Uses of digital technologies by Nepali migrants in Malaysia

AUTHORS

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ABSTRACT

This working paper forms part of the output of Work Package 9 on technology, inequality and migration within the MIDEQ Hub, a multi-disciplinary research project in 12 countries of Latin America, Africa and Asia, including the Nepal-Malaysia migrant corridor. It presents the results of an online survey of 281 respondents in Malaysia, 98.2% of whom were migrants, with 1.8% being family members of migrants; 96.1% of the respondents had been born in Nepal. Following a summary of the methodology, which explains why an online survey was used to replace the originally planned interviews and focus groups, the paper provides an overview of the most important results. Smart phones and the Internet are widely used by migrants, mainly for audio calls, video calls, news updates, text messages, and watching videos for entertainment. Digital devices are liked mainly because they are easy to use and they help users network with others, but in contrast, they are disliked because of the costs of the devices and air-time. An important finding is that migrants increasingly used digital technologies as their migration journeys progressed; only 3.2% used them very often in deciding to migrate, whereas 66.1% used them while in Malaysia. Three pertinent conclusions for our future work with migrants and local tech developers on implementing a digital intervention to reduce the inequalities associated with migration are: simply designing another new app will not be particularly valuable; the widespread use of smart phones and access to the internet by migrants suggest that these might be appropriate areas on which to focus; and it might be wise to work with, or build on, technologies and apps already in existence, so as not to reinvent the wheel and add value in any interventions that we develop together.

KEY FINDINGS

1. **Digital technologies play an important part in the lives of Nepali migrants in Malaysia** - especially mobile phones for personal communications, entertainment and games, as well as for gaining news updates

2. **Very few migrants make any use at all of apps that have been developed specifically for migrants** - 97.3% made no use of such apps

3. **Migrant use of digital technologies increases through the migration journey** - 94% had not used digital tech before migrating, whereas 66.1% used them very often while in Malaysia

Introduction

This is the first of a series of working papers presenting the initial findings from research conducted by Work Package 9 of the UKRI GCRF funded MIDEQ Hub[1] into how migrants use digital technologies. This work package is one of three such "intervention" packages within MIDEQ, and has the overarching objective of facilitating the crafting of a digital intervention (or interventions) that will contribute to reducing inequalities associated with migration between and among a selection of the 12 countries chosen for study by the MIDEQ leadership in Africa, Asia and Latin America. This first working paper summarises the results from collaborative work with partners in Malaysia, focusing mainly on migrants from Nepal.

A three-phase approach

The work package has adopted a very specific three-phase approach to deliver its overall objective, which is designed explicitly to learn from and work with migrants and local tech developers to craft an intervention of their choosing. The *first phase* of the research (2019-20) was intended to understand better how migrants currently use digital technologies. Originally, this was intended primarily to be undertaken through interviews, focus groups and other qualitative methods in four of the MIDEQ migration corridors (China-Ghana, Ethiopia-South Africa, Haiti-Brazil, and Nepal-Malaysia). Building on this, the *second phase* (2021-22) aimed to explore further how migrants understand the notion of inequalities associated with migration, what they might like to change, and how digital technologies might be able to effect such change. This aimed to combine migrants' understandings of migration inequalities with the digital experiences of colleagues within the work package. The *third phase* was to facilitate interactions between local tech developers and migrants, with the intention of crafting one or more digital interventions that might help reduce the identified inequalities.

The impact of COVID-19 on Phase One

The qualitative field research for the first phase was intended to take place together with the MIDEQ country teams mainly in 2020 and early 2021. However, this proved to be impossible as a result of the global COVID-19 pandemic, which not only had serious implications for migrants across the world, but also prevented any such research visits. Furthermore, the UK government dramatically cut funding to the UKRI GCRF in an effort to use the savings to support its own response to COVID-19. This led to the formal suspension of Work Package 9 within MIDEQ. However, Royal Holloway, University of London generously stepped in to provide one year's funding to cover the costs of employing a post-doctoral researcher following the cessation of MIDEQ funding to the work package.

In response, the leadership of Work Package 9 adopted a creative and flexible approach to these challenges, and developed an online survey instead of conducting the previously planned qualitative work (see methodology below). This produced a very different kind of data to that originally anticipated, but it did also have a range of unanticipated advantages.

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[1] MIDEQ is funded by the UK Research and Innovation (UKRI) Global Challenges Research Fund (GCRF) and is a five year project (2019-2024) with an ambitions aim to transform understanding of the relationship between migration and inequality in the context of the "Global South" by decentring the production of knowledge about migration and its consequences away from the "Global North" towards those countries where most migration takes place. Work Package 9 is led by staff within the UNESCO Chair in ICT4D at Royal Holloway, University of London.

The Nepal-Malaysia migrant corridor

Malaysia has long been the top destination for Nepali migrant workers, especially men, with around 500,000 Nepalese reported to be living in Malaysia in 2019 (Yeoh and Ghimire, 2019).[2] These represent about 16% of the total migrant population in Malaysia, and are mainly employed in manufacturing, construction, agriculture and services.[3] Intermediaries play a key role in the migration process, and migrant workers are faced with various restrictions. Their living and working conditions have also long been reported as being of poor quality, and the impact of responses to COVID-19 on them was severe. Wahab (2020) thus reports that the implementation of Malaysia's Movement Control Orders in the government's efforts to limit the spread of the pandemic made their already precarious living and working conditions very much worse (see also Verghis *et al.*, 2021).[4] This repression of migrants in Malaysia during 2020-21 created further problems for this research, not least because many migrants were fearful for both their health and their personal security, and were suspicious of researchers enquiring into any aspects of their lives and livelihoods (for wider discussion on migration in this corridor and neighbouring countries see also Hassan *et al.*, 2019; ILO, 2018, 2019a, 2019b; SUAREM, 2018).

Methodology

The only means to gain some basic data for Phase One of our research in the face of COVID-19 was to use online methods and to ask our MIDEQ partners and others within our networks to help disseminate the links for the surveys to migrants. We therefore decided to create a short online survey to explore aspects of how migrants used digital technologies. The advantages and disadvantages of such an approach are summarised briefly in Table 1 below.

Table 1: Advantages and disadvantages of an online survey approach

Advantages of an online approach	Disadvantages of an online approach
• Feasible in a context where travel and on the ground field research are impossible • Focus was on the use of digital tech by migrants, and so migrants who were using digital tech could still respond • Enabled many more people to respond than would have been possible through originally planned qualitative methods • Anyone with access to the digital link could complete the survey, and so could include respondents not just from the MIDEQ corridor countries • Limits the impact of variable researcher influence on respondents' answers to the questions	• Does not enable the richness of in-depth discourse available through qualitative research • Focuses mainly on closed questions, which can constrain respondents' answers • Little control over exactly who answered the questions – reliant on partners' decisions about representativeness

Design approach

We were driven by seven overarching principles in developing the online survey to be used in all of the MIDEQ corridors where we are undertaking research:

- It should be as short as feasible, so that migrants would not need to spend much time in its completion;

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[2] https://www.mideq.org/en/resources-index-page/nepal-malaysia-corridor-brief/.
[3] https://www.mideq.org/en/resources-index-page/malaysia-brief/.
[4] See also media coverage, such as https://www.abc.net.au/news/2021-06-03/malaysia-to-again-target-immigrants-during-total-lockdown-/100179220, https://www.straitstimes.com/asia/se-asia/malaysias-hardline-stance-on-illegal-migrants-could-raise-risk-of-covid-19, or https://www.bbc.co.uk/news/world-asia-52515000.

- It should be in relevant languages, so that it could be readily understood by migrants;
- The questions should be framed together with our partners;
- It should be easy to use and as accessible as possible for mobile devices;
- It should focus very clearly only on the basic theme of how migrants are currently using digital technologies;
- Each survey should have its own identity, using the logos of the partners involved in disseminating the links associated with a colour scheme relevant to the context; and
- It should be uniform in structure and content across all of the countries in which we were undertaking research.

Examples of two of the survey designs are shown below in Figure 1.

Figure 1: Two of the survey designs for use in Malaysia

Partner involvement and versions of the survey for use in Malaysia

The lead MIDEQ partners involved in the survey in Malaysia were Monash University in Malaysia and the Nepal Institute for Social and Environmental Research (NISER) in Nepal. Monash University in Malaysia colleagues provided introductions to Project Liber8,[5] who distributed the survey through their network, and NISER translated the survey into Nepali. Subsequently, we also had the generous support of Migrant Forum Asia[6] and Our Journey,[7] who also distributed a further version of the survey in Nepali.[8] The difficulties in finding migrants willing to participate in the survey, especially as an outcome of the additional burdens and restrictions on them caused by the reactions of the Malaysian government to COVID-19, meant that this was not at all easy, and we are particularly grateful to Our Journey for facilitating this.[9] It clearly matters who administers surveys and conducts interviews with migrant workers in Malaysia, but it should also be noted that the results will likewise depend in large part on the particular networks through which such research is facilitated. This process generated three surveys for use in Malaysia: in Nepali and English for distribution by Project Liber8 and NISER, and in Nepali for distribution by Our Journey. The questions remained the same across all of the surveys, and results were aggregated for subsequent analysis. The objective was to have a

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[5] https://projectliber8.org/.
[6] https://mfasia.org/.
[7] https://www.facebook.com/ourjourneymy/.
[8] Colleagues at the Universiti Malaysia Sarawak (UNIMAS) also helped in the distribution of the survey through their networks.
[9] Especial thanks are due to our colleague who administered these surveys through their network of contacts, and was paid for so doing.

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minimum combined total of 250 responses, in line with a figure deemed to be realistic for completion in each of the corridor countries.

Structure and questions

The survey has five basic sections, following an introduction that briefly summarises its purpose, and emphasises that all of the responses are strictly anonymous.

- The first section asks whether or not the respondent uses digital technologies, and depending on the response (yes/no) directs them through two different routes.
- For those who answer no, there then follows a section about why they do not use digital technologies.
- For those who answer yes, the subsequent questions are grouped into two sections: the first asks questions about how and why they use different types of digital technologies, and the second asks about the apps (applications) that they use.
- Both groups of respondents are then asked to provide some limited information about themselves for the purpose of analysing their previous responses. This section comes last because we do not wish to put migrants off in any way by appearing to ask personal questions before answering the substantive questions in which we are really interested.

Most of the 19 questions asked were in the form of two-dimensional matrices in which respondents simply have to check a box indicating, for example, the frequency with which they used a particular type of technology (annually, monthly, weekly never). However, where relevant the questions also provide respondents with the opportunity to tick a box for "other" and provide further qualitative responses. The personal information that they are invited to contribute consists of:
- Whether they were a migrant living overseas, a returned migrant living in the home country, or a family member of a migrant.
- The country in which they were born (drop-down menu).
- The country in which they are now living (drop-down menu).
- Length of time living in the country where they now are (drop-down menu).
- The country where they consider their home to be.
- Their age.
- Their gender.
- Their current employment status (part- or full-time, in formal or informal sector, or not working)

The choice of options as possible responses to specific cases was based in part on our knowledge of existing literatures on technology use by migrants, and also on the suggestions made by our partners in the early stages of the research design across all of the countries where we were working. Nevertheless we sought to limit the total number of options in any one question to around ten, although the question on what uses were made of specific devices (mobiles, tablets, laptops and desktops) stretched to 14 options. It was particularly difficult to agree on a set of generic apps that migrants might use that would be relevant across all countries. Ultimately 11 options were agreed, based on data (all for 2019) about the worldwide usage of different apps. Interestingly, different sources, using varying measures are not consistent in their rankings, and so difficult judgements had to be made about what to include.[10]

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[10] Sources used were: https://www.messengerpeople.com/global-messenger-usage-statistics/, https://www.similarweb.com/corp/blog/worldwide-messaging-apps/ , https://techjury.net/stats-about/app-usage/#gref, https://sensortower.com/blog/top-apps-worldwide-q1-2019-downloads , https://www.netsolutions.com/insights/top-10-most-popular-apps-2018/, https://blog.sagipl.com/most-used-apps/, https://www.appinchina.co/market/apps/, https://ltl-

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We were also keen to use apps developed in both China and the USA (in Chinese and in English), given the strong influence of Chinese technologies in some of the countries of interest.

Choice of platform

The platform used for the survey was the UK academic JISC Online Surveys (formerly Bristol Online Surveys),[11] primarily because of our existing familiarity with its design and functionality, but also because it is GDPR compliant, secure, certified to ISO 27001 standard, relatively easy to use, built specifically for research and education, and has sophisticated analytical tools embedded within it, while also enabling easy export of the results for further statistical analysis.

Results

This summary of results for the surveys conducted in Malaysia is divided into sections on the sample, on how respondents used digital devices, and on the applications that they used.

The sample

It was difficult to encourage migrants in Malaysia to complete the online survey, in large part because of the challenges that many of them faced during the COVID-19 pandemic. We had also assumed that there was some reluctance to do so because of migrants' concerns over security and privacy at a time when many felt persecuted by the authorities, but the evidence adduced from the surveys themselves would suggest that this may not have been as big an issue as we had thought. The precise sample, though, as in all research, very much reflects the local networks of those who administered the survey, as discussed above.

Sample size

A total of 281 respondents completed the survey in Malaysia between May 2020 and July 2021, with 255 completing the version in Nepali distributed by Our Journey, 22 the Nepali version distributed by Project Liber8, and 4 the English version distributed by Project Liber8. All but five of the respondents were migrants, with the remainder being family members of migrants.

Age and gender

The largest age group represented in the sample were the 60.4% aged between 31 and 40, with 25.9% being aged between 21 and 30; women only represented 6.2% of the sample, with all of them being under 40, whereas 12% of the men were over 40 (Table 1).

Table 2: Age and gender distribution of respondents

How old are you (n=281)	What gender do you consider yourself to be?			No answer	Totals
	Female	**Male**	**Other**		
< 10 years old	1	0	0	0	1
10-20 years old	0	2	0	0	2
21-30 years old	4	66	0	2	72
31-40 years old	12	154	0	2	168
41-50 years old	0	31	0	0	31
51-60 years old	0	3	0	0	3
>60 years old	0	1	0	0	1
Totals	17	259	0	5	281

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school.com/chinese-apps/, https://www.scmp.com/magazines/style/news-trends/article/2172512/life-china-made-easier-these-top-8-must-download-apps and https://www.24hchina.com/chinese-app-store-list/.

[11] https://www.onlinesurveys.ac.uk/.

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Country of origin, residence and home
In line with the MIDEQ research emphasis on the specific migration corridor between Nepal and Malaysia, the selection of respondents who were invited to participate in the survey, and the use of the Nepali language, it is unsurprising that the vast majority of those who completed the survey were indeed from Nepal: 96.1% of respondents were born in Nepal, 92.5% were currently living in Malaysia, and 93.6% consider their home to be in Nepal. Two per cent of Nepalis now referred to their home country as Malaysia. Most respondents originally from countries other than Nepal also referred to their countries of birth as their home countries, as with China and Botswana.
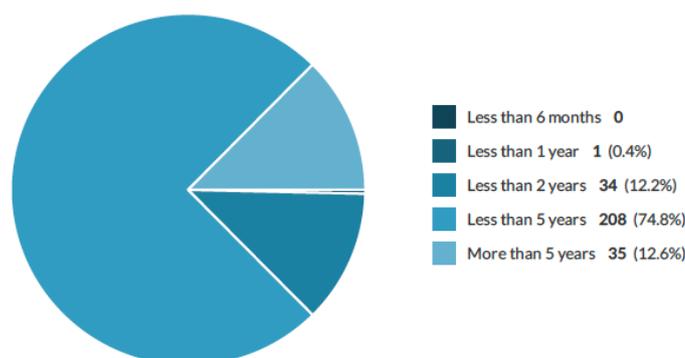
Migration status
Ninety-eight *per cent* of respondents were migrants living overseas (mostly in Malaysia), with the remaining 1.8% being family members of migrants.

Duration of migration overseas
Most (74.8%) migrant respondents to the survey had been living in Malaysia for between two and five years. However, there was some range of duration, with about 12% of the sample having been there for less than two years, and a similar percentage beyond five years (Figure 2). Given the government of Nepal's suspension of migration for foreign employment to Malaysia since 2018, and the ongoing COVID-19 restrictions, it is unsurprising that only one person had been in Malaysia for less than a year.
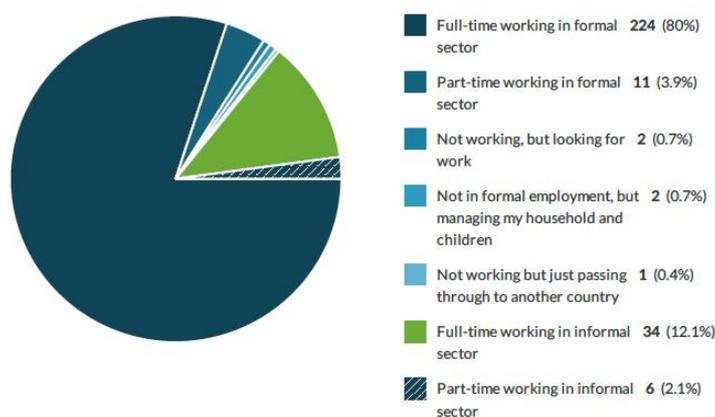
Figure 2: Length of time spent in the country where respondents are now living

Less than 6 months 0
Less than 1 year 1 (0.4%)
Less than 2 years 34 (12.2%)
Less than 5 years 208 (74.8%)
More than 5 years 35 (12.6%)

Occupation
A large majority (80%) of respondents were working full-time in the formal sector, with a further 12.1% working full-time in the informal sector (Figure 3).

Figure 3: Current main employment status of respondents

Full-time working in formal 224 (80%)
sector

Part-time working in formal 11 (3.9%)
sector

Not working, but looking for 2 (0.7%)
work

Not in formal employment, but 2 (0.7%)
managing my household and
children

Not working but just passing 1 (0.4%)
through to another country

Full-time working in informal 34 (12.1%)
sector

Part-time working in informal 6 (2.1%)
sector

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Support in completing the survey

The extent to which migrants needed, or sought, support in completing the survey is an important indication both of their digital expertise and also of the potential influence of another person on the responses provided. Only 7.1% (20 people) of the respondents agreed that they did not use digital technologies, and all of these noted that someone other than a family member had helped them complete the responses.[12]
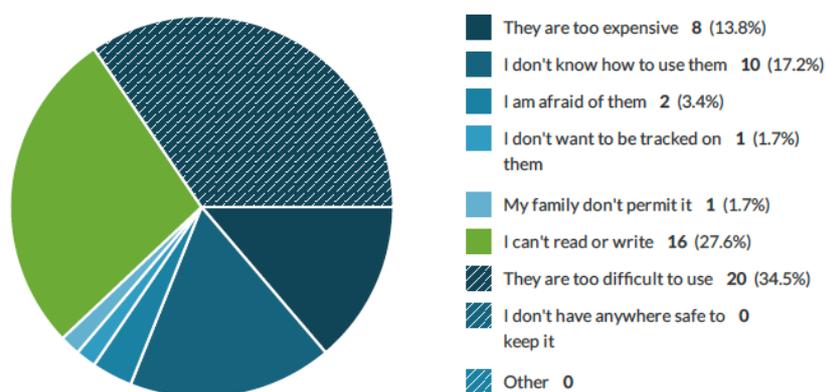
Usage of digital technologies by migrant respondents

The above summary shows clearly that there was strong uniformity within the sample: most respondents were male; most worked in full time employment, mainly in the formal sector; almost all were from Nepal; and most had been in Malaysia for between two and five years. This section highlights the main findings concerning how this group of migrants used digital tech, while recognising that other types of migrants might indeed make very different uses of these technologies.

Usage and non-usage of digital technologies

As noted above, the vast majority of respondents (92.9%) did indeed use digital technologies. However, a section was included within the survey specifically for those who did not use them, so that information could be gathered about such non-usage. Figure 4 summarises these results, and shows that just over one-third of the respondents noted that it was because they are too difficult to use, with the next most important reason being that they could not read or write.[13] Very interestingly given the COVID-19 climate in which the survey was undertaken only one person claimed that the reason was because they did not want to be tracked, and only two noted that they were afraid of them.[14] This may well, though, in part also be because migrants had preferred to give another neutral response, even though they did have concerns over being tracked.[15] None identified other reasons for not using digital tech, which provided useful reassurance that our list of options for use in the survey did indeed reflect their realities.

Figure 4: Reasons for not using digital technologies

They are too expensive 8 (13.8%)
I don't know how to use them 10 (17.2%)
I am afraid of them 2 (3.4%)
I don't want to be tracked on 1 (1.7%) them
My family don't permit it 1 (1.7%)
I can't read or write 16 (27.6%)
They are too difficult to use 20 (34.5%)
I don't have anywhere safe to 0 keep it
Other 0

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[12] An additional one person also commented that a family member had helped them complete it. Although 20 people had reported specifically that they did not use digital tech, 21 people followed the link confirming that they did not use such technologies.

[13] Respondents were invited to check as many boxes from the list as they wished.

[14] This question was asked deliberately in a neutral way, and responses might well have been different if they had been asked whether they use specific government apps such as MySejahtera (https://mysejahtera.malaysia.gov.my/intro/) developed for managing COVID-19 or the recently launched WFW (Working for Workers) app serving as a platform to expose errant bosses (https://www.workforworkers.com.my/sapn-portal/index).

[15] Our intended qualitative research will explore this possibility further, although preliminary findings from other countries suggest that migrants elsewhere do indeed acknowledge concerns over being tracked.

Frequency of use of digital technologies

As noted above, the vast majority of respondents do indeed use digital technologies. There was also remarkable consistency across the sample in the frequency with which different types of technology are used (Table 3; shading in green indicates agreement by ≥90% of sample). In essence, the vast majority of respondents only use smart phones, and they do so on a daily basis. Likewise, almost 95% of the sample use the Internet daily, with only just under 5% indicating that they never use it.

Table 3: Frequency of use by respondents of different types of digital technology and the Internet

Percentages of respondents (n=281)	Desktop computer	Digital radio	Digital TV	Basic mobile/ feature phone	Mobile smart phone	Laptop	Tablet	Internet
Daily	8.6%	2.5%	2.9%	11.7%	97.6%	7.1%	5%	94.8%
Weekly	0.8%	0.8%	0.8%	0	0.8%	0.8%	0.4%	0
Monthly	0	0.8%	0	0.8%	0	1.7%	0.8%	0.4%
Never	90.6%	95.9%	96.3%	87.5%	1.6%	90.4%	93.7%	4.8%

Reasons for using digital devices

The survey delved into usage of digital technologies in more detail through concentrating on the reasons why respondents used four of these types of device (mobile phones, tablets, laptops and desktop computers).[16] Table 4 summarises these results (with green shading again indicating ≥ 90% agreement); the percentages indicate the frequencies with which people who answered each question chose that option. Thus, of the respondents who said that they used digital technologies for playing games, 87.9% used mobile phones and 12.1% used desktop computers for this purpose. Some respondents may have used more than one device for each type of activity.

Table 4: Usage of different types of digital device for a selection of purposes

Percentages of respondents (n=281)	Mobile phones	Tablets	Laptops	Desktop computers
Audio calls	100%	0.4%	0.8%	0
Text messages	98.6%	0.5%	2.8%	2.3%
Video calls	99.6%	1.2%	2.8%	0.4%
Playing games	87.9%	0	0	12.1%
Watching videos for entertainment	97.9%	0	2.1%	3%
Work	71.2%	0	11.5%	23.1%
Learning and education	42.9%	0	19%	52.4$
Accessing government services	37.5%	6.3%	6.3%	56.3%
Social networking	78.4%	5.4%	8.1%	29.7%

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[16] The specific question asked was "Focusing on just four of these devices (mobile phones, tablets, laptops, desktop computers), please indicate which types of technology you use for what purpose (click all of the relevant boxes). If you do not use a specific technology, please just leave the relevant boxes blank."
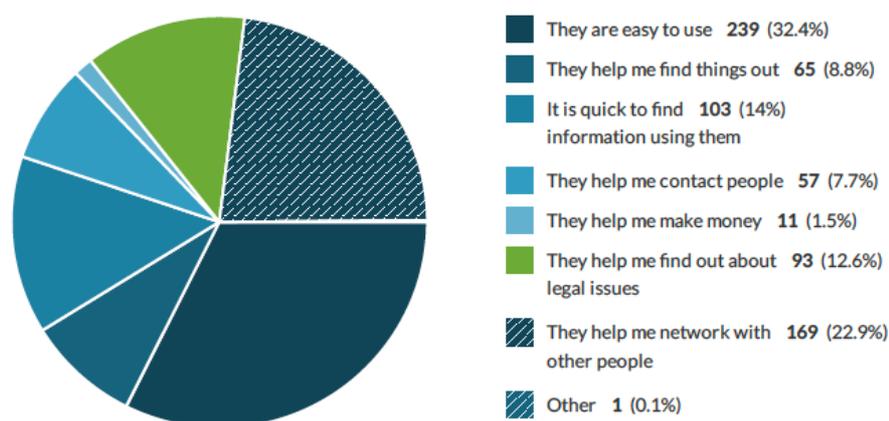
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Cultural activities	55%	0	15%	50%
Political activities	57.9%	0	10.5%	42.1%
Health activities	61.1%	0	5.6%	44.4%
News updates	99.6%	0.8%	1.6%	0.8%
Other	50%	0	0	50%

This indicates once again the dominance of mobile phones for most types of usage, but also that different types of device do tend to be used for varying purposes. Mobile phones are especially used (in descending order of frequency) for audio calls, news updates and video calls, text messages, and watching videos. In contrast, for the relatively few who use digital technologies for other purposes, desktop computers are used more than mobile devices for such reasons as accessing government services, and learning and education.

Likes and dislikes of using digital technologies
The survey also explored what the migrant respondents liked and disliked about using devices and apps, by asking them which of a list of options were their top three reasons for liking and top three for disliking them.[17] The main reasons why digital devices are liked are because they are easy to use and they help users network with others (Figure 5).

Figure 5: Reasons for liking digital technologies

- They are easy to use 239 (32.4%)
- They help me find things out 65 (8.8%)
- It is quick to find 103 (14%) information using them
- They help me contact people 57 (7.7%)
- They help me make money 11 (1.5%)
- They help me find out about 93 (12.6%) legal issues
- They help me network with 169 (22.9%) other people
- Other 1 (0.1%)

In contrast, the main reasons why respondents disliked them were the costs of the devices and air-time (Figure 6). Interestingly, only 17 respondents were concerned about being tracked when using them, although potential health problems and potentially harmful content were indeed noted by 102 and 85 respondents respectively. Three of the five respondents who added a comment under other emphasised that they could also be used for publishing fake news (गलत समाचार प्रकाशित). Once again, the small number of "other" responses can be interpreted to indicate that the survey has indeed captured the most important reasons why migrants like and dislike these technologies.

Figure 6: Reasons for disliking digital technologies

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[17] Two separate questions were asked, one for likes (What do you like about using digital technologies (devices and apps). Please click button on the most important factors (up to THREE) that apply, or add suggestions by clicking on "Other"), and one for dislikes (What don't you like about using digital technologies (devices and apps)? Please click button on the most important factors (up to THREE) that apply, or add suggestions by clicking on "Other")

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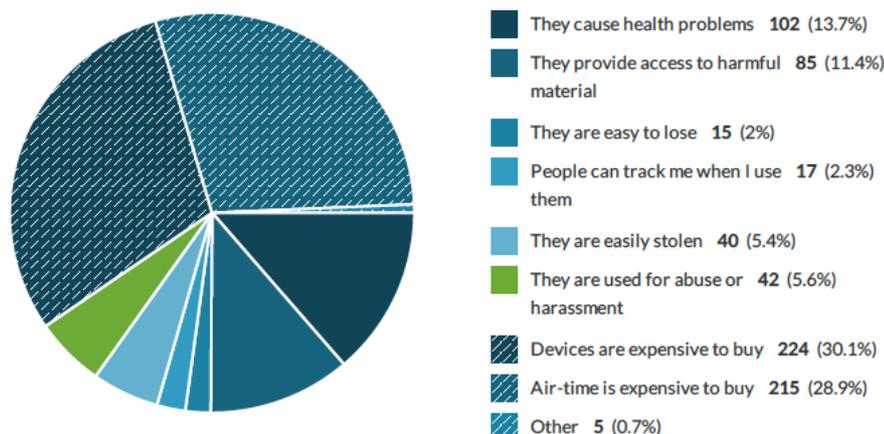
Additional potential uses of digital technologies

Respondents were asked what they would like to use digital technologies for that they cannot already do with them. Only ten provided responses, including two who said nothing else is needed (मलाइ आवश्यक छैन and केही चाहिदैन). One did, though, comment that they wanted to keep informed as much as possible about current news and recent tech developments; another suggested that they would like to use them to find driverless cars.

Use of digital technologies during the migration journey

Those respondents who considered themselves to be migrants (*c.*250[18]) were asked a further set of questions about how often they used digital technologies at different stages within the migration process (Table 5; green shading again indicates agreement by ≥90%)[19].

Table 5: Frequency of digital technology use at different stages in the migration

Percentages of respondents (n ranged from 247 to 253)	**Very often**	**Sometimes**	**Rarely**	**Never**
Deciding to migrate	3.2%	2%	0.8%	94%
Before departure	3.6%	10.4%	8.4%	77.5%
During the migration journey	19.4%	61.3%	4%	15.3%
Upon arrival in destination country	58.1%	32.8%	2.8%	6.3%
While in new location	66.1%	31.5%	0.8%	1.6%
Deciding to return home	55%	43%	0.4%	1.6%

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[18] Varying numbers of respondents (ranging from 247 to 253) answered the questions about using digital technologies during different parts of the migration journey, even though it was clearly stated that they were only to be answered by people who considered themselves to be migrants.

[19] We recognise that different people will interpret the options "very often", "sometimes" and "rarely" in varying ways, but this choice of words was deliberate because our interest was in how migrants perceived these things themselves, and not just a purely quantitative measure of frequency.

When/if you have returned home	57.7%	38.1%	2%	2%

This shows very clearly that frequency of use of digital technologies increases at every stage from considering to migrate through to while in the new location. It is surprising how little use migrants made of these technologies before actually departing their home country for the first time. In part, this may be due to the widespread use of local agents, and general trust in their knowledge, but also because they could not afford smart phones before migrating. However, it does suggest that their lack of initial experience in using digital technologies means that they could be particularly vulnerable to digital abuse during the migration journey and subsequently. It is also interesting to note that use of digital tech on return home is also lower than while in Malaysia. The increased use of digital technology while in Malaysia is clearly because of the need to communicate with home, as well as perhaps peer pressure and the potential to communicate with friends should they be in difficulties.

Migrants' usage of apps

Table 6 indicates the clear dominance in use by migrants of the US-owned apps Facebook, Messenger and YouTube, as against Chinese apps such as Alipay or Baidu. This Table does though only indicate the globally dominant apps, and it is important to note that 72 respondents also wrote that they used other apps, and especially Imo (इमो)[20] which was mentioned by 68 respondents (24.2% of the overall sample).[21]

Table 6: Frequency of usage of different apps

Percentages of respondents (n ranged from 238 to 255)	Number of responses	Never	Annually	Monthly	Weekly	Daily
Alipay	246	99.6%	0	0	0	0.4%
Baidu	245	98.4%	0.4%	0	0	1.2%
Facebook	255	2.7%	0	0	0.4%	96.9%
Instagram	249	88.8%	0.4%	0	5.2%	5.6%
Messenger	255	4.3%	0	0	0	95.7%
Netflix	247	96.6%	0.4%	0	0	2.9%
QQ	238	97.9%	0.4%	0	0	1.7%
Twitter	244	91%	0.4%	0.8%	2.9%	4.9%
WeChat	240	92.5%	0	0.4%	1.7%	5.4%
WhatsApp	253	18.6%	0	0.4%	5.1%	75.9%
YouTube	254	6.7%	0	0	1.2%	92.1%
Other	72					

Finally, respondents were also asked whether they had ever used an app specifically designed for migrants. The response was striking and clear: 97.3% of them replied "no". Four of them did, though, say that they had used the Shuvayatra Safe Journey app

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[20] An app mainly for free video calls and messaging, but also for chats and stories (https://imo.im/). It is internationally operated by PageBites Inc. which is a wholly owned subsidiary of Singularity IM, Inc., both of which are based in Palo Alto, California, USA.

[21] In part this may result from restrictions placed on use of Facebook and Messenger (especially through VoIP) in some countries where Nepali migrants might travel, but this is not the case in Malaysia.

("Shubhayatra" in some responses) launched by The Asia Foundation, the Non-Resident Nepali Association (NRNA) and Young Innovations in 2016.[22]

Analysis

This working paper is primarily intended to present the early results of our survey of migrant (mainly Nepali) use of digital technologies in Malaysia. Future working papers will likewise present the findings for all of the countries in which we are working within the MIDEQ Hub, and we will then present the main analyses on a corridor-by-corridor basis. These data for Malaysia will thus be analysed together with those from Nepal to gain a more comprehensive understanding of the use of digital technologies by Nepali migrants in Malaysia. Nevertheless, it is possible to present some initial analysis based exclusively on the material that has been summarised here.

The vast majority of respondents were men between 21 and 40, and so these results largely represent the behaviours of this particular group of migrants. Nevertheless, four specific aspects of the data were examined in more detail to help understand how the following characteristics of the migrants themselves may have influenced various aspects of their use of digital technologies: age, gender, occupational status, and country of origin. A final brief section draws some wider observations around reasons for usage. One challenge in doing this, however, was that the sample sizes for categories other than the dominant group were very small and so it was difficult even to use χ^2 tests appropriately to test them for significance.

Age and usage of digital technologies

With the above caveats in mind there was a slight tendency for older migrants to say that they did not use digital technologies more frequently than did younger respondents (Table 7), although this is not statistically significant at the 0.05 level.[23]

Table 7: Whether or not respondents used digital technologies

Age groups (n=278)	Whether or not using digital tech	
	Yes	No
<21	1.5%	0%
21-30	27.2%	5.0%
31-40	60.2%	55%
>40	10.73%	35%

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[22] Asia Foundation and Partners Launch "Shuvayatra," the Safe Migration Android App, https://asiafoundation.org/2016/05/18/asia-foundation-partners-launch-shuvayatra-safe-migration-app/ . See also Lockshin, B. (2018) Supporting the 'Safe Journey': how mobile tech is making migration more secure and less costly, *Next Billion*, https://nextbillion.net/supporting-the-safe-journey-how-mobile-tech-is-making-migration-more-secure-and-less-costly/.

[23] χ^2 = 6.63 with 3 df which is less than the usual critical value of the Chi-squared distribution at the critical level of p= 0.05 (7.815), and so we cannot reject the null hypothesis (of no difference between the distributions) at this level (there is more than a 5% probability that the null hypothesis is correct). However, the observed value is higher than the critical value at p=0.1 (6.251) indicating that were this level to be chosen the null hypothesis could be rejected.

Three other tentative conclusions can be drawn with respect to the influence of age on the use of digital technologies, although the numbers involved are very small and they the relationships are not statistically significant:

- With respect to dislikes of using digital tech, respondents in their 50s seemed disproportionately to have been concerned about being tracked than were younger migrants. This might well be because of their wider experience of both migration and the use of digital technologies.[24]
- Age did not seem to play a role in determining how respondents used digital tech at different stages in the migration journey; and
- Older migrants were slightly more likely to use a laptop or desktop than were younger people, possibly because the nature of their work involves such technologies.

Gender and usage of digital technologies

Only 17 women responded to the survey,[25] and so again it is difficult to make any analytical generalisations, beyond the observation that all of them made use of digital technologies. There appeared to be little gender-based differences in the use of specific technologies, and the same was true of what people liked or disliked about them. Likewise, there was little difference between the relative frequencies with which men and women used digital tech at different stages in the migration process, although a higher percentage of women (71%) than men (50%) reported that they used these technologies very often on their return home (Table 8). The female respondents also tended to have been in Malaysia for slightly less time than their male counterparts, and a higher percentage of them were working part-time in the formal sector than were men.

Table 8: Usage by women and men of digital technologies in the decision to return home

Usage of digital tech when returned to home country	Female	Male	No answer	Totals
Very often	70.6%	49.8%	40%	143
Sometimes	23.5%	34%	40%	94
Rarely	0	1.9%		5
Never	0	1.9%		5
No answer	5.9%	12.4%	20%	34
Totals	17	259	5	281

Occupational status and usage of digital technologies

The preponderance of respondents in formal employment and only small numbers of people in other categories of employment makes it very difficult to draw any firm conclusions about the influence of employment status on the use of digital technologies by migrants. The overwhelming conclusion, though, is that all types of migrants used digital technologies extensively, and especially their mobile phones (usually smart phones), regardless of the type of employment that they had. Those working full-time or part-time seemed to use their mobile devices generally for very similar purposes and to similar extents at various times in the migration journey.

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[24] It could possibly also reflect their greater confidence in giving their honest opinions in surveys such as this.
[25] Only one of these reported being a family member of a migrant, and the vast majority thus considered themselves to be migrants.

Migrant origins and usage of digital technologies

The very small number of migrants from countries other than Nepal in this sample means that it is not possible to draw any conclusions about whether migrants from different countries use different types of device and apps.   One unexpected observation, though, is that it was not the single Chinese migrant who responded to the survey who used the Chinese app WeChat, but rather two migrants from India and Botswana! This emphasises that individual preferences may well differ beyond the expected normal generalisations or expectations, and that conclusions from qualitative research on individuals are just as important are as the generalisations made from broader statistical analyses.

Reasons for usage of digital technologies

The results section above emphasises that mobile devices, mainly smart phones, were liked primarily because they were seen as being easy to use and good for networking; they were disliked essentially because devices and air-time were expensive. Migrants used them essentially for audio and video calls as well as news updates. The low numbers of migrants who used any types of digital devices for other reasons were quite striking. Only 6% used them to access government services, 7% for health-related activities, 7% for political activities, 8% for cultural activities, and 8% for learning and education. This was unexpected, and suggests that there is considerable potential to develop resources that could provide tailored support for migrants in these areas, particularly perhaps on education and skills development, although their concerns over the costs of airtime would seem to be an important limitation on likely uptake. Moreover, as noted above, it was not mobile devices that were used by the few people who did use digital tech for education and learning as well as accessing government services, but rather desktop computers. As noted above, there also seemed to be little differentiation in the data relating to the impact of other variables on these reasons, not least since samples sizes in these categories were relatively small, and the responses were overwhelmingly from men aged between 21 and 40.

Conclusions

This working paper has focused on presenting the results of an online survey of 281 respondents in Malaysia, 98.2% of whom were migrants, with 1.8% being family members of migrants. The sample was relatively uniform, with most respondents being men aged between 21 and 40 working full time in either the formal sector (80% of sample) or the informal sector (12.1%). This uniformity meant that there was little significant difference between the responses of different groups, especially when numbers of responses from particular groups were very small, and thus not possible to test statistically. However, eight main conclusions about their use of digital technologies are clear:

- More than 90% of migrants used digital technologies
- Smart phones were used daily by nearly 98% of respondents, and almost 95% of them claimed to access the Internet on a daily basis
- The main uses of these phones were, in descending order of frequency, audio calls, video calls, news updates, text messages, watching videos for entertainment; more than 90% of respondents used them for these purposes.
- Digital devices are liked mainly because they are easy to use and they help users network with others
- In contrast, the main reasons why respondents disliked them were the costs of the devices and air-time
- Migrants increasingly used digital technologies as their migration journeys progressed; only 3.2% used them very often in deciding to migrate, whereas 66.1% used them while in Malaysia.

- The apps most frequently used (by more than 90% of respondents) were Facebook, Messenger and YouTube.
- Apps specifically designed for migrants were rarely if ever used; 97.3% responded that they had never used such apps!

These have important ramifications for the second and third phases of our research on working with migrants and tech developers to develop some kind of digital intervention that will help to reduce inequalities associated with migration. First, it seems likely that simply *designing another new app will not be particularly valuable*. There are many migrant apps already in existence, and many more currently under development with considerably more resources behind them than we could provide. Sadly, it seems probable that few migrants will ever use them. Second, it is very evident that the vast majority of Nepali migrants in Malaysia have *smart phones and access the internet very frequently*, although they complain about the costs of handsets and air-time. It would therefore undoubtedly be feasible to use these technologies in some way should this be desirable. Their lack of use when deciding to migrate or in preparing for the migration journey is striking, though, and lends weight to suggestions that some kind of early interventions to provide migrants and their families with advice on the wise use of digital tech might be desirable. Third, it could be wise to *work with, or build on, technologies and apps already in existence*, so as to improve them in ways that could increasingly empower migrants. This could be, for example, through work-based technologies and apps provided by employers, or through developing an intervention with a company such as Facebook to deliver enhanced services for migrants. The precise direction in which this research will go very much depends on the findings of our survey in Nepal itself, as well as on ongoing interviews and focus groups with migrants to discuss their understandings of inequality and what they might like to see changed through the use of digital technologies.

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Partners

We are very grateful to the following MIDEQ partners and others who helped to distribute the online surveys on which this report is based: Nepal Institute for Social and Environmental Research; School of Arts & Social Sciences, Monash University Malaysia; Project Liber8; Our Journey; and Migrant Forum Asia.

Funding

License

Recommended citation

Unwin, T., Ghimire, A., Yeoh, S-G., New, S.S., Kishna, S.S., Gois, W., Lorini, M.R. and Harindranath, G. (2021) *Uses of digital technologies by Nepali migrants in Malaysia*, Egham: UNESCO Chair in ICT4D, Royal Holloway, University of London, Working Papers No.1.

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Uses of digital technologies by Nepali migrants in Malaysia