

# TOWARD A MOBILE OPEN AND SOCIAL LANGUAGE LEARNING PARADIGM

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## Introduction

With the widespread availability of broadband access to the Internet, the use of online multimodal learning resources has increased significantly. E-Learning has provided an opportunity for courses to be structured around these resources, together with communication tools like chats and forums. However, the great majority of these courses are run on "closed" institutional platforms, where general access is impossible. The Web has gradually evolved into a social infrastructure where most tools and services either have a component where users can engage in discussions or give their opinion, or provide links to the main social networks. The popularity of this infrastructure has led people to want to apply it to their learning needs. Gradually, online courses are beginning to move away from closed platforms onto open ones, where social interaction between the students has become a key element in the learning process. As awareness grows of the existence of such courses, the number of students taking them, or signing up to take them, has dramatically increased in the last decade. Hence, massive open social learning has become an educational phenomenon that is receiving a great deal of attention within the expert educational community (Kop, 2011).

The application of massive open social learning to the domain of languages has only just begun, and existing research highlights both successes and problems still to be solved (Barcena et al., 2015). One key problem here is that developing second language capabilities is not purely a knowledge-based process but one that requires considerable interaction with other (preferably, but not necessarily native) speakers. The opportunities for such communication in massive open social learning exist but are limited to the current nature of the learning design (which oscillates between very tightly controlled interaction related to a given task, which limits autonomous learners, or completely unstructured interaction, where less competent learners can easily feel lost or isolated) and the need for the learners to be sat in front of their computers.

Mobile technology is becoming a standard part of life and it has been estimated that by 2020, 80% of all adults in the world will carry some form of it around with them (Evans, 2014). Many people have mobile devices these days but do not have a computer, so the results of the research presented in this article will offer an opportunity for a very large number of people to learn a second language using mobile devices. Furthermore, potentiating the role of mobile devices helps to further blur the boundaries between standard online learning activities, i.e.,

digital learning, and what has been termed digital living (Read & Barcena, 2015). This refers to an increase in the flexibility of how people mix their learning with their everyday activities and highlights the benefits of this combined approach.

In the SWITCHED-ON project (The empoWerment of maSsive open socIal language learning through mobile TeCHnology: harnEssing interactions, transcenDing bOuNdaries), the authors are analysing the affordances of open social learning, in the widest sense, for second languages. This ongoing project is funded by the Spanish Ministry of Economy and Competitiveness (Programa Estatal de Fomento de la Investigación Científica y Técnica de Excelencia, Subprograma Estatal de Generación del Conocimiento; ref. no. FFI2016-80613-P). In this work, mobile technology (including MALL) is conceived to be not just a tool that can be used for undertaking certain tasks (in an unstructured and loosely controlled manner), but as the main way in which second language learners can interact and carry out their learning effectively (Barcena & Read, 2014; Barcena & Read, 2015; Read et al., 2015). The hypothesis underlying the work in this project is that given the complex, hectic and mobile nature of 21<sup>st</sup> century societies, open social language learning can take place with a backbone defined by mobile technology. This will represent a new paradigm that is both inclusive for a wider range of language learners than is the case with current open online courses, and is more effective, since it blurs the boundaries of everyday life with learning. It is envisaged that this will happen through the combination of mobile online interaction with integrated supportive MALL practices. In this article, an initial exploration of some of the issues related to the conceptual space of possibilities for such a paradigm are discussed as a step toward its formalisation in a systematic and controllable manner.

## Massive open social language learning through mobile technology

Open online courses have been around almost as long as the Internet itself, some of them with very large numbers of learners. However, it was not until 2008 that Dave Cormier actually explicitly used the term MOOC for a massive open online course (Cormier & Siemens, 2010). This educational modality attempts to promote free learning for a large number of people with a shared interest, by removing initial limits of access and attendance, and in some cases, offer credits and/or certificates at very low cost at the end of the course. It is not surprising, therefore, that despite the conflict of interests with the objectives of formal educational institutions and the many criticisms raised in the literature (Romeo, 2012; Jackson, 2013), MOOCs are having a significant impact upon the online educational community (with hundreds of thousands of people undertaking these courses).

MOOCs did not just appear from thin air as some new educational revolution, but represent a natural evolution of previous initiatives. One of the most important differences emerging in the literature is that between what are referred to as xMOOCs and cMOOCs. The former are similar to standard online courses but with larger student numbers. They represent the great majority of existing courses, since they are quite often launched as a continuation of previous e-Learning courses. The latter (connectivist MOOCs) are based upon principles of learning communities with users actively contributing content and constructing knowledge, where the

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key activities are remixing, repurposing and the co-creation and curation of content and interaction (Cormier & Siemens, 2010). xMOOCs promote participant diversity, in the sense of transmitting the same message to thousands, whereas cMOOCs focus more on diversity, with activities and resources developed and distributed in many different ways. The majority of MOOCs for languages (henceforth, LMOOCs) developed to date are xMOOCs, which arguably present a fundamental limitation related to the very nature of second language learning (henceforth, 2LL). Thus, if successful language learners are expected to assume a protagonist role in their own learning, on the basis that knowledge is can be self-constructed rather than transferred to learners, they require the opportunity to build strategies and connections that are significant for them at a given moment in time, in an *adaptive* manner. However, given the intrinsically social nature of verbal communication, negotiating meaning, engaging in group work, providing mutual assistance, and constructing and sharing new knowledge and skills collaboratively with others have all been widely praised in the 2LL literature (e.g. Warschauer & Kern, 2000). Although peers' production is bound to contain inaccuracies and the validity of their feedback, therefore, may not always be reliable, 2LL is no longer restricted to the idea of the continuous individual imitation of the model, 'flawless' performance of a single teacher (and/or set of materials). Nowadays, the ultimate objective of language learning is generally accepted to be proficient engagement in intelligible, empathic, and effective verbal performance, in a varied set of contexts and situations, with different types of interlocutors (Council of Europe, 2001). Therefore, the design approach used in effective open social language learning must contain cMOOC-like elements to provide the interactional degrees of freedom necessary for users to really develop their 2LL capabilities.

Previous experience of the authors with different types of LMOOCs have let us identify their potential problems, including the unmanageable size (e.g., how to provide feedback and scaffolding), problems of attributing authorship of assessment, and the high degree of student dropout (e.g. Read, 2014), among others. Furthermore, Barcena and Martín-Monje (2014) have discussed other potential difficulties, such as the changing role of teachers in LMOOCs (where they move away from being an instructor to being a facilitator, therefore not being able to directly interact in a personalised way with the large number of students present), the problem of how to provide effective feedback with such an unbalanced teacher-student ratio, and the difficulties of managing a heterogeneous student group composed of people with different levels of language communicative competences and learning digital literacy, styles and goals. There is also no clear business model. However, 2LL can be seen to be eminently practical and dynamic, and as such, falls in the middle of the scale of 'intrinsic MOOC suitability', since it is both skill-based and knowledge-based. This requires a network of capabilities (competences, skills and data) to be finely intertwined as learning progresses (Barcena, 2009). Such learning requires both cognitive involvement (using high-order mental skills) and social interaction (with more or less competent speakers of the target language) (Read et al., 2010). Experience gained so far is enabling the concept to be refined empirically, by focusing on what works best, in terms of factors like the average number of hours a course requires, the prototypical profile of the students, etc., as well as basic instructional design issues such as selecting suitable methodology and supporting technology (where options are available) (Martín-Monje et al., 2013). However, regardless of the conceptual and terminological confusion related to these courses, experience shows that they are popular with students, in terms of their numbers, course statistics and student/teacher satisfaction (Martín-Monje et al., 2013). Arguably, the popularity comes in part from the lack of associated cost and the flexibility of access and commitment that MOOCs offer. Unlike other initiatives related to OERs (Open Educational Resources), the essential learner-centeredness and social orientation of these courses are also generally found to be both stimulating and rewarding by the students. Formats are still being explored, intense CPD (Continuing Professional Development) being seen as optimal.

In LMOOCs, specifically, the quantitative factor, i.e. the potentially large numbers of learners, typically ensures sufficient critical mass to allow for varied input, lively forums, and rich peer interaction (e.g., plenty of linguistic issues to comment on, people to help out with queries), and even the possibility to distinguish more advanced students in gamified courses (where it is useful to provide them with additional monitoring roles [Barcena et al., 2015]). Hence, online social tools and platforms, if correctly structured and managed, can combine the best of both formal and informal learning to harness the possibilities for the development of 2LL competences, especially the productive and interactive ones. Therefore, open social language learning can be proposed in order to potentiate effective student interaction and enable them to communicate in the target language (with [non-]natives), using the same (meta-)cognitive strategies as they would in authentic communicative situations (e.g., reasoning, contrasting, enquiring, justifying, reflecting, etc.). This arguably requires the whole process to be structured and contain mechanisms that prevent the students from internalising erroneous language while providing some degree of flexibility and adaptability, and keeping motivational levels up. In order to provide such a design in effective open social language learning, reproducing a *standard* xMOOC would lack the proactive and interactive features necessary for developing second language competences. Yeager et al. (2013) identify four types of activities in cMOOCs that can increase proactivity on the part of the learners and facilitate interaction (which can be undertaken to some degree in the target language according to their level): aggregation/curation (gathering links to existing resources), remixing (producing new documentation, undertaking blogging, etc.), repurposing/constructivism (where users arguably build their own internal connections) and feeding forward (where new content, resources, summaries, etc., are shared with others). In this project, applying the complete cMOOC philosophy (of students freely exploring a large conceptual space of online resources and related social media in an almost *ad hoc* fashion, largely improvising activities as they go) is not seen to be the most effective way to gain competence in general in the target language. Once students have obtained basic structural foundations (vocabulary, grammar, pragmatics, social cultural knowledge, etc.), a progressively more communication-based approach is seen to be more appropriate for framing the learning (Knight, 2003).

Since the early 90s, mobile devices have increasingly become a part of everyday life. With the advent of the smartphone and the development of open mobile operating systems like Android, there has been a 'democratization' of such devices, and the associated lowering of

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costs means that an ever-growing sector of society now has access to such phones and perhaps tablets. It is not only the devices themselves that have improved with time, but also the underlying network technology that they use for communication. It is not surprising, therefore, that mobile data services can be obtained from telecommunications companies to offer access to the Internet when one of the ever-growing number of open Wi-Fi hotspots cannot be found. As Evans (2014) notes, "The world is mobile!", an assertion supported by data such as the 4-6 billion downloads of apps on iOS and Android devices, over 50 social messaging apps that have had more than a million downloads on Google Play, over 14 billion messages sent on WhatsApp a day, around 400 million photos shared on social networks each day, the fact that almost 70% of Facebook daily users connect from mobile devices, and the estimate mentioned above that by 2020, 80% of the world's adult population will have a smartphone. Given these data, it is easy to see the relevance that mobile devices have for learning. They represent an important step towards ubiquitous information and community access and, as such, contain great potential for the way in which online education can be undertaken, which users are beginning to explore. This is not a question of researchers trying to get learners into Web 2.0 environments from their mobile devices, because the learners can already see their benefits. This is a bottom-up revolution where the learners themselves are pushing the teachers to use technology, not the other way round. This change of habits reflects basic human behaviour: if we are used to using a tool for some purpose, and happy to do so, then we may try to use it for other purposes as well.

It is reasonable to expect that if people are studying something, or even already on a course, then they will try to use a mobile device to carry on with this activity when possible (Kukulska-Hulme et al, 2007; Pettit & Kukulska-Hulme, 2007). This premise is implicit in a great deal of the research being undertaken on mobile learning (henceforth, ML) and, specifically in the context of languages, in MALL. Crompton (2013) defined ML in general terms as "learning across multiple contexts, through social and content interactions, using personal electronic devices". Traxler (2005) defines ML as "any educational provision where the sole or dominant technologies are handheld or palmtop devices"; Kukulska-Hulme and Shield (2008) define it as "learning mediated via handheld devices" that is available flexibly, and may be either formal or informal. Specifically, in terms of MALL, they note the application of such devices for new types of 2LL, emphasizing continuity or spontaneity of access and interaction across different contexts. Since learners are using their mobile devices to access educational resources online anyway, then exploring the access of LMOOCs from these devices should be the next logical step.

Given the widespread adoption of mobile devices, it is just a question of time before most, if not all, major LMOOC providers prepare their courses and related tools for mobile delivery. Even MOOC platforms that do not support mobile access and use directly may actually offer content and resources than can be downloaded indirectly to a computer and then transferred to a mobile device. It should also be noted that given the wide range of mobile-compatible Web 2.0 tools that are available these days, it is questionable whether an actual MOOC platform is really required to offer massive open social language learning to students. The

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authors argue that mobile devices offer three affordances for open social language learning that can complement the learning experience. Firstly, as portable course clients, offering the learners context-free and context-sensitive access to their courses, thereby enabling them to continue their studies in a flexible way, making the most of the time and locations they have available as they move around every day. Such access will promote frequent interaction, and in the process, communication and collaboration. They do not need to wait to have a computer handy, but can check to see if, for example, some other learner has commented on something they have said in a forum or on some annotated recording they have made or curated from a given source of social media. Secondly, as mobile sensor-enabled devices, modern smartphones provide an enriched way for the learners to interact with the world around them, recording sounds and language, taking photos, obtaining geographical data, etc. Such interaction can complement standard online learning activities (e.g., find a certain type of object, take a photo of it, label the parts of the object in the photo and upload it to the course for your fellow learners to work with), and can also be used in immersive augmented reality learning scenarios, where language scaffolding can be provided just-in-time for real world interaction in the target language, and the results captured on the mobile device for later analysis in subsequent learning activities. Thirdly, modern mobile devices are powerful small handheld computers based around an extendable architecture of apps that can both provide general tools to be used to complement open social language learning, and specific MALL apps that can train language competences and be used either as part of a course or as some kind of complementary activity (Godwin-Jones, 2011).

Regarding the first of these three affordances, mobile devices as LMOOC clients, de Waard (2013) presents a comprehensive list of twenty strategies for improving interaction (not specifically for 2LL), when the learners connect from a mobile device. Since many of these strategies revolve around language use, particularly those related to the human learning environment, they are relevant for open social language learning, although not specifically for mobile access to a given course. Regarding the second affordance, as mobile sensor-enabled devices, for some time it has been argued that 2LL should be authentic or highly realistic (Kilickaya, 2004), based on real world situations and scenarios. Carrying around a modern smartphone is like the digital equivalent of a Swiss army knife; it is like carrying around a photo/video camera, an audio recorder, an eReader, an audio/video player, and so on. These functions are particularly useful for immersive 2LL experiences, where the learner finds him/herself in a country that uses the target language, since his/her target language use can be thus scaffolded in a just-in-time way by providing the necessary resources as and when needed. Regarding the third affordance, that mobile devices are powerful and extensible appbased small handheld computers, it can be noted that the different online app stores for the main mobile device operating systems, namely iOS and Android, have hundreds of apps that can be used, to a larger or smaller degree, for 2LL. It should be noted, however, that up until now, the impact of such apps on the development of the related language competences has been almost negligible. A problem with these apps is that although they could form part of a coordinated 2LL program, they are not currently used as such and lack the methodological framework that a skilled language teacher would provide. There is scope for such apps to be used as part of an LMOOC, since they provide another instance of how the learning experience can be moved out of the online environment.

It would appear to be the case that mobile open social language learning is, indeed, feasible and would improve the experience significantly. The authors' work in SWITCHED-ON aims at exploring the conceptual space of MALL and open social language learning and how the three affordances of mobile technology can empower their combination for large student numbers. However, regardless of the benefits of using mobile devices with such courses, to enrich the learning process and extend it into peoples' everyday lives away from the limited time they have access to desktop computers, it is still the case that mobile access is desired first and foremost because it reflects the way people live today, and will arguably facilitate the use of such courses for people who do not have access to other means. In the authors' experience, 2LL is most effective when a scaffolded spiral approach is used, moving people from teacherled to self-directed learning, and back again; combining an individual learning stage with subsequent social-constructivist ones (Barcena, 2009). In the case of LMOOCs, teachers are not typically present once the course starts to adapt the activities to the progress of the learner. Therefore, the paradigm developed in this project is intended to be applied to plot the possible learning paths of individual open social language learning courses and provide adequate and relevant scaffolding. Indeed, there are many ways in which learning scenarios can be structured to move people through the LMOOC, back and forth to and from the real world, using mobile technology, so further research is needed to explore and theorise about the space of possible conceptual designs.

## Conclusion

The emergence of MOOCs was as an important step forward in providing open education, including foreign languages, to the large number of people who, for diverse reasons, are not able to attend conventional taught classes or participate in closed online courses. However, given the current diversity of LMOOCs, the authors argue that it is more appropriate to be thinking in terms of open social language learning in general, since there are many different ways to harness existing technology to facilitate 2LL which includes but goes beyond the standard MOOC formats, and that the boundaries between what is a course and what is not, are not always so clear or relevant. The distinction between xMOOC and cMOOC will clearly play out differently on different classes of devices, e.g. mobile versus desktop, owing to differences in their technical affordances and their social context, and the assumption that cMOOCs require a dedicated delivery technology may be premature. If MALL is the application of mobile technology for language learning, then given the potential of such technology to increase both the access of people to 2LL and also provide them with complementary tools, we can begin to define and explore the concept of mobile open social language learning and its research validity. It has been argued here that mobile devices complement open social language learning as portable course clients, portable sensor-enabled devices, and app platforms. To the best of the authors' knowledge, only incipient work has been done until now to apply mobile devices to specific tasks within online courses but no systematic analysis has been undertaken with a view to specifying a 2LL paradigm. In the SWITCHED-ON project, the authors are studying the general affordances of mobile devices for open social language learning, using the arguments presented here as a starting point, to characterise a novel paradigm for 21<sup>st</sup> century second language learning.

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