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Transcending borders and stereotypes: Older parents' intergenerational contacts and social networking through digital platforms

By Anoop C Choolayil & Laxmi Putran**

Abstract

Older adults are often portrayed as incompetent digital citizens, mostly stemming from the popular perception of older adults as "digital im-migrants." The purpose of this research study was to study how older adults can effectively engage in digital platforms. Following a qualitative approach, 30 older parents who have emigrated children (15 males and 15 females) from Kerala, India, were interviewed who were active users of Information and Communication Technologies (ICT). The findings show how the respondents embraced digital technologies stemming from perceived emotional benefits associated with intergenerational contact, without which they would not have ventured into the digital space. From seeking emotional goals initially, the respondents gradually started pur-suing intellectual goals in the digital world. The varying degrees of exper-tise of older adults in the digital space indicate that they cannot arbitrarily be categorised as digital immigrants. Instead, they are "digital citizens" who gradually better themselves in social networks, information literacy and social participation online.

**Anoop C Choolayil* & *Laxmi Putran*, Department of Social Work, Central University of Kerala, Kerala, India

Keywords: older ICT users, digital divide, digital citizenship, digital literacy, socioemotional selectivity theory.

Background of the Study

Life in the present era is marked by an overwhelming trend towards digitalisation. The term "virtual" has become synonymous with reality in the present world of digital connectedness. This digital connectedness gradually evolved from the beginning of the 1990s with the advent of the internet. Since the establishment of the World Wide Web in the 1990s, digital platforms have produced revolutionary changes in almost every sphere of social life. The internet evolved from an elite platform to an everyday feature in a very short span of time. With this evolution, the internet opened up the possibilities of virtual connectedness, which became the "new normal" in the early 2000s. However, with the popularisation of the internet, an unnoticed intangible divide came into existence, that of digital natives and digital immigrants (Prensky 2001), with the former being individuals with the digital ecosystem programmed to their fundamental existence and the latter being individuals who deal with the digital as a learned phenomenon. While the digital natives engage efficiently in ICT, digital immigrants pursue to familiarise themselves with technology through conscious learning efforts (Dingli & Seychell 2015). The notion of "digital natives" is sometimes theorised as superficial arising from a sense of moral panic, referring to a state of affairs where a topic of public interest gains more attention and prominence than factual backing in favour of the phenomenon (Bennett et al. 2008). Although the idea of "digital natives" is sometimes termed as superficial, the existence of a digital divide, expressed as a generational gap, cannot be denied (Kania-Lundholm & Torres 2017). Digital divide, in plain terms, refers to the disparity between people having access to resources pertaining to ICT in contrast to people without it. The reasons for the digital divide could be socio-economic, geographical, educational, attitudinal or generational (Cullen 2001). The generational aspect of digital divide is often extrapolated to draw assumptions regarding the status of older adults.

Older adults constitute a population that is traditionally assumed to be on the wrong side of the digital divide vis-à-vis digital immigrants

as they could learn using ICT only at adulthood, and hence, face some difficulties with ICT compared with those who grew up with the internet (Wang et al. 2013). Sometimes, the divide is taken a step further to describe them as "digital aliens," given the popular belief that they are aloof from the digital way of life (Vigouroux-Zugasti & Bourret 2019). Studies on the digital divide and lower engagement rates of older adults in the digital horizon have been attributing the trend to be the result of multiple factors, including poor access to the digital platforms (Kania-Lundholm & Torres 2017), lack of interest (Heart & Kalderon 2013), and limited relevance and need (Selwyn 2004; Selwyn et al. 2003). The minority of older adults who engage in the digital world are highly stratified by age, gender, marital status and education (Selwyn et al. 2003), and the subset of older adults who consider themselves good at ICT perceive themselves as exceptions to the general older adult population (Kania-Lundholm & Torres 2015). Research studies suggest that the nature of digital engagement of older adults and the skillset they develop depend to a great extent on the ease of access to technology (Schreurs et al. 2017) and a sense of need or motivation to engage in such platforms (Morris 2007).

Digital Citizenship

The idea of digital citizenship is often discussed in association with the digital divide. Digital citizenship denotes the capacity of an individual to participate in a society online (Mossberger et al. 2008). The term implies concepts like "… access, participation and societal integration" (Schou & Hjelholt 2018: 3), which, in turn, are linked to the idea of the digital divide. Digital citizenship is a concept that emerged in developed nations; however, it is still in a germinal or seminal stage in developing nations. Access to ICT, which is a foundational requirement for digital engagement, is near universal in developed nations. However, in the case of many developing nations, access to digital platforms is a work in progress. Digital citizenship is argued to be an essential element to integrate fully into modern societies (Shade 2002). With the idea of citizenship getting shaped increasingly by digital communication (Shelley et al. 2004), people assumed to be on the wrong side of the digital divide end up being perceived as technologically unskilled to perform as fully functional digital citizens.

The effectiveness of digital citizenship often revolves around the question of being digital natives and digital immigrants. Digital immigrants are often perceived as a group that "remain obstinately tied to older media, and who are failing to catch up with the times" (Thomas 2011: 10). The notion that digital immigrants are reluctant and slow to embrace digital technologies consequently leads to the idea that digital immigrants possess lesser potential to become effective digital citizens. Thus, the terms digital immigrants and digital citizens are precariously linked. The question of so-called digital immigrants being digital citizens at par with the digital natives is the one that falls within the scope of the debate on the digital divide.

Although digital citizenship was originally conceptualised in the political sphere, it bears significant implications for older adults who are believed to lag in adapting themselves as digital citizens due to computer anxiety and technophobia (Dijk 2009). This study explores the patterns of ICT usage among older adults and their success in becoming digital citizens. The aim is to address what constitutes meaningful digital interactions for older adults and how they make sense of their digital life. Based on the results, we argue that older adults can be successful digital citizens, putting efficient use of ICT for things that they deem to be useful.

Digital Divide and Older Adults: A Background Analysis of Kerala, India

Despite mass digital literacy programmes, India is still considered digitally poor (Srivastava 2020). It is estimated that around 90% of the population in India is digitally illiterate (Digital Empowerment Foundation 2018), despite being the top digitally dexterous nation in the world (The Economic Times 2020). The case of the digital divide, hence, is a factor beyond the duality of digital natives and digital migrants in India. The digital divide in India is a complex phenomenon having its roots in multiple factors, including disparities in internet availability, teledensity[1] and mobile phone access (Singh 2010). Such disparities create a privileged section in the society who have resources to access digital platforms, unlike

[1] Teledensity is the number of telephone connections per 100 individuals.

in developed nations where access is near-universal. The Government of India has been rolling out policies and intervention strategies to minimise the rampant digital divide in the country. The country has been implementing three major digital literacy[2] programmes: the National Digital Literacy Mission, the Digital Saksharta Abhiyan and the Pradhan Mantri Gramin Digital Saksharta Abhiyan since 2014, aiming at mass digital literacy (Srivastava 2020).

With the popularisation of smartphones and affordable data plans since 2014, the pattern of internet access and digital involvement of people in India has been witnessing a positive leap (Majumdar 2018). In terms of data cost, India tops the world with the cheapest rate per GigaBytes of data at 0.09 USD (Cable.uk. 2020), and when it comes to smartphone penetration, India ranks 18th among the world nations (Newzoo 2018). However, when it comes to digital literacy, there exists a gulf between age groups. In a nation like India that is engaged in a fight to minimise digital poverty, older adults face a double burden when it comes to digital platforms, primarily due to the lack of access and the absence of opportunities to learn and adapt to these platforms. A total of 27.5% of the population aged 14–29 years can operate a computer in India, in contrast to only 2.5% in the age group 60+ years (Council for Social Development 2017).

Kerala as a southern state is a positive outlier in India, in terms of many developmental indices. Its Human Development Index[3], literacy rate and health services are at par with the developed nations (Parayil 1996). The state has been making constant digitalisation efforts. When it comes to the population that can operate a computer, the state has shown steady improvements. The state has the highest smartphone coverage in India, with 65% of the phones used being a smartphone (Thomas 2018). It is found that 77.5% of the population, aged 14–29, can operate a computer. However, the corresponding percentage of people aged 60+ years is only 4% (Council for Social Development 2017). Hence, it could be argued that there is a generational gap in terms of digital usage between young

[2] Digital literacy refers to the skillset required to communicate with others and access information using digital technologies.
[3] Human Development Index (HDI) is an average measure of life expectancy, education and per capita income.

people and older adults in the state of Kerala. This study focuses on the exceptional section of older adults who are active in digital platforms.

Digital Life as Socioemotional Selection against the Background of Migration in Kerala

Based on the results from our selective sample and socioemotional selectivity theory, we argue that older adults can engage in the digital world with ease and become digital citizens over a very short period with the right motivational factor, namely inter-generational contacts. The socioemotional selectivity theory proposes that owing to a perceived sense of decreasing time left to live, older adults prioritise emotional goals over intellectual ones, thus giving preference to meaningful social relationships that provide emotional well-being (Carstensen et al. 1999). Thus, socioemotional selectivity theory suggests that older adults engage and invest their time and effort, in what they perceive to be emotionally rewarding. A future time perspective is an aspect of the socioemotional selectivity theory, which suggests that with a perception of decreasing lifetime, individuals tend to involve in goals that are more emotionally than intellectually rewarding. The primacy of an individual's goals is determined by the individual's shift in the time perspective, from the time being perceived as "expansive/open-ended" in middle age to "limited/running out" during the late adulthood (Gruhn et al. 2016). The key reasons – other than the lack of access – for older adults not to invest in the learning of digital platforms include lack of interest (Heart & Kalderon 2013), limited relevance and limited need (Selwyn 2004; Selwyn et al. 2003). Hence it could be assumed, according to the theory, that if proper emotional reward is involved, older adults will invest in learning the skills associated with digital platforms. Given such a foundational motivation, they could become digital citizens gradually.

Traditionally, Indian culture is marked by a solid intergenerational bonding. Children are believed to be responsible for their older parents, and parents have emotionally invested in their children (Chadda & Deb 2013; Kumari & Dhruvarajan 2001; Smith & Majmundar 2012). Globally, older parents who are "left behind" due to transnational migration often experience mental traumas and health-related difficulties (Thapa et al. 2018; Torres et al. 2020). With the migration to the Middle East and Europe,

the nature of intergenerational bonding took a new turn in India as well. Kerala, with its high migration rates, has witnessed problems with intergenerational contacts and bonding. It is estimated that there are around 2.1 million emigrants from Kerala working across the globe (Rajan & Zachariah 2019). Older parents of the state reportedly experience loneliness, anxiety and a sense of being left out as a result of the emigration of their children (Rajan & Balagopal 2017; Zachariah et al. 2001). However, the data revolution and increased smartphone coverage in the state offered an alternative to older parents to maintain intergenerational contacts. In this study, we argue, from the perspective of the socioemotional selectivity theory, that maintaining intergenerational contacts has served as a motivational factor for older adults to embrace the digital way of life.

Once the socioemotional selection of ICT is made, the potential to pursue further benefits of ICT is always present. Older adults often transcend the emotional goals they originally pursued to seek avenues of ICT that they deem useful. This embracing of digital life, beyond immediate emotional goals, gradually turn older adults into digital citizens through gradual "naturalisation." The idea of naturalisation is associated with citizenship, wherein a person becomes a citizen through prolonged exposure and embracing a state. In this study, we argue that older adults making a conscious socioemotional selection of embracing digital technologies ascend gradually in the digital spectrum to become digital citizens of varying degrees of expertise – a sort of naturalisation of the digital space.

Methods and Materials

Since the focal point of this study was to explore how older adults embraced digital technologies in their personal lives, a qualitative research design was employed. Qualitative research captures "the meaning individuals or groups ascribe to a social or human problem" (Creswell 2013: 44). In order to examine how older parents who have emigrated children effectively mastered digital technologies to pursue intergenerational contact and to understand the implications of this digital mastery, the framework of qualitative enquiry was put to use. Adopting a qualitative design with open-ended questions could capture the personal experiences of the participants, which facilitated a nuanced understanding of the meaning that the participants ascribed to ICT in facilitating their lives.

Participants and Procedure

As the study was made from a qualitative vantage point, the emphasis was to capture the lived experiences of the participants and the personal meaning they had ascribed to ICT. The respondents were recruited through purposive sampling, which ensured the selection of respondents "that are most likely to yield appropriate and useful information" (Kelly 2010: 317), enabling the researcher to study the central themes and questions in detail (Bryman 2012).

In order to ensure the selection of appropriate respondents, the researchers employed a set of criteria for participant recruitment. Only the persons meeting the following criteria were recruited for the study:

- Aged 60 years or above,
- Had at least one emigrated child,
- Owned a smartphone and considered themselves skilled (at least to some extent) in ICT,
- Had started using smartphones after the emigration of their child/children.

The respondents were recruited from the Kottayam district of Kerala state, India (Zachariah et al. 2001). In order to identify potential participants that met the selection criteria, a snowball sampling technique was employed. The snowball sampling procedure employed by the researchers involved identifying a few members of the intended population who were then asked to identify other members of the population (Handcock & Gile 2011). Only one older adult from a household was chosen if both the parents owned smartphones. The purpose was to ensure equal representation of both men (n=15) and women (n=15). In terms of the population characteristics, the respondents formed a subset of the older adult population that, in contrast to the majority of the national population, had access to and skills in digital platforms.

The research focused on two primary areas:

- How were older parents who had emigrated children initiated into the digital world?

- How did older ICT users continue their digital lives after their initiation into digital technologies?

The data were collected using in-depth interviews of the participants through video conferences in the local language, and then translated verbatim to English for analysis. Attention was paid to ensure that the translated content did convey the meaning of the original content. From a constructivist vantage point, knowledge is created in the interview, with both the interviewee and the researcher actively participating and interpreting (Yeo et al. 2013). Open-ended questions were employed in the interview to elicit responses that revealed newer dimensions of the research problem, which were followed-up to reach conclusions and two sets of coding with inter-coder agreement has helped to attain data saturation (Fusch & Ness 2015).

Data Analysis

The content gathered from the respondents were analysed in two phases. The data that were collected to map the first research question, that is, the factors that motivated the older adults to embrace digital platforms, were initially analysed from the theoretical lens of socioemotional selectivity theory using a deductive approach. In this phase, a thematic analysis was done from the theoretical standpoint of Socioemotional Selectivity (Bengtsson 2016). The data were analysed to locate emerging patterns pertaining to "motivation" and "sense of need" associated with digital engagement. The content was scrutinised until an inter-coder agreement was obtained.

While the first phase was informed by the theoretical framework of socioemotional selectivity theory, the second phase involved a grounded theory approach (Charmaz 2014). The aim was to understand how the respondents pursued digital technologies beyond the immediate emotional goals. The initial coding process involved "open coding" by the researchers and comparing and combining the codes. In this phase, the aim was to locate concrete narratives by the respondents on their perceived ICT engagements. The ICT usage in multiple domains, beyond the scope of communicating with the children, were identified and coded. These engagements were then further grouped according to the purpose of the

engagement as axes. The engagement of the older adults in ICT, beyond networking, fell under the axes of utility, information, entertainment and spirituality. From assessing the axes, the core category was developed to subsume and integrate all the lower level categories (Table 1), as the core category is essential for "the integration of other categories into a conceptual framework or theory grounded in the data" (Hallberg 2006).

The content pertaining to basic digital platform usage was analysed using SPSS 25 - a software program for statistical analysis in social sciences. The nature of digital connectedness was plotted using UCI NET- a software package for social network analysis (Borgatti et al. 2002). The content from the in-depth interviews was analysed using Atlas.ti 9. Textual analysis of the content was done using Voyant Tools (Sinclair & Geoffrey 2016) to detect patterns of commonalities.

Findings

A total of 30 respondents aged 60 years or above participated in the study, out of which 15 were men and 15 were women. Most of them (97 per cent) were aged 71 years or younger. All of them were accessing ICT through smartphones, and all of them were using video calling and instant messaging applications.

Women respondents were found to be engaging more in ICT usage than men. When comparing the usage of multiple services, it was found that ten female respondents were using social media compared with eight male respondents. All the female respondents but only twelve male

Table 1. Outline of the content analysis

Core category	Categories/Axes	Open codes
Digital life beyond emotional goals	Utility	Shopping, banking
	Information	News, local updates, learning
	Entertainment	Video streaming, social media
	Spirituality	Online prayer services, spiritual video streaming

respondents were users of video streaming services. Online banking services was used by six of the women and three of the men. Online shopping services were used by five male and five female respondents. Online news portals or news services were used by twelve female and ten male respondents, respectively. However, there were no significant associations in the usage patterns based on gender, as indicated by chi-square tests or Fischer's exact tests.

Digital Life as a Socioemotional Selection

The content pertaining to the respondents' getting initiated into digital technologies was analysed within the framework of the socioemotional selectivity theory. The theory emphasises the prioritisation of emotionally rewarding elements over intellectual pursuits by older adults (Carstensen et al. 1999). The data from this study suggest that the older adults embraced digital technologies due to a perceived motivation at the emotional level – maintaining intergenerational contacts. This motivation takes place in two intertwined phases: (1) perceiving digital life as a need and (2) perceiving the emotional value of embracing digital life.

Digital Life as a Perceived Need

The starting point of embracing digital technology for most of the respondents was a sense of necessity. Almost all the respondents could identify a sense of need to embrace digital technologies triggered by the emigration of their child or children. This need paved the foundation for digital engagement. When enquired about their initiation into the digital world, the respondents reiterated the role of their children's emigration. Respondent 1 noted how the smartphone was the only choice in maintaining constant contact with the children:

> "I was not at all into smartphones or digital things except for watching TV. I had to learn this for my children. If they were living with me, I would not have needed a smartphone." (R1, 66 year old man)

The narrative highlights how the participants felt the need to connect with their children, which would not have been possible without the

assistance of technology. The respondents were quick to recognise the benefits of ICT in facilitating intergenerational contacts. They identified technological knowledge as a "need" to maintain quality interaction with their children. Respondent 25 emphasised how ICT platforms offered an economical and effective means to ensure intergenerational contact:

> "The problem with children working abroad is that they can't come home often, not even once a year sometimes. WhatsApp video call is a practical option for parents like us. At least it is better than earlier when we had to wait for their phone calls as it was expensive to make calls to England. Now it is cheaper and easier, and we can even see them, at least virtually." (R25, 69 year old woman)

They have accepted virtual meetings with their children through ICT as a viable alternative to face-to-face contact. For instance, respondent 22 commented:

> "My children can't come home too often. Though I want them to stay with me as I am getting older, I realise that it is practically impossible. These video calling apps provide us with a practical alternative to keep in contact with our children though it is not an alternative for being there for real." (R22, 72 year old man)

Digital technologies were the only means for all the respondents to maintain intergenerational contact with their emigrated children, which was of emotional value to the older parents. Most of them opined that they would not have learned to use a smartphone if their child/children had not emigrated, implying how embracing digital technologies was a "Socioemotional Selection" of the respondents. The choice was made purely due to emotional necessity. The goal was emotional in nature, and digital technologies were the means. Embracing digital technology was not just a choice for the respondents but also a necessity that was paired with a perceived emotional reward.

Perceived Emotional Value of Embracing Digital Life

As the socioemotional selectivity theory suggests, older adults tend to focus on emotionally important relationships, and hence, prioritises goals pertaining to emotional regulation (Carstensen et al. 1999). During the interviews, almost all respondents were motivated to embrace digital life

due to a perceived emotional goal to maintain the emotional bond with their child/children. Most of them reiterated how they were rewarded emotionally by embracing digital technologies in the form of frequent and better communication with their children. They emphasised how video calling and instant messaging platforms had transformed the nature of their interactions with their children, in terms of both quality and frequency. The perceived need to embrace digital technologies originated from the identification of potential emotional rewards/value associated with the use of ICT. The sense of "need to use ICT" and "perception of emotional reward" are intertwined, which motivate the older adults socioemotionally. Respondent 2, for instance, pointed out the perceived emotional joy gained through intergenerational contact by ICT:

> "Three of my daughters are settled in the UK. They visit us once in two or three years, which is really saddening for us. Since we got this phone, it has been easy for us to see them, at least virtually. It is very much helpful though it can't replace the joy we get when they are really with us. My grandchildren call me once a month, and I am so happy about that." (R2, 65 year old woman)

The facilitation of intergenerational bonding, which is a key element in the studied local culture, is realised by ICT for most of the respondents, and the value they ascribe to ICT is connected to their perceived bonding opportunities. For instance, Respondent 7 commented:

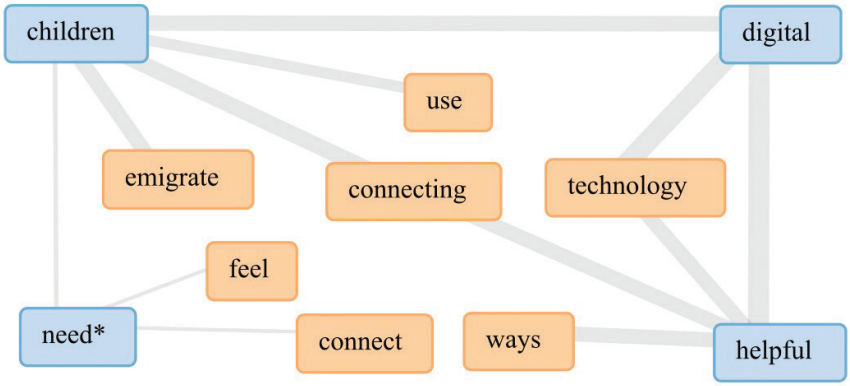
> "I now use Facebook and Whatsapp, which are really useful in keeping in touch with my children and their family. They are all abroad. Video calls and instant messaging has made the distance disappear. This is very practical and convenient. Now my grandchildren know me better. If not for these technologies, they would be coming home once in two or three years, and I would have been a stranger to my grandchildren." (R7, 63 year old woman)

It was this emotional aspect that attracted the respondents to make the selection of technology-assisted intergenerational contacts. Thus the interviews suggest that older parents of emigrated children embrace the digital life motivated by a socioemotional selection, that is, the perceived emotional reward of better communication with and relationships to the child/children and their families have motivated the respondents to learn digital technologies.

A key term analysis of the interviews showed that the participants were reiterating the usefulness of digital technologies in connecting with their emigrated child/children. Four recurrent terms: "children," "digital," "helpful" and the variations of the term "need" – like "needing," "needful," "needs" etc. – were analysed to see textual linkages to plot thought patterns associated with intergenerational contacts through ICT (Figure 1). The links are plotted in such a manner that the thicker the lines connecting the key terms, the more frequent the association of the terms.

The linkage of key terms reveals how the term "digital" is associated with the key terms "children" and "helpful," further linked by the term "connecting." The network indicates how the respondents perceived the "digital platforms as a helpful way to connect with their children who had emigrated. The response patterns revealed a sense of "perceived helpfulness" offered by "digital technologies" in meeting the 'perceived need' to connect with the emigrated children, reiterating the concept of 'digital life as a socioemotional selection.'"

Figure 1. Thought patterns of the respondents in terms of perceived usefulness of technology in connecting with their emigrant children.*



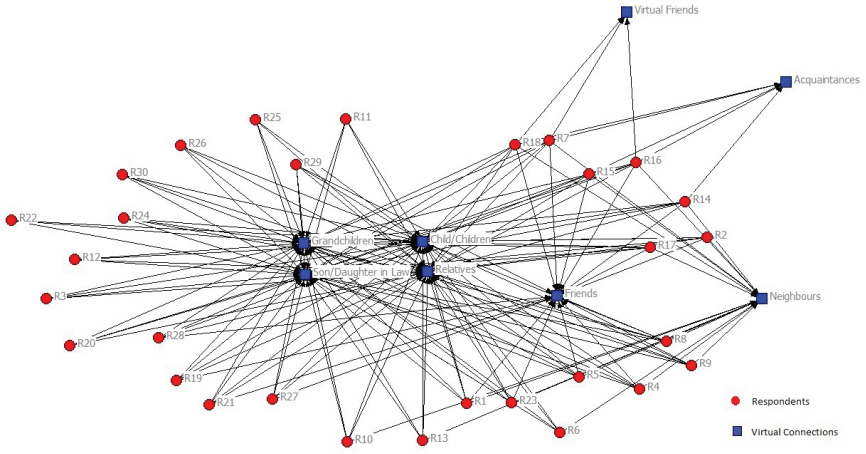
*, Generated using Voyant Tools from the interviews of the espondents.

Continuing the Digital Lives: The Stage after the Initial Socioemotional Selection

As discussed in the previous sections, the starting point of embracing digital technologies, as reported by all the respondents, was a perceived emotional need to connect to their child/children and grandchildren. However, the interviews suggest that the digital social circle of the respondents expanded beyond the circle of their child/children and family. The majority of the respondents maintained virtual relationships with their relatives (97%) through digital platforms. However, when it comes to connecting with friends (60%) and neighbours (53%), not all use virtual platforms. A very few maintain virtual connections with their acquaintances (17%). Only a few respondents (10%) initiated new virtual friendship relations. As depicted in Figure 2, the centrality of the digital connectedness of older adults revolves around their immediate family. Friends, neighbours and acquaintances fall outside the central spectrum of digital connectedness.

The respondents having no digital connectedness with friends, neighbours, acquaintances and who did not initiate any new virtual friendships

Figure 2. Network of the digital connectedness of the older adults**



**, Generated using UCI NET from the interviews of the respondents.

were asked the reasons for this non-engagement beyond immediate family.

Respondent 3 who did not have any digital connection with friends, neighbours, acquaintances and also had not initiated any new virtual friendships commented:

> "My phone helps me connect with my children. Everything else is secondary for me. I don't connect with people who I have no emotional connection with. I talk with my neighbours and friends, but I don't need to connect with them as often as I need to connect with my children. I would rather engage in casual conversations with them only when required." (R3, 64-year-old woman)

Respondent 5 who maintained digital connections with long-term friends and neighbours but had not initiated any new virtual friendships and connections with acquaintances online commented:

> "I have a lot of friends back from my home town. We shifted to Kottayam almost ten years before. Since then, I was not able to contact them, but after I got this phone, I often make video calls with some of them who have a smartphone. They are part of a lot of my memories, and it is a great happiness to keep in touch with them. I am not connecting with people who are just acquaintances because I have no memories of them. I am not excited to talk with strangers either. That is why I am not into virtual friendships in social media. Also, my children have warned me about online scams. So I am cautious about the people I talk with." (R5, 67-year-old man)

The respondents were not very enthusiastic about making new virtual friends online. Those respondents who had initiated new virtual friendship relations in social media commented that their contacts with such virtual friends were limited.

For instance, Respondent 18, who had virtual friends on Facebook, commented:

> "I started using Facebook for connecting with my friends and family. I started getting connection requests from unknown people later on, and I connected with a few. However, I don't communicate with them often. In fact, most of the conversations are limited to some greetings and forwarded messages." (R18, 61-year-old woman)

Respondent 7, who also had virtual friends on Facebook, commented:

> "Though I have virtual connections on Facebook, I seldom communicate with them. I did not initiate any connection with strangers. Rather, some people started sending me connection requests, and I accepted them. Though I answer if someone messages me, I don't engage in a proper conversation with any virtual friends on Facebook." (R7, 63-year-old woman)

The responses from most of the respondents suggest that the limited online networking beyond immediate family was mainly due to a perceived hierarchy in the emotional value of connections. The responses regarding limited digital connectedness beyond the first-degree relatives fell under two major themes: limited emotional attachment and a consequent lack of interest in establishing new connections over digital platforms due to the absence of perceived emotional value. The general trend in the results suggests an association between the perceived emotional value and digital connections. The more the respondents were emotionally connected to someone, the more certain was the digital connection with that person, given that the person too had access to a smartphone.

Also, almost all the respondents cited concerns over online scams and other security reasons for not making virtual friends. The alertness of the participants regarding potential scams, especially financial scams, is a key finding, as older adults are often considered vulnerable to online financial scams (Brancaccio 2019).

Beyond Networking: Older Adults on Exploring the Possibilities of the Digital World

Data from the interviews suggest that the primary motivation of the participants to start using smartphones was to connect with their emigrated children. However, once the respondents were familiar with the technology, they started exploring other possibilities offered by their digital devices. The data from Table 2 show how the respondents made use of their smartphones beyond the purpose of networking. It was found that 90% of the respondents used video streaming applications, 73% used news portals or applications, 33% made use of online shopping applications and 30% used mobile banking facilities. The analysis of the interviews shows that respondents explored the possibilities of the digital world in four main categories other than maintaining intergenerational contacts:

Table 2. Socio-demographic profile and basic digital involvement of the respondents

Age Group (*n* = 30)		
Age category (years)	**Frequency**	**Percentage**
60–63	5	16.7
64–67	15	50.0
68–71	9	30.0
71 and above	1	3.3
Education (*n* = 30)		
Level of Education	**Frequency**	**Percentage**
Primary level	10	33.3
Secondary level	9	30.0
Senior secondary school	5	16.7
Graduate level	5	16.7
Post graduate level	1	3.3
Gender (*n* = 30)		
Gender	**Frequency**	**Percentage**
Male	15	50.0
Female	15	50.0
Device		
Device	**Frequency**	**Percentage**
Smartphone	30	100
Video calling usage (*n* = 30)		
Usage status	**Frequency**	**Percentage**
User	30	100
Instant messaging applications usage (*n* = 30)		
User status	**Frequency**	**Percentage**
User	30	100.0

(*Continued*)

Table 2 . (*Continued*)

Social media usage (*n* = 30)		
User status	**Frequency**	**Percentage**
User	18	60.0
Non-user	12	40
Video streaming applications usage (*n* = 30)		
User status	**Frequency**	**Percentage**
User	27	90.0
Non-user	3	10.0
Online shopping usage (*n* = 30)		
User status	**Frequency**	**Percentage**
User	10	33.3
Non-user	20	66.7
Online banking usage (*n* = 30)		
User status	**Frequency**	**Percentage**
User	9	30.0
Non-user	21	70.0
Email usage (*n* = 30)		
User status	**Frequency**	**Percentage**
Non-user	30	100.0
News applications usage (*n* = 30)		
User status	**Frequency**	**Percentage**
User	22	73.3
Non-user	8	26.27

(1) information seeking, (2) entertainment, (3) utility services and (4) spirituality.

Information seeking mostly involved following news on different platforms, and some respondents were learning to cook. On the entertainment front, the respondents were reporting how they used video streaming platforms to watch movies and other contents. Banking and online shopping were the most common utility services reported by the respondents. Spiritual content was accessed by many respondents across different video streaming platforms.

These factors point to the fact that older adults explore the potential of learning newer possibilities in the digital world, which implies that they are potential digital citizens. Digital citizenship, in its basic understanding, emphasises the capacity to use digital media and interact with people over digital platforms (Mossberger 2009). The idea is also discussed in terms of media and information literacy (Kim & Choi 2018; Simsek & Simsek 2013). On an advanced understanding, it means the capability of a person to take part in a society online (Mossberger et al. 2008). Concurring with these understandings of the idea of digital citizenship, it can be observed that the respondents of this study are digital citizens in varying degrees. The participants could use digital media and interact with people online, had media and digital literacy in varying degrees, and could participate in a society in varying degrees.

Older ICT Users' Perception of their Position in the Digital World

The respondent group of this study constitutes a subset of the population that is a positive outlier among the older adult population of India in terms of ICT usage. The participants were asked to explain their position in the digital divide from two standpoints: (1) the position in terms of fellow seniors and (2) the position in terms of young people. Most of the respondents considered themselves to be good at using ICT because of their interests. They consider themselves "exceptions" to the general older adult population, who cannot handle ICT as efficiently as them. When pitching themselves against young people, most of the older respondents considered themselves not having the expertise that the young people have in ICT. However, the respondents identified "perceived usefulness" as the motivation to pursue ICT usage. A good number of the respondents

believe that they have expertise in the areas they deem useful, and that they have the potential to gain expertise in any aspects of ICT if they deem it useful. Given the fact that young people have prospects of more usefulness with ICT, their percieved superior expertise is understandable. This does not make older adults neither digital natives nor digital aliens. They constantly evolve in the digital spectrum, learning and imbibing the digital way of life.

Discussion and Conclusion

The starting point of this study was the exploration of a subset of the older adult population, which is a positive outlier in the Indian context in terms of digital know-how. The overall digital literacy among older adults in India, especially in Kerala, is not at par with the global standards (Council for Social Development 2017). Unlike that of the developed nations where "access" is almost universal, the case of developing nations like India is different. In such cases, the opportunity to avail the resources to access the digital world is a key element. Besides limited access, the most important reasons for older adults not to use ICT are the lack of interest (Heart & Kalderon 2013) and limited relevance and need (Selwyn 2004; Selwyn et al. 2003). The study focused on a subset of the population that had access to and perceived relevance in pursuing digital technologies.

Once the right motivation with an emotional output was involved, the participants in this study developed a sense of interest and relevance associated with ICT use. This sense of interest and relevance of ICT, in turn, made the older adults embrace digital platforms, primarily for emotional reasons for maintaining intergenerational contact and later on it expanded to other fronts of digital life. In this process of transcending the initial motivation of emotional rewards, older adults embrace digital technologies to seek intellectual goals as well. The active engagement of the older adults, in both the emotional and intellectual front at varying levels, makes them digital citizens in different degrees. The respondents were seen to be exhibiting different traits of digital citizens, like using digital media and interacting with people over digital platforms (Mossberger 2009), having media and information literacy (Kim & Choi 2018; Simsek & Simsek 2013), and having the

capacity to take part in a society online (Mossberger et al. 2008). These traits effectively make them digital citizens.

Most of the older adults who participated in this study suggest that there are varying degrees of digital expertise, and that young people have better proficiency in ICT. However, this does not make older adults non-digital citizens. The digital way of life can be conceptualised as a "spectrum" rather than a "binary." There exists no watertight compartmentalisation of aliens/immigrants and natives. Instead, it is a spectrum of people embracing digital life in varying degrees according to perceived usefulness. Just like any spectrum, the digital way of life is constituted of components that are different but integral to the spectrum. Any attempt to arbitrarily classify one component as unimportant or less important would be contradicting the nature of the spectrum.

The respondents of this study consider themselves as efficient in using ICT for the purpose that they deem to be useful points to the fact that they are part of the digital spectrum. The participants of this study were of different levels of expertise and practice in terms of ICT usage, implying that ICT engagement is not categorically segmented in terms of age. It is more nuanced and complex. Hence, assuming older adults to be lesser digital users is illogical. They could be considered digital learners who are gradually venturing into increasing digital involvement. They are successful digital citizens in so far as they can efficiently use ICT for what they need and want. The nature of their engagement in comparison with their younger counterpart may suggest differences in the degree and/or frequency of usage; however, the idea of being a digital immigrant is unimportant as long as one possesses the potential to be a citizen through naturalisation. In the case of digital life, digital citizenship through naturalisation can be conceptualised as a forward movement of older ICT users in the spectrum of digital life through gradual steps. Starting with a gradual transcendence from emotional goals to intellectual goals in the digital world, older ICT users are equal digital citizens in the digital spectrum. Even though the digital divide – expressed as a generational gap – exists, the idea of digital citizenship in varying degrees of expertise suggests that older adults progress in the spectrum of digital life through engagement and interaction that they deem useful.

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Corresponding Author

Anoop C Choolayil, Department of Social Work, Central University of Kerala. Tejaswini Hills, Periye, Kerala 671316, India. Email: anoopcchoolayil@gmail.com

References

Bengtsson, M. (2016). How to plan and perform a qualitative study using content analysis. *NursingPlus Open* 2, 8–14. doi: 10.1016/j.npls.2016.01.001

Bennett, S., Maton, K. & Kervin, L. (2008). The "digital natives" debate: A critical review of the evidence. *British Journal of Educational Technology* 39(5), 775–786. doi: 10.1111/j.1467-8535.2007.00793.x

Borgatti, S. P., Everett, M. G. & Freeman, L. C. (2002). *Ucinet 6 for Windows: Software for Social Network Analysis*. Harvard, MA: Analytic Technologies.

Brancaccio, D. (2019). *Age of Fraud: Are Seniors more Vulnerable to Financial Scams?* Available on https://www.marketplace.org/2019/05/16/brains-losses-aging-fraud-financial-scams-seniors/ (Accessed: October 10, 2021).

Bryman, A. (2012). *Social Research Methods* (4th ed.). Oxford: Oxford University Press.

Cable.uk. (2020). Available on https://www.cable.co.uk/mobiles/worldwide-data-pricing/ (Accessed: January 4, 2021).

Carstensen, L. L., Isaacowitz, D. M. & Charles, S. T. (1999). Taking time seriously. A theory of socioemotional selectivity. *The American Psychologist* 54(3), 165–181. doi: 10.1037//0003-066x.54.3.165

Chadda, R. K. & Deb, K. S. (2013). Indian family systems, collectivistic society and psychotherapy. *Indian Journal of Psychiatry* 55(Suppl 2), S299–S309. doi: 10.4103/0019-5545.105555

Charmaz, K. (2014). *Constructing Grounded Theory*. Los Angeles, CA: Sage.

Council for Social Development. (2017). *Digital Literacy Training to Non-IT Literate Citizens*. Available on http://www.csdindia.org/pdfs/Project-reports/Digital-Literacy-Report-2017.pdf (Accessed: January 5, 2021).

Creswell, J. W. (2013). *Qualitative Inquiry & Research Design: Choosing Among the Five Approaches* (3rd ed.). Thousand Oaks, CA: Sage.

Cullen, R. (2001). Addressing the digital divide. *Online Information Review* 25(5), 311–320. doi: 10.1108/14684520110410517

Digital Empowerment Foundation. (2018). Available on https://www.defindia.org/national-digital-literacy-mission/ (Accessed: January 5, 2021).

Dijk, J. A. G. M. (2009). One Europe, digitally divided. In A. Chadwick (ed.), *Handbook of Internet Politics* (pp. 288–304). New York, NY: Routledge.

Dingli, A. & Seychell, D. (2015). Who are the digital natives? In A. Dingli & D. Sey shell (eds.), *The New Digital Natives* (pp. 9–22). Berlin: Springer.

Fusch, P. I. & Ness, L. R. (2015). Are we there yet? Data saturation in qualitative research. *The Qualitative Report* 20(9), 1408–1416. doi: 10.46743/2160-3715/2015.2281

Gruhn, D., Sharifian, N. & Chu, Q. (2016). The limits of a limited future time perspective in explaining age differences in emotional functioning. *Psychology and Aging* 31(6), 583–593. doi: 10.1037/pag0000060

Hallberg, L. R. (2006). The "core category" of grounded theory: Making constant comparisons. *International Journal of QualitativeSstudies on Health and Well-being* 1(3), 141–148. doi: 10.1080/17482620600858399

Handcock, M. S. & Gile, K. J. (2011). Comment: On the concept of snowball sampling. *Sociological Methodology* 41(1), 367–371. doi: 10.1111/j.1467-9531.2011.01243.x

Heart, T. & Kalderon, E. (2013). Older adults: Are they ready to adopt health-related ICT? *International Journal of Medical Informatics* 82(11), e209–e231. doi: 10.1016/j.ijmedinf.2011.03.002

Kania-Lundholm, M. & Torres, S. (2015). The divide within: Older active ICT users position themselves against different "Others." *Journal of Aging Studies* 35, 26–36. doi: 10.1016/j.jaging.2015.07.008

Kania-Lundholm, M. & Torres, S. (2017). Older active users of ICTs make sense of their engagement. *Seminar.Net*, 13(1). Available on https://journals.oslomet.no/index.php/seminar/article/view/2297 (Accessed: January 2, 2021).

Kelly, S. E. (2010). Qualitative interviewing techniques and styles. In I. Bourgeault, R. Dingwall & R. De Vries (eds.), *The Sage Handbook of*

Qualitative Methods in Health Research (pp. 307–326). Thousand Oaks, CA: Sage Publications.

Kim, M. & Choi, D. (2018). Development of youth digital citizenship scale and implication for educational setting. *Journal of Educational Technology & Society* 21(1), 155–171.

Kumari, A.B. & Dhruvarajan, R. (2001). Ageing in India: Drifting intergenerational relations, challenges and options. *Ageing and Society* 21(5), 621–640. doi: 10.1017/S0144686X0100842X

Majumdar. (2018). *Fortune India.* Data and the New India. Available on https://www.fortuneindia.com/opinion/data-and-the-new-india/102658 (Accessed: January 10, 2021).

Morris, A. (2007). E-literacy and the grey digital divide: A review with recommendations. *Journal of Information Literacy* 1(3), 13–28. doi: 10.11645/1.3.14

Mossberger, K. (2009). Toward digital citizenship: Addressing inequality in the information age. In A. Chadwick & P. N. Howard (eds.), *Routledge Handbook of Internet Politics* (pp. 173–185). London: Taylor & Francis.

Mossberger, K., Tolbert, C. J. & McNeal, R. S. (2008). *Digital Citizenship: The Internet, Society, and Participation.* Cambridge: MIT Press.

Newzoo. (2018). *Newzoo Global Mobile Market Report 2019* | Light Version. Available on https://newzoo.com/insights/trend-reports/newzoo-global-mobile-market-report-2019-light-version/ (Accessed: January 15, 2021).

Parayil, G. (1996). The "Kerala model" of development: Development and sustainability in the Third World. *Third World Quarterly* 17(5), 941–958. doi: 10.1080/01436599615191

Prensky, M. (2001), "Digital Natives, Digital Immigrants Part 1", *On the Horizon* 9(5), 1–6. doi: 10.1108/10748120110424816

Rajan, S. I. & Balagopal, G. (eds.). (2017). *Elderly Care in India: Societal and State Responses*. Singapore: Springer.

Rajan, S. I. & Zachariah, K. C. (2019). Emigration and remittances: New evidences from the Kerala migration survey 2018. *eSocialSciences*. Working Papers id: 12989.

Schou, J. & Hjelholt, M. (2018). Digital citizenship and neoliberalization: Governing digital citizens in Denmark. *Citizenship Studies* 22(5), 507–522. doi: 10.1080/13621025.2018.1477920

Schreurs, K., Quan-Haase, A. & Martin, K. (2017). Problematising the digital literacy paradox in the context of older adults' ICT use: Aging, media discourse, and self-determination. *Canadian Journal of Communication* 42(2), a3130. doi: https://doi.org/10.22230/cjc.2017v42n2a3130

Selwyn, N. (2004). The information aged: A qualitative study of older adults' use of information and communications technology. *Journal of Aging studies* 18(4), 369–384. doi: 10.1016/j.jaging.2004.06.008

Selwyn, N., Gorard, S., Furlong, J. & Madden, L. (2003). Older adults' use of information and communications technology in everyday life. *Ageing and Society*, 23(5), 561–582. doi: 10.1017/s0144686x03001302

Shade, L. R. (2002). *Gender & Community in the Social Construction of the Internet* (vol. 1). New York, NY: Peter Lang Publishing.

Shelley, M., Thrane, L., Shulman, S., Lang, E., Beisser, S., Larson, T. & Mutiti, J. (2004). Digital citizenship. *Social Science Computer Review* 22(2), 256–269. doi :10.1177/0894439303262580

Simsek, E. & Simsek, A. (2013). New literacies for digital citizenship. *Contemporary Educational Technology* 4(2), 126–137. doi: 10.30935/cedtech/6097

Sinclair, S. & Geoffrey, R. (2016). *Voyant tools*. Available on http://voyant-tools.org/ (Accessed: January 1, 2021).

Singh, S. (2010). Digital Divide in India. *International Journal of Innovation in the Digital Economy*, 1(2), 1–24. doi: 10.4018/jide.2010040101

Smith, J. P. & Majmundar, M. (2012). *Aging in Asia: Findings from new and emerging data initiatives*. Washington DC: National Academies Press.

Srivastava, S. (2020). International Literacy Day: Bridging India's Digital Divide. *Bloomberg Quint*. Available on https://www.bloombergquint.com/technology/international-literacy-day-bridging-indias-digital-divide#:~:text=As%20per%20a%20report%20from,India's%20population%20is%20digitally%20illiterate.&text=However%2C%20until%20October%202018%2C%20around,just%201.67%25%20of%20India's%20population. (Accessed: January 5, 2021).

Thapa, D. K., Visentin, D., Kornhaber, R. & Cleary, M. (2018) Migration of adult children and mental health of older parents' left behind': An integrative review. *PLoS One* 13(10), e0205665. doi: 10.1371/journal.pone.0205665

The Economic Times. (2020). *India is world's most digitally dexterous country: Survey*. Avaiable on https://economictimes.indiatimes.com/tech/

internet/india-is-worlds-most-digitally-dexterous-country-survey/articleshow/75178052.cms?from=mdr (Accessed: January 3, 2021).

Thomas, M. (ed.). (2011). *Deconstructing Digital Natives: Young People, Technology, and the New Literacies*. New York, NY: Taylor & Francis.

Thomas, T. (2018). Kerala Tops Smartphone Penetration in India; Gujarat, Punjab close behind. *Ulta News*. Available on https://ultra.news/t-t/40425/kerala-tops-smartphone-penetration-in-india-gujarat-punjab-close-behind#:~:text=Kerala%20has%20emerged%20as%20the,firm%20tracking%20the%20technology%20sector.&text=-Kerala%20led%20the%20charts%20with,and%20Punjab%20at%20about%2059%25 (Accessed: February 8, 2021).

Torres, J. M., Sofrygin, O., Rudolph, K. E., Haan, M. N., Wong, R. & Glymour, M. M. (2020). Adult child US migration status and cognitive decline among older parents who remain in Mexico. *American Journal of Epidemiology* 189(9), 761–769. doi: 10.1093/aje/kwz277

Vigouroux-Zugasti, E. & Bourret, C. (2019). Digital disqualification, digital suffering, digital reliance: The case of French retired people over sixty years old. *The Fifth International Conference on Human and Social Analytics*, Jul 2019, Rome, Italy. Available on https://hal.archives-ouvertes.fr/hal-02363646/document (Accessed: February 5, 2021).

Wang, Q. E., Myers, M. D. & Sundaram, D. (2013). Digital natives and digital immigrants. *Business & Information Systems Engineering* 5(6), 409–419. doi: 10.1007/s12599-013-0296-y

Yeo, A., Legard, R., Keegan, L., Ward, K., Nicholls, M. C. & Lewis, J. (2013). In-depth Interviews. In J. Ritchie, J. Lewis, C.M. Nicholls & R. Ormston (eds.), *Qualitative Research Practice: A Guide for Social Science Students and Researchers* (pp. 177–208). Thousand Oaks, CA: Sage.

Zachariah, K. C., Mathew, E. T. & Rajan, S. I. (2001). Social, economic and demographic consequences of migration on Kerala. *International Migration* 39(2), 43–71. doi: 10.1111/1468-2435.00149