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A Capability Approach Analysis of a Mobile Language Learning Program for Migrants

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Abstract

This paper describes a Capability Approach analysis of the capabilities, functionings, and conversion factors reported by learners on workplace-based mobile language learning courses. The study used secondary data from student satisfaction surveys from 556 learners who were all recent migrants to the US and who were using the courses to study English. Use of the Capability Approach highlights that the promises of mobile learning were not available to all learners as conversion factors (individual, social, environmental, and technological) inhibited their participation in the courses. The study shows how some learners experienced a tension between well-being and agency as they were unable to study the content they wanted in the way they wanted. It also demonstrates that factors around the business model of the company that created the courses impacted the level to which learners were able to participate in the program. Finally, the study illustrates that learners were able to extend the language they learned through the course into other areas of their lives and to help others.

Keywords: Capability Approach, migrants, mobile learning, secondary data analysis, U.S.A

In 2018, the foreign-born population of the US was 44.8 million, equal to 13.7% of the total population (Budiman, 2020). Self-reported census data from migrants aged 5 and older showed just over half (53%) were proficient English speakers (Budiman, 2020). For migrant communities around the world (Shorten, 2017) and across the US (McHugh & Morawski, 2015), poor dominant language proficiency is associated with a range of negative outcomes. However, language programmes designed for migrants are often inadequately funded, difficult to access (Cuban, 2010), may not meet the needs or wants of students (Mathews-Aydinli, 2008), and, especially in the case of workplace-oriented courses, are limited in what they can provide learners in terms of creating social networks or supporting them in joining their new society (Pulinx & Van Avermaet, 2017). Mobile learning may offer solutions to some of these issues. It has the potential to allow those with family or work constraints to access formal and

informal learning opportunities at times and in places that suit them, support 'just-in-time' learning, provide for learners with specific language needs (Kukulska-Hulme, 2019), and enable social interaction within a mobile community (Kukulska-Hulme et al., 2016).

This study investigates migrant learner experiences of mobile language learning. It uses the Capability Approach (Nussbaum & Sen, 1993) to examine what recent migrants to the US reported as hindering or enabling their participation in workplace-based mobile learning language courses, and the skills they reported developing through the courses. Keyword searches of various academic databases indicate that the Capability Approach has not been used to analyse mobile language learning interventions with migrant populations in the US.

Context

Generate (a pseudonym) is an online language-learning platform that provides workplace-based courses. These courses utilise a range of real-world materials such as podcasts, videos, and texts as input for English language learners, with a focus on providing courses for recent migrants to the US. The courses are sold to companies and community organisations (hereafter 'sponsoring organizations') who provide their employees or members with six-month licenses to use the platform. At the time of the study, 133 sponsoring organizations were using Generate to provide courses. The courses were ordered from and produced by a business partner of Generate, who have a team of individual, hourly paid contractors that created them using a set template.

There was great variety in the courses available at the time of this study. Courses were related to specific employment sectors such as childcare or nursing, including a few ESAP (English for Specific Academic Purpose) courses for students studying engineering or business. In addition, there were general workplace courses that focused on, for example, health and safety requirements or employment rights. At the time of this study there were seven ESAP courses, 21 general workplace courses, and 51 industry-specific courses available for learners. The approach to course design can be described as 'needs-based' in terms of the learners' proficiency levels and the sponsoring organizations' needs. The courses were a form of 'tutorial' or 'dedicated' CALL (Computer Assisted Language Learning) as they were designed around a specification of what is needed for language learning in a specific context (Colpaert, 2006).

While the basic lessons for each course followed a similar pattern, the courses were all extremely different. Each course consisted of a number of lessons, each lesson based around an open-access or licenced text such as a newspaper article, video or audio recording. Courses varied in length; each course was made up of between three and 20 units, and each unit of between 10 and 30 lessons. Each text featured comprehension questions and gamified vocabulary study activities (Deterding et al., 2011). Learners encountered auto-graded progress tests at the end of each unit. There were also a word bank and grammar guide for linguistic support. Courses were levelled according to the Common European Framework of Reference for Languages (CEFR), and learners were assigned a level according to their performance on an auto-graded proficiency test.

Course delivery varied depending on the sponsoring organization. Some offered access to the digital lessons alone, as self-access materials with no other support. Others used hybrid educational models with either online or face-to-face classes with a teacher offered in conjunction with the digital materials. Learning in these courses can be defined as mobile, as learners were not tied to one place or time for some or all of their engagement with the course,

and because learners were able to access the course on a variety of devices. Courses were structured around multi-modal input, and in the cases where the learners were supported by a teacher, multi-modal output as well.

Research Questions

Though studies of mobile learning among migrant learners are becoming more common (Drolia et al., 2022; Figueiredo, 2023), the field is still under-researched, especially when considering learners outside of K-12 or higher education (Demmans Epp, 2017). Drawing on the academic literature on the potential benefits of mobile learning and the barriers faced by migrant learners when trying to engage in English classes, two research questions were formed to guide this study, using the terminology of the Capability Approach:

1. What conversion factors do migrants report that inhibit or amplify their capabilities to engage in a mobile language learning course?

2. What capabilities and functionings do migrants report they were able to develop through engagement in mobile language learning courses?

Literature Review

English Language Proficiency and Migrant Lives

Many migrants, defined in this study as a people who have left one country to seek long-term residence in another, face issues related to language. While learning the dominant language does not necessarily lead to an improvement in the life conditions of migrants (Ennser-Kananen & Pettitt, 2017), dominant language competency is nonetheless an important capability (Wolff & de-Shalit, 2007). Lacking such a competency is related not only to the inability to access or participate in education (Wilson-Strydom, 2016), find employment opportunities, and convert health or legal resources (Lippi-Green, 2011), but also to relate to others and to express oneself (Wolff & de-Shalit, 2007).

Migrants who enter the US as children from non-anglophone backgrounds have higher school dropout rates than those from English speaking countries and are much less likely to describe themselves as proficient English users as adults (Beck et al., 2021). For undocumented migrants who enter the US as children, lack of documentation and a weak financial situation often prevent access to a college or university education, and recognition of this among learners is a factor in failure to complete high school (Conners, 2016). For adult migrants, post-migration educational experiences are strongly linked to pre-migration schooling. Migrants with lower pre-migration social and human capital are more likely to be unemployed or work in trade or manual labour and have fewer chances to access career-based education or degree programs post-migration (Calvo & Sarkisian, 2015). Proficient English speakers have considerably higher chances of accessing career-related education and, if they come from outside the anglosphere, are also more likely to attend all forms of education courses, reflecting perhaps the difficulty in transferring undervalued human capital (Calvo & Sarkisian, 2015; Kamimura et al., 2017).

Employment for migrants can be harder to find, less stable, and less rewarding both financially and intrinsically (Bureau of Labor Statistics, 2021; Wilson-Forsberg, 2015). For migrants from outside the anglosphere, language barriers can prevent even highly skilled workers such as physicians from joining the workforce or can force them into jobs that do not make use of their

skills and qualifications (Calvo & Sarkisian, 2015; Kamimura et al., 2017; Lo et al., 2019). This leads to deskilling, or 'brain-waste', and is associated with a loss of self-esteem, the struggle to redefine oneself, and a reduced desire to integrate into the society of the host country, as well as lower rates of pay (Cuban, 2010; Wilson-Forsberg, 2015). Though migrants with a bachelor's degree or above actually earn slightly more than US-born graduates, the median weekly earnings of foreign-born workers in 2020 were 88.5% of US-born workers, and salaries for foreign-born workers were notably lower than for their US-born counterparts at most levels of educational attainment (Bureau of Labor Statistics, 2021).

In terms of healthcare, for migrants to the US who have lower English proficiency, patient-doctor communication is considerably worse than for proficient English users (Bersahl & Kirby, 2019). They are also less likely to access healthcare or screenings than proficient English users (Smith, 2012). Coverage of migrants by both public and private insurance differs by language proficiency, with less proficient English users less likely to have coverage or a usual care provider (Sifuentes et al., 2020).

Poor English language ability among migrants to the US is connected to a variety of crime-related issues. Migrants have a high likelihood of being a victim of crime such as street robbery or wage theft (DuBord, 2014; Fussell, 2016). In some cases, this directly relates to language proficiency. Caraballo and Topalli (2023) even describe how individuals with an assumed lack of dominant language proficiency are actively targeted by criminals in some public spaces. Furthermore, migrants with poor language proficiency may find it harder to seek help in the case of becoming a victim. Migrants from a variety of communities are less likely to consider contacting the police due, in part, to language barriers (Chu et al., 2005; Menjívar & Bejarano, 2004), and they find it much harder to communicate with the police when they do interact (Wolf et al., 2003).

Language proficiency has been described as a protective factor for the well-being of migrants as it not only facilitates access to resources such as employment, education, healthcare, or policing, but may also improve interpersonal communication (Garcini et al., 2021). Lower levels of social support and resilience among migrants to the US as compared to US-born populations has been linked to negative mental health outcomes (Brailovskaia et al., 2019). Work in Australia has connected English proficiency to higher perceptions of well-being and settlement satisfaction among migrants (Kim et al., 2012). Data from Hong Kong shows that migrants who felt they had better integration with their new environment had strong contacts with local friends while social support from non-local friends was not found to be helpful (Ng et al., 2017). Language proficiency can also help ease relationships within families in which children are positioned as 'cultural brokers' who need to translate for parents with limited proficiency, causing stress for both generations (Garcini et al., 2021).

Mobile Learning and Barriers to Improved English Proficiency

There are many potential barriers that migrant individuals and communities face in improving dominant language proficiency, though not all migrants face all these barriers and not all these barriers are equally high for all migrants. Mobile learning has the potential to break down some of these barriers, though also the potential to raise new barriers for migrants who wish to develop English proficiency.

Definitions of the terms 'mobile learning' (m-learning) and its sub-category 'mobile assisted language learning' (MALL) have evolved alongside the technologies that they originally

described. Initial research into m-learning generally focused on devices, highlighting the differences between m-learning and e-learning with other forms of 'fixed' ICTs such as personal computers or computer rooms (Ferreira et al., 2013). As mobile technology has evolved, and the multi-modal affordances offered by mobile and fixed technologies increasingly come to resemble each other, the 'mobile' of m-learning and of MALL has come to refer to the mobility of the learner and of learning rather than the mobility of the device (Kukulska-Hulme et al., 2015). M-learning, and MALL, therefore, can be used to describe learning with the aid of one or more devices by a learner who is able to move across technologies, modalities, contexts, spaces, and times.

Mobile learning may provide opportunities for study as asynchronous classes can be accessed by the learner in times and places that suit them, potentially making it easier to balance studying around work or other commitments (Jones et al., 2018). Attending scheduled classes is difficult for many migrants, as balancing other time-hungry commitments such as work or childcare alongside classes is a recognised barrier in migrant adult education (Cuban, 2007; Ennser-Kananen & Pettitt, 2017). Employment-focused paradigms of social policy rarely consider the constraints that work can place on the freedom of individuals by limiting their capabilities, by eating into their time, or by leaving them too tired to attend or engage with class (Laruffa, 2020). One of the learners in a study by DuBord (2014) also highlighted that undocumented migrants in some southern US states are not prepared to attend classes in certain locations or at certain hours of the day as they are worried about being confronted by immigration authorities. For undocumented learners, correspondence or mobile learning courses are of benefit as they do not need to risk arrest and/or deportation to improve their proficiency (DuBord, 2014).

Migrant learners are migrants engaged with formal or informal education. For migrant learners who are able to access and attend classes, issues other than those described above may arise. In classes with learners from a variety of English language backgrounds, teachers are unlikely to be able to communicate in the dominant language of each learner. Classroom practices such as English-only policies, though often well-intentioned on the part of the teacher and sometimes enforced by learners themselves, are more concerned with the maintenance of English monolingualism than effective learning (Mori, 2014). For learners with lower levels of literacy in any language, exclusive use of English in the classroom is associated with learner demotivation and higher dropout rates (Lukes, 2009). For these learners, some of the affordances of mobile devices, such as dictionaries or machine translation tools may be useful. Demmans Epp (2017) describes the use of a variety of such tools by migrants to Canada. Furthermore, language learning apps can be created in multiple languages more easily than all English teachers can be taught the many potential languages of their students.

Hammer (2016) describes integration leading to proficiency, leading to higher integration. Using language in meaningful ways is a necessary element of language learning, and learners who do not have the opportunity to interact in English inside or outside of the classroom may struggle to develop communicative competency (Lightbown & Spada, 2013). Yet, some people remain trapped in vicious cycles. For example, the migrant women living in New York and California in a study by Cuban (2007) found that it was difficult to afford courses or find opportunities to practice English when access to higher wage jobs was restricted. The communication affordances of mobile devices may be of benefit here as learners can use their mobile devices to speak with or write to other language learners or speakers of English, as in

the case of Spanish speaking migrants to the UK who took part in the MASELTOV project, a European Union funded project that focused on improving the social inclusion of migrants through mobile technologies (Jones et al., 2018).

On the other hand, mobile learning may throw up other barriers. Access to appropriate devices with internet connectivity is often required for learners to engage in mobile learning (Kukulska-Hulme et al., 2015). This cannot be guaranteed among some migrant groups such as refugees (Drolia et al., 2022), or those in low-paid work (Lindström et al., 2021). While it is easier to translate an app into multiple languages than teach a teacher the many languages potentially spoken in a class, this translation does not always occur and learners may find themselves facing unknown languages or scripts without the support of a teacher, as described in a small-scale study of migrant women in Australia (Ahmad et al., 2017). Safety issues, including a desire not to be seen as acting strangely and standing out (Gaved & Peasgood, 2017), or related to data storage and capture (Lindström et al., 2021) can also inhibit learner engagement with mobile learning.

The Capability Approach

The Capability Approach (CA) is an evaluative framework that can provide tools for a holistic assessment of human flourishing at the individual level (Nussbaum & Sen, 1993). It can be used to evaluate interventions and practices such as mobile learning in terms of the impacts they have on the well-beings and freedoms of individuals or groups (Johnstone, 2007). Central to the CA are the ideas of functionings, capabilities, and resources. In the CA, a functioning is a being or doing activity that is valued by people. A capability is the freedom or capacity for a person to convert a functioning or set of functionings into something real (Alkire & Deneulin, 2009). Extension of capabilities requires inputs in the form of resources. Capability inputs include commodities or material goods, as well as practices such as education (Walker, 2006). As a complex good that has both intrinsic and instrumental values, education is often viewed as a fundamental or basic capability (Terzi, 2007). That is, not only is education both a good in itself, but it also enables people to reach other resources and capabilities (Saito, 2003).

Conversion factors either help or hinder the transformation of resources into capabilities and functionings. The CA recognises three forms of conversion factor; personal, related to the individual; social, related to people or institutions; and environmental, related to the natural and built environment. Some theorists have suggested that technology works as a fourth conversion factor that interacts with the other three (Haenssgen & Ariana, 2018). Use or utilization is not inherent to an object but assigned to a tool through the socio-technological system, a "heterogeneous linkage of knowledge, ritual, artifacts, techniques and activity" (Pfaffenberger, 1992, p. 509). Therefore, the socio-technological context could be considered as a fourth conversion factor, one that "comprises the complete set of technological knowledge in a society" (Haenssgen & Ariana, 2018, p. 108). This fourth conversion factor can interact with the other three factors listed above. Personal conversion factors that could interact with the fourth conversion factor include the fear of or comfort with being online, language barriers or proficiencies (Kukulska-Hulme et al., 2015), or level of digital literacy or literacy in a different digital culture (Traxler & Crompton, 2020). Environmental factors might include poor connectivity, or access to places to buy, rent or use devices. Social factors, such as who is allowed to use devices and what they are allowed to use them for, may also interact with the technological conversion factor (Haenssgen & Ariana, 2018).

The CA views both well-being and agency as necessary for an intervention to have positive outcomes. Well-being refers to what is good for an individual, and agency to the choice a person has in realizing their goals. A CA analysis therefore views an intervention as good if it improves an individual's quality of life and if the individual has the agency to choose whether they engage with the intervention and under what circumstances they do so. In terms of education, if a learner has access to appropriate materials, subjects, or pedagogies, their well-being has been enhanced. If they have the choice of attending or participating in education, or a range of choices within education, the learner has agency (Unterhalter, 2003). Tensions can exist between well-being and agency. For example, while some students may choose to study English courses, others have to take English classes as a compulsory component of their studies. Though the well-being of all of these students may have increased (depending on the class), a student on a compulsory course does not have agency (Mackenzie, 2021).

Cutting across these two concepts are two other domains, achievements and freedoms, where achievements are what one manages to accomplish, and freedoms are the opportunities one has to accomplish them. Well-being achievements are those related to human flourishing and well-being freedoms are the chances one has to reach these goals, whether one values them or not. Agency freedom is the freedom to make and effectively act on one's own decisions, and agency achievement is the act of doing so (Crocker & Robeyns, 2010). Mobile learning can be both well-being and agency enhancing because it has the potential to provide a huge amount of choice for learners in terms of learning style and content (Kleine, 2013). It is interactive and collaborative (Kelly, 2020), and it is multi-modal and can be used to produce multi-modal texts (Kukulska-Hulme et al., 2015). However, mobile learning can also inhibit freedoms by reducing choice if teaching and learning becomes too dependent on one device (Hatakka et al., 2013) or application (Kleine, 2013). Tension can exist between the potential agency and well-being freedoms associated with technology in education. A CA analysis of laptop use among Swedish students showed that for some learners the increased agency in accessing information with personal computing devices was matched by a decrease in well-being, as learners reported more health problems, an increased risk of becoming the victim of crime, more distractions when studying, and reduced social interaction among their peers (Hatakka et al., 2013).

Methodology

Design of Study

This study was a secondary analysis of data. Secondary analysis of data can take many forms. In all cases, data gathered for one study is analysed again. This can be done by different researchers or the original researchers, to reexamine data in light of new information, or to answer new research questions. For example, Bowler et al. (2018) reanalysed previously gathered data to investigate how young people seek information with their mobile devices. Secondary data has been used in this study as it can be difficult to find a large group of willing participants among migrant language learners. The dataset was considered suitable for the study as the initial purpose (measuring learner satisfaction with the courses to drive improvements to the platform and courses) was similar enough to the research questions guiding this study (Johnston, 2014).

Participants

Data came from responses to a learner satisfaction survey carried out among adult migrant learners in the US (N=556 responses). Learners were all registered on a Generate course

through one of 133 sponsoring organizations. They were spread around every state of the US. All learners were over 18 years of age.

Instrument

The surveys were created by Generate to measure learner satisfaction with the platform, with the intention of driving changes to the product. They consisted of a number of Likert style questions followed by between two and three open ended questions. It is the answers to the open-ended questions that form the data for this study. Surveys were administered to learners in the fourth quarter of 2021. At the time of the survey, 80% of the respondents had finished their 6-month licenses and 20% still had access.

The surveys were delivered in the learners' registered L1 in the cases of Spanish (n =237), French (n =7), Mandarin Chinese (n =8) and Portuguese (n =1) speakers, and in English (n =303) for everyone else. Generally, learners answered in the same language as the questions were posed in. However, one respondent to the English survey answered in Spanish, while twenty respondents to the Spanish survey, one respondent to the French survey, all eight respondents to the Mandarin Chinese survey and the single respondent to the Portuguese survey answered one or all the questions in English. The French and Spanish language responses were machine-translated. The translated responses underwent a 'light' post-edit (O'Brien, 2022) and then were back translated to ensure accuracy in the translations.

Learners who were given the English language survey were asked two questions:

1. How has Generate helped you with your current job and goals outside of work, if at all?
2. How could Generate improve to help you learn more?

For learners who were given the survey in one of the other languages, the first question was broken into two parts:

1. How has Generate helped you with your current work, if at all?
2. How has Generate helped you achieve your goals outside of work, if at all?
3. How could Generate be improved to help you learn more?

Responses were coded according to a data-driven approach (Schreier, 2014). The data was read through once and given preliminary codes. From these initial codes, various themes were extrapolated, and the codes revised to provide a final set of codes representing categories and sub-categories.

Codes were grouped according to the elements of the Capability Approach. The Capability Approach was chosen as a suitable framework for the study as it centres the values and desires of the people for whom intervention is carried out (Nussbaum & Sen, 1993). This approach allows for the foregrounding of learners' experiences and lives as described by the learners and is therefore suited to the qualitative data produced by open-ended survey questions.

Ethical Considerations

Learners gave Generate permission to share data from the satisfaction surveys with third parties for research purposes. Only responses to the open-ended questions, those relevant to the study, were shared with the researcher. All information that could be used to identify participants was removed prior to the data being shared with the researcher, unless the learner had provided

such information in their written answers. Data were stored online and only representatives of Generate and the researcher had access to the spreadsheet where the data were stored.

Findings

Codes

Many learners did not provide detailed answers. For example, Learner 8 answered "Mucho" ["A lot"] and Learner 12 "Ninguno" ["None"] to the first question. For the longer responses, each answer received any appropriate code, but only one instance of each code. If a learner mentioned technology three times in the same answer, the excerpt received only one code for qualifications. If they mentioned technology once in each of their three answers, each answer received one instance of the code. The codes relating to conversion factors can be seen in Table 1.

Table 1. Final Codes and Frequencies – Conversion Factors

Code	Frequency
Cost	3
Lesson content	117
Lesson format	96
Level	20
Opportunities for practice	34
Support	5
Technology	31
Timing or frequency	32

The majority of conversion factors related to the lessons themselves – the class content or the lesson format. Many of the learners were receiving the lessons from employers or other associations who were bearing the cost of the courses, likely the reason why there were so few mentions of cost.

The second research question asked about the functionings and capabilities reported by the learners. The codes relating to capabilities and functionings can be seen in Table 2.

Table 2. Final Codes and Frequencies – Capabilities and Functionings

Code	Frequency
Access to public services (healthcare, banking, police)	10
Autonomy and confidence	98
Entertainment	1
Family, friends and community	46
General communication skills	187
Happiness / enjoyment	19
Improvement in performance at work (not communication)	11
Improvement in working conditions	25
Improvement in workplace communication	76
Increase in English language knowledge	203
Increase in subject knowledge (not English language)	12
Political engagement	4
Safety and security	6
Shopping and food	11
Support for qualifications	17

As is to be expected from such a survey, many of the responses concerned improvements in language, in general or in specific situations or specific skills. There were also many responses

related to positive affective factors, such as confidence or enjoyment of learning. Learner 9, for example said, “Comunicarme mejor y dejar el miedo al hablar” [“Communicate better and stop being afraid to speak”], and Learner 3 said, “Me ha dado seguridad y mejorado mi pronunciacion” [“It has given me confidence and improved my pronunciation.”].

Themes

After coding, the coded excerpts were grouped and regrouped, and further examined for themes that linked them. Several themes emerged from the learner responses. These will be described under the following headings: the promise of anytime/anywhere learning; the tension between agency and well-being; the socio-technical system; valued capabilities and functionings; and social aspects and group capabilities. The points made under each heading will be supported by excerpts from the learners’ answers. These answers have been provided in the original language alongside an English translation. Excerpts originally in English have kept the original spelling and punctuation.

The Promise of Anytime/Anywhere Learning

Several learners reported that the ‘anytime/anywhere’ affordances of mobile learning helped them engage in their courses. For example, Learner 97 stated, “the big plus is that you can study on your time and anywhere.”

However, a variety of conversion factors still affected whether learners were able to access their course. Even if learning was available at any time and in any location, individual, social, and environmental factors prevented some learners from accessing the self-timed materials. Learner 17 said that they needed to “tener mas disiplina” [“have more discipline”] and Learner 30 stated, “mi dificultad es que tengo jornadas largas de trabajo y realmente salgo cansada” [“my difficulty is that I have long working days and I really get tired”].

Such conversion factors also prevented some learners on hybrid courses from accessing the live classes. Learner 161 described how their experience could be improved: “A ser más flexible en cuanto a estudiar porque tengo mucho trabajo ahora en temporada y a veces no tengo tiempo” [“To be more flexible in terms of studying because I have a lot of work now in season and sometimes I don't have time”].

The Tension Between Agency and Well-being

Learner responses demonstrated tension between well-being and agency. For some learners, the technology proved no barrier and was actually integral to the positive experience of study. Learner 249 stated, “I love the website’s course design, classified by different theme, and every lessons related to our daily life and work. I feel it is easy and happy way to keep learning.” Others, however, seemed much less comfortable. Learner 72, for example, made the following request: “Enviar material impreso, libros, folleto” [“Send printed material, books, booklet”]. For this learner, the well-being freedoms offered by the technology were in tension with the learner’s lack of agency in choosing their preferred study materials.

Such tension was also seen in the requests for offline classes. Learner 287 explained that Generate had helped them, saying, “I'm speaking better with my co-worker,” but also said the course could be improved by “having class in person”. For this learner, the course provided well-being achievements, but not the agency to choose their preferred format for language classes.

A further potential area for tension between well-being and agency lay in the 'needs based' approach to course design, where 'needs based' refers to the needs of the sponsoring organization. Without more detail, it is not clear how much input learners had in defining the needs of the course. Some learners enjoyed the content. For example, Learner 459 stated, "Generate is very interesting due it has so many interesting articles and it does not look like you are studying, it is more like an interesting magazine with a trivia." However, for some learners the content did not meet their needs. Learner 8 suggested that Generate "las historias sean mas para mujeres en general" ["Make the stories more for women in general"]. Learner 15 wanted "más temas de interés, como deporte o tecnología" ["more topics of interest, like sport or technology"]. Learner 139 said, "Me ayudaría si habría alguna opción de algo en específico porque necesito presentar para la ciudadanía" ["It would help me if there was an option for something specific because I need to apply for citizenship"].

The Socio-technical System

Though the course designers and providers did not provide hardware for learners, learners needed access to at least one device to access the materials. The interaction of software and hardware influenced how the learners were able to use the input. For example, the device that the learner used could inhibit use of some or all of the platform. Learner 201 said "oder usar el celular en la práctica oral, because at the moment the only way is the computer, most the time I'm not in Home,muchas gracias" ["to be able to use the mobile phone in the oral practice,because at the moment the only way is the computer ,most the time I'm not in Home,thank you very much"], and Learner 344 asked that Generate "fix the glitches(freezes a lot, some unit test dont work)."

Some technological factors interacted with other conversion factors to amplify or inhibit conversion. For example, the platform has auto-graded proficiency tests that assign learners to a level. Several learners felt that they had been placed in the wrong level but were unable to change. Without a human teacher to facilitate, learners were stuck with materials that were inappropriate for their needs. In some cases, beginners such as Learner 66 found the materials too hard: "Es un poco complicado cuando eres principiante" ["It's a bit complicated when you are a beginner"]. In other cases, learners felt that the material was too easy and that the course therefore was unable to provide them with any benefit. Learner 108 said that their course would be improved by "ser mas exigente." ["Being more demanding"]. This technological conversion factor combined with individual conversion factors to inhibit use of the platform by learners like Learner 208:

> Me preocupa la dificultad para escuchar audios, o cuando alguien me habla. Entiendo muy pocas palabras. He pensado en mi edad de (74) que podría influir, pero tampoco lo creo. Pudiera ser que ha sido poco tiempo el dedicado al estudio, o que no estoy en el nivel de curso adecuado. [I am concerned about the difficulty in listening to audios, or when someone speaks to me. I understand very few words. I have thought that my age (74) might play a role, but I don't think so either. It could be that I have spent too little time studying, or that I am not at the right course level]

Interaction between technology and other conversion factors was not limited to specific characteristics of the technology or to individual situations, but also to the wider socio-technological context. While instructions for activities were standardized and available in several languages, elements such as comprehension questions and word definitions in the

glossary and vocabulary activities were bespoke to each short lesson and therefore written in English. For learners with lower proficiency levels, this presented a problem, as Learner 26 explained:

> es muy aburrido leer parrafos tan extensos sobretodo si estan enseñando a principiantes que no saben nada de ingles, el nivel de Generate es para intermedios, los principiantes no entienden es muy dificl, en el area de Guia de Gramatica la cual me parece la peor, todo esta escrito en ingles sin explicacion en español y no hay nada interactivo,como pretenden que alguien entienda las explicaciones si todo esta en ingles, eso no tiene sentido, [it is very boring to read such long paragraphs especially if they are teaching beginners who do not know any English, the level of Generate is for intermediate, beginners do not understand it is very difficult, in the area of Grammar Guide which seems to me the worst, Everything is written in English with no explanation in Spanish and there is nothing interactive, how do they expect anyone to understand the explanations if everything is in English, it doesn't make sense]

In this negative conversion factor, the interaction between a wider socio-technological context (here including the processes and pressures entailed in the creation of mobile learning resources) and individual language proficiency levels can be seen.

Valued Capabilities and Functionings

Many learners spoke about work and employment. This may have been because the courses were workplace-oriented and the learner satisfaction surveys explicitly asked about experience of work. Some learners responded that the course had not helped them at work, while others reported that they were better able to communicate with customers, colleagues or managers. Learner 156 stated that Generate had helped them "en la comunicación con mis jefes" ["in communicating with my bosses"] while Learner 241 said that Generate had helped them "a mieux communiquer avec les collègues et a mieux exercer mon travail" ["to communicate better with colleagues and to better carry out my work"].

Despite the question asking about 'current work', many learners described other work-related situations, such as Learner 329, who said, "Thanks to Generate, I did well my interview and got a job," and Learner 425, who said, "Help me improve my language to find a better job." For these learners, employment was a valued functioning, one that had been achieved for one learner and was aspirational for the second. In the second excerpt, Learner 425 speaks about a better job. While the CA would look on any form of employment as having some benefit by providing the means for accessing basic functionings such as food or shelter, in contrast to approaches that focus on the economic benefits of work, the CA also considers the value that an individual places on the work to be of importance (Laruffa, 2020). It may be that Learner 425 means that they found a job with higher pay, and they are happy with this because they value the pay, but it could also be that the job they found is more suited to their skills or allows them time to care for their children.

There were also many learner responses connected to education. For several learners, English learned through the course helped prepare them for formal education and qualifications. Learner 548 said, "I would like to learn more because it's help me a lot and study bachelor degree" and Learner 69 said, "Me siento más confiada en buscar nuevas oportunidades y terminar mis estudios" ["I feel more confident in pursuing new opportunities and completing my studies"]. As well as a lack of recognition of and fewer opportunities for using

qualifications gained prior to entering the US, formal educational opportunities that lead to recognised qualifications are more difficult to access for many migrants. Several learners recognised that their capabilities had been expanded by participation in the course and that they were now able to study for formal qualifications such as college or university degrees and professional certificates. The course also seemed to be helping those already in formal education keep up with their studies.

The courses that the learners were registered on were workplace oriented. However, some learners were able to extend the limited proficiency developed through the courses into other areas. Learner 296 said, "I feel more confident at the doctor and when I have solve any legal issue". Learner 139 said, "Me ayudó a poder salir a comer o a comprar sin tener miedo" ["It helped me to be able to go out to eat or shop without being afraid"]. These three themes – shopping, security and crime, health – were mentioned as a benefit, and it is clear that they were valued by learners. Some learners did not mention legal or crime issues explicitly but focused on the idea of being less afraid or of feeling more secure in specific situations or locations.

Social Aspects and Group Capabilities

For some learners, English classes were the only place through which they could use the language they were learning. Learner 184 said, "Nadie Abla ingles" ["Nobody speak English"]. Learner 190 described their workplace situation by saying, "En mi trabajo actual solo hablo español" ["In my current job I only speak Spanish"], and Learner 14 said, "No salgo muy poco" ["I don't go out much"]. The social and environmental contexts of these learners limited their agency in converting any capabilities they had developed into the functioning of English language use. These learners may well have benefitted more from a class with other learners that would have allowed them the opportunity to meet other English speakers.

In contrast, others were able to expand their social circles outside of their own language groups. Learner 323 stated, "It encouraged me to talk to native speakers. And I became a less perfectionist, in a good way," and Learner 190 said, "Me ha permitido conectarme con el mundo real" ["It has allowed me to connect with the real world"]. The excerpt here from Learner 190 is of interest as Learner 190 was one of the respondents who stated that they had limited chances to use their language skills at work. Other learners also mentioned connecting to the 'real world' through increased engagement with the news. Learner 15 said that thanks to their course, they could "Comunicarme mejor y entender más las noticias" ["Communicate better and understand the news more"], while Learner 383 said, "Improve my ability to keep up with current issues."

Though the focus of the CA is on individuals, work on group or collective capabilities has shown that the capabilities of a collective can transcend those of the individual group members (Foster & Handy, 2008; Ibrahim, 2006; Pelenc et al., 2013). Several learners stated that their new capabilities extended to those in their networks. Learner 149 said that Generate had supported them "en protectos de ayuda en mi Comunidad e iglesia tambien" ["in helping people in my community and church as well"]. Closer to home, Learner 44 said, "Puedo ayudarle a mi hijo con sus tareas" ["I can help my son with his homework"], while Learner 543 said, "I even take my parents to the doctor. I can speak with the doctor now." These three excerpts demonstrate that capabilities (doing homework, reading labels, accessing healthcare) expanded through the course extended to others who did not take the course. The case of Learner 44

indicates that some learners were perhaps able to expand both the well-being and agency of others through educating them. However, unless the parents of Learner 543 develop enough proficiency through their child to go to the doctor themselves, they only had their capabilities expanded while maintaining a relationship with their child.

Discussion

The first research question asked about the conversion factors that inhibited or amplified learner engagement with their online courses. A variety of conversion factors, often related to technological aspects of the courses, were reported. Technological conversion factors interacted with other categories of conversion factor, especially individual and social factors, to help or hinder learners.

Mobile devices and courses have the potential to help learners participate in education as portable technology or multi-device use allows anytime/anywhere learning (Kukulska-Hulme, 2012). For some learners, this seems to have been the case. Mobile learning allowed them to study at times and in places that benefitted them. However, though mobile learning programs have the potential for overcoming barriers that prevent learners attending scheduled location-based classes, the conversion factors relevant to each individual learner may still prevent them from doing so. Employment and other time constraints remained negative conversion factors and prevented some learners from accessing their course. Sponsoring organizations should be cognizant of this and aware that learners will still need to find an appropriate time in their schedule to study.

Mobile learning has the potential to offer learners choice in terms of content, however, where such choices have been made by an intermediary, the reduced agency freedoms may limit the capabilities the learners can extend. Course providers should also be aware that mobile learning may not be beneficial to all learners and consider other forms of course delivery. For some learners to lead lives that they value, neither mobile language learning nor asynchronous learning may be appropriate. While some learners were comfortable using digital devices to study, others were not. Furthermore, though some learners liked to study at their own pace, many more learners wanted live classes (either online or face-to-face) in which they could speak with other students and with teachers. Where possible, migrant learners would benefit from a choice of face-to-face or online learning to decrease the tensions they experience between well-being and agency.

Several factors influence the creation of mobile learning resources, beyond pedagogical need, including time and resourcing (Haggard, 2021). Production of these courses was carried out in English by English speakers from 'inner-circle' countries (Kachru, 2005). This resulted in a de facto 'English-only' policy that, without a teacher to facilitate and aid the learner in negotiating meaning, prevented learners from accessing appropriate pedagogical materials. This reduced the well-being freedoms available to the learners. When designing courses, especially those for multi-lingual groups, course designers should take steps to provide as much of the content as possible in multiple languages. As Kukulska-Hulme et al. (2016) point out, it would be beneficial for many learners if this extended to allowing multiple scripts to be used in cases where the learner has to input written language. Allowing learners who are fluent in languages that use, for example, Arabic script or Japanese kana to draw on a wider range of linguistic resources may benefit them.

The second research question asked about the capabilities and functionings that learners reported developing through engagement in their course. Learners valued English proficiency for the benefits that it provided for them at work and school. However, the capabilities extended via these workplace-based courses were not limited to the workplace. Some learners were able to extend their English proficiency in other areas such as in shops and at the doctors, and reported feeling more confident in their language use in other scenarios as well. Course designers should be aware that learners value workplace-oriented language, but also value language that can be used in other contexts and areas of their lives. The needs of the sponsoring organization and the needs of the migrant learner may overlap, but migrant learners may have linguistic needs that are not covered by workplace courses.

In some answers, learners described how they were now able to help others in their networks. There was evidence of the well-being of others being advanced by the capabilities of learners. Foster and Handy (2008) refer to these as 'external capabilities', which rely on someone sharing a capability through an informal network, and they suggest that ICT and digital technologies can dramatically amplify the range of external capabilities offered. However, the receiver of the external capability is reliant on the sharer for their well-being and so may not fully exercise their agency in deciding, for example, when to visit the doctor, which doctor to visit, or what to share with them. In other cases, the learner was able to expand the capabilities of others by teaching workmates or children. In these cases, learners were able to improve both the well-being and agency of others. Furthermore, some learners mentioned engagement with the news or current issues. Even as migrants may remain involved in the political sphere of their country of origin through transnational spaces (Itzigsohn & Giorguli-Saucedo, 2005), exclusion from socio-political participation in the US among foreign-born people is high and this appears to be directly connected to literacy level and proficiency in English (Grotluschen et al., 2021). Migrant learners who are better able to engage with these issues may be better placed to advocate for themselves and their communities to improve individual and group well-being and agency.

Robust needs analyses of the learners' wants and needs should be a starting point for course design. Such needs analysis should also extend to the needs of people in the learners' networks, such as children or elderly parents, to whom the learners' capabilities may also be extended.

Limitations

There are several limitations inherent in the analysis of secondary data when the data is being re-examined for new research questions by new researchers. In this study the purposes of the original data collection were similar to the research questions in this paper and the data provided by the surveys was suitable for the examination of the research questions and for the chosen CA framework. However, data was not gathered with the express purpose of answering these research questions or applying the framework, nor was the instrument designed by the researcher. The fact that the data was collected by another party rather than the researcher placed limits on what could be collected.

Another issue concerns the anonymity of the learners. Demographic data, such as age, length of time spent in the US, countries of residence prior to arrival in the US, other languages spoken aside from English, pre-migration English learning experiences, and reported comfort and experience with digital devices would have been illuminating. Again, however, the use of secondary data prevented this. Another factor that could be considered a limitation of the study

is the variety of courses that learners were engaged in. The experiences of a learner on a short course of three units of ten lessons, and of a learner on a longer course of twenty units will undoubtedly be different, and these different experiences are not clear from the anonymized data. Some courses were delivered with support from online teachers, some with support from face-to-face teachers and some with no teacher. Again, the different experiences are not clear in the anonymised data.

This limitation also meant that the role of agency in the educational lives of migrants could not be fully explored. A CA analysis of learner agency examines both the range of choices that learners can make within a course, as well as the choices to participate in education or not (Unterhalter, 2003). Unfortunately, the distance between the researcher and participants meant there was no exploration of the agency learners had in registering for the courses. Furthermore, in this study, all participants were learners on Generate's courses and their survey responses have been used to draw conclusions regarding mobile learning. However, as all participants were learners, the voices of those who either exercised agency in deciding not to participate in the courses or who were unable to exercise agency in choosing to participate have been silenced. This study should therefore be used to complement studies where the potential learner is the focus.

Conclusion

This Capability Approach analysis of secondary data has presented some of the conversion factors that influence engagement with mobile language learning for migrant language learners in the US. It has also highlighted some of the capabilities and functionings learners were able to extend through these courses. Barriers included time constraints from work, issues of owning compatible technology, lack of comfort around digital devices, a lack of human interaction with teachers or other learners, and the exclusive use of the English language across language learning resources. For other learners, the anytime/anywhere affordances of mobile devices, and the wide range of content improved engagement in learning. Learners also reported that the mobile-learning courses they engaged with extended their ability to use English beyond the workplace in support of their needs and the needs of those in their networks.

After this study was carried out, Generate made several changes to the platform in order to overcome some of the issues highlighted above. The platform is now available in 20 different languages, including Swahili, Dari, Pashto, Burmese, Karen, Ukrainian, and Haitian Creole. Sponsoring organizations are encouraged to provide human support for their learners and Generate provide support services for those that cannot do so. Generate have also worked on expanding beginner focused content for learners with lower proficiency.

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