a cause of commotion in the field of literacy studies. Progressing along with the theories of new literacy studies, multiliteracies and multimodality, researchers across the globe have acknowledged the presence of these devices as "placed resources" (Nichols, 2017; Prinsloo, 2005; Prinsloo & Rowsell, 2012) which argues that despite their global presence, digital resources do not necessarily have innate resourcefulness and can be "best studied as resources situated in social practices that have a local effect" (Prinsloo, 2005, p. 87). Focussing his study in two different areas in South Africa, Prinsloo makes an argument that the use of these devices across different contexts should not be generalized. He notes (2005, p. 96):

> At the level of practice, the new literacies are never reproduced in their entirety across different contexts. They function as artifacts and as signs that are embedded in local relations which are themselves shaped by larger social dynamics of power, status, access to resources and social mobility.

We see in the beginning vignette that Adil and his friends use smartphones within the community's local contexts whereby children negotiate in taking turns to access the device. The smartphone in this case becomes a resource for children whose use goes beyond entertainment and implicitly fosters collaboration. Engagement is a key concept in the study which identifies the diverse ways of everyday interactions with smartphones, reflecting individuals' social, ideological, and economic relationships.

Over the last few years, several studies have documented children's engagement with digital devices (Marsh et al., 2018; Perry, 2009). However, for the purpose of this review, we are limiting the selection of studies that account for the engagement of low-income families with digital devices. The following section presents the findings of such studies.

### Technology adoption in low-income families

The literature on technology adoption among low-income families has grown, especially in the last decade, indicating the diverse ways it is being used in these homes. There have been a growing number of researches focussing on children's engagement with digital devices at home as indicated in a review of 42 articles by Kumpulainen and Gillen in 2020, thus documenting the altered landscape of childhood. A research study on low-income households (Katz, 2017) indicated that families

increasingly engage with their children using digital devices and are investing in making their homes media-rich. The findings of a survey conducted on 95 participants by Auld et al. (2012) in a remote indigenous community residing in Maningrida, Australia explored ways in which families used mobile phones in their everyday literacy practices. The results of the survey indicated that approximately 56 percent of the participants possessed mobile phones. Interestingly, those who did not own a personal phone often borrowed it from family and friends and used it for a variety of purposes such as taking pictures, watching videos and for entertainment. Further, the presence of mobile phones also provided an opportunity for parents to foster literacy among their children implicitly. Oduor et al. (2013) have also provided evidence for the use of digital devices such as phones and computers as cheaper options for communication in rural and slum regions of Kenya. Findings report the use of these devices by adults for maintaining ties with family members via emails and voicemails for specific needs such as seeking financial assistance, keeping updated with the family situations and getting aid for farming. Another large-scale study conducted by Katz and Gonzalez (2016) collected data through qualitative interviews with 336 Latino parents residing in high-poverty cities of Chula Vista, Tucson and Denver. The findings indicated that low-income Latino families are no exception, given the current landscape where the world is connected electronically. The researchers noted that households had a range of digital devices, including television, tablets, smartphones and laptops. In fact, across all three sites, possessing digital devices was the norm (p. 71), and access to digital devices was on an upward trend in households depending upon the economic status.

With low-income households becoming increasingly media-rich, researchers (Akhter, 2016; Perry, 2009; 2014) have focussed on the role of children in using these devices. While these studies are set in varied contexts and settings, they have a common thread in documenting the role of children acting as 'brokers'. Commenting upon this role in a Sudanese immigrant family, Perry (2009; 2014) provides rich vignettes of how children enrolled in kindergarten and grade one acted as experts for their parents and offered help with digital tools. This assistance was crucial for parents to download forms on government websites and apply for jobs. Likewise, a study conducted by Akhter (2016) captures the intergenerational literacy learning between a seven-year-old child and his grandmother residing in Northern England. The Bengali-speaking grandmother

promoted heritage language for her grandson by encouraging him to use the internet to find the opening verse of the Quran. On the other hand, the child used his technical skills to find the same on the computer. The study is particularly significant as it offers possibilities with which technology can act as a mediator in upholding culture, especially in families who have left their native land and settled in new places.

Using phones in low-income homes has also focused on asymmetrical aspects. For example, a study by Mugalavai (2013) pointed out that while children in the early years in a slum in Kenya used smartphones owned by their parents to develop reading habits, parents did not like sharing their phones with their children because they feared they might break them. This asymmetry along the boundaries of gender is also documented in some studies. Islam et al. (2021) discussed disparities in ownership of devices and accessibility among students in Dhaka city's marginalized and higher-income settings. The study pointed out that males generally owned more devices than females. Some studies from slums in India have highlighted the need for further exploration of the use of mobiles, especially concerning everyday engagement. Tacchi (2014) makes a case for examining local perspectives and agencies regarding the use of mobile phones by slum dwellers, especially marginalised women, instead of only focusing on the economic aspects. Further in this direction, a four-year ethnographic study by Bhatia et al. (2021) examined how 14 young Indian adolescent girls from low-income urban slums engaged with digital technologies. Access to affordable digital technology intersected with normative social norms and enabled the girls to navigate and negotiate their agency across gender and class boundaries. Similarly, in another study, Nagpal and Bamezai (2022) have indicated nuanced patterns of use of smartphones by working women, unschooled women, young girls and males of different age groups. The study indicated that despite the widespread use of smartphones across genders, there were some stark differences in the use patterns. Although women used smartphones for a wide range of uses, the use of phones by their male counterparts was far more diverse and unrestricted. In general, women did not use smartphones for e-banking, e-booking tickets, reading the news and so on, unlike the male members.

While there has been a growing influx of digital devices in households across the globe, one cannot take it as a ubiquitous fact. We see from the findings of the above studies that there are differences in people's educational levels and earnings. Thus, adopting

technology can also lead to disparity, creating a world of haves and have-nots. Debunking the case of the digital divide, Rowsell et al. (2017) provide a different perspective on the issue. Reaffirming the reality of disparities in access to digital devices, the authors propose that avoiding internet use would deepen the gap. Instead, they recommend less focus on the use of technology as tools and more on accounting for them among the many literacy practices and thus adapting them as an enabling factor for literacy learning.

Researchers have established the increasing role of digital technologies among families, but whether they offer a window for literacy learning for users in particular contexts has to be established only through located research. Further, most of the research within the realm of New Literacy Studies has been taking place in the Global North, making it appear that children in the Global South do not engage with digital devices. Given the peculiarities of local and cultural dynamics (Prinsloo, 2005; Prinsloo & Rowsell, 2012; Street, 2003) in the South Asian context, there is a dire need for located research. The present study aims to add to the limited pool of research done in the field of digital literacies in India. The findings of the study will provide an impetus for further research in South Asian countries as well.

## METHODOLOGY

This ethnographic case study (Merriam, 1988; Yin, 2009) used ethnographic methods to collect and analyse data for exploring the engagement of participants with smartphones. Adopting such an inquiry enabled us to look closely at the ways in which this engagement contributed to literacy development among children (Street, 2017) within the socio-cultural context of the urban slum (Merriam, 1988; 2009). Pseudonyms have been used for the setting and participants throughout this paper.

### Research site and participants

The study was conducted in an urban slum community situated in the southern part of a large metropolitan. Built on flat land owned by the local city's civic authority, the site was inhabited mainly by Muslim migrants from Cooch Behar in West Bengal. Many families had made their homes in this area decades ago, yet there was a constant influx of individuals for better opportunities. People resided in *kutcha* houses that stood on bamboo poles and had aluminium sheets that doubled up as walls. The slum had approximately 5000 households and was flanked by garbage mounds. The size of each house was not more than 10x10 feet. The problems of the residents were further aggravated due to water shortages and frequent power cuts. The community also housed a mosque and a Hindu temple for the residents to pray. There were four elementary schools run by different non-governmental organizations and one religious school offering lessons in Arabic for children to attend. These schools held classes from preschool to Grade 1 and charged a fee of 200-300 rupees a month. The medium of instruction in the school was Hindi while the children spoke Bengali at home. The use of English was limited to older children at a basic level. The older children were enrolled in the nearby Government School.

With little or no education, most adults in the area were employed in the informal sector and earned a meagre income. The male members worked as waiters, security guards, and drivers. Some also owned small businesses like tea stalls, grocery shops, and scrap dealing. The women, on the other hand, were employed as housemaids in the nearby residential colonies. The participants in our study included families with children up to the age of 13 years.

### Data collection

Data collection included observations and semi-structured interviews with parents, children, relatives and other stakeholders such as local leaders, religious teachers and shopkeepers. We included diverse participants purposefully to inform our research questions, and ensure generalizability of results and data triangulation.

The process of data collection lasted for 18 months. We visited the research site an average of once a week during this period. Except for some brief notes, field notes were written right after the visit because it was difficult to write during data collection (Patton, 1990). These included information regarding the (1) community and home setting, (2) interaction between participants on the use of technology/mobile phones, and (3) transcriptions of conversations that occurred in the field where possible.

Being in the field for a long time, our presence became familiar to the participants. Even though we did not provide monetary incentives, the adults in the area would ask for assistance with their children's homework, filling out forms, information about schools for their children's admission, etc. We often worked

with students in completing their homework and assignments. These activities enabled us to form partnerships with the participants as we engaged with them in their lives. However, we were also aware of the power relationships that existed due to a difference in our socio-economic and educational backgrounds and acknowledge the same.

A total of 42 interviews with people from over 15 households were recorded during the data collection. All interviews were conducted in Hindi using a protocol (Merriam, 2009) that included questions on the kinds of mobile phones available in the home, the average time spent using these devices and the ways in which phones were employed in everyday lives. It is important to note that we did not know Bengali, which was a limitation of the study in capturing moments where the participants used their mother tongue.

**Data analysis**

Data analysis of this ethnographic case study began during the data collection process, and the simultaneity of the two enabled us to guide the ongoing data collection (Creswell & Creswell, 2017). Transcribed interviews and observational field notes were the main data sources. Peer debriefing was a critical component that guided the process of identifying patterns and interpretation of the data from the initial codes to broad themes (Bogdan & Biklen, 2007; Merriam, 2009).

The analysis was conducted in three stages. In the first stage, the interview and observation data were read multiple times and open codes were assigned to each identifiable segment of the data related to use of language and literacy practices centred around the use of mobile phones. This coding enabled us to identify the nature of mobile use by various participants, purposes of use, language of use, interactions among participants, spaces of use, and so on. In the second stage, the focus was specifically on literacy events which enabled us to identify instances of brokering, problem solving, collaboration and so on by developing a series of data matrices for coding (Miles & Huberman, 1994). Some broad yet overlapping categories were created across the data related to the use of mobile phones across domains. In the third stage, data from the interviews and observations were collated to develop broad themes for the study.

## RESULTS

The participants with whom we collected data possessed digital devices such as televisions, Bluetooth speakers and in some cases, a smartwatch. These devices were usually bought second-hand to ensure affordability. In some cases, people also owned "slum phones" (Saunders, 2007) that were cheaper and came with waterproof keypads and loudspeakers. Even though there were a variety of digital devices available, we restricted ourselves to capturing the engagement of families with mobile phones. This was a decision we took keeping in mind that phones were a no-fuss device which were easy to carry and used for various purposes. Since none of the families owned a computer, they relied on mobile phones for several day-to-day activities. The adults in the family were the ones who owned mobile phones; however, it was shared among family members at different times of the day. While men invested in buying a smartphone with a 3G data plan, women usually used the cheaper keypad version (Livingstone & Helsper, 2007). The use of smartphones also indicated some disparities across gender lines. The children expressed their affinity for using a smartphone. This could be attributed to features such as a coloured touchscreen, the internet and an array of applications they could use. The results of data analysis demonstrated themes related to a plethora of ways in which individuals used mobile phones in their everyday lives. These domains of use were across children's work and play spaces, family's language and religious spaces and parent's workspaces (Openjuru, 2017). Figure 1 provides an overview of the domains and intersections of the use of mobile phones. The themes, highlighted below, also explicate ways by which smartphones intersected and transformed the everyday literacy practices of our participants.

**Using smartphones for assistance in everyday activities**

The presence of smartphones made it convenient for children to use them for various school and non-school activities, such as browsing school homework, watching DIY videos and playing video games. These activities had little oversight from the parents. Since most parents in the area did not study beyond the elementary level, they could not assist much in their child's education. Smartphones provided an easy way for children to access educational websites and find information regarding their curricular subjects (Hofferth, 2010).
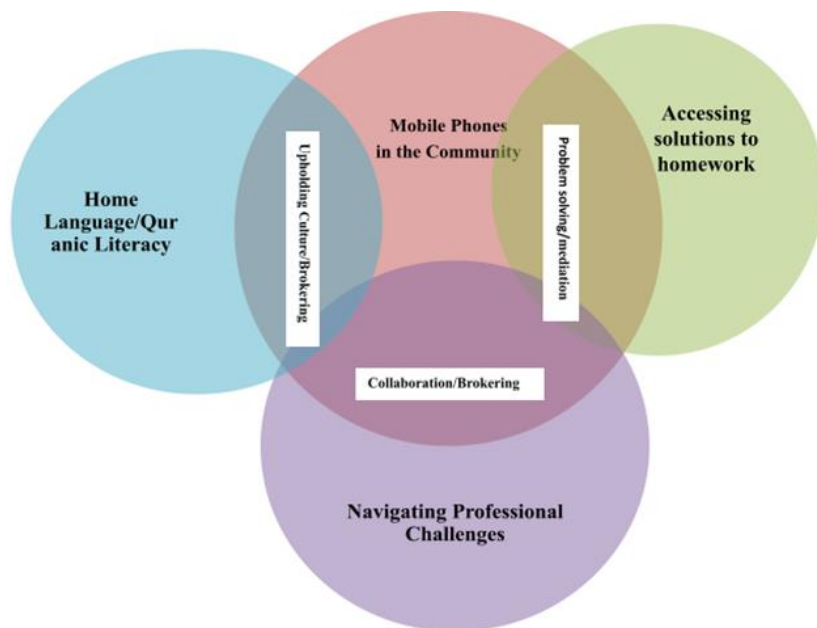
Figure 1. *Domains and intersections of use of mobile phone*

The following entry in the field notebook exemplifies this finding:

> Sohail, a 13-year-old, picked up his school bag and sat down on the floor to study. He opened his math book and looked at the question given for homework. After gazing at the question for some time, he got up to pick up his father's phone. He unlocked the phone, turned on the internet and tapped the Google icon on the screen. After waiting for the browser to load, he typed 'Class 8th Maths NCERT' and found a list of options appearing on his screen. Without thinking much, Sohail tapped the first search result and a website appeared. He then searched for specific questions and found solutions to the problem. When asked about the same, he stated, 'jo samajh nahi aata school mai, woh mai yaha dekh leta hun' (Whatever I do not understand at school, I find it here).

Without mentorship at home, Sohail looked up the answers provided online that helped him complete his homework. While this arrangement provided a quick-fix solution and enabled him to finish the homework – it is questionable whether he understood anything in the process of copying from the internet. It is also problematic in the long run by him dependent on smartphones to look for ready-made solutions. Further, his parent's educational level made children like Sohail "experts" in school related academic matters and gave them the autonomy to decide ways to complete the school work. The parents on the other hand could never realise what was happening and lent their phones assuming that it helped their child with his/her homework.

In addition to school work, we also observed mobiles being used in non-school work. In their free time, children watched Do It Yourself (DIY) videos about crafts and arts on YouTube and tried them at home. Children of varying ages had downloaded games such as *Subway Surfer*, *Temple Run* and *Ludo.* Sometimes, parents also joined their children in playing *Ludo* – a childhood favourite whose digital version enabled them to play it at their convenience. The older boys played a game called *PubG*. The interface of this game required children to connect with their friends online. This enabled the creation of a gaming community where children acted as knowledge brokers (Perry, 2014) and passed down their knowledge of the game to their less experienced parents and peers. While acting as an expert, it was not the child's age that mattered but how much one knew about the game as we saw in the opening vignette with Adil and his friends.

The finding above provides a glimpse of the ways in which children used smartphones for school and non-school domains (Openjuru, 2017). It is interesting to note that predominantly the young boys downloaded and played games on mobiles, and the girls engaged with the DIYs. In the vignette, we saw that Sohail's school work gave him little scope for critical thinking and creativity, and so the presence of smartphones remained limited to accessing calculations. It was evident that when it came

to accessing educational content online, Sohail was not an expert and relied on the options provided by the search engine. In contrast, even though Adil's use of a smartphone was confined to playing games, it enabled him to mediate his learning by becoming an active user of the game and foster problem-solving skills (Gee et al., 2017). Further, it helped to usher collaboration and transaction of knowledge among children and offered avenues of discussion, negotiation and learning digital skills. These informal encounters with smartphones had the potential to offer new ways of multimodal learning.

**Upholding language and religion: The 'digital' way!**

The movement from village to city altered ways of living for the participants. It made it inevitable for them to learn to speak Hindi in formal spaces like work and school. However, the families retained their language and religious practices at home (Akhter, 2016). The individuals spoke their mother tongue, Bengali at all times in the community even though they knew and spoke Hindi at their workplaces. Given the prevalence of smartphones, participants employed the same to uphold and foster the mother tongue of their children by accessing video streaming websites such as YouTube to expose children to popular Bengali films and songs based on writings by the Bengali poet, Rabindranath Tagore. During the home visits, we were often entertained by songs and Bengali Ghazals (one of the popular ones was *Allahu, Allahu*) praising Allah. According to Aslam, a 13-year-old boy, "*Hum roz Allah ka video dekhte hai. Iss se hume Allah ke baare mai pata chalta hai. Mere Papa ne mujhe yeh wala dikhaya. Ab mujhe yeh acha lagta hai*" (I watch Allah's videos daily. It helps me know more about Allah. My father showed me this video. I also like watching it now).

Phones were also used to conduct the everyday religious practice of Namaz, mandated by Islam for Muslims. Even though the community housed a Mosque for people to offer prayers, applications like YouTube and E-Quran made it convenient for the young to adhere to their customs without the need to learn Arabic or take religious lessons with a teacher. The people in the community had adopted this practice and preached others to follow the same. Fatima, a 21-year-old woman, advised the researcher, "*Aajkal phone mai App aa jati hai, Aap Youtube se Quran padh sakti hai. Aap English read kar sakti hain, daal lijiye aur dua kar le*" (Nowadays, you can download the application on your phone. You can listen to the Quran on YouTube. You can read English. Install the App and start praying).

Fatima who had limited experience with print literacy was not only able to find an application to suit her needs but also suggested to the researcher to install the app and read the Quran in English. Fatima's advice made it explicit that when it came to offering prayers, access to a smartphone enabled her to navigate challenges that came up due to her limited schooling and gave her the confidence and an easier means to offer prayers. Thus, by doing her prayers using an application, Fatima extended the definition of religious literacy, which was out in the public domain – the internet and accessed it in her private space.

We see that smartphones functioned as an artifact (Prinsloo, 2005) for families to carry out everyday rituals and sustain their religious and language practices without having to master the script or carry out elaborate rituals. The videos offered our participants the ease of access and entertainment value to hook children to content related to their mother tongue. We also see that Fatima's smartphone motivated her to adopt her age-old religious practices differently. The arrangement also made sense in this context, where houses were too cramped to have a physical copy of the Quran and phones made it easy for participants to negotiate these practices to maintain their religious identity. These examples show how smartphones occupied a place in the everyday lives of our participants and became a resource for them to sustain their religious and linguistic identity.

**Smartphones to navigate challenges at work**

The availability of digital devices provided a fertile ground for frequent literacy brokering (Perry, 2014) as the professional lives of community members changed due to the shift from the village to the city and was now integrally linked with the use of mobile phones. The male participants used the mobile for their businesses, where most of them worked as Ola and Uber drivers. Due to the nature of their work, the men needed to access the Internet, Google Maps and mobile banking apps.

We usually find that children are rarely familiar with the work done by their parents. However, in the case of our participants, children were familiar with the setting and nature of the work. The parents admitted that they needed assistance when using digital devices, especially smartphones. The sophisticated interface of these apps made their usage confusing and complex, and the adults often got overwhelmed. It was then that the children stepped in and provided help to their parents and other members in the community. The fact that the children

were exposed to digital devices at school, as well as homes, made them better users in comparison with their parents. One of the participants reported that his 12-year-old son helped him navigate the Internet. He explained, *"Mujhe phone chalana nahi aata. Kabhi kabhi gadbad ho jata hai. Mere bete ne mujhe sikhaya hai. Mai ab google pe bol ke sab kuch dhund leta hun. Kaam chal jata hai."* (I do not know how to use this smartphone. Sometimes it gets difficult. My son has taught me how to use the phone. I now speak on Google and find everything at the touch of a button. It's working well for now).

In the case of women, cell phones played an indispensable role in their work-life to connect with their employers. Since most women in the area were illiterate, they faced difficulties maintaining a phone book. Working in several houses, the women had no choice but to make themselves available to their employees regarding working hours and phones were a convenient option. Thus, children were roped in as brokers for saving telephone numbers with the house numbers and not names. This tweak enabled the women to use their phones to call their employers. The members used visual literacy to accustom themselves with their employer's phone numbers without making any error. Aspects of ownership, access and use also reflect the uneven landscape of engagement with the smartphone. The 'brokering' by children brings into perspective the complexities of gender and generation.

We see that cell phones provided avenues to experiment with new forms of literacy (Cope & Kalantzis, 2000) for our mature participants who had little engagement with print literacy in their everyday lives. The brokering between parents and children enabled dual benefits for our participants. On one hand it enabled the adults to employ phones to navigate challenges in their professional lives and on the other it helped children become aware of the work landscape of their parents which may be helpful for them in future. This also led to a change in the power dynamics between parents and children, where the former actively enhanced the adult's learning and digital skills.

## DISCUSSION AND CONCLUSION

Print and oral literacies have occupied the centre stage in the field of literacy studies for a very long time (Heath 1983; Street, 1984), with the dominance of print forms. In the last few decades, technology has made deep inroads into the forms and functions of literacy (The New London Group, 1996). In addition, the multimodal nature of the available devices, especially smartphones, has escalated ways in which technology can be used to foster literacy. We saw in our study that with migration and the availability of technology in hands of the participants "everyday" had changed. The access of technology in homes had permeated new areas of interaction that provided literacy support. In this research, we documented the engagement of families with mobile phones to explicate digital literacy in an urban slum.

Conventional digital literacy tools used for schooling are computers, iPads and tablets. Several kinds of research in the area have documented diverse ways of use of technology (Akhter, 2016; Marsh et al., 2018). However, there is little research on the use of technology in low-income families (Alper et al., 2016; Smith & Crane, 2019). It is important to note that none of the families in our study possessed a computing device, such as a laptop or a desktop computer. Unlike the middle-class and upper-class homes, families in these low-income households used outdated 'slum phones' with basic functionalities. Our understanding of digital learning in an urban slum emanated mainly from the use of smartphones in our participants' lives as we noticed that these literacies worked differently in comparison with print literacies (Sheridan & Rowsell, 2010). The study provided evidence of how a mobile phone could transform day-to-day relationships into a learning environment and could be one of the many channels for learning, communication and identity maintenance. We noted that mobile phones had occupied a central role in the participants' lives and served multiple purposes ranging from academic, social, cultural and professional. It offered ways of interaction and knowledge about the world. This engagement enabled participants to consume content that implicitly fostered their knowledge, language, literacy, and problem-solving skills. These socially situated practices broadened the ways of literacy use in society as participants also mediated relationships through the use of mobile phones. When using digital devices, both parents and children partnered with each other. While children often acted as 'digital brokers', parents were the 'cultural brokers' (Perry, 2009; 2014). It further enabled partnership opportunities for families to learn with and from each other. The phones acted as a placed resource (Prinsloo, 2005), allowing for those engagements to occur.

The use of technology led to a shift in power vis-à-vis who held 'knowledge' where the parents viewed their children as 'experts' and sought their advice on

how to use smartphones. It is important to note that the study has also indicated asymmetrical relationships related to gender and the use of smartphones. This was evident in the male members' ownership of phones with more features compared to the females. As the male heads of the family called upon their sons to help them navigate certain phone features, this expertise reflected the difference in access and content. This unequal access was also evident in the video games played by the young boys regularly in the slum. This study adds to the small pool of studies that have explored issues of gender vis-a-vis the use of mobile phones (Bhatia et al., 2021; Nagpal & Bamezai, 2022).

The opportunities provided by mobile phones shaped the contours of literacy practices in the lives of individuals. The young and old used mobile phones to create literacy events for different purposes depending on their likes, interests and needs. Further, the everyday lives of families made it inevitable for them to depend on the phone for their professional and personal lives. Significant among these was the use of a phone for reading the Quran. While mobile phones are generally not conceived as a medium for religious activity in homes, they ushered in new ways of praying that allowed the younger participants ease of access, thereby ensuring that they abide by their religious customs and uphold their identity.

The versatility of such a device was evident from participants' diverse ways of phone use at home. This study brought to the forefront the content children were learning independently. It also highlighted various ways by which they were doing so. However, this did not permeate all aspects of the lives of children, especially in schools. In the vignette, we see that Sohail was adept at finding solutions to the homework problem on his own because the homework content was structured in predictable ways. The school context continued to encourage static ways of studying. Curricular reforms that would encourage independent problem-solving and creativity that have been long advocated for have not found a place in the classroom (National Council for Educational Research and Training, 2005; National Council for Teacher Education, 2009; NEP, 2020; Singh & Chaudhary, 2019). The focus on a mechanical literacy instruction process has resulted in little engagement with comprehension and meaningful instruction in schools for children who need it the most (Sinha, 2019). While modalities have changed, the content of instruction has not. Schooled literacy is still dependent on the autonomous literacy model that strongly emphasizes acquiring a universal set of skills (Street, 2013; 2017).

There is also a need to bring nuanced cultural resources from different languages into the classrooms (Singh, 2019).

There is a relatively small pool of research examining the interaction with mobile phones and how this technology is appropriated in everyday use (Kamble, 2018; Pathak-Shelat & DeShano, 2014; Tacchi, 2014, and so on), especially concerning marginalisation and empowerment (Ravindran, 2021). The multifarious uses of smartphones in one urban slum points to the need for a pluralistic framework for understanding ICT4D in the Global South (Khene & Masiero, 2022). The current study specifically adds to the base of New Literacy Studies in the South Asian context highlighting the organic ways the participants were engaging with their mobile phones in the face of the changing landscape of their personal, social and professional lives. While app-based services are on the rise in India (Smith & Crane, 2019), we saw that children were creative users of content but limited in how they did not produce anything independently. We find evidence of locally situated ideological literacy practices that have broadened the notions of literacy, created new domains within the private and professional spaces and blurred power hierarchies. This study points to the need for context-specific and located research that could further examine the nuances and intricacies of such practices.

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