Resilience, smartphone use and language among urban refugees in the Global south

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ABSTRACT
The formidable challenges faced by urban refugees in the Global South have received considerable attention, calling for new approaches to support their resilience. Although critical interest in resilience and the role of digital technology in enabling refugees to navigate their new surroundings has been growing, little attention has been paid to the influence of language and literacy in processes of resilience-building and the use of such technology. This is important due to the diverse linguistic resources which refugees bring with them and the central role of language in adapting to contexts of forced displacement. We develop a conceptual framework for examining refugees’ transnational use of smartphones and apply the framework to data collected from participatory workshops with fifty-four Rohingya refugees in Malaysia. Results revealed varying degrees of digital literacy, linguistic capital and literacy in three main languages: the Rohingya language which refugees bring with them, Bahasa Malaysia, the national language of Malaysia and English, which is widely spoken in Malaysia. These variations significantly shape resilience-building strategies. Greater attention to the role of language and literacy in refugees’ use of digital technology will contribute to better understanding of the capacity for resilience among these individuals and more effective digital solutions.

Introduction
Recent statistics have revealed that 60 per cent of the world’s refugees, that is, 15.24 million individuals, live in cities rather than camps (World Refugee Council Report 2018). The majority live in the Global South, often on a long-term, or ‘protracted’ basis (UNHCR 2020a). Many of the countries here are not signatories of the 1951 Geneva Convention which was created after World War II and provides an international framework for responsibility-sharing and support for individuals fleeing war and political persecution. The current study responds to the call by Cole (2020) to pay more attention to the experiences of forced migration in such countries and to consider alternative
routes for supporting refugees. This is crucial because the shortcomings of the proposals initiated by the United Nations High Commission for Refugees (UNHCR) have increasingly become painfully apparent (Landau 2019; Hyndman and Giles 2019). The proposals include mechanisms for supporting refugees to return to the country of origin; local integration in the host country; and resettlement in third countries. Refugees are understandably reluctant to return to their country of origin while they remain at high risk of persecution. Host nations have also been slow to integrate them and resettlement options are limited due to the reluctance of Western countries to accommodate them (Zetter and Long 2012). Recognition of the inadequacy of these solutions have contributed to calls for a paradigm shift from solutions that are compatible with global and national regulatory frameworks towards those that are perceived necessary from refugees’ own perspectives (Landau 2019). This approach is reflected in the Global Compact on Refugees which emphasises the importance of enhancing the self-reliance and resilience of refugees (UNHCR 2018a). While such policies have been criticised for shortcomings in promoting refugees’ own capacities (Krause and Schmidt 2019), as Udwan, Leurs, and Alencar (2020) have observed, a resilience-focused approach provides opportunities for taking a ‘power-sensitive, agency-centric’ lens to these individuals’ lived experiences.

The shift in global humanitarian responses to refugees has coincided with two developments in the field of migration studies. The first is reflected in an increasing emphasis in critically analysing resilience as a response to forced migration among both host countries (Bourbeau 2015; Fingerle and Wink, 2020) and refugees themselves (Hutchinson and Dorset 2012; Udwan, Leurs, and Alencar 2020). The second development is growing critical interest in the uses of mobile technology, including in enabling individuals to communicate with family and friends transnationally, access information and sources of support and represent themselves (Dekker et al. 2018; Donà and Godin 2019). Such technology can also facilitate pathways to housing or employment (Martin-Shields et al. 2019), privileging those with access to technology and giving rise to concern that existing inequalities within refugee communities may be exacerbated (Georgiou, 2019; Leung, 2018). Synthesising these two developments, an emerging body of work is examining the role of digital technology in resilience-building, for instance through enabling refugees to support each other (Udwan, Leurs, and Alencar 2020; Merisalo and Jauhiainen 2020). However, apart from a small number of studies which have explored how refugees use smartphones to learn new languages (Gaved and Peasgood 2017; Jones et al. 2017), hardly any research has examined the role of linguistic practices and literacies in either using these devices (Kaufmann 2018) or resilience-building, the focus of this study. This is surprising in the light of the central role that language and literacy play in enhancing resilience-building through maintaining connections with family and friends globally, as well as navigating their new environments, accessing services and finding employment (Campion 2018).

Further, most research into smartphone use have focused on displacement contexts in the Global North, with little attention to such use in the Global South (Leurs and Smets 2018; Alénccar 2020), including Malaysia, the site of the empirical research of this study. This has resulted in a lack of focused attention to multilingualistic social environments which have been complicated by colonialism. Consequently, the challenges that refugees face in attempting to navigate such environments, including through use of their smartphones, have yet to be explored, a significant knowledge gap which this study addresses.
The aim of the current study is to increase theoretical and empirical understanding of the resilience-building strategies that refugees employ through smartphone use and the ways in which language and literacy shape this process. We develop a conceptual framework which synthesises scholarship on resilience in migration studies, Bourdieu’s theorising on linguistic and other forms of capital and habitus, and Chiswick and Miller’s (2003) influential model of conditions which enable migrant acquisition of dominant languages in destination countries. We employ participatory action research methods involving Rohingya refugees to explore how their use of smartphones shapes and is shaped by language and literacy, and to propose ways forward for developing digital solutions.

Our study makes three distinct contributions to the literature on resilience-building and digital migration. Firstly, it develops a conceptual framework which bridges theorising on the resilience of refugees in migration studies with theories on the role of language and literacy, and the acquisition of dominant languages in displacement contexts. Secondly, it increases empirical knowledge of the ways in which language and literacy shape the use of smartphones as a tool for resilience-building within an urban context in the Global South. Thirdly, it explores the implications of our research for developing solutions that enable refugees to increase their resilience within these contexts.

We begin by developing the theoretical framework of the study. We next discuss the socio-political context of the empirical research, the methods used and the research findings. We examine how Rohingya refugees in Malaysia use their smartphones and the role of literacy in three languages: the Rohingya language, Bahasa Malaysia (BM), the official language of Malaysia, and English which is also widely spoken. Finally, we discuss the theoretical, empirical and methodological contribution of the study and explore the scope for developing digital solutions to support the resilience of refugees in the Global South.

Developing resilience among refugees through smartphones

While the ‘resilience’ of refugees has been variously defined, most analysts concur in understanding the phenomenon as the capacity to adapt to shocks – either individually or collectively (Adger et al. 2002) – or ‘bounce back’ after experiencing major stressors (Lewis and Rödlach 2019). Such stressors may include coping with a sense of loss, difficulties in job-seeking or adapting to a new socio-cultural context (Lewis and Rödlach 2019; Sleijpena et al. 2016).

Individuals employ resilience strategies, that is, ‘choices, behaviours and resources’ to promote resilience (Sleijpena et al. 2017, 352). It is important to recognise that such strategies are enacted in power-laden structural contexts, where choices to access support and exercise their rights are heavily constrained (Udwan, Leurs, and Alencar 2020; Merisalo and Jauhiainen 2020). Consequently, while resilience strategies can enable refugees to regain physical and psychological stability or even positively transform living conditions (Fingerle and Wink 2020), the capacity of individuals to adapt to their new context is severely limited (Bourbeau 2015). Further, such strategies are culturally and politically embedded (Liebenberg and Pelley 2020), involving interactions between migrants, their families and other social environments (Siriwardhana et al. 2014) and institutions of the state (Udwan, Leurs, and Alencar 2020). Previous research has identified the use of digital resilience strategies for self-support, health, identity management and building
bridging capital. Our focus is the role of language in the strategies that refugees employ using smartphones in forced migration contexts, an important area which has previously been overlooked. Having outlined our approach to conceptualising resilience and resilience strategies among refugees in contexts of forced displacement, we next highlight the role of smartphones in this process, particularly with respect to the use and acquisition of language and literacies.

**Developing digital literacy and other literacies**

In many contexts, including in the Global South, reading and writing or what is commonly referred to as literacy, is now developed along with, or facilitated by, digital literacy (Pegrum 2016). For our purposes, we briefly define the latter as the ability to use digital tools and resources. Literacies are viewed as fluid, being shaped by political, historical, and socio-economic factors, and ‘varying according to time and space, but also contested in relations of power’ (Street 2003, 77). These contestations are related to the symbolic power of language, as both a source and a medium which privileges some groups and excludes others (Bourdieu 1991). The symbolic power of dominant languages in migratory contexts is evidenced through the capacity of migrants who have acquired them to earn economic capital in the form of higher wages (Dustmann and Fabbri 2003) and social capital through wider social networks (Morosanu 2016; Thusen 2017).

Linguistic capital, was identified by Bourdieu (1991) as a form of cultural capital which has been defined as ‘knowledge, skills and other cultural acquisitions, as exemplified by educational or technical qualifications’ (1991, 14). Among refugees, linguistic capital includes both the language which individuals associate with their cultural and ethnic identity as well as fluency in the dominant or official language/s of the host country. The former (in this case, the Rohingya language) is important for creating identity and sense of belonging (Bloch and Hirsch 2017), while the latter (in this case, Bahasa Malaysia (BM) and English) are necessary for access to education and other key services, training and employment and social cohesion (Campion 2018). Closely related to language use, literacies have also been viewed as a form of cultural capital (Wan and Warriner 2012), which, like language, takes on different values within different contexts or, in Bourdesian terms, ‘markets.’

Our understanding of how refugees use smartphones to navigate their way in cities of the Global South is deepened by Bourdieu’s concept of habitus – that is, as a set of dispositions, which enable individuals to act and respond in specific ways in their daily lives. For the purposes of our study, we draw on habitus to explain older refugees’ attachment to the Rohingya language as well as their complicity, along with other refugees and the local population, in viewing both BM and English as high-status languages. While BM is the official language of Malaysia, English is widely spoken as part of the legacy of British colonialism and enjoys a high status as the common language across ethnic groups (Canagarajah 2006).

Along with Guarnizo (1997) we also employ the concept of transnational habitus which recognises that refugees maintain certain dispositions within and across national contexts. These dispositions include literacies in the languages which they bring with them and maintain through family practices as well as those they acquire in their new
contexts through socialisation and other processes. Applying a transnational lens to literacy enables us to consider the role of literacy in a variety of languages, as well as digital literacy, for accessing information and communicating with family members and others in their new context, homeland and other parts of the world (Duran 2017). Since no two situations of protracted displacement are the same (Long 2011), understanding the linguistic market of displacement contexts is crucial to understanding why some languages are privileged over others, and the opportunities available to individuals for gaining linguistic capital (through the acquisition of languages which are valued in specific contexts) and cultural capital (in the form of literacies in those languages, as well as digital literacy) (Campion 2018).

Finally, to further deepen understanding of the links between linguistic capital, literacies and resilience strategies, our theoretical framework is informed by Chiswick and Miller’s (2001) influential model which was first tested on 1991 Census data on adult male immigrants in Canada. The model assumes that language skills are a form of asset that immigrants who are not already proficient in the dominant language(s) heavily invest in. It identified three groups of factors which are conducive to destination country language acquisition, namely, exposure, efficiency and incentives. Exposure is associated with participation in language classes, consumption of host country media and interaction with others in the language. Efficiency is related to level of education, with highly educated learners likely to become more proficient in the dominant language. Incentives for language acquisition, such as the potential for increased earnings, are associated with higher levels of proficiency.

Having outlined our theoretical framework, we now outline our key research questions: How are the resilience strategies refugees employ shaped through smartphone use within contexts of forced displacement in the Global South? How is smartphone use mediated by literacies and language use in these situations? How can digital solutions which support refugee resilience be more responsive to language use and literacy?

**Rohingya refugees in Malaysia**

We now proceed to discuss the socio-economic and political context of our empirical research into the situation of Rohingya refugees in Malaysia. The UN (2017) has described Rohingya refugees as the most persecuted minority in the world. As a Muslim minority originating from the north-western state of Rakhine in Myanmar, their human rights have been, and continue to be violated in their country of origin, including through mass killings, rape, arbitrary detentions and burning of villages. The denial of their right to citizenship has resulted in making them stateless. Their forced migration from Myanmar to neighbouring countries can be traced to the Second World War, with the large outbreak of violence in 2017 indicating the prolonged nature of both the conflict and their displacement (Huennekes 2018).

Malaysia presents an important context for investigating the role that language plays in the use of smartphones by refugees living in conditions of protracted displacement. Like most South East Asian countries (except the Philippines and Cambodia), the country is not a signatory to the 1951 Geneva Convention. Despite this, it is the fifth top country for resettlement globally: of the 3285 refugees submitted, 2631 were resettled (UNHCR 2018b: 36). It has hosted increasing numbers of these individuals, with the
number registered at the end of December 2019 being 178,580 (UNHCR 2018b). The number unregistered is unknown. About 68% of the refugees are men, 32% women and approximately 26% children. Of the total, 99,290 (55.6%) are Rohingya. In terms of geographical distribution throughout Malaysia, Pulau Pinang features among the top three locations (after Kuala Lumpur and Selangor) with the highest number of ‘people of concern (POC)’ (refugees and asylum seekers) in Malaysia (UNHCR 2020a). About 12% of the POCs are in Pulau Pinang. There are no refugee camps in Malaysia and most refugees reside in urban areas (UNHCR 2018a).

Domestic legislation which recognises the legal status of asylum seekers, refugees and stateless persons has not been enacted. However, the country has permitted the UNHCR to register, determine and assist refugees. Despite this, UNHCR registration does not confer legal immigration status. Consequently, most asylum seekers and refugees are, like irregular migrants, often subjected to an aggressive, punitive ‘crackdown’ (Nah 2010). The government is not currently involved in any systematic interventions in refugee issues although historically, it had provided asylum in the form of camps or temporary residency permits to refugees from Vietnam, the Philippines, Cambodia, Indonesia and Bosnia (Munir-Asen 2018). The Rohingya refugees have not been granted any form of residency permit. The federal government has, in the past used its discretion under section 55(1) of the Immigration Act 1959/63 (Act 155) to give temporary work permits to refugees on humanitarian grounds and some Rohingya refugees have benefited from this (Ketchell 2019; Lego 2012). However, such permits have not been extended, and there is no formal right to paid employment, leaving refugees to work in the informal sector where they are vulnerable to exploitation. The jobs they undertake include manual labour (for example, in construction or agriculture), sale of food in small businesses, and work for non-governmental organisations (NGOs) and international fast food and retail chains.

Local governments have little jurisdiction in dealing with refugees (Wake 2016). Several NGOs have been established specifically to respond to refugee issues, while others have included them in their work with other marginalised groups. These NGOs assist refugees with education, healthcare, training and capacity-building, livelihood, child protection, sexual and gender-based violence, and community empowerment. Faith-based organisations have also played a role in supporting refugees through providing education, financial assistance and religious support. Refugees in Malaysia do not have a right to access mainstream education in government schools. To fill this gap, an informal system of education has developed around community-based learning centres. These centres are unevenly spread, with the majority providing only primary level education. Of the 23,823 refugees of school-going age, less than a third (30%) are enrolled in these centres (UNHCR 2020b). Low and unreliable income, vulnerability to exploitation at work, extortion by law enforcement officers, the high cost of rent and health services mean that poverty is widespread (Nah 2010).

Literacy rates within the Rohingya community are reported to be low (Tay et al. 2018). This may be attributed to multiple factors, including lack of access to education in many parts of Myanmar and the nature of the Rohingya language, which is primarily oral. Accordingly, various scripts have been employed to capture the language in written form, including Arabic, Urdu and Rohingyalish, which uses Latin letters to communicate a Rohingya script (Tay et al. 2018), further complicating the process of gaining literacy.
Plans have been made to include the language into the Unicode Standard, a global coding system that converts written script to digital characters and numbers (Guardian 2017). This would allow the Rohingya people to write in their own language on social media.

Further, Malaysia poses additional challenges due to its ethnically diverse population comprising Malays (69.1%), Chinese (23.0%), Indians (4.9%) and others (1%) (Department of Statistics, Malaysia 2018). Malay, which is the language of the Malay ethnic group was designated the official language of the country following the granting of independence from British rule in 1957. The primacy of Malay is now entrenched in the Federal Constitution and is commonly referred to as Bahasa Malaysia (language of Malaysia). It is commonly abbreviated as BM – the acronym adopted in this article – and was chosen to symbolise the end of empire and to promote patriotism and cohesion across ethnic groups. However, as in many post-colonial contexts, English remains widely spoken as a common and international language (Canagarajah 2006). We now turn to the approach and methods we adopted in our research.

**Methods**

The research team was multi-disciplinary and included specialists in migration, sociolinguistics and human computer interaction. The team adopted a participatory approach, working closely with a Pulau Pinang-based refugee NGO throughout the research process, including in determining the research focus; structure and design of workshop activities; participant selection; and planning of a dissemination event to amplify refugee voices. Refugee volunteers assisted with organising the workshops and workshop activities including facilitating opportunities for participants to propose solutions for the way forwards through discussion and drawing. Prior to the workshops, the lead author met with groups of participants in a *kampong* (Malay word for village or group of traditionally built houses clustered together) and other areas of residence to build rapport and obtain informed consent.

Anonymised demographic information relating to age, gender, place of origin, length of residency in Malaysia and languages spoken, read and written was collected. A total of 54 refugees participated in the workshop activities, with a gender balance of 27 females and 27 males. Ages ranged from 13 to 45. The majority had migrated from Myanmar, two from Thailand while eight were born in Malaysia. Their length of residence in Malaysia ranged from 1 to 16 years, underscoring the protracted nature of the displacement for many.

A total of four workshops were organised on the NGO premises. The first three followed an identical protocol: each was facilitated by a minimum of two researchers who each worked with a group of ten Rohingya refugees. They were supported by bilingual community workers who acted as interpreters. The main language spoken by the participants was Rohingya while the researchers spoke either BM or English. The small size of the groups helped with engaging all participants in the discussion and workshop activities. To accommodate Rohingya cultural norms relating to gender segregation, two of the three workshops were single sex. Female researchers and females from the Rohingya community co-facilitated the women only and mixed sex workshops. Transport was organised to and from the venues and lunch provided. Participants were paid RM50 for attending. The workshops elicited information on migration background,
experiences of living in Malaysia, languages used and access and engagement with smartphones, including for what purpose and how this was facilitated by language and literacy. Participants were also invited to design new applications and tools which could help them and other refugees. This was undertaken by asking them to draw their ideas on paper and share them with each other. Data analysis of the discussions was driven by identifying patterns of routine behaviour relating to participants’ use of various languages, literacies and their smartphones, paying attention to how this was informed by the socio-political and cultural context of protracted displacement.

The fourth and final workshop was carried out a month after the first three. The initial research findings were presented to a selection of participants who had attended the earlier workshops to validate and refine the findings and further explore proposals for moving forwards. All the workshops were recorded; utterances in English were directly transcribed while utterances in BM and the Rohingyan language were transcribed and translated into English. The research was also informed and developed through a two-day dissemination event comprising refugee community organisations across Malaysia, individual refugees, government representatives, UNHCR, academics and representatives from key humanitarian organisations in Thailand and Indonesia.

To support and illustrate the findings, we use quotes from transcriptions of the workshops. Most of these were communicated to us through interpreters, who used the first person (for example, ‘I’) to reflect the participant’s own words. However, in a few cases, participants spoke directly to us in English or interpreters lapsed into using the third person pronoun (for example, ‘she’). In all cases, the quotes used have not been changed in any way.

**Results**

The most popular use of phones by refugees was for social networking, with music, radio listening, video watching, messaging, communication and navigation apps following closely. While this finding aligns closely with findings from other similar studies involving refugees (UNHCR 2016) which show communication and entertainment to be high on the list, our results also show that smartphone use was strongly mediated by, and shaped, literacies in three languages – the Rohingya language, BM and English. Below we discuss our findings relating to smartphone use and resilience strategies in each of these languages, the constraints faced by refugees and the digital solutions proposed by them.

**Smartphone use, the Rohingya language and resilience**

Age, gender, and levels of education intersect with digital literacy and use of the Rohingya language to significantly influence digital activity. Smartphones enabled older women, who had experienced little formal education to make international phone calls in the Rohingya language, reducing their social isolation in the transnational habitus (Guarnizo 1997) which they occupied. The use of the language in such devices also enabled others to access information about political developments relating to the situation of Rohingya people and enabled them to check on family members and friends in their homeland and other parts of the world. In support of the value of these devices for
these purposes, in the words of one participant, mobile phones, combined with the use of the Rohingya language, enabled individuals ‘to contact each other no matter how far is the state.’ Similarly, within the urban context of Malaysia, these devices enabled them to monitor each other’s safety while moving around often hostile local areas, where they could be vulnerable to detention or arrest. Consequently, through enabling communication with, and positive surveillance of loved ones transnationally, the use of the Rohingya language in mobile technology played an important role in supporting the wellbeing and emotional resilience of individuals whose familial ties had been ruptured through forced migration. Emphasising the symbolic power of the language (Bourdieu 1991) in affirming their ethnic and cultural identity and generating a sense of belonging and solidarity in their transnational habitus, one participant had this to say:

I learnt because it is important, right, we are Rohingya. We should learn Rohingya language so we can understand, talk with people and can know their problems. (female Rohingya participant)

However, while the use of ‘voice notes’ enabled some individuals to communicate with others, access to information through search engines such as Google was severely constrained. Illustrating individual capacity to devise resilience strategies to overcome this constraint, some participants used social media applications such as WhatsApp to obtain information and support from others who had higher levels of proficiency in BM or English, revealing the usefulness of such devices even among individuals with low levels of literacy (Lalji and Good 2008) and the importance of intergenerational solidarity. In an isolated example, which illustrates the use of smartphones to build financial resilience, a female adult used hers to communicate in the Rohingya language with customers of a small enterprise selling Burmese products.

**Smartphone use, BM and resilience**

Reflecting the complicity of dominated groups in the high status accorded to the main languages and their symbolic power (Bourdieu 1991), BM was viewed as useful for routine communication. The following quote by one participant is typical:

Bahasa Malaysia is everyday language, easy to talk with friends.

Literacy and proficiency in BM appeared to be strongly mediated by gender, age, access to educational opportunities, participation in the informal economy and financial resources. Younger participants who had benefited from participation in community learning centres were able to read and write, communicate with teachers and classmates and carry out homework in the language, supporting Chiswick and Miller’s (2001) model in reinforcing the important role that education plays in acquiring a language in the host country. They also used Google to translate from English to Malay and vice versa in both spoken and written forms as revealed in the extracts below, highlighting its use for language-learning:

They say something that we know in Malay but don’t know in English. That is when we use Google Translate.

I was in hospital and wanted to talk something I know in English and I need to talk in Malay, and that is when I use it to translate from English to Malay.
These findings provide valuable insight into the ways digital literacy can combine with literacy in a dominant language to enable some individuals to continually increase their literacy – not only in that language but in other dominant languages too. They also reveal the use of resilience strategies in adapting to unfamiliar linguistic situations through employing online services to facilitate offline social processes. This opportunity should not be under-estimated within a context where demand for education far outstrips supply.

In contrast, among those who had not benefited from formal education in either Myanmar or Malaysia, low levels of literacy hindered acquisition of BM, for instance, through reading. These participants primarily gained proficiency in the language through exposure (Chiswick and Miller, 2001) in the form of contact with locals, carrying out daily activities and accessing mass media:

Whenever we go to a shop, we try to speaking in Malay then also whenever we go to our work and then we speak and listen in Malay. Sometime we can understand, sometime we cannot understand.

Last time when I worked, my colleagues are Malay. Our employer, employer’s spouse, children and in-laws are Malay. Now my workplace in canteen is also filled with Malay.

However, opportunities to gain the language by exposure were sometimes curtailed through everyday acts of ‘bordering’ (Yuval-Davis, Wemyss, and Cassidy 2017) which revealed stark constraints in resilience-building through language-learning:

Sometimes this happens to our children, if they are going somewhere or play somewhere, the Malay boys … say ‘this is not your place, just go back to your place.’

They will say that ‘this is not your country, this is our country. I have right to say to you … you are like a beggar here, so you don’t deserve to stay here.

Further, reflecting gendered and age-related differences in opportunities to interact with others, particularly among women who were more housebound, not all participants had acquired proficiency in BM, despite staying in Malaysia for some considerable time. For example, one female participant who had lived in the country for ten years reported with some regret, that she was still unable to speak the language. The use of smartphones among Individuals who had not benefited from formal education and had limited proficiency in BM was severely restricted.

**Smartphone use, English and resilience**

English was identified as the most important language to learn due to the employment opportunities that it opened:

English is important because if you want to work, they also always speaking.

The higher value accorded to the language despite the status of BM as the official language in post-colonial Malaysia is significant, attesting to its persistent symbolic power. Feelings of pride were associated with proficiency in English as well as regret that opportunities to acquire the language were limited:

My children like to learn English. And they are all grown up and speak fluent English and I love it. When my children spoke to others, I am happy to hear them talk. I’ve been staying in
Malaysia for fifteen years and can speak Malay well. English I still couldn’t understand much.

We can speak a couple of languages but I cannot speak English so I feel bad. So if I can learn English then I would feel very good.

Participants were keenly aware of the relative convertibility of linguistic capital in both BM and English into social and economic capital, locally as well as globally. As in other post-colonial communities, English has become the contact language among the colonised (Canagarajah 2006), with the quote below demonstrating awareness of its usefulness in communicating with non-Malays, thus widening livelihood and other opportunities:

Yes, I want to learn. Because Chinese could speak English, Indian also speaks English. Everybody is good in English.

Further, English was particularly valued as an international language, clearly signalling dissatisfaction with the lack of opportunity and discrimination experienced in Malaysia, and aspirations for further onward migration:

Malay language is only used in Malaysia; English is used all over the world. It would be easy for us to communicate with people if we can speak English. Everything will be easy for us.

Whenever we know we can speak English, it is easy for us to talk, to communicate with people and then it is very easy if we can learn English to do movements and talk to people.

These views also underscore the important role played by language-learning as a resilience strategy for increasing opportunities for resettlement abroad.

Reflecting its dominant presence in web-based applications, participants with high levels of English literacy were able to use a wide range of applications for multiple purposes, including obtaining information, ride-hailing, playing games, sending text messages and communicating with funders who had supported group activities. Such activities played an important role in supporting individuals socially and psychologically. As a stark reminder of the limited rights of refugees in Malaysia, ride-hailing was seen as particularly important since they are not entitled to obtain a driving licence due to lack of legal status. Conversely, a low level of proficiency in English was a major barrier which restricted phone use even further than limited proficiency in BM:

Basically, we use for phone calls. For the functions we need to read in English.

As with BM, participants also used their phones to actively learn English (Kaufmann 2018) by clarifying and rehearsing previous linguistic utterances through social interaction:

Sending SMS by friends like “Hi” and then when somebody send to me “Hi” then I can remember that things and when somebody say “Ok” I can remember when somebody send “Thank you”, I can remember that.

Yet others, particularly educated young people, revealed creative digital literacy practices in communicating with family members in Myanmar which were facilitated through translation apps. For instance, one participant described the use of ‘Myenglish’ for such communication:
It’s like Burmese and English, we can write a spelling in English but the word is in Burmese … so she message like that to her sister.

Such practices reinforce the value of adopting a transnational lens to literacy (Duran 2017) in examining smartphone use. Illustrating the benefits to be derived from digital literacy as well as literacy in both BM and English, younger participants were able to use multiple modalities (sound, image and video) for recreational and creative purposes, including dancing, singing, miming or acting:

To make video … dance, funny video …, singing, also follow the lips … like acting … just do anything. Do with hands, do with mouth.

Table 1 summarises the multiple resilience strategies enabled through smartphone use in Rohingya, BM and English. It clearly reveals the enhanced range of activities enabled through literacy in the latter two languages, with literacy in English clearly enabling the widest range of digital activities.

**Constraints in using smartphones**

Supporting the critical role played by infrastructure in influencing opportunities for resilience-building through smartphone use (Gillespie, Osseiran, and Cheesman 2018), a significant constraint that refugees encountered was difficulty in purchasing SIM cards. In Malaysia, purchase of these cards requires presentation of a national identification (ID) card which refugees cannot obtain. Individuals could therefore only obtain a SIM with the assistance of Malaysian friends or supporters. Other barriers that individuals faced were the lack of affordability of such cards, power outages and loss of internet access. For instance, an internet shutdown in Myanmar during fieldwork evoked considerable concern as it effectively resulted in a breakdown in communication with friends and relatives there. Such findings vividly reveal the vulnerability and precarity of individuals’ reliance on smartphone use for resilience-building.

**Digital solutions**

Reinforcing the urgent need for digital solutions which pay greater attention to different levels of language proficiency in enabling individuals to navigate their urban environments, participants suggested that providing tools or applications which enable individuals with low literacy skills to access vital information through videos in Rohingya and other languages was vital. Similarly, applications to help individuals translate from the Rohingya language into BM and English and to access key information about sources of potential help, such as key services provided by NGOs and mosques were also identified as areas for further development.

**Discussion**

This research makes significant theoretical and empirical contributions to understanding the role of language and literacy in resilience-building among refugees through digital technology in a transnational habitus. Firstly, it has developed a theoretical and conceptual framework which synthesises theories of resilience in refugee studies with Bourdieu’s
(1991) work on linguistic capital, linguistic markets, symbolic power and the habitus, and Chiswick and Miller’s (2001) model of dominant language acquisition in host countries. The framework has enabled us to offer four distinctive contributions. Firstly, it has advanced understandings of resilience by highlighting the central role of language and literacy among refugees displaced in the Global South, an area which has received little research attention. Secondly, by extending Bourdieu’s work on cultural capital to digital literacy (Wan and Warriner 2012) and adopting a transnational lens to literacy (Duran 2017), the framework has enabled us to explore the complex relationships between digital literacy and other literacies, as well the ways in which literacies in one language interact with those in another language. Thirdly, it has allowed us to demonstrate that processes of language learning through mobile technology are highly differentiated by symbolic power and their relative presence on the internet, as illustrated through the use of three languages: the Rohingya language associated with cultural and ethnic identity and ‘there’ (homeland), BM associated with ‘here’ (new land) and English associated with the status of being a former imperial and current international language and with ‘looking forward’ (Duran 2017) to possibilities for resettlement. Fourthly, the study extends Chiswick and Miller (2001)’s influential model by demonstrating the important role of access to and use of digital resources for learning the dominant languages of host country, in addition to exposure, education and incentives. We believe that our theoretical model can be fruitfully deployed in other multilingual contexts of protracted displacement in the Global North, as well as the South.

Empirically, the research has responded in five significant ways to Cole’s (2020) call for more attention to the need for alternative solutions for supporting refugees in countries which are not signatories of the 1951 Geneva Convention. Firstly, it has revealed considerable scope for supporting the multiple resilience-building strategies facilitated by smartphone use which have been summarised in Table 1, through more sensitivity to linguistic diversity and literacy. Secondly, it has illuminated processes of language-learning, illustrating how digital literacy supports the acquisition of literacy in one or more languages and the potential for online activities to support offline process of social interaction while acquiring dominant languages. Thirdly, it has demonstrated that the use of mobile technology as well as the resilience-building strategies that individuals engage in are profoundly influenced by literacy. At one end of the spectrum, smartphone use enables individuals with even very limited digital literacy to stay in touch with family members transnationally thus supporting the psychological and social

| Table 1. Resilience strategies enabled through smartphone use in Rohingya, BM and English. |
|---------------------------------------------------|-----------|-----------|
| Keeping in contact with family members            | ✓         | ✓         | ✓         |
| Engaging in leisure activities                     | ✓         | ✓         | ✓         |
| Communicating with locals                          | ✓         |           | ✓         |
| Learning BM and English                             |           | ✓         | ✓         |
| Setting up small businesses                         | ✓         |           |           |
| Communicating with funders                          |           |           | ✓         |
| Keeping informed of current events                  | ✓         |           |           |
| Ride-hailing and other local services               |           | ✓         |           |
| Increasing employment opportunities                 |           |           | ✓         |
| Increasing educational opportunities                |           |           |           |
| Increasing resettlement opportunities               |           |           |           |

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components of resilience-building. At the other end, individuals with more advanced levels of digital literacy and literacies in BM and English are able to engage in a wider range of resilience strategies, enabling them to better navigate their new physical as well as virtual contexts and increase their education, employment and future migration opportunities. Fourthly, our research reveals that opportunities for acquiring proficiency in the dominant languages are deeply unequal, with age and gender intersecting with exposure and level of education. The findings thus extend other research which has indicated that digital divides within refugee communities may sharpen other disparities and contribute to differences in social mobility (Aléncar 2020; Leung, 2018) by highlighting the key role played by language and literacy in such processes. Fifthly, the study has revealed that constraints associated with lack of access to infrastructure, such as affordability and SIMs, interact with refugees’ lack of legal status and access to mainstream education, denial of the right to employment, and freedom of movement to severely limit their possibilities for human development through smartphone use. Along with previous research which has revealed the use of digital technologies by state actors as well as humanitarian actors for surveillance and control (Leurs and Smets 2018), these restrictions indicate the importance of guarding against the trap of falling into the trap of techno-optimism and the need for continuing efforts to strengthen refugee rights.

Methodologically, the participatory approach adopted in the study has enabled us to advance understanding of the scope for resilience-building through the design, implementation and dissemination of the research study. While various aspects of refugees’ precarity associated with their lack of legal status undermine processes of resilience-building, the approach we adopted reveals that there are spaces where refugees are actively creating their own solutions and can be supported by others, including through the funding and design of digital solutions. Elements of this approach included: close work with our NGO partner in determining the focus of the study; allocation of financial resources for community workers to engage with the research; workshop design; participant selection; pre-workshop meetings to build trust and rapport; the co-facilitation of workshops with trusted community workers; gender and linguistic sensitivity throughout the research process; inclusion of an opportunity for refugees to validate the research findings and ways forward; and participation in the planning of dissemination activities. These collaborative processes not only contributed to resilience-building strategies within the community through opportunities to widen their social capital and networks but also enabled us to build up trust and rapport with key individuals within the refugee community.

Along with the knowledge gained from the research, these relational aspects of the research process enabled us to urgently assist Rohingya refugees through the development of an application soon after the Covid-19 pandemic broke out. Led by the computer science members of the research team in collaboration with our refugee NGO partner and the UNHCR, this application enabled Rohingya refugees to obtain reliable information on symptoms, government guidance and sources of medical and financial assistance in Rohingya, BM and English. The approach used in this study can be readily adopted not only in collaboration with Rohingya refugees living in other parts of the world, but also with other groups of refugees in diverse contexts.
The study has implications for a wide range of stakeholders in Malaysia as well as other situations of protracted displacement. Building on studies which have revealed that opportunities for building resilience through smartphone use by refugees in such areas are highly context-dependent (Gillespie, Osseiran, and Cheesman 2018; Udwan, Leurs, and Alencar 2020), this study has highlighted the particular significance of linguistic diversity. For refugees, community and global humanitarian organisations such as the UNHCR, it provides evidence of the immense potential for purposefully designed tools to play an important role in enabling refugees – including those with limited literacy and digital skills – to access vital information and services. For developers of digital solutions, the research provides valuable insights into the literacy, linguistic, financial and safety needs of this group and the context in which they reside so that they can better design tools to assist with resilience-building. The findings highlight the need for digital solutions which can both accommodate varying levels of proficiency and literacy in the dominant languages as well as those which support the maintenance of the languages which refugees bring with them, including those groups whose languages have a strong oral tradition. Practical solutions include the translation of information into appropriate languages, and the use of as many pictures as possible and audio as well as written formats. Crucially, the digital divide (Aléncar 2020) within refugee communities requires developers and others to work closely with community organisations and engage with the social practices of the group over a sustained time. Solutions identified must be developed and embedded within an overall strategy for advancing refugees’ rights through collaboration with them, as well as a wide range of organisations. For governments, the study strongly indicates the need to create and implement policies that reduce barriers to digital inclusion, including those associated with ID requirements. Collective models of public access to online services which are inclusive of refugees, for example through community centres, can help counter barriers related to affordability.

The study supports our initial premise that far more attention needs to be paid to the complex ways in which digital literacy interacts with other literacies in order to expand the opportunities for resilience-building among refugees within urban contexts in the Global South. It also underscores the importance for policymakers and humanitarian organisations to pay greater heed to the central role that language and literacy play in navigating both physical and virtual environments when designing interventions to support refugees. Finally, the protracted nature of the displacement faced by urban refugees in the Global South calls for urgent study into how human development, access to key services and initiatives to advance their human rights can be better supported by linguistically sensitive mobile technology.

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References

Adger, W. N., P. M. Kelly, A. Winkels, L. Q. Huy, and C. Locke. 2002. “Migration, Remittances, Livelihood Trajectories, and Social Resilience.” Ambio 31 (4): 358–366.

Alénçar, A. 2020. “Mobile Communication and Refugees: An Analytical Review of Academic Literature.” Sociology Compass 14 (8). https://onlinelibrary.wiley.com/doi/full/10.1111/soc4.12802.

Bloch, A., and S. Hirsch. 2017. “Second Generation” Refugees and Multilingualism: Identity, Race and Language Transmission.” Ethnic and Racial Studies 40 (14): 2444–2462.

Bourbeau, P. 2015. “Migration, Resilience and Security: Responses to New Inflows of Asylum Seekers and Migrants.” Journal of Ethnic and Migration Studies 41 (12): 1958–1977.

Bourdieu, P. 1991. Language and Symbolic Power. Cambridge: Polity Press.

Campion, E. D. 2018. “The Career Adaptive Refugee: Exploring the Structural and Personal Barriers to Refugee Resettlement.” Journal of Vocational Behaviour 105: 6–16.

Canagarajah, S. 2006. “Negotiating the Local in English as a Lingua Franca.” Annual Review of Applied Linguistics 26: 197–218.

Chiswick, B., and P. Miller. 2001. “A Model of Destination-Language Acquisition: Application to Male Immigrants in Canada.” Demography 38 (3): 391–409.

Chiswick, B. R., and P. W. Miller. 2003. “The Complementarity of Language and Other Human Capital: Immigrant Earnings in Canada.” Economics of Education Review 22: 469–480.

Cole, G. 2020. “Pluralising Geographies of Refugee.” Progress in Human Geography. First published January 26 2020. https://doi-org.ezproxy1.hw.ac.uk/10.1177/0309132519900925

Dekker, R., G. Engbersen, J. Klaver, and H. Vonk. 2018. “Smart Refugees: How Syrian Asylum Migrants Use Social Media Information in Migration Decision-Making.” New Media and Society 19: 240–254.

Department of Statistics, Malaysia. 2018. “Current Population Estimates 2017–2018.” Accessed April 23 20. https://www.dosm.gov.my/v1/index.php?r=column/cthemeByCat&cat=155&bul_id=c1pqTnFjb29HSnNYNUpiTmNWZHArdz09&menu_id=L0pheU43NWJwRWVSZklWdzQ4TlhUUT09.

Donà, G., and M. Godin. 2019. “Mobile Technologies and Forced Migration.” In Forced Migration: Current Issues and Debates, edited by A. Bloch and G. Dona.126-144 Oxon: Routledge.

Duran, C. S. 2017. Language and Literacy in Refugee Families. London: Palgrave Macmillan.

Dustmann, C., and F. Fabbri. 2003. “Language Proficiency and Labour Market Performance of Immigrants in the UK.” The Economic Journal 113: 695–717.

Fingerle, M., and R. Wink. 2020. Forced Migration and Resilience Conceptual Issues and Empirical Results: Wiesbaden: Springer.

Gaved, M., and A. Peasgood. 2017. “Fitting in Versus Learning: A Challenge for Migrants Learning Languages Using Smartphones.” Journal of Interactive Media in Education 2017 (1): 1–13.

Georgiou, M., and S. Ponzanesi. 2019. “City of Refuge or Digital Order? Refugee Recognition and the Digital Governmentality of Migration in the City.” Television and New Media 20 (6): 600–616.
Gillespie, M., S. Osseiran, and M. Cheesman. 2018. “Syrian Refugees and the Digital Passage to Europe: Smartphone Infrastructures and Affordances.” Social Media + Society. doi:10.1177/2056305118764440.

Guardian. 2017. Language of the Rohingya to be Digitised: it Legitimises the Struggle. Accessed June 16, 2021 https://www.theguardian.com/world/2017/dec/19/language-rohingya-digitised-legitimises-struggle-emails.

Guarnizo, L. E. 1997. “The Emergence of a Transnational Social Formation and the Mirage of Return Migration among Dominican Transmigrants.” Identities 4 (2): 281–322.

Huennekes, J. 2018. “Emotional Remittances in the Transnational Lives of Rohingya Families Living in Malaysia.” Journal of Refugee Studies 31 (3): 353–370.

Hutchinson, M., and P. Dorset. 2012. “What Does the Literature say About Resilience in Refugee People?” Journal of Social Inclusion 3 (2): 55–78.

Hyndman, J., and W. Giles. 2019. “Protracted Displacement: Living on the Edge.” In Forced Migration: Current Issues and Debates, edited by A. Bloch and G. Donà, 74–88. Oxon: Routledge.

Jones, A., A. Kukulska-Hulme, L. Norris, M. Gaved, E. Scanlon, J. Jones, and A. Brasher. 2017. “Supporting Immigrant Language Learning on Smartphones: A Field Trial.” Studies in the Education of Adults 49 (2): 228–252.

Kaufmann, K. 2018. “Navigating a new Life: Syrian Refugees and Their Smartphones in Vienna.” Information, Communication & Society 21 (6): 882–898.

Ketchell, Misha. 2019. “The Right to Work can Empower Refugees in Malaysia.” The Conversation. https://theconversation.com/the-right-to-work-can-empower-refugees-in-malaysia-119666.

Krause, U., and H. Schmidt. 2019. “Refugees as Actors? Critical Reflections on Global Refugee Policies on Self-Reliance and Resilience.” Journal of Refugee Studies 33 (1): 22–41. doi:10.1093/jrs/fez059.

Lalji, Z., and J. Good. 2008. “Designing new Technologies for Illiterate Populations: a Study in Mobile Phone Interface Design.” Interacting with Computers 20: 574–586.

Landau, L. B. 2019. “Displacement and the Pursuit of Urban Protection: Forced Migration, Fluidity and Global Cities.” In Forced Migration: Current Issues and Debates, edited by A. Bloch and G. Dona, 106–125. Oxon: Routledge.

Lego, J. B. H. 2012. “Protecting and Assisting Refugees and Asylum-Seekers in Malaysia: The Role of the UNHCR, Informal Mechanisms, and the “Humanitarian Exception”.” Journal of Political Science and Sociology 2012 (17): 75–99.

Leung, L. 2018. Technologies of Refuge and Displacement. Rethinking Digital Divides. London: Lexington Books.

Leurs, K. H. A., and K. Smets. 2018. “Five Questions for Digital Migration Studies - Learning from Digital Connectivity and Forced Migration In(to) Europe.” Social Media and Society 4 (1): 1–16.

Lewis, D., and A. Rödlach. 2019. “Introduction to the Special Issue: Resilience and Wellbeing in Forced Migration.” Migration Letters 16 (3): 355–359.

Liebenberg, L., and E. Pelley. 2020. “Supporting Escapees and Migrants: Understanding the Role of Resilience Resources.” In Forced Migration and Resilience, edited by M. Fingerle and R. Wink, 31–44. Wiesbaden: Springer.

Long, K. 2011. “Permanent Crises? Unlocking the Protracted Displacement of Refugees and Internally Displaced Persons.” Policy Overview. Accessed April 23 20. https://www.rsc.ox.ac.uk/files/files-1/pb-unlocking-protracted-displacement-2011.pdf.

Martin-Shields, C. P., S. Camacho, T. Rodrigo, and C. Ruhe. 2019. “Digitisation in the Lives of Urban Migrants.” Discussion Paper. Germany Development Institute. Accessed September 27 2019. https://www.die-gdi.de/en/discussion-paper/article/digitalisation-in-the-lives-of-urban-migrants-evidence-from-bogota/.

Merisalo, M., and J. S. Jauhiainen. 2020. “Asylum-Related Migrants’ Social-Media Use, Mobility Decisions, and Resilience.” Journal of Immigrant & Refugee Studies. doi: 10.1080/15562948.2020.1781991.

Morosanu, L. 2016. “Professional Bridges: Migrants’ Ties with Natives and Occupational Advancement.” Sociology 50 (2): 349–365.
Munir-Asen, K. 2018. “(Re)negotiating Refugee Protection in Malaysia: Implications for Future Policy in Refugee Management.” Discussion Paper 29/2018. German Development Institute. www.die-gdi.de/discussion-paper/article/renegotiating-refugee-protection-in-malaysia-implications-for-future-policy-in-refugee-management/.

Nah, A. 2010. “Refugees and Space in Urban Areas in Malaysia.” Forced Migration Review 34: 29–31.

Pegrum, M. 2016. Mobile Learning: Languages, Literacies and Culture. Basingstoke: Palgrave Macmillan.

Siriwardhana, C., S. S. Ali, B. Roberts, and R. Stewart. 2014. “A Systematic Review of Resilience and Mental Health Outcomes of Conflict-Driven Adult Forced Migrants.” Conflict and Health 8: 13.

Sleijpena, M., H. R. Boeijec, R. J. Klebera, and T. Mooren. 2016. “Between Power and Powerlessness: A Meta-Ethnography of Sources of Resilience in Young Refugees.” Ethnicity and Health 21 (2): 158–180.

Sleijpena, M., T. Mooren, R. J. Klebera, and H. R. Boeijec. 2017. “Lives on Hold: A Qualitative Study of Young Refugees’ Resilience Strategies.” Childhood (copenhagen, Denmark) 24 (3): 348–365.

Street, B. 2003. “What’s “New” in new Literacy Studies?” Current Issues in Comparative Education 5 (2): 1–14.

Tay, A. K., R. Islam, A. Riley, C. Welton-Mitchell, B. Duchesne, V. Waters, A. Varner, D. Silove, and P. Ventevogel. 2018. Culture, Context and Mental Health of Rohingya Refugees: A Review for Staff in Mental Health and Psychosocial Support Programmes for Rohingya Refugees. Geneva: United Nations High Commissioner for Refugees (UNHCR). Accessed September 29 2019. https://www.unhcr.org/protection/health/5bbc6f014/culture-contextmental.

Thusen, F. 2017. “Linguistic Barriers and Bridges: Constructing Social Capital in Ethnically Diverse Low Skill Workplaces.” Work, Employment and Society 31 (6): 937–953.

Udwan, G., K. Leurs, and A. Alencar. 2020. “Digital Resilience Tactics of Syrian Refugees in the Netherlands: Social Media for Social Support, Health, and Identity.” Social Media + Society, doi:10.1177/2056305120915587.

UNHCR. 2016. Connecting Refugees. Accessed December 29 20. https://www.unhcr.org/innovation/wp-content/uploads/2018/02/20160707-Connecting-Refugees-Web_with-signature.pdf.

UNHCR. 2018a. “Global Compact on Refugees.” Accessed April 23 2020. https://www.unhcr.org/the-global-compact-on-refugees.html.

UNHCR. 2018b. Projected Global Resettlement Needs. Geneva: UNHCR.

UNHCR. 2020a. “Global Trends Forced Displacement in 2019.” Accessed December 23 2020. https://www.unhcr.org/5d08d7ee7.pdf.

UNHCR. 2020b. “Education in Malaysia.” https://www.unhcr.org/en-my/education-in-malaysia.html. Accessed April 23 2020.

United Nations Human Rights Office of the Commissioner. 2017. “Human Rights Council Opens Special Session on the Situation of Human Rights of the Rohingya and other Minorities in Rakhine State in Myanmar.” https://www.ohchr.org/EN/NewsEvents/Pages/DisplayNews.aspx?NewsID=22491&LangID=E. Accessed April 23 2020.

Wake, C. 2016. ‘Turning a Blind Eye’ The Policy Response to Rohingya Refugees in Malaysia. London: Overseas Development Institute. Accessed January 12 2019. https://www.odi.org/sites/odi.org.uk/files/resource-documents/11116.pdf.

Wan, S. E. L., and D. S. Warriner. 2012. “Transnationalism and Literacy: Investigating the Mobility of People, Languages, Texts, and Practices in Contexts of Migration.” Reading Research Quarterly 47 (2): 191–215.

World Refugee Council Report. 2018. “Refugees and the City: The Twenty-first-century Front Line WRC Research Paper No. 2.” Accessed April 23 2020. https://www.worldrefugeecouncil.org/publications/refugees-and-city-twenty-first-century-front-line.

Yuval-Davis, N., G. Wemyss, and K. Cassidy. 2017. “Everyday Bordering, Belonging and the Reorientation of the British Immigration System.” Sociology 52 (2): 228–244.

Zetter, R., and K. Long. 2012. “Unlocking Protracted Displacement.” Forced Migration Review 40: 34–37.