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How to cite:

Jones, Ann; Kukulska-Hulme, Agnes; Norris, Lucy; Gaved, Mark; Scanlon, Eileen; Jones, Jan and Brasher, Andrew (2018). Supporting immigrant language learning on smartphones: A field trial. *Studies in the Education of Adults*, 49(2) pp. 228–252.

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Version: Accepted Manuscript

Link(s) to article on publisher's website:

<http://dx.doi.org/doi:10.1080/02660830.2018.1463655>

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Supporting immigrant language learning on smartphones: a field trial

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Supporting immigrant language learning on smartphones: a field trial

The challenge of supporting immigrant language learning and social integration has increased recently, leading to initiatives and projects that aim to provide assistance, including using smartphones in the course of daily activities.

However, much of the Mobile Assisted Language Learning (MALL) literature focuses on classroom based learning, leaving a gap in understanding learning in informal settings. This paper discusses a UK field trial of the European funded MASELTOV project, which developed a suite of smartphone tools and services (the 'MApp') to help immigrants' language learning and social inclusion in four European cities. MApp tools and services include language lessons designed to assist informal learning in everyday life, focusing on situational language needs and a social forum for peer support, cultural information, comments and practice. The paper reports on interview data and social forum use. Our findings suggest that the MApp helps immigrants with their confidence; with relevant, practical language learning and practice of different language skills, and supports social learning. Studying and practising language skills in locations and at times that learners choose, along with access to a social forum for socio-emotional support and feedback, is a powerful combination for informal mobile language learning.

Keywords: immigrant language learning; Mobile Assisted Language Learning (MALL); informal language learning; smartphone language apps; immigrant social integration

Introduction

Social justice has been a concern in adult education for many years (Jarvis and Orr, 2016). The vulnerability of immigrants in the workplace, and, for many, their change of status when they cannot work in the professions for which they have trained, has been noted both in the press (Ong 2017) and in research on migrant language learning (e.g. Norton and Toohey 2011). Norton and Toohey (op. cit.) discuss how immigrant workers seek to change their positioning and relationship with their co-workers and note the significant relationship between identity and language learning. In recent years the escalating challenge of supporting migrant and refugee populations in language learning

and social integration has led to numerous initiatives and projects, e.g. the Council of Europe's project on adult migrants' linguistic integration (Beacco, J.-C. et al. 2017) or the settlement, integration and language learning program in Ontario, Canada (Piccardo and Hunter 2016).

Several projects have considered the role of mobile phones and other portable, ubiquitous technologies in supporting immigrants. Smartphones can be valuable tools in enabling inclusion, by providing information and language learning resources during daily activities (Kluzer et al. 2011). One significant research and development project in this space was the European Union FP7 funded MASELTOV project (<http://www.maseltov.eu/>), which explored how smartphone applications could support immigrants' social inclusion and language learning needs in four European cities (Kukulska-Hulme et al., 2012; 2015). A central element of the MASELTOV project was developing a smartphone app (the 'MApp') containing a range of integrated tools and services that the target audience could use in their daily lives. The aim was to resolve immigrants' immediate needs, and to enable reflection and further planning of learning goals to support their integration into their new cities. For this intended audience, given work and family commitments, attending formal educational classes is often difficult (Kluzer et al. 2011), hence an app that is accessible anywhere and uses the city environment as a contextual resource may provide a practical alternative or complementary learning aid. The MApp tools and services included language lessons to support informal and incidental learning in context and a social forum providing a space for social support, peer comment and practice. These tools were initially evaluated in London, Madrid and Graz (Schwarz et. al., 2015). The final field trial aimed to investigate how the MApp supports language and cultural learning in a different environment to these historically established, global city settings. The tools were used

in a field study in a planned provincial town in the UK, Milton Keynes, and it is this study that is reported on here. The research question was: How do the participants use the tools and services provided within the MApp to improve their language and communication skills and cultural understanding? This is discussed further in the research design section below.

In his review of theoretical contributions to distance education, Garrison (2000) reminds us of the field's early (1970s) focus on independent learning 'under the geographical and temporal control of the learner' (p.5) and its development towards transactional issues centred on learner proficiency, available support, and opportunity to choose (Garrison 1989). Adult mobile learning can draw inspiration from distance education in this regard. Park's (2011) application of Moore's transactional distance theory to mobile learning also considers the geographical and psychological separation or distance between learners and instructors. She proposes a pedagogical framework of four types of mobile learning, based on the transactional distance between learners and teachers and whether the learning activity is more individualized or more socialized. Her 'type 3' mobile learning, where mobile devices are utilized for multiple functions and active participation, and social experiences are encouraged, is closest to the activities envisaged and observed in our field trial. However her framework assumes the presence of a teacher who is advised to develop a meaningful collaborative task or a complex situation for the learners. In our field trial scenario, there is a facilitator but no teacher. The learners are not asked to collaborate or solve particular problems but they are encouraged to interact in the social forum to address any problems or interests they may have. They are also given some structure through a set of language lessons they can work through at will but are not obliged to do so. In principle they are enabled to engage in activity arising from their own spontaneous requirements (Kukulska-Hulme,

Traxler and Pettit, 2007). Any activity is likely to be related to their personal choices with regard to learning location and time (Kukulska-Hulme, 2012). The field study aimed to gather evidence of personally relevant contexts and to contribute to our understanding of the role of activity, time and place, with reference to Kukulska-Hulme's (2012) framework for next generation designs.

The paper considers relevant literature on informal mobile language learning in the next section; in particular, informal mobile language learning and immigrants who are learning a new language. Then the Milton Keynes trial and its background is considered, and the research design in the following section. After this we outline the data collected, then discuss the findings. Conclusions and implications form the final section.

Relevant Literature

Informal Mobile Language Learning

Recent reviews of mobile assisted language learning (MALL), e.g. Burston (2013) and Duman, Orhon and Gedik's 2015 meta study, show that most projects have been concerned with particular implementations, often laboratory or classroom experiments, design-based research or pilots and trials within formal education settings. Few studies focus on informal learning; for example Burston's (2015) meta-analysis is concerned with learning outcomes in formal settings. The most commonly used approaches have been quantitative, and there is a lack of theoretical framing for many studies.

Sharples, Taylor and Vavoula (2007, p.224) define mobile learning as 'the processes of coming to know through conversations across multiple contexts amongst people and personal interactive technologies'. This widely adopted definition is appropriate for the MASELTOV project as it emphasises: 1) the learning processes with

which technology can be involved; 2) the communicative nature of learning; 3) the learners' mobility, and 4) it refers to personal and interactive technologies. As Glahn, Börner and Specht (2010, p.27) note: '... (it) reflects that (mobile) learning takes place across space, time, topics, and technologies.'

Informal learning is part of a long tradition of participatory research in adult education (Jarvis & Orr, 2016), and Kukulska-Hulme (2009) has discussed the potential of informal mobile learning for language learning. Informal learning has also previously attracted increasing interest (e.g. Benson, 2011; Lamb and Reinders 2008). However, there are still far fewer studies looking at mobile learning *outside* the classroom (Stockwell 2013) despite the recognition of the important role of learning in this context (Lai and Gu 2011). It is vital to develop some understanding of learner-led activities and learners' practices in informal mobile language learning if we are to make the best use of MALL and to advise learners accordingly. Studies of informal language learners include an investigation of how English learners used mobile devices (PDAs) to develop their vocabulary knowledge (Song and Fox 2008). This showed that students used their PDAs in diverse, creative ways to improve their vocabulary learning, integrated their use of the PDA and the computer for incidental vocabulary learning and developed new self-directed practices. Other studies focus on entirely learner-led practices. Kukulska-Hulme and de los Arcos (2011) investigated using mobile devices for informal language learning in relation to learners' use of space and time. They highlight experiences where meaning made 'in situ' can be captured on mobile devices and used to enrich the repertoire for future language learning, beyond the confines imposed by time and space in more traditional settings. Demouy et al. (2016) surveyed the MALL practices of adult distance language learners, who were learning independently, in both formal and informal settings. These learners used mobile devices

both in planned language learning sessions and spontaneously, and enabled them to study at times and in places that they otherwise would not have done, to benefit from small gaps in their schedules.

As Oxford (2003) notes, one of the main qualitative perspectives of second language learning is the sociocultural view, concerned with interpersonal or “mediating” relationships between teachers and learners in particular settings. In mediated learning, a more capable or knowledgeable person assists the learners. In relation to the learners in our project, this person could be a facilitator or another immigrant with more advanced knowledge or skills. From a sociocultural perspective, learning is also “situated in a certain social and cultural setting, at a particular time, and with specific individuals interacting as participants” (Oxford 2003, p.276). Second language learning, particularly outside the classroom, is a situated practice; thus “the particular circumstances in which the learning occurs make it more unique and meaningful to the learner and thus more likely to be absorbed into the learner’s acquired knowledge” (Comas-Quinn et al., 2009).

The social nature of language learning has long been recognised: ‘...There are many aspects of language learning that exist ... in the social relationships developed between the learners and the members of the speech community which they seek to enter’ (Trosset, 1986, p.165). The importance of discussions amongst learners and with facilitators in a social media forum, and the multifaceted role required by facilitators to ‘guide or influence’ involvement is highlighted by Kop, Fournier and Mak (2011, p.88). Shao and Crook explore how ‘social software’ supporting group interaction encourages successful participation and ‘networked communication in everyday contexts’ for language learners (2015, p.403). Similarly, Kan and McCormick (2014, p.44) found that an online forum supported language learning as well as making the process ‘enjoyable

and fun’. In the MASELTOV project, a social forum was developed to facilitate exactly such communication.

To summarise, although the MALL literature is still dominated by classroom based studies, there is evidence of how creative language learners can be in using mobile devices for informal learning, the importance of peer support and community learning and the potential for self-directed learning. Qualitative and mixed methods studies are also beginning to take their place in MALL research. The following discussion reviews relevant literature on language learning among immigrants.

Immigrants and Language Learning

As noted earlier, the MASELTOV project aimed to support immigrants’ inclusion and integration in their new cities through providing mobile resources to support their linguistic, social and cultural capabilities.

A recent special collection, (Jones, Kukulska-Hulme and Brasher, 2017) focusses on how technology can support immigrants’ learning in different ways. In this collection, Gaved and Peasgood (2017) investigate how mobile technologies can support immigrants without on-the-move internet access in their SALSA project. They focus on how location-triggered learning activities can enhance informal language and cultural learning in the migrants’ new town of residence. Twenty-seven radio transmitting Bluetooth ‘beacons’ were deployed across Milton Keynes in the UK. Such beacons triggered one of twelve learning activity scenarios when a participant approached with a custom app loaded on their smartphone. The learners were studying English at local adult continuing education classes – so the SALSA app complemented their formal learning with informal learning in their daily lives. All participants successfully used the provided app and visited one or more of the beacon locations

around the town. Gaved and Peasgood (op cit.) used Kukulska-Hulme's (2012) language learning framework to understand participants' practices and analysed their results in terms of time, activity and place, each of which affected how participants used the app. Sometimes participants checked the app when a learning activity was triggered but studied the content later, at home. Participants also wanted to learn with the app in places conducive to learning – e.g. in a café, library or at home – and to learn in ways that were unobtrusive and felt socially acceptable. Overall, using learning activities relevant to the participants' aims and interests was successful and developed their language skills and knowledge about their town. However, there was a tension between the aims of learning and 'fitting in', leading the researchers to emphasise the importance of social and cultural factors when designing MALL. The participants studied by Demmans Epp (2017) also preferred using the mobile tools in private locations.

Bradley, Lindström and Hashemi (2017) focused on migrants learning Swedish. An experimental group used an app to support their pronunciation skills in addition to taking part in formal programmes. The results indicate that the focused linguistic training with the pronunciation app was useful and successful for developing spoken language skills; however the experimental group did not use the app for as long as anticipated, and it is suggested that more motivating material is needed. Participants also reported speaking little Swedish outside the classroom. So whilst the mobile devices were widely used in the classroom and outside, most of the use was for communicating with family and friends.

Across these papers there is a focus on understanding migrants' everyday practices in using mobile devices to support their learning, and an emphasis on the social nature of language learning. Bradley, Lindström and Hashemi (op. cit.) found that participants used a wide range of apps and technology to support their language learning

– including resources such as Google Translate, as did the participants in Demmans Epp’s (2017) study. The latter study asked migrants which of their language-learning and communication needs were not being met by current MALL tools. The majority of the gaps participants noticed were about unknown vocabulary which prevented their access to information as well as hindering communication. They were also concerned about using vocabulary and colloquial expressions appropriately in specific situations and being supported with language use in real-world contexts. The data indicate insufficient tools to scaffold the larger learning challenges faced by these migrants, including communication, understanding multiple registers, different accents or to obtain socio-emotional support. Demmans Epp (op. cit.) proposes that MALL tools could support a greater range of activities, for example socio-collaborative approaches to learning and/or enabling learners to develop their self-regulation strategies by providing formative feedback.

Acquiring sufficient language skills to integrate into a new community and participate fully is difficult: Brooker, Lawrence and Dodds (2017) suggest this is the biggest challenge for their participants, even those attending university. The challenges they identified also include learners becoming more self-directed. The studies reported here are small scale, taking either a qualitative or mixed-methods approach. Although the social nature of language learning is emphasized in these migrant learner studies, there is little literature on technological support for social learning. We define social learning as learning through social interactions, derived from the position that language is a social phenomenon and language learning is a social practice (Firth and Wagner, 2007). Technological support for social learning is one feature of the MASELTOV project, discussed next.

The MASELTOV Milton Keynes Trial

The MASELTOV project: ‘Mobile assistance for social inclusion and empowerment of immigrants with persuasive learning technologies and social network services’ aimed to research and develop innovative information technologies to facilitate bidirectional integration via local community building and to empower cultural diversity. The MASELTOV team, a collaboration between partner organisations across Europe, developed and tested a prototype of integrated mobile services and tools, the MApp.

The MApp was first evaluated with Latin American Spanish, Arabic and Turkish mother tongue immigrants living in London (UK), Madrid (Spain) and Graz (Austria), in June 2014. The trials were conducted by NGOs (The Migrant Resource Centre, Fundacion Desarrollo Sostenido and Verein Danaida) with bilingual facilitators sharing the mother tongue and culture of participants. These field trials aimed to investigate user experience, technical and data logging aspects of the MApp tools and services, to inform further development. Three further field trials investigating participants’ experiences were conducted over 8 weeks in London and Graz, in late 2014 with Latin American, Arabic and Turkish speaking immigrants, using the same facilitators and NGOs.

The final field trial, reported in this paper, aimed to investigate how the MApp supports language and cultural learning in a very different environment to the traditional city settings of those conducted earlier. Milton Keynes, a designated New Town in the UK, is unlike the urban, city environments for which the MApp was first developed and therefore provides an interesting contrast in setting. The main difference lies in the carefully planned grid squares in Milton Keynes connecting existing towns and villages with new housing, parklands, and nature reserves, the antithesis of the more organic,

historically evolved landscapes of well established global cities characteristic of London, Madrid and Graz, the sites of earlier trials.

In order to better understand the needs of learners engaged in incidental, situated mobile learning in everyday life, the Milton Keynes trial focused entirely on exploring how the MApp tools and services supported language learning and developed understanding of cultural differences between the immigrants' home towns and their new town. The trial took place in 2015 over three weeks and involved a group of immigrants chosen because their first language was Spanish (Spanish-English was one of three language pairs available for the MApp). In keeping with the MAZELTOV target demographic, participants were chosen with English language competency at Common European Framework of Reference for Languages (CEFR) levels A2-B1 (low-intermediate).

We have drawn on Kukulska-Hulme's (2012) conceptual framework to frame our discussion of our results. The framework (see figure 1) emphasises three dimensions for mobile language learning: time, place and activity. This framework was derived from an analysis of language learners' own informal learning practices with their mobile phones and other mobile devices, with the aim to inform future designs of mobile language learning especially for outside of class. Elsewhere, Kukulska-Hulme et al. (2017), drawing on this project and other case studies of mobile informal learning, note that "Pedagogical models arising from this research foreground learners' agency, blending of formal and informal learning, the value of social interaction, and playful learning that may alleviate anxiety or build confidence" (p.222).

[Figure 1 around here]

Research Design

MASELTOV adopted a user-centred design approach to the process of software development, trialling and evaluation. This approach involves users throughout the lifecycle of a project involving software development (Schwartz and Bobeth 2014). It included a multidisciplinary design team and employs an iterative design process where user feedback informs the next stage of development. In MASELTOV this began at the project start with gathering immigrants' needs and workshops with users including participatory design workshops continued throughout the project. The MK trial was at the end of the MASELTOV project and so was not able to inform further software development in this project but did inform the development of language lessons on a related project, SALSA, (Gaved and Peasgood, 2017). The Milton Keynes (MK) trial used mixed methods. The aim was to acquire a rich mix of quantitative and qualitative data to capture participants' perceptions of their learning experience, and how they used the MApp tools and services. The main research question (RQ) for the MK trial was:

RQ: How do the participants use the tools and services provided within the MApp to improve their language and communication skills and cultural understanding?

The research design of the MK trial was approved by The Open University's Human Research Ethics Committee.

Participants

Seventeen participants (5 men; 12 women) were recruited and filled out an initial questionnaire at the first workshop [see section below]. Eleven participants had been in the UK for two years or less; four for between two and four years, and two had been in the UK for over ten years. Thus, whilst most were relatively recent immigrants, this was

not true for all participants. Of these 17, thirteen completed the trial. Twelve were able to attend the final workshop and were interviewed. Thus some of the forum data that we have drawn on, represents two participants who engaged with the forum and the trial but did not complete the trial and so were not interviewed.

Facilitator role

In addition to the project researcher, fluent in English and Spanish, and MASELTOV team members, a locally based bilingual (English/Spanish) Latin American volunteer facilitator helped to recruit and communicate with participants. She played a pivotal role in maintaining tool use and engagement by participants and participated in the forum. She worked closely with the project researcher throughout this process. The roles of the facilitator and the researcher during the trial involved solving technical problems, providing assistance, e.g. in using the tools, scaffolding and developing discussion and giving input or resolving issues, all based on communication via the MApp social forum tool ('Forum').

The MApp: Services Used for Milton Keynes Study

This section provides details of the MApp tools and services that were used in this study, from among the suite displayed in Figure 2.

[Figure 2 around here]

Figure 2 shows the English language home screen interface, with the full range of the Mapp tools and services. Due to technical reasons three of the MApp tools were not included in the MK trial (Help Radar, Info, and Navigation), and Progress was only partly implemented for the Milton Keynes context. An example of the Spanish interface is shown in Figure 3 (the text Translation tool).

[Figure 3 around here]

Of the other 8 tools, 4 relate directly to English language learning and developing an understanding of cultural differences and these tools (a language learning app, the forum, the translation tool and a serious game) are described below. However, the vast majority of use was in the language learning lessons and the social forum and so our analysis focuses on these two tools, but the four tools are described to provide some context. Smartphones were given to all participants for the trial, and could be kept afterwards along with the trial software by those who completed the trial. The MApp interface, tools and services as well as the smartphone operating system were set to the participants' first language, Spanish, for ease of use.

- (1) **The Language Learning** lessons included authentic learning activities reflecting situations likely to be experienced in participants' daily lives and relevant to them. The vocabulary used is high frequency and supports collective experiences (e.g. 'we need' alongside 'I need') as well as social inclusion through a focus on socially and culturally inclusive language. All language activities are categorised and aligned with the Common European Framework of Reference (CEFR) covering topics such as shopping, health, travel, money, accommodation, education and study. Figure 4 shows the home screen for the language lessons. These are organised around 6 language 'modules' that introduce language in relation to broad themes relevant to the lives of immigrants. Each of these is divided into 3-4 lessons, a situation page and 'emergency vocabulary'. Real-world challenges are suggested to prompt practice of the learning objectives via spoken interaction with other users of

English, e.g. asking somebody about directions after an activity involving the target language, and reporting back in the **Forum** (described next).

[Figure 4 around here]

- (2) The **Forum** is the tool for social networking. It provides a space for participants to communicate with facilitators and each other in writing by exchanging ideas, posting and answering questions about language, culture or the use of MApp tools and services. Technical and MApp user problems were dealt with via this tool, so that the data could be captured. Posts were made with an anonymous MApp identity (e.g. MApp99) with the exception of those made by facilitators, whose identity was known to participants. Private messaging between participants and facilitators was possible. Communication could be synchronous or asynchronous, and was populated initially with threads containing topics suggested by facilitators.

- (3) The **Translation** tool captures short texts such as those found on notices, signs, and labels, with a smartphone camera. Text recognition software works to transcribe the results as shown in Figure 3. If necessary, the resulting text can then be corrected before it is translated into the target language.

- (4) **Split** is a ‘serious’ game; i.e. a game whose primary purpose is not pure entertainment but in this context learning about different cultures. (see **Game** in Figure 2) . The inclusion of a game with a serious focus was intended to promote understanding different cultures through an engaging, playful experience (see, e.g. Caldwell et al. 2013).

Data Collection and Analysis

Due to the volume of the data set gathered, we limit our focus to a brief description of data gathered, with examples covering the first two weeks of the trial. We also confine our discussion to the two tools that were used most and that are most relevant to language learning, which is the focus of this paper: the Forum and the Language Learning lessons). Qualitative and quantitative data were collected using a variety of methods to collect either synchronous or asynchronous data:

(1) Data collected synchronously from the MApp's location

- Event data, e.g. language lesson or forum access
- Forum posts

However, it should be noted that direct data on the usage of the app was not, in the end, available to us, although we had anticipated drawing on this rich data.

This is discussed further under limitations.

(2) Data collected asynchronously included the forum data which consists of the posts made in public threads only, and translated from their original Spanish versions. Interviews were carried out and recorded in person with selected participants at the end of the trial (with those who attended the final workshop).

A thematic approach was taken to analysing the translated interview transcripts (Braun and Clarke 2006) in which the transcripts were scrutinised for emerging categories, producing a list which was then re-evaluated and reduced to provide a small number of themes. The themes that emerged from the analysis (see section below) were drawn on to address the research question: *How do the participants use the tools and services provided within the MApp to improve their language and communication skills and cultural understanding?*

Three Bilingual Spanish research staff based at the host university (familiar with but not

otherwise involved with this trial), carried out and recorded 12 interviews lasting between twenty and thirty minutes each. The interviews were subsequently translated into English for analysis.

Twelve participants and the facilitator, were interviewed in their first language (Spanish), where they discussed how they used MApp services, focusing on the Language Learning app and Forum

Trial Opening and Closing Workshops

An initial workshop was held in Milton Keynes for participants to meet each other and the research team, and become familiar with the MApp tools and the smartphone to be used in the trial. The workshop, instructional materials, informed consent, trial information, survey forms, and the project smartphone operating systems were all in Spanish.

Participants received an Android Motorola Moto G smartphone with a Gmail account, the MApp already installed, and a MApp user account linked to the phone. MApp IDs were known to the project team, and associated with phones, so participants were anonymous and identified only by their MApp ID, e.g. MApp99. Phones were pre-loaded with a data allowance, and credit for SMS and phone calls during the trial. The final workshop was held at the end of the 3-week trial at a language school when data was removed from project phones, and semi-structured interviews with 12 participants conducted.

Findings

Table 1 below **breaks down** individual participants' reports of their usage of the MApp services into four key themes identified through thematic analysis. The data reported on here is from interviews with the participants and their use of the social forum.

[Table 1 around here]

Below, in order to make the reporting manageable and to allow space to include some quotations, the findings from the interviews and forum data are reported separately in two different sections. As Table 1 shows, although there are different emphases in the two sets of data, both support and illustrate the themes.

Interviews: How the MApp Supported Participants' Language Learning

The interview data suggests that the MApp supports users' language learning by:

- (1) Supporting personally relevant, practical learning and practice of using different language skills
- (2) Supporting social learning via the forum
- (3) Increasing confidence: motivating
- (4) Being under the learner's control: learning anywhere, anytime

A mapping of these themes to the different participants is shown in Table 1 for both the interview and forum data. The four themes are discussed below. The numbers in parenthesis following each theme indicate the ID of the participant(s) making this comment.

*Supporting Personally Relevant and Practical Learning and Practice of Using
Different Language Skills*

Comments from the following participants are represented by this theme: 81; 84; 85; 86; 87; 88; 89; 90; 92; 94 and 100.

Participants found the MApp tools very relevant to their everyday lives, and this differed from their previous experiences:

Well, I learned things about medical stuff, I've done other courses and there's never been anything specific about that, they give you stuff you don't really need... but these (topics) were really timely. (MApp81).

MApp84 describes the relevance of the medical context and transport:

Sometimes I looked at things linked to the doctor, which interested me. I also looked at train information, such as which ones to catch or where they went. At some point you are going to need it.

Most participants commented on the support for personal needs, situations and interests; e.g. going to the doctor's (81, 84, 87), settling into the UK (88), making bank transactions (89), or catching a bus (90, 84 and 87). For example MApp90 noted (the):

... really practical everyday phrases that help a lot, for example in my bank I didn't know what to say if I wanted to deposit this amount but...there were really simple sentences that help you really fast....

Participants referred to the language lessons in particular. For example MApp88, said:

(I learnt a lot) because of the language learning app,... if I want to find a job or... need to open a bank account, or find out my social security number...really useful for people recently arrived"

MApp90 described how she used the language lessons and applied them to her personal life:

... there's a transport class... that says how to catch a bus, how to change ?...I got to my destinations with the same phrases simply by changing the name of the destination and the time, so this is what I really liked, questions like "how long will it take from my house to central Milton Keynes...what bus do I take?" so then it's really easy, things like 'take' and 'change'...really simple words I know but I didn't know how to express myself with... so this really helped as I got phrases where I could simply change words like the destination...

The language lessons helped the participants to practice using different language skills: reading, listening, speaking and pronouncing and hearing/understanding pronunciation (86, 94). MApp93 commented:

...for me the best part is the pronunciation because in this way you can tune your ears and get used to the English accent.

Feedback was also appreciated:

...like the tests where ...if I had mistakes, I could see my errors and say OK I'll go back and read it again (MApp88).

They learnt colloquial and appropriate English (e.g. using the word 'temperature' instead of 'fever' (87)), and talked about learning contracted forms of phrases e.g. 'I've' instead of 'I have' (85).

Supporting social learning in the Forum

Comments from the following participants are represented in this theme: 81; 84; 87; 88; 90; 94 and 100. The Forum was well used for a variety of purposes, including: asking questions, sometimes about the language learning app (87, 94); expressing doubts (87) 'if you have a question ..., you can share it with the other members....'; and learning about cultural differences:

They talked about food on the forum and I realised I didn't know what the typical dishes were here. (MApp84).

In her interview, MApp 81 explained that she used the forum because:

... here in England it's an easier way to make friends, ... get to know people,
exchange ideas

The participants appreciated the support and friendship of the online community. The social forum also complemented the language lessons by providing a space in which to practice writing, as is noted in the section on the forum below.

Increasing Confidence: Motivating

Comments from the following participants are represented in this theme: 84; 87; 92 and 100. Participants talked about the feedback being motivating: *'It is very motivating to learn that out of 6 questions, you have answered five correctly'* (MApp84) whilst when asked about confidence MApp85 replied – *'yes it has made me feel more confident...also in forming questions, how to form them with what where who'*.

MApp86 also commented that she is much more confident.

MApp87 explained how the Language Learning app helped her to acquire the vocabulary needed for a doctor's visit and appropriate local language, and how in turn, this helped her confidence:

It's been super brilliant, like in the doctors for example, because I have only been here four months and I've been to the doctors only once and I was terrified so at least you have all this vocabulary that they use...the application seems really good for this, because if you do a google search... it shows you words but not what they use here. It's language from the street and that's the part I like. Yes it's given me confidence and I want to learn everything.

Under the Learner's Control: Learning Anywhere, Anytime

Comments from the following participants are represented by this theme: 84; 85; 87; 88; 90; 92 and 94. The claim that mobile learning can support learning anywhere is often made, and the participants valued this way of language learning, e.g:

I can say it again several times, complete it with my headphones, repeat it with the system, oh...it's weird, they are saying it like this.(I used it) when I had free time, when I was at college, when I had a break, when I left work, when I was at home!...(MApp88)

As MApp84 said,

... if you have a programme on your mobile for English, you tend to use it when you have a chance... when you have a minute and something will stick, whether it's just a word, or a phrase.

MApp84 also used lessons linked to her family members' needs: *'I looked at things linked to the classroom, for my girls, classroom objects'*.

Others, e.g. MApp92, also noted the practicality of access at any time and anywhere, whilst MApp85 compared the language lessons to her previous experiences and ways of learning:

At home I have books, books, books, but...I read and don't understand...I don't know if it's the application, but I read and I want to read more, read more and learn it... it's not the same.

MApp87 also comments on the convenience of having it there when you want it: *'you don't know at exactly which moments you could need it, so then to have it on your mobile...'*

However, as noted below, some participants often waited until they were home to use the Forum. Neither did they all carry the phone around. For example, one

participant did not take the phone with her as she worried about losing it. Participants did not always have the time, nor was it convenient, to take up the suggested language lessons whilst out and about and so waited till they were back home. Another participant photographed an item of shopping in the supermarket in order to get a translation. However, other shoppers noticed and she decided it was not appropriate and gave up.

The Forum Postings

The Forum provided a virtual space where participants communicated with each other and with the facilitators by posting questions, comments and replies and discussing language, culture and the use of MApp tools and services. Data on the forum use is available both from the forum posts themselves and the interviews. The Forum supported written text only, and the default language setting was Spanish. All 1121 public posts (including those initially populating the discussion threads) were captured and translated into English.

The posts commented and reflected on the participants' experiences as shown in the examples below:

The English course is really good, what I'm doing is taking photos and going to the translation tool for the words I don't know.

Hello I reviewed the English tests again and it's interesting to me that I discovered and understood some of the same words when I go to the doctor's.

The English course is very good today I saw a new word...well at least I didn't know it: 'pupil'.

Supporting Personally Relevant and Practical Learning and Practice of Using Different Language Skills

As in the interviews, the forum posts reflected this theme and the Forum complemented the language lessons by providing a space for written practice, as MApp99 noted:

... one (thread) was for writing practice, ... something that also really caught my attention, at a personal level I have problems with my writing. I write... only in English that's what it comes to...one topic was practising writing exchanging opinions with different fellow participants

However, her strategy of only using English was unusual. Most participants were not confident enough to do this. The **Forum** posts also reveal more about the participants' emphasis on listening and pronunciation skills. MApp93 describes the features valued here in a language lesson on listening to tannoy announcements: *'the vocabulary part is brilliant since you have words separated from the classic messages from the big supermarkets...'*. She appreciates how chunks of everyday language are isolated in order to focus on how the spoken forms appear in writing, which is mystifying to a user whose L1 is phonetic. MApp80 reports that she is working on the transport section of the language lessons: *'and it's really good that these are the situations that you have to deal with day by day'*.

Participants also asked questions and checked their understanding of how the tools worked. e.g. MApp85 asked: *'How do I publish a photo in the Forum?'* However, only four posts asked for specific help in understanding or correcting language, e.g. MApp90 posted:

I take the bus from central MK to Westcroft. It takes me 20 mins... hello I'd like to know if this is written alright. Thank you

But despite valuing unsolicited peer and facilitator correction (*'thanks for the correction*

Mila, ... Mapp85 corrections help all of us' (MApp94)), the 'corrections' thread was very rarely used.

Supporting Social Learning via the Forum

The Forum was a source of support, motivation and confidence; for example MApp92 said that she did not know anyone before but felt they were people with the same needs as her so she could be more open and ask questions – and this in turn gave her confidence. Similarly MApp85 said *'It gave me relationships with other people'*; and MApp86 viewed herself as part of an online community: *'yes like a family, all your own people nearly all of us Latinos I think....'*

Participants also felt sufficiently at ease to talk to each other about their difficulties and mistakes, often with humour:

I was in the supermarket this weekend and I didn't know where the sausages were and I went up to an assistant and asked her 'excuse me where can I find the sausages?' and she took me to the sauces..ha ha ha ..of course I pronounced it badly...

whilst MApp88 shares her strategy for getting English speakers to slow down and for her to gain confidence (and see the next theme below):

The first thing I do is excuse my English and this helps me a lot because they don't start to speak super fast, they have more patience and I get enough confidence to throw myself in the ring and talk like a madman ... and then the English tell you that we speak better English than they do Spanish and this breaks the ice to give more confidence and do it bit by bit. I hope this helps some people ;)

Increasing Confidence: Motivating

A number of forum posts sought to reassure the person posting and help their confidence. For example, MApp85 posted: *'Unfortunately for me, no job. Because I*

can't speak the language I can't get any work' and received the following reply: *'Don't worry, Mapp85, the most important thing is to want to, I encourage you, you can do it ;).'*

In another post *'now with the English course I understand more about what the doctors are telling me,'* MApp89 quickly gets an encouraging reply: *'That's great!! The key is to practice a lot.'*

In the forum, participants also identify concrete language learning strategies, some of which emphasise listening and repeating. The following exchange exemplifies this tendency, referring to wanting to be perfect in the language learning app tests:

MApp82: *'I'm going to repeat and repeat until it comes out at 100%'*; MApp89: *'Yes me too, it is really nice and necessary'*.

Under the Learner's Control: Learning Anywhere, Anytime

The participants appreciated being able to use the smartphone wherever they went, although they did not always do this and they tended to use the forum at home, in the evening: *'at home to practice with my kids or at night when it's all calm'*; (MAp88); *'at home in my house because I had more time'*; (MAp90). Another issue was the connection: *'At home because I had connection problems'*.

The participants valued the shared experiences of this small community and interacting with and learning from each other. This reflects the intention for the forum: to provide a social space and peer rapport, and participants talked about using the forum in just these ways.

As noted earlier, the facilitator was a Spanish/English bilingual volunteer who helped to resolve any queries and technical issues that the participants encountered. Importantly, she also monitored the posts and often posed questions in the Forum and

encouraged participants to answer and to reflect on their learning. Many of the posts were in response to such questions so it is likely that the facilitators' presence, monitoring and 'seeding' of discussions was very important to the success of the forum

Discussion

The field study enabled us to gather some evidence of personally relevant contexts and to contribute to an understanding of the role of activity, time and place (Kukulska-Hulme, 2012). We have therefore used these three elements to frame the first part of the discussion. We also discuss the study's findings in relation to social justice and we note the limitations of our study.

Earlier in the paper we discussed the theoretical challenges proposed in the related field of distance education. Garrison's own theoretical model (Garrison 1989) placed the idea of control (the learner's opportunity to choose) at the centre of the learning-teaching transaction, along with learner proficiency and available support. Two of these issues are reflected in the themes that emerged from our thematic analysis; i.e. support (noted in our first and second themes) and our fourth theme, 'being under the learner's control'.

What Participants Did with the Tools (Activity)

The participants made good use of the language learning lessons and the Forum. The language lessons had been carefully designed to be relevant to the immigrants' practical and every day needs, and this was appreciated. Participants commented that they could use the lessons to prepare for particular situations or events such as conversations at the bank or with their doctor. The language lessons also provided 'templates' that they adapted and practised in order to use public transport. Most participants had done

formal courses but had not previously encountered this particular aspect. They were able to practise different language skills; in particular pronunciation and learning colloquial and appropriate English.

The Forum was important in complementing the language lessons and in providing a social space and a supportive community. Participants saw this as a space where they made friends (e.g. MApp85 said '*It gave me relationships with other people*') as well as learning about English culture, discussing the tools and encouraging each other. This was important in providing reassurance and helping them to build up confidence. Taken together the language learning tool and the forum motivated participants and helped their confidence to develop.

However, we should note that getting the Forum to work in this way took considerable resources and the facilitator and project researcher, who also acted as a facilitator at this point were important here. . We recognise that such resources are scarce. One potential way forward is to integrate something like MApp into ongoing/existing adult education provision. A start in this approach which provides an example of how it could work was made in the SALSA project where the small team were with adult educators who see the value of additional tools to supplement their face to face session with learning actions between class time (Gaved and Peasgood, 2017).

It is difficult to answer all the questions posed for the 'activity' dimension of Kukulska-Hulme's (2012) conceptual framework (see Fig. 1). However, we have good indications for some of the elements. Several participants found the language learning challenging and some tended to focus more on receptive skills such as listening than on practising language production. For example, earlier we saw that MApp 82 said she was going to '*repeat and repeat until it came out at 100%*'. However, having access to and

learning phrases for practical situations such as going on the bus – where the participant ‘*could simply change words like the destination...*’ was seen as easy. There was little indication of social use of the language lessons, (e.g. practising with other learners), but the forum provided good support that was very much appreciated.

Where and When Participants Used the Tools (Place and Time)

Whilst the mobility and practicality of the smartphone was appreciated it was not always convenient or appropriate to use it out and about, nor to engage with the language lessons on the move. In terms of place, participants did not necessarily use the smartphone in the context where it was potentially the most helpful (e.g. in the supermarket). Several participants referred to using forms of transport such as the bus and the train. To use the forum, most of the participants waited until they were at home, and had more time and a ‘calm’ environment.

It was envisaged that the MApp would be used while out and about in a city or town, rather than in other contexts such as during breaks at work or on a very long commute. Consequently, the places and times where it was used were not necessarily similar to the places and times chosen by the learners whose practices informed Kukulska-Hulme’s (2012) conceptual framework. MASELTOV field trial participants were being asked to consider how they might learn ‘in the city’, and for many of them this was a new experience. It would take longer than the duration of our trial to form new habits or routines incorporating this type of learning, or to recognize fully how it might fit in with personal moods and readiness for learning. Despite the appeal of an ‘anytime and anywhere’ device, there is increasing evidence that mobile language learning tools are often not used ‘on the go’, in public spaces, but in more private, specific environments such as at home (Gaved and Peasgood, 2017), on longer journeys

(by car, train, bus or bicycle) or at work (Kukulska-Hulme 2012). Learning while walking around a town or city, or catching public transport for short journeys, is predicated on very short learning episodes in complex and dynamic environments that stand in contrast to more sustained learning that is possible when it is woven into longer journeys and established routines.

Social justice and social inclusion

We believe that initiatives such as this can make a small contribution to the social justice agenda in terms of providing:

- Tools that give immigrants more opportunities to *participate* in society. In this paper we have discussed the forum and the language lessons. There were also other MApp tools that can play such a role and that are discussed elsewhere (for example the text lens and pedestrian sat nav – see Kukulska-Hulme et al., 2015).
- Support for the development of language skills, via the language lessons which can be empowering, and could make a difference.

However it is clear that social support is vital. Thus successful integration and progression would need more than an off-the-shelf app or a short term project such as the current one. It would need resources to provide such social support, via, e.g. mentors or volunteers taking facilitator type roles as in the MASELTOV project. For example one participant noted that he had no job as he had no language skills: *‘Unfortunately for me, no job. Because I can’t speak the language I can’t get any work’*. Such a comment emphasises the importance of language skills in being able to play a full role in society. Earlier we referred to Denman App’s study (Denman App, 2017) where participants wanted to be able to use vocabulary and colloquial language appropriately in specific

situations wanted support for language use in real-world contexts. Whilst there is no *direct* evidence of social inclusion, in the study reported here, participants did comment on how they were supported in learning and using appropriate language and vocabulary in every day contexts, which is likely to support social inclusion.

Limitations

There are a number of limitations to the study; some of which arise from the nature of the project and especially that such funded projects are short term and the resources provided are lost when the project ends. For such projects to have impact after the end of the funded period requires an open ended approach. Day and Cupidi (2004) referred to this as an initiative versus a project approach to innovations.

As noted earlier, the MASELTOV system collected data about participants' use of each tool within the Mapp. Although this data was made available to the research team after the field trial completed, initial explorations of the data set indicated that the resources required to analyse and process it were greater than the remaining project budget available. However, a limited analysis was carried out to confirm that participants' reports of their use of the tools were credible (results are reported in Schwarz et. al, 2015). Given a greater budget, it would have been useful to have carried out a detailed analysis of participants' patterns of usage of the MApp tools over space and time, to both inform the nature of the semi-structured interviews that were carried out, and to complement these interviews with visual representations of usage as recorded by the system.

The limited timescale of the project also curtailed the participatory involvement of people who will move on after the end of the stated commitment. Thus whilst we were able to operate our principles of user centred design and participant involvement throughout most of the project, we were not able to contact many of the participants in

the Milton Keynes trial once the project had ended and thus were not able to seek their comments and reflections on our interpretations.

Conclusions

A number of important themes emerge from the field trial. The MASELTOV field trials results show that the MApp was practical and relevant to immigrants' everyday lives, and included support not found in other courses or apps (e.g. in the areas of transport and health) and opportunities to practice. Language is still a significant challenge for migrants. The MApp also addressed some of the challenges identified in the migrant language learner literature such as that identified by Brooker, Lawrence and Dodd (2017) on supporting the understanding of different registers and varieties and accents in English (see also Demmans Epp 2017).

The MApp was used when appropriate and convenient, i.e. when participants had sufficient time, reliable internet connection and a suitable location, such as at home. The concept of anywhere anytime learning idea is not always borne out in practice (Demmans, 2017; Gaved and Peasgood, 2017). The importance of social and cultural factors is stressed by other researchers (e.g. Trosset, 1986; Kan and McCormick 2014), and was apparent in our trial.

It is the combination of the possibility of private study and practice in locations that learners find convenient (which might be at college or on the bus, or at home), together with the social aspect of the social forum, that makes for a powerful convergence. It allows learners a private space in which to practice and make mistakes and appears to address some known challenges, such as pronouncing words 'correctly', understanding local accents and understanding and using colloquial language which

includes contractions. Such support and practice was motivating and improved confidence. The social forum brought participants together and developed into a supportive and friendly community. Here they felt able to share their experiences and frustrations as well as reflections about what they have learnt, gained reassurance that some of their experiences and anxieties were shared by others and developed confidence.

Acknowledgements

The research leading to these results has received funding from the European Community's Seventh Framework Programme (FP7/2007-2013) under grant agreement no. 288587 MASELTOV.

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Table 1. How the themes applied to the participants across the interview and forum data

Figure 1. Dimensions of Time, Place and Activity (from Kukulska-Hulme 2012)

Figure 2: English Language Home Screen Interface of MApp Tools and Services

Figure 3: Sign captured in Translation Tool

Figure 4: Home screen for the language lessons

Participant	Theme Relevant and practical learning		Theme 2 Social learning		Theme 3 Increases confidence motivating		Theme 4 Under learner's control	
	Int	Forum	Int	Forum	Int	Forum	Int	Forum
MApp80*		✓						
MApp81	✓							
MApp82						✓		
MApp 84	✓		✓		✓		✓	
MApp 85	✓	✓		✓		✓		
MApp 86	✓			✓				
MApp 87	✓		✓		✓			
MApp 88	✓			✓			✓	✓
MApp 89	✓			✓		✓		
MApp 90	✓							✓
MApp 92	✓		✓	✓	✓		✓	
MApp93		✓						
MApp 94	✓	✓	✓		✓		✓	
MApp 94		✓						
MApp100	✓							

Table 1: How the themes applied to the participants across the interview and forum data.

(*note Mapp80 and Mapp99 did not participate in the final workshop interview)

Figure 1: Dimensions of Time, Place and Activity (from Kukulska-Hulme, 2012)

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Figure 4: Home screen for the language lessons