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The Digital Divide and Social Inclusion among Refugee Migrants: A Case in Regional Australia

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Abstract

Purpose: This paper examined the factors which influence refugee migrants' adoption of digital technology and its relevance to their social inclusion in Australia.

Design/methodology/approach: This research developed a conceptual framework keeping the 'use' of digital technology as the centre-piece of the digital divide. The empirical data was derived from a series of focus group discussions with refugee migrants in an Australian regional city, Toowoomba in Queensland.

Findings: There is a digital divide among refugee migrant groups and it is based on inequalities in physical access to and use of digital technology, the skills necessary to use the different technologies effectively and the ability to pay for the services. The opportunities to use digital technology could support the social inclusion of refugee migrant groups in the broader Australian community.

Research limitations/implications: Further research is required to examine whether this digital divide is unique in the regional context or common to Australian society and to confirm factors that might contribute significantly to refugee migrants' social inclusion.

Originality/value: This article determined the role digital technology can play in building social capital and hence social inclusion among refugee migrant groups. Many of the factors identified as influencing refugee migrants' use of digital technology can inform the Australian government and the information and communication technology industry in devising supportive policies and plans to reduce the risk of social exclusion, alienation and marginalisation among refugee migrant groups.

Key words: Australia, digital divide, focus group discussion, information and communication technology, refugees, social inclusion.

Introduction

There has been an increased adoption of digital technology in Australia over the last two decades. It is anticipated that most of the information needs of refugee migrants[1] relating to services such as settlement, housing, employment opportunities, health and education will be met through the ongoing rollout of the high-speed National Broadband Network[2] (Broadbent and Papadopoulos, 2013a; Lloyd *et al.*, 2013; Khoir *et al.*, 2014). The ability to access and use broadband Internet is therefore becoming a critical aspect of social inclusion.

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[1] According to the Refugee Convention, a refugee is, any person who 'is unable or unwilling to return to their country of origin owing to a well-founded fear of being persecuted for reasons of race, religion, nationality, membership of a particular social group, or political opinion' (UN General Assembly, 1951, p. 137). In contrast, an asylum seeker is someone who has sought protection but whose claim for refugee status has not yet been assessed (Phillips, 2013).

[2] The National Broadband Network (NBN) is an Australia-wide project to upgrade the Internet network infrastructure. It makes available a very fast broadband link to access the Internet and a range of other services such as videoconferencing, security monitoring and health monitoring services (ISOC-AU, 2011).

To participate in informed and productive ways in this rapidly expanding age of information and communication technology (ICT), social inclusion is facilitated through access to and the use of digital technology (Lloyd *et al.*, 2013). Providing information channels also requires training and acquiring skills that build the capacity to use the technology. While the concept of social inclusion is broad and extends to all segments of the Australian community, this study focuses on refugee migrants who are becoming increasingly visible in regional Australia as the federal government is encouraging them to resettle there (Cahill, 2007; McDonald *et al.*, 2008). Australia is one of the few countries in the world with a formal humanitarian resettlement program. In the five years from July 2007 to July 2012 Australia accepted 67 849 refugees and other humanitarian entrants, representing approximately 0.3% of the population which was 21.51m in the 2011 census (McAdam, 2013). In Queensland there were 7 065 refugee and humanitarian entrants during 2007–13, which made up 12.8% of the total refugee migrants who entered Australia (RCOA, 2013).

Resettlement of humanitarian entrants in regional areas has been operational since 2005, initially through pilot projects (Schech, 2013). About 20% of the total entrants have been directly settled in or later moved to regional locations (DIBP, 2014). The Department of Immigration and Border Protection (previously Department of Immigration and Citizenship) offers a range of support services and programs to refugee migrants. For instance, through the Adult Migrant English Program refugee migrants have access to up to 510 hours of basic tuition in the English language (Department of Industry, 2014). Humanitarian entrants are offered 100 and 400 additional hours of tuition through the Special Preparatory Program (Department of Industry, 2014). To gain familiarity with the Australian workplace culture and practices 200 hours of tuition are offered through the Settlement Language Pathways to Employment and Training program (Department of Industry, 2014). These programs help migrants make the transition to the workforce or take up vocational training. In addition, the Language, Literacy and Numeracy Program provides 800 hours of free language, literacy and numeracy training assistance to registered jobseekers who may be disadvantaged in the labour market (Commonwealth of Australia, 2013). Migrant resource centres provide various services to refugees such as information, referrals, an advocacy role and family support programs (Government of Western Australia, 2011).

Studies show the success of refugee dispersal (geographical) strategies in terms of economic, social and cultural benefits and that these humanitarian entrants settle well in regional

locations in terms of their social, economic and personal wellbeing (RCOA, 2010; Hugo, 2011; Schech, 2013). Nevertheless, refugees can face complex information and communication challenges that may lead to social and economic problems (Leung, 2010). They come to Australia from countries where they communicate in languages other than English and where the culture and environment may be different to that in Australia (Lloyd *et al.*, 2010). This insufficient interaction of the refugee migrants with their new communities obstructs their full participation in and integration with their new environment. Consequently, it can create the problem of social exclusion and may stall the process of assimilation (Correa-Velez *et al.*, 2013; Lloyd *et al.*, 2013). Social exclusion is defined by Silver and Miller (2003, p. 3) as a 'relational process of declining participation, solidarity, and access'. It is, therefore, important to understand the ICT needs and requirements of these migrants and to identify factors that can enable them to adopt technology to enhance their access to information for their daily activities such as education, employment and health.

There is some empirical research that explores the issues of digital exclusion in low income and socially disadvantaged communities (Helsper, 2008; Powell, 2010), and research on the information literacy practices of refugees and social inclusion from an information perspective among migrant groups (Lloyd *et al.*, 2010, 2013). Research also indicates that social exclusion can provoke information disjuncture and an inability to adopt ICT effectively and independently due to barriers related to language, access and skills to use the technology (Lloyd *et al.*, 2013). However, very little is known about the ways refugee migrant groups' access and use digital technology and about their attitudes towards, awareness of and skills in using the technology. In order to understand digital technology practices among refugee migrants and to accommodate their needs, a holistic approach encompassing a close examination of their online practices and information seeking behaviour is advocated. The aim of this research is, therefore, to understand the challenges refugee migrant groups face in adopting emerging digital technologies in general and broadband Internet in particular, and how the social inclusion of refugee migrants is linked to their adoption of digital technology. To gain this understanding, this paper explores the perceptions of refugee migrant groups residing in a regional town, Toowoomba in Queensland, Australia, and attempts to answer the following research questions: (i) What are the perceived challenges that refugee migrants face in adopting the technology?, (ii) Does digital inclusion affect social inclusion and (iii) Is there any divide in the refugee community in term of the access, use and adoption of digital technology?

The research also considers how age, language and education can affect access to and use of digital technology to enable the refugee migrants to become informed citizens and to integrate with the wider community.

Literature Review

The rapid advances in ICT have resulted in a new social order that is having a profound effect on the daily activities of individuals, organisations and society (Warschauer and Matuchniak, 2010). However, there are gaps that separate individuals and societies into those who are able to take advantage of the ICT opportunities and those who are not (OECD, 2000). The issues of access to and use of digital technology have given rise to the concept of a 'digital divide'. Digital divide was initially referred to as the gap between those who did and those who did not have physical access to digital technology (initially personal computers and the Internet) (Van Dijk, 2006a). Academic and policy debates in the 1990s focused attention on this first-level digital divide between haves and have-nots in terms of material access. With the fast development of ICT, the rapid uptake of networked ICT and a decline in the price of digital technology, the first level of digital divide has significantly narrowed in recent years and has contributed to a significant growth of Internet access (Lu *et al.*, 2013; Pedrozo, 2013).

As the computer became more affordable and the Internet became more accessible, researchers re-examined the status of the digital divide. Many empirical studies stressed the importance of distinguishing access from use, because creating access to computers does not mean that people have the skills or desire to use the technology (Ono and Zavodny, 2007). Thus the digital divide was redefined (Lu *et al.*, 2013; Van Dijk, 2006b; Ono and Zavodny, 2007) and the concept focused on the inequities of the use of the Internet, which is referred to the 'second level digital divide' (Hargittai, 2002; Hargittai and Hinnant, 2008; Van Deursen and Van Dijk, 2011) or the 'deepening divide' (van Dijk, 2005).

Furthermore, the issue of digital literacy has arisen as a third level digital divide (Palfrey and Gasser, 2008) where different skill levels create new inequalities (Van Deursen and Van Dijk, 2013). This third level of digital divide is linked to the knowledge gap (Wei and Zhang, 2006; Lu *et al.*, 2013; Van Dijk and Hacker, 2003). Research indicates that access to digital technology is just the first step to digital inclusion. Many non-users of the Internet who might have access to it 'doubt their ability to master the complexity of computers and the Internet'

(Lenhart *et al.*, 2003, p. 13). For a more inclusive digital society, digital literacy depends on the quality of education and training to enable the underprivileged to learn and use ICT resources more fully (Pedrozo, 2013).

Many different aspects and forms of divides co-exist today and are being defined and approached in various ways (Tsatsou, 2011). They are linked to socio-economic status and the ownership of ICT (Park, 2012). Digital divides have been found across age, income and employment (Hohlfeld *et al.*, 2008; Lengsfeld, 2011), and across gender and geographical location such as urban and rural areas (Hargittai and Shafer, 2006, Asthana *et al.*, 2009; Hindman, 2000).

Research specifically associated with migrants and refugee migrant groups implies that while digital technology is considered to be helpful for them, it can also be a barrier if it is expensive and difficult to access (Migliorino, 2010). Within older migrant groups in South Australia there was little interest in learning how to use digital technology (Goodall *et al.*, 2010). Correa-Velez *et al.* (2013) found that refugees living in regional Queensland were significantly more likely to be excluded from production, social relations and services. It is observed that not everyone in migrant groups experiences the same level of quality of participation in using the Internet (O'Mara *et al.*, 2010). Culture and language, education level, age, language proficiency, socio-economic conditions, communication preferences, familiarity with technology and other factors influence the adoption of digital technology among refugee migrant groups (Helsper, 2008; Bianco *et al.,* 2010; O'Mara *et al.,* 2010).

These issues can create social exclusion for refugee migrants. Without access to information migrants run the risk of remaining excluded from mainstream information sources and subsequently failing to integrate and to participate in society as full citizens. The ability to access information promotes the development of social networks and, consequently, social inclusion (Caidi and Allard, 2005; Caidi *et al.,* 2010; Lloyd *et al.,* 2010). Caidi and Allard (2005) conceptualise social exclusion as an information problem. They suggest that migrants in Canada faced substantial problems relating to the navigation of information in regard to basic needs such as housing, employment, education and health. An analysis of social exclusion in a study conducted in the United Kingdom indicated that social isolation and economic disadvantage, two important dimensions of social exclusion, were associated with a lack of basic/practical use of the Internet (Helsper, 2008). Language problems are seen as a significant barrier to accessing ICT and have been identified as an underlying cause of social

exclusion for migrant groups (Aspinall, 2007; Bigelow, 2010; Colic-Peisker, 2005). The affordability of digital technology and familiarity with its forms are other issues that are frequently mentioned in the research (O'Mara *et al.,* 2010).

The information poor are described as the socio-economically disadvantaged section of society with inadequate information resources, skills and technologies which leads to deficient information access and use. Factors such as education, gender, race and family structure are identified as primary correlates of information poverty (Tsatsou *et al.,* 2011). Many studies on digital divide (see, for example, De Haan, 2004; Cartier *et al.,* 2005; Schradie, 2011; Tsatsou *et al.,* 2011) examine inequalities in the adoption and integration of ICT. Van Dijk and Hacker (2003) in their study identify four kinds of barriers that lead to information poverty: lack of digital experience, lack of computers and network connections, lack of digital skills and lack of usage opportunities. Gebremichael and Jackson (2006, p. 269) define information poverty as 'the lack of access to emerging ICT, information infrastructure in general, and the skills to manipulate and use information'.

In Australia digital divide is adversely affecting groups with limited access to high-speed broadband infrastructure and with low digital literacy. These information poor groups include people with low incomes who live in rural and remote areas and have non-English speaking backgrounds (Bowles, 2013). Low income may inhibit the financial capacity to own a computer or to afford high-speed broadband, significantly restricting access to the range of online resources and assistance available in Australia (Lloyd *et al.,* 2010). Similarly, Lloyd *et al.* (2013) in a paper on the information literacy practices of refugees observe that the lack of ICT literacy skills and a lack of language competency among refugees limit their ability to deal with information efficiently and this impacts on their social inclusion. Therefore, access to the digital technology for households and businesses in remote and rural areas is a major policy concern in Australia (DBCDE, 2011). The readiness of regional Australia to compete in the digital economy is also said to be affected by the ability to acquire specific ICT skills (Bowles, 2013). For these reasons, digital divide is considered to be in danger of widening further in Australia (Bowles, 2012).

Research shows that ICT facilitates activities that are seen to constitute social inclusion (Selwyn and Facer, 2007). ICT use can have a positive impact on an individual's social inclusion and on a community's collective social capital as it continues to expand potential social networks and sense of belonging (Broadbent and Papadopoulos, 2013a). Access to ICT

is considered critical to economic, social and political participation and fundamental to building social capital. This highlights the influential role of the Internet in cultivating social networks and strengthening social ties (Broadbent & Papadopoulos, 2013a). It is argued that a successful digital divide policy approach requires a social inclusion and social capital policy framework. Such a framework can extend our interpretation of the digital divide from a narrow focus on issues of access toward a broader understanding of the way the digital technology can be used to increase and strengthen socially beneficial forms of online participation in the network society (Notley & Froth, 2009).

There is a gap concerning research that identifies the ways in which refugee migrants differ within their own community groups in terms of the effective use of digital technology and how this digital divide affects the social inclusion of refugee migrant groups within the wider community. Furthermore, studies have been conducted on specific health, education and training needs of refugees migrants (Schech, 2013). However, research is scarce on their ICT needs, particularly in examining the critical link between the use of digital technology, social capital and social inclusion. To address this gap, this paper explores, through empirical research, refugee migrants' adoption and use of digital technology and the implications for their social inclusion.

Conceptual Framework

The issue of circumventing social exclusion and establishing a more inclusive society through the use of digital technology now forms a basis of academic discourse in social research (Mervyn *et al.*, 2014; Park, 2012; Selwyn, 2004). There is no specific theory underpinning the concept of digital divide. However, the literature has begun to acknowledge the connection of digital divide to the concept of social exclusion (Clayton & Macdonald, 2013; Selwyn, 2004), social capital, cognitive and communicative ecology and social stratification theories (Ragnedda and Muschert, 2013; Powell *et al.,* 2010; Van Dijk and Hacker, 2003).

The present research puts the use of ICT as the centre-piece of digital inclusion and social inclusion. Access is only one factor affecting the use of ICT. Research indicates that a use gap exists even after providing equal access to ICT (Barnard *et al.,* 2013; Hargittai and Walejko, 2008; Park, 2012). Research demands that it is vital to examine who is or is not using the Internet, why and with what consequences (Selwyn, 2003; Warschauer, 2003). Apart from inequalities in the nature and quality of access (Livingstone and Helsper, 2007), the variations

and inequalities in the use of ICT depend upon intertwining factors such as choice, affordability and skills (Fig. 1). The use of ICT is influenced by affordability, which relates to the costs or the economic capacity to adopt the technology. Research indicates that inadequate practical skills of new and inexpert users can limit the use of digital technology significantly (Van Dijk and Hacker, 2003; Livingstone and Helsper, 2007). Choosing to use ICT or not is related to the willingness and/or motivation of individuals to adopt the technology. This could affect differential use of the Internet in terms of lack of interest, computer anxiety or unattractiveness of the technology (Van Dijk and Hacker, 2003). In addition, social, cultural and educational factors have influenced an individual's choice in using digital technology (Tsatsou, 2011). Digital use is ultimately determined by access and affordability coupled with the capacity to use ICT and the choice to adopt ICT (Bowles, 2013).

This research applies the concepts of social capital and cognitive theories while researching linkages between digital inclusion and social inclusion. Exclusion from digital networking relates to social exclusion and isolation (Helsper, 2012). Viewed in this perspective, digital divide cannot be measured in exclusively economic and social terms. Cognitive factors related to the adoption of digital technology need to be considered as well (Kvasny and Keil, 2002). At the core of the social cognitive theory is self-efficacy, 'the belief in one's capability to organise and execute the courses of action required to manage prospective situations' (Bandura, 1997, p. 2). According to the cognitive theory, personal factors in the form of cognition affect behaviour (Bandura, 1986). The personal conditions that shape self-efficacy could be guided and enactive. Guided experience is achieved by instruction or training. It helps to cultivate self-efficacy through knowledge and skill development. Enactive experience is achieved through putting knowledge and skills into practice (Bandura, 1986, 2001). Individuals also develop self-efficacy as a result of the social persuasions they receive from others (Wei *et al.*, 2011). Computer self-efficacy is influenced by computer usage patterns, availability of computer resources as well as various sources of social cognitive influence (Wei *et al.*, 2011). Computer self-efficacy plays an influential role by affording individuals with capabilities to explore Internet content and use communication technology with ease (Wei *et al.*, 2011).

The use of social cognitive theory gives us a better understanding of how and why the use of digital technology can be impacted by the cognitive aspects of skills and attitude. Factors such as ICT training can increase the computer self-efficacy and bring a positive attitude change in

the use of digital technology. Social inclusion is associated with Internet-mediated economic, social and cultural networks (Castells, 2002; Livingstone and Helsper, 2007). The concept of social inclusion fits well with the digital divide perspective because a lack of access to technology is positioned within a larger framework of exclusion, reduced resources and social power. Considering the transformative nature of digital technology, it can increase social inclusion and community participation (Caidi and Allard, 2005). To increase access to ICT among refugee migrant groups will not result in social inclusion unless they have a supportive environment, and the skills and choice to use the technology effectively.

Those who do not adopt and use ICT can become socially excluded as they lack access to mainstream modern sources of information (Caidi and Allard, 2005). Social inclusion is often conceptualised in terms of social capital. An Organisation for Economic Co-Operation and Development report defines social capital as 'the networks together with shared norms, values and understanding which facilitates cooperation within or among groups' (OECD, 2001, p. 41). Johnson (2003) in her research of the urban poor in Mongolia states that information is an inherent part of social capital. Better access to information can indeed contribute to the social inclusion of marginalised members of society. Those without adequate access to digital technology can be socially excluded and, therefore, cannot build their social capital. This research develops a conceptual framework which presumes that access and affordability promotes the use of digital technology and strengthens social networks and social support leading to the generation of social capital (Fig. 1). The cognitive factors include competency to use the technology and attitudes towards the adoption of ICT. Social networks and social support play a key role in acquiring the skills and providing the motivation to make choices to use the digital technology. Social capital and cognitive factors, therefore, play central roles in the use of technology and digital inclusion, which forms the groundwork for social inclusion.

<Figure 1 about here>

Methodology

The research was conducted in the regional town of Toowoomba in the state of Queensland, Australia. Toowoomba is located 127 km of west of Queensland's capital city, Brisbane, with a district population of 157 699 in 2012, 10.4% of whom were born overseas. Toowoomba has been nominated as a preferred place for regional refugee migrant settlement. Toowoomba's refugee migrant population is relatively modest, but has been growing rapidly

in recent years with arrivals coming from diverse ethnic backgrounds. The city has recently become one of the three local council areas in Queensland to be declared a 'Refugee Welcome Zone'.

Focus groups were considered a natural means of gathering information and perceptions on the research topic in a safe environment from different ethnic communities with language barriers (Nevid and Maria, 1999; Webb and Kevern, 2001). This research preferred focus groups over other methods of data collection as the emphasis was more theoretically and thematically motivated and not so much on generalisability (Creswell, 2012; Riggs *et al.*, 2014). This study used a heterogeneous focus group design to obtain feedback from a diverse population of refugee migrant groups.

All focus groups were conducted in a multilingual environment with English as the main language. When interpretation was required, the bilingual researchers and participants interpreted for the participants who did not understand English. All audio recordings included the English interpretations of the discussions – the subsequent transcriptions only included the English-language components. The focus groups enabled the researchers to explore the themes and perspectives that emerged from the discussions.

Participation in the study was voluntary and the purpose of the research was explained to all participants prior to obtaining their consent to participate. All participants signed the plain language statements and consent forms in English. The participants who could speak English were asked to interpret the forms in their own language for other participants from the same ethnic group.

Four focus group discussions were conducted during September–October 2013 in Toowoomba. The discussion in each group involved 6–9 participants. In all 28 participants from diverse ethnic backgrounds were involved (Table 1). The sample comprised of 18 female (63%) and 10 male (37%) participants from Afghanistan (n = 10), Bangladesh (n = 1), Congo (n = 7), Ghana (n = 1), Liberia (n = 1), Pakistan (n=1), Rwanda (n = 1), Sri Lanka (n = 1) and Sudan (n = 5). Over 60 per cent of the participants were studying and 28 percent were working; the remaining 11 percent were not working. 'Not working' category included participants who were jobless, and looking for a job. This category also included people who were not actively looking for jobs due to a lack of necessary English skills, training or experience. Yet only 10.71 per cent were in Australia for more than three years.

<Table 1 about here>

The snowballing technique was used to select the sample as it makes it easy to identify a hard-to-reach and 'hidden' population (Heckathorn, 2011). Thus participants were recruited through acquaintances and key informants. Initially, different organisations such as local churches and social welfare organisations and networks were approached to help recruit the participants. The participants who consented to attend the focus group discussion then recommended other participants. This sampling method did not ensure representativeness of the sample, but it did prove to be fairly effective in gaining trust and cooperation from the participants (Yu, 2010). The focus group discussions were run for approximately 1½ hours. Approval to conduct this research was obtained from the Human Research Ethics Committee of the University of Southern Queensland.

Thematic analysis was employed to identify key themes from the four discussion groups. Thematic analysis is a qualitative analytical method that identifies patterns (themes) within data and interprets various aspects of the research topic (Braun and Clarke, 2006). The transcripts were reviewed initially to discover patterns in the data. Similar words occurring in the data were then sorted to generate initial codes by the researchers. The codes with similar meanings were then clustered to form categories which provided analytical depth and rigour. The categories were then reviewed and grouped according to the theme they were related to. Each theme was subsequently given a name as shown in the Results section. Quotes are verbatim and are used to illustrate important themes. The four focus groups are identified as FG 1, FG 2, FG 3 and FG 4.

Results

This section reports the findings of four focus group discussions conducted with refugee migrant groups in Toowoomba. The demographic characteristics of the study participants are summarised in Table 2. Over 60% of the participants were between the ages of 18 and 34 years. Only about 11% of the respondents were over 55. Nearly 40% of the participants had a certificate or diploma and 14% had attained primary education only. A vast majority of the participants (88.46%) were in the low income group with household average weekly income of less than $600.

<Table 2 about here>

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In order to understand how the refugee migrant groups in the research sample perceived ICT and its adoption, a theoretical framework was constructed based on themes elucidated from the findings of the research (Fig. 2). These themes represented two intertwining aspects of digital inclusion and social inclusion. The four key themes underpinning digital inclusion and influencing the adoption and use of ICT were access, choice, affordability and skills. All these four factors were interdependent and in certain aspects inseparable as each were affecting the other. Three themes were identified for the aspect of social inclusion. These were related to availing of opportunities, provision of e-services and getting connected socially through the adoption of ICT. The impact of digital technology was perceived in relation to these three key themes of social inclusion which emerged as significant themes. The findings indicated strong links between the themes of digital inclusion and social inclusion.

Access opportunities and availability

The research findings revealed that use of e-services and availing opportunities were the most important aspect of social inclusion that could be served by the access and use of digital technology. Acquiring access to online information was considered as an essential part of everyday life. The participants faced a difficulty if they did not have access to the broadband Internet. For instance, the problem of access constrained the participants in availing education, employment and other opportunities, using e-services and getting connected socially. For instance, one participant stated:

> *Whether for work or contacting someone, or for university work, I really can't meet deadlines, because a lot of things like, submitting assignments are online, so if you don't have Internet access you can't submit your assignment. (P 3, FG 1)*

Some other participants said:

> *Without Internet … we can't communicate with each other … So using the Internet is very important. (P 2, 4 & 5, FG 2)*

Participants described access to the Internet as essential for applying for jobs, gaining education and getting other e-services (Fig. 2):

> *I need the Internet for employment and education purposes. (P 5, FG 3)*

Participants who could not use the Internet due to the lack of availability felt deficient in terms of availing themselves of opportunities:

> *It is very important as all the assignments are through the Internet and without the Internet you can't get your work done. For instance we can do all our transaction on the Internet such as paying bills, banking and shopping. It saves a lot of time. (P 9, FG 1)*

In particular, the Internet was considered essential for educational activities:

> *Here it is very important as all the assignments are through the Internet and without the Internet you can't get your work done. (P 1, FG 3)*

The above findings suggest that digital technology was seen as a key mechanism for addressing social needs and that a lack of access to the internet was seen as increasingly disadvantageous in terms of becoming socially included.

<Figure 2 about here>

It was observed that the refugee migrants who had recently arrived in Australia were the most disadvantaged in accessing and using the Internet compared to those who had been settled in Australia for longer. The main barriers that hindered the adoption of ICT by the new arrivals were related to the availability of the service.

At certain areas the service is not available. It is very expensive, the cost is high we have to pay for the rent and other expenses. (P 5, FG 3)

For those who did not have home access to the Internet, going to a library or other public places was part of their routine. However, some participants expressed concern at the difficulties such as time and transport in accessing the Internet at these public places:

> *The only two Internet facilities we have are at the library and TAFE but this facility is for a limited time … At the library we can use it for one hour only and only if place is available. At TAFE most of our time is spent in attending classes and we do not have time for the Internet … There is also the problem of going to these places; we walk for hours to reach the library and then the bus service is not available after 5pm. (P 1, 3 & 7, FG 3)*

Affordability and choice

The results show that access to the Internet among the refugee migrant population was related to affordability. Those who had a lower income were unable to afford the internet:

The barrier is from ... economic point of view. If you want to buy the computer it will cost a lot of money ... and then you can't get connected without payment. (P 6, FG 2)

There was a digital divide within the refugee migrant groups in terms of affordability and choice.

> *Many of my friends at TAFE prefer smartphones over the fixed Internet service because it's affordable and easy to use. Smartphones are their main source of Internet needs ... (P 2, FG 4)*

Those with a regular income and the younger generation felt that the Internet was not expensive as they had alternative choices and they could afford to access and use it:

There's a lot of opportunities ... I can pretty much access the Internet wherever I go, I have my phone Internet, which is a plan, so I can use it anywhere I go ... and at home I have the Internet. (P1, FG 1)

But refugee migrants relying on government funding did have the ability to pay for the internet costs and despite their interest could not choose to us it:

You don't pay for your Internet, then you don't have access to it, so I suppose finding a means to providing for your Internet and having a regular income so you can pay for your Internet can be a barrier. (P3, FG 1)

These migrants also cited unexpected costs as reasons for dropping broadband services and changing their service providers:

Yeah and they [service provider] don't give you a notice saying that you've gone over, we're charging you ... So when she [participant's mother] saw the bill she almost had a heart attack ... They just keep charging you and then they just bring the bill over, and say you have to pay this by this date. (P5, FG 1)

Concerns were raised that some digital/wireless devices are also widening the knowledge gap in terms of affordability:

> *You won't be able to perform the same quality of work on a smartphone that are able to do on a computer or a laptop connected with the Internet. (P4, FG 4)*

Skills vs opportunities

The findings of the research indicated that Internet skills were increasingly affecting refugee migrants teaching and learning, professional work and career development. To some extent, the digital divide appears to be shifting from a gap in connectivity to a 'knowledge divide' – the gap between those who have the skills and understanding of using ICT effectively and those who do not or who are passive users.

> *Some of my colleagues have better computer skills. Normally those who have better technical skills can perform well in my workplace and get promoted. I don't deserve to be promoted as I don't have such skills. (P1, FG 4)*

The shortage of digital skills was compounded by low literacy skills or language barriers:

> *I don't know English very well so language is a barrier for me to use Internet. (P3, FG 2)*

> *I maintain good network with my friends back in my home country because they understand my emotion and language. Here people in my neighbourhood don't speak with me as we speak in a different language and we look different. (P 2, FG 4)*

Moreover, there were age-related differences related to skill in adopting ICT. The younger generation had more skills in using it than older generations:

> *For us it's a lot easier, but for our parent's, that's a barrier ... if I explain to my mum that I'm going on the Internet and I'm trying to find this information, she like gets out the Yellow Pages and calls the doctor. I'm like no I can go and type it in and look for a doctor and look for their schedule, and she finds that hard to comprehend. So it's just ... getting on the Internet and finding certain things is a problem. (P 5, FG 1)*

The older generations had the motivation and willingness and if given the choice would use the internet but did not have the skills to use ICT:

> *It is very important for us that we learn to use the Internet even at our age. It is essential as all the information is on the Internet. Whatever we have to do we have to use the Internet. We can do our daily life activities through the Internet. (P 3, FG 3)*

I don't know how to use a computer and the Internet. My nephews send emails regularly to my kids, but I can't read them. (P 6, FG 4)

These results indicate that many refugees are excluded from and/or unable to participate in using the information on the internet because of digital literacy and language barriers.

Connectivity –Digital inclusion vs social inclusion

Social inclusion is often theorized as a way of strengthening community cohesion and participation of the socially excluded communities within the wider community Clayton et al., 2013). The research results revealed that the use of the Internet enhanced the development of relationships of the refugee migrants with the wider community. The younger participants were of the view that the Internet assisted them in learning more about Australian cultural practices which helped in developing greater tolerance and cohesion. They felt that it allowed them to maintain their ethnic identity, while accepting the host community's culture and integrating themselves in the host country, so indicating a strong link between digital inclusion and social inclusion (Fig. 2):

When we were in Africa I didn't understand about multiculturalism. When I came here it was like Australia is a multicultural country. I wanted to find out more so I went on the Internet and I decided to find out – I realised what Australia has … indigenous people, like for example the Aboriginals, the Torres Strait Islanders and all those sort of people, and I got to know who are those indigenous Australians and where are those migrants coming from. So with the help of the Internet I feel that I have been part of the Australian society. I feel integrated into the system by the Internet. (P 1, FG 2)

While it was evident in the results that one of primary uses of the internet was for social networking. The results also demonstrated that in addition to connecting with new people, its use enabled the maintenance of social relationships already established. For instance, it was observed that apart from playing the role of social bonding, digital technology helped the refugee migrants in reuniting bonds with family and friends across the globe. It helped the refugee migrant communicate with their family and friends and to develop ties that were severed due to migration, thereby promoting social or community cohesion across boundaries:

The main purpose to use the Internet, was to get in contact with relations abroad, because my country had a civil war, so most people relocated to other countries,

like Norway, Canada, US, Australia, so we needed to get in touch with them. (P 5, FG 2)

In other words, the Internet through social bonding assisted the refugee migrants' emotional stability which furthered their connections with the local community, learning the social setup and assimilating with the host community:

It helps with understanding the social norms that happen in this country, when you first come, you say things differently, and you do things differently ... I've gone on the Internet and I've experienced the Australian culture through the Internet, I've learnt about it ... you know, we were having a quiz about Australian slang, I don't know Australian slang at all ... and I get out my phone I type it in, and I'm like oh, that's what it means. (P 8, FG 1)

This empowerment indicated that ICT has a role in facilitating intra- and inter-community connectivity.

The results of the research indicate that four factors in particular influenced the access to and use of digital technology among the refugee migrant groups. As indicated in Figure 2, these factors are access or the inequality of access to broadband Internet, choice or willingness and motivation to use ICT, digital skills or the inequality in the skills to use the services and affordability or the inequality in income to pay for the Internet service. The findings also revealed that refugee migrants understood access to and use of broadband Internet as being essential for providing (i) opportunities to engage in economic activities and to participate in the social and cultural life, (ii) access to services, including government, banking and shopping, and (iii) connectivity for knowledge enhancement and social interaction (Fig. 2). The findings suggest that digital exclusion can stall the process of social inclusion and the process of the refugee migrants' integration into the wider community.

Discussion

The results suggest that opportunities to use digital technology can support the social inclusion of refugee migrant groups as most of the research participants viewed broadband Internet as an effective means of communication, information exchange, interaction and assimilation in the wider community. Contrary to research that suggests a lack of interest among some people in acquiring Internet access (Dutton *et al.,* 2009; Horrigan, 2009), the

participants expressed a pressing need for online connectivity. These findings were similar to those in research conducted by Powell *et al.* (2010) on digital exclusion in low-income American communities. Despite their motivation to adopt the technology, the findings show the main reasons for not using ICT were cost, language and skills. The results suggest that the main barriers in using ICT were mainly social, economic and technical and less a behavioural issue. The research also implies that use of broadband Internet can help refugee migrants immensely in applying for jobs, gaining an education, getting access to e-services, social networking and cultural connectivity, the things that form an integral part of the social inclusion process as suggested in other studies (McIver & Prokosch, 2002; Powell *et al.*, 2010).

The research indicated that there was a digital divide in the refugee migrant groups that was specifically related to income, mobility and availability. Groups that were financially constrained, had transport issues and lived in locations where the Internet was not available were the most affected by this divide. The low availability of the Internet at home was somewhat bridged by access through public facilities but was stalled by time and mobility factors. This digital exclusion was more pronounced, particularly, among the newly arrived refugee migrants as they could not access and use the Internet due to barriers associated with affordability, language and literacy. Use patterns among the refugee migrant groups showed that older people were less likely to use the Internet in comparison to the younger generations as they had fewer opportunities to learn the technology. These results are consistent with other research studies where age was considered as a barrier to the adoption of digital technology (Benitez, 2006; O'Mara, 2012).

Overall, the research implied that access to and the use of ICT was considered essential in the lives of the refugee migrants in terms of their integration in the wider community, their access to a range of goods, services and information, and connecting with their separated family and friends. The technology can bring education opportunities, enhance financial services, facilitate interaction across great distances and offer a strengthened sense of community.

Finally, previous research has largely overlooked the role of social capital and cognitive factors and the importance of their connection with the adoption of ICT and its implications for social inclusion. This article revisited the digital divide to emphasise the critical role of social capital and cognitive factors in access to and the use of digital technology. The research implies that the use of digital technology is associated with social capital and cognitive factors

as social inequalities can decrease through access to ICT, its affordability, skill and choice to use it. Similarly, the development of social networks, social support competence and positive attitudes towards digital technology can increase with the use of ICT. This contextualisation of social and cognitive factors influencing access to and the use of digital technology is a useful means of understanding, evaluating and explaining digital inclusion and its influence on social inclusion.

Conclusion

This study revealed that digital inclusion and social inclusion are interlinked as refugee migrants' information needs influenced their social inclusion in their host community. Refugee migrants viewed digital technology as a vital tool for learning, assimilating with the wider community, accessing education and job opportunities, and contact with family and friends. The research also revealed that socio-economic inequalities and the technology itself were barriers to accessing and using ICT. The results indicated that digital exclusion or digital divide among refugee migrant groups was based on inequalities in material *access* to ICT, in the literacy *skills* necessary to use ICT effectively and in the *capacity* to pay for the services.

A positive indicator that did not entail digital divide was the willingness to adopt ICT by *choice* as opposed to some research studies where people preferred not to use the technology when given a choice (Dutton *et al.,* 2009; Horrigan, 2009). Rather, the adoption of digital technology was considered important as it could bring improvements in the lives of refugee migrants in terms of access to information, communication with family and friends, e-services, and for education and employment opportunities.

The digital divide was apparent in terms of affordability and age among the refugee migrants. This inequality in the adoption of digital technology indicates disparities in the refugee migrants' socio-economic situations and skills.

This research has implications for social policy and practice. It is important to understand and address barriers such as literacy, ICT literacy and social-economic issues to ensure a digitally and socially inclusive community. Further research is required to examine how the level of education, the period of stay and gender influence the digital divide in refugee migrant groups and whether this divide is unique in the regional context or common to the whole of the Australian society and to confirm factors that can significantly contribute to this new form of

divide. Although the research is based on a regional town in Australia, the findings would be relevant to other regions and comparable refugee-receiving countries for framing resettlement and social integration strategies.

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Table 1.
Distribution of four focus group participants

Variables	FG1	FG2	FG3	FG4	Total
Gender					
Male	4	2	2	2	10
Female	5	4	5	4	18
Ethnicity					
Afghanistan	1	2	4	3	10
Congo	2	3	2	0	7
Sudan	4	0	0	1	5
Rwanda	1	0	0	0	1
Liberia	1	0	0	0	1
Pakistan	0	1	0	0	1
Bangladesh	0	0	0	1	1
Ghana	0	0	0	1	1
Sri Lanka	0	0	0	1	1
Occupation					
Working	2	3	2	1	8
Studying	6	3	5	3	17
Not working	1	0	0	2	3
Length of stay in Australia					
Less than 1 year	2	2	5	5	14

1-3 years	4	4	2	1	11
More than 3 years	3	0	0	0	3

Table 2.
Socio-demographic profile of focus group participants

Variables	Range/level	Participants (% of total)
Age (years)	18-34	17 (60.71)
	35-54	8 (28.57)
	55-64	3 (10.72)
Education	Primary	4 (14.28)
	High School	11 (39.29)
	Trade/certificate/diploma	11 (39.29)
	Bachelor	1 (3.57)
	No education	1 (3.57)
Income/ week	$599 or less	23 (88.46)
	$600-799	1 (3.85)
	$800 or more	2 (7.69)