MALL: Global Prospects and Local Implementation

Jack Burston (jack.burston@cut.ac.cy)
Cyprus University of Technology, Cyprus

Abstract

This paper focuses on the global prospects and local implementation of Mobile-Assisted Language Learning (MALL). From a global perspective, it considers how MALL has been implemented around the world up to now and how this can be improved in the future by addressing two main challenges facing the effective integration of MALL into the foreign language curriculum: technology access and pedagogical methodology. It is shown that, owing to the ubiquitous ownership of mobile devices, it is now feasible to resolve the challenge of technology access through a Bring Your Own Device (BYOD) approach to MALL.

Likewise it is shown how a constructivist, collaborative, learner-centered teaching approach can provide a solid pedagogical foundation for the effective exploitation of MALL. From the perspective of local implementations, the paper addresses the very practical question of how instructors can integrate BYOD MALL into their own curriculum.

Keywords: MALL, BYOD, implementation, mobile devices, infrastructure

MALL: Global Prospects

To understand MALL it is necessary to first situate it within the broader context of CALL, of which it represents the most recent evolution both technologically and pedagogically. Like CALL before it, predictions have regularly been made about the revolutionary effect that MALL would have upon language learning (McQuillan, 2006: 1; Fallahkhair, Pemberton & Griffith, 2007: 313; Cavus & Ibrahim, 2008:38; Meurant, 2010: 193; Farr & Murray, 2016:1). Likewise, the integration of MALL into the foreign language curriculum has long since been heralded as a *fait accompli* (Abdous, Camarena, & Facer, 2009:76). Notwithstanding, such predictions and claims about MALL are premature to say the least. It must be said that CALL practitioners tend to overestimate the extent to which instructional technology influences language teaching. In reality, CALL remains peripheral to the great majority of language programs around the world. Where they are available, information and communication technologies are frequently used to provide learners with multimedia language related resources (audio, video, images, documents) and, to a lesser extent, to support learner interaction (blogs, wikis, discussion forums). However, even in the most technologically developed countries, it is rare to find language programs that exploit the potential of CALL in any extensive, let alone revolutionary, way.

The exploitation of MALL to date has very much paralleled that of CALL during its first 20 years. MALL has focused primarily upon vocabulary and grammar learning based on very traditional behaviorist and structuralist teaching approaches (Burston, 2014). Even today, though they may be disguised as games and enhanced with sound and images, this is true of the myriad commercial mobile apps for foreign language learning (Kim & Kwon, 2012:52).

MALL remains very much within the domain of early adopters both in terms of research and practical application. Of the over 1400 papers published in the four most prominent CALL journals (*CALICO*, *CALL Journal*, *Language Learning & Technology*, *ReCALL*) in the last 20 years, only 55 (i.e., less than 4%) have involved MALL. The marginality of MALL is equally reflected in the recently

published *Routledge Handbook of Language Learning and Technology* (Farr & Murray, 2016). In this comprehensive overview of foreign language instructional technology only one paper out of 38, 11 pages out of 570 (i.e., 2%), deals with MALL.

The penetration of MALL into the foreign language curriculum is even more marginal than is the case of CALL. As Burston (2013) demonstrated in a study of some 300 journal articles going back to 1994, only about a third of all MALL projects have actually formed part of a course curriculum and nearly all of these as a voluntary complement. The remainder were all research related (Figure1).

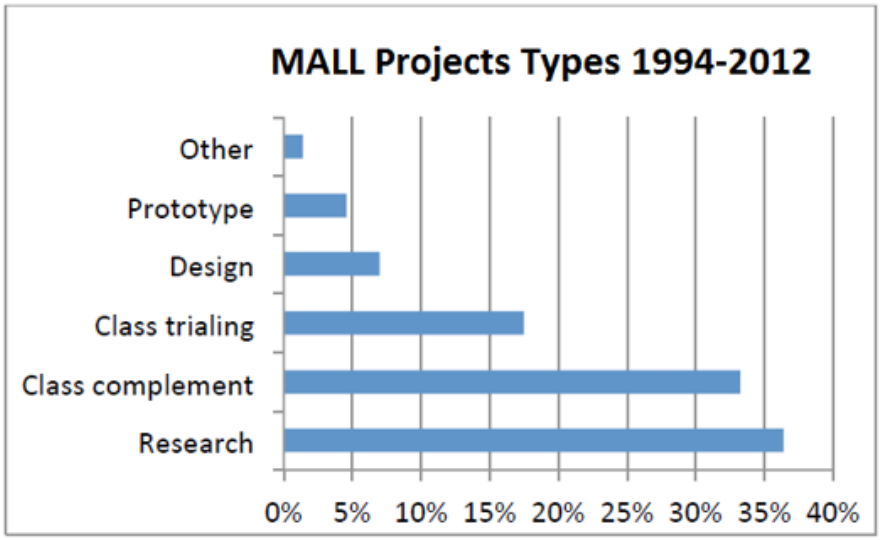

Figure 1 (Burston, 2013)

Though less revolutionary than what its most enthusiastic proponents would have us believe, MALL unquestionably has the potential to significantly influence the teaching and learning of foreign languages. It has, however, failed to realize this potential for a number of reasons. The most fundamental of these is the disconnection between technology and pedagogy. Although it is a widely repeated truism that computer-based applications are only as good as their underlying pedagogy, as happened in the early days of CALL, MALL has been almost entirely technology-driven up to now. According to Burston (2013), the vast majority of published MALL implementation projects have lasted only long enough to see what the technology could do (Figure2).

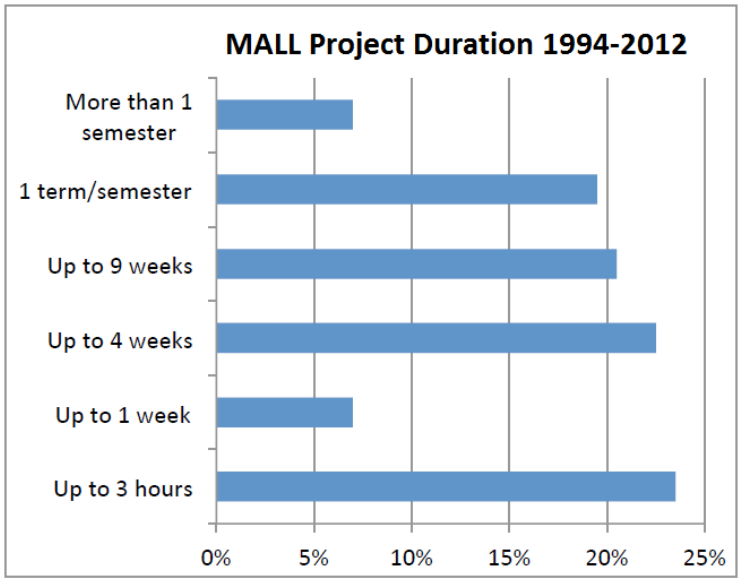

Figure 2 (Burston, 2013)

In 30% of the cases the duration was a week or less, with three-quarters of these lasting no more than three hours. Given their technocentricity, and limited focus on vocabulary and grammar, not surprisingly very few MALL implementations have engaged students in interactive, communicative, language learning activities. In particular, the interpersonal communication functionality of mobile phones has gone virtually unexploited.

Though very much the exception, and quite recent, there have however been a few innovative projects that illustrate what can be achieved when the exploitation of mobile devices takes place within a solid pedagogical framework. The MASELTOV project (Paletta, Dunwell, Gaved, Bobeth, Efremidis, Luley, Kukulska-Hulme, de Freitas, Lameras, & Deutsch, 2013), for example, seeks to exploit mobile-accessible social network services to support the informal English language learning and social integration of new immigrants to the UK as part of their real-world daily activities. Similarly, the Mentira project (Holden & Sykes 2011, 2012) takes university students of Spanish out of the classroom into an Augmented Reality environment using their iPods (and later iPhones) to collaboratively solve a murder mystery.

Most notably, Tai (2012) has shown that, when grounded upon second language acquisition principles and pedagogically well implemented, MALL can support very innovative and effective language learning even with primary school pupils. This Taiwanese study involved 35 sixth-graders, working in groups of between three and four, who were set the task of helping to solve an imaginary museum burglary. Their job was to assist international agents who could only communicate in English. Learners used smartphones as part of a classroom response system to prepare for an out-of-class task (going to the scene of an imaginary burglary to track down the culprit) in which they used their GPS-equipped devices to collect and share Internet-based data and communicate with each other and their teacher to obtain information and guidance. Subtasks were distributed according to the mode of communication, a caller, an SMS reporter, a secretary for recording and requesting help. On their return to class, learners reviewed and compared the resources they collected and discussed their solutions, all in English of course.

In sum, as the MASELTOV, Mentira and Tai's project demonstrate, much more innovative and effective foreign language learning can be achieved with mobile instructional technologies than has been the case up to now. What then is the future of MALL? Predicting the future is risky business, and none more so than when technology is involved. Notwithstanding, it is still possible to foresee with relative certainty the path that MALL is likely to take in the near term, i.e., the next five years. To progress, MALL needs to address two main challenges facing its effective integration into the foreign language curriculum: technology access and pedagogical methodology.

Technology Access

Since its inception, MALL has been seriously hampered by a lack of access to suitable technology. Initially, this was because of the limitations of mobile-based technologies. Not much could be done with the PDAs and mobile phones of yesteryear. But even though mobile technology has improved by leaps and bounds, its cost has remained prohibitive for all but a minority of language teachers. With one or two very recent exceptions, such as the MASELTOV and Mentira projects, any MALL application that has gone beyond the use of SMS on basic mobile phones has had to provide learners with the necessary hardware. The ubiquitous ownership of smartphones and, increasingly, tablet computers worldwide has the potential to remove the obstacle of mobile technology access. Owning a smartphone (and increasingly a tablet computer) is very much more the rule than the exception. In developed countries, over half the adult population already owns a smartphone. Western Europe in

particular has one of the highest smartphone adoption rates in the world (O'Neill, 2015). In the US, some 85% of 18-29 year olds are smartphone owners (Pew Research Center, 2015). According to the latest predictions, it is estimated that by 2020 worldwide 98% of all mobile phones sold will be smartphones (ibnlive.com, 2016). In fact, the ownership of smartphones and tablet computers among the senior student and teacher population has already reached the point where it is feasible to resolve the challenge of technology access by implementing a BYOD, that is to say Bring Your Own Device, approach to Mobile-Assisted Language Learning.

In reality, BYOD is not in the future at all, but is already very much part of current foreign language instructional technology. Every major digital language lab producer, SANS, SANAKO, ReLANPro, Robotel, XCLASS, Schoolshape, etc. now markets a version of their product that is accessible to Apple and/or Android smartphones and tablets. As educational institutions replace their aging labs, desktop installations are bound to give way to mobile devices for very good financial and pedagogical reasons. Firstly, it is much more cost effective to invest in wireless networks and exploit the potential of the mobile devices which learners are already buying, maintaining and replacing themselves. So, too, the use of mobile devices allows any classroom with wireless network access to take on the functions of a language lab when required, thereby reducing if not altogether eliminating, the need for such facilities. Even in situations, such as primary schools, where learners themselves cannot be expected to provide their own mobile devices, their acquisition for in-class usage is far less costly than that of desktop computer equipment. Above all, the use of BYOD mobile devices allows pedagogical activities to extend beyond the classroom, virtually anywhere, anytime.

Needless to say, digital language labs have their costs, which many institutions – especially in the public sector – cannot afford. For those that can, going mobile is no more expensive than traditional desktop lab installations and students are usually provided the mobile apps at no cost. Moreover, some producers make entry level versions of their systems available for free[1].

Pedagogical Methodology

While BYOD MALL implementations can, and undoubtedly will, overcome the challenge of technology access, pedagogical methodology remains a critical factor in the successful implementation of MALL. As the previous examples of innovative MALL projects attest, the effective exploitation of mobile technologies has to be firmly grounded in learning theory in general and second language acquisition principles in particular. Student activities need to be constuctive, collaborative, learner-centered and task-based, and require communicative linguistic interaction to complete. No less importantly, they need to engage the learners' creativity. When these elements are in place, mobile-based learning can be very effective, highly motivating and even fun to undertake.

MALL: Local Implementation

In theory, coupled with innovative, communicative, pedagogical methodologies, a BYOD implementation MALL will allow it to come in from the fringes and realize its enormous potential as an integrated, effective tool in the foreign language curriculum. In practice, however, how can BYOD MALL be realized within the real-world constraints that most, if not all, language teachers have to face? How can the transition be made from global potential to local implementation?

The most convincing answer to this question is perhaps best approached with some concrete examples that assume a worst case scenario: an instructor who teaches in a school system with no money to spend on technology, only minimal technical support, if any, and perhaps lacking even wireless networking facilities. That's pretty bad, but unfortunately not uncommon. But also very likely to be

the case, at least if teaching at the high school level or above, virtually all students will have smartphones and/or tablet computers of their own. Even within such a challenging technological environment, very effective BYOD use can be made of mobile devices to support foreign language learning.

First of all, an instructor can get started by taking advantage of one of the free digital lab systems mentioned previously. This will allow the creation of lessons based on audio and video sources, which students can access on their mobile devices wherever an Internet connection is available. By the very nature of digital lab programs, these lessons will admittedly be teacher centered and involve vocabulary and grammar exercises as well as listening comprehension activities. This in itself is not a problem, in fact it is a necessary part of language instruction. The problem comes in limiting the exploitation of MALL to such activities, which need to go further and prepare the linguistic skills and furnish the background information related to task-based assignments that necessitate the collaborative use of the target language to accomplish. Working in small groups – inside or outside of class – students can use their own mobile devices to communicate with each other as needed via phone, SMS, MMS, *Skype*, *Twitter*, *WhatsApp*, whatever meets their needs. Using mobile technology in this way can not only take instruction out of the classroom but bring language learning into the real world.

Real-world language activities can make use of student mobile devices to create personal artifacts linked to assigned tasks. For instance, a great variety of activities can engage students in using their mobile devices to take task-related pictures (Wong, Song, Chai & Zhan, 2011). Students could be told they have a certain amount of money to spend on a wedding or birthday gift for a friend, then go off on their own to some shops, take pictures of possible choices, share their photos and collectively decide which gift they prefer. Alternatively, a class might be told to imagine that a student from a target-language country was going to spend two weeks with them and that they need to take pictures of places to go and see in their town and use these to prepare a guidebook which they would share with the class. Another idea would be for students to work together in small groups to take pictures of places and things that other groups would have to identify.

While such BYOD MALL activities by design require out-of-class student interaction, how much of this actually takes place in the target language depends very much upon the L2 linguistic competence of learners. Whatever the competence level, to ensure that the target language is being used, it is essential that discussions relating to assigned tasks also take place in class. Collaborative assignments need first to be discussed by students to decide details and allocate responsibilities. The results of outside activities also have to be brought back to the classroom for subsequent discussion and finalization of projects. This oral activity can then be turned into a written exercise, with each group explaining what they photographed and the reasons for their final choice. Picture-based tasks are adaptable to any language proficiency level. So, too, they are limited only by the imagination of the instructor, and indeed the students themselves.

Audio and video recordings made with student mobile devices likewise lend themselves well to effective language learning activities. This could be as simple as audio recording the reading of a text out loud and comparing this to a model for pronunciation practice (Papadima-Sophocleous & Charalambous, 2014). Students could similarly use their audio recorders to practice dialogues which they perform in class. Video recordings could just as readily be made of skits that students prepare and practice beforehand for instructor feedback (Leis, Tohei & Cooke, 2015). Recorded interviews, audio or video, are real-world activities that students can profitably undertake with their mobile devices. As with picture-based tasks, the audio-video artifacts created by students provide the substance for the subsequent collaborative use of the target language and follow-up written and oral activities. So, too,

the language level and topics of such tasks can be easily adapted to the linguistic proficiency and personal interests of students.

The GPS functionality of student mobile devices can similarly be exploited for language learning purposes. For example, students can be assigned the task of providing directions for getting from their home to some point of interest, the airport for instance. Treasure hunts, known as geocaching, are another good way that mobile device GPS systems can be exploited in language learning activities (Freiermutha, 2015). As with all these mobile-assisted activities, the basic principle is to link them to tasks that students have to prepare and complete through the collaborative, interactive, use of the target language.

Provided students have their own mobile devices, MALL can be innovatively and effectively implemented even in the absence of institutional technical support. Being able to teach in a wireless networked environment, which if not already a reality certainly should be in the foreseeable future, allows even greater exploitation of mobile technologies. Most notably, the vast resources of the Internet, including the work of students themselves, can be accessed and shared at any time by teachers and students alike. Likewise, Internet access opens the door for communication with remote native speakers, for example, via small group tele-collaborative exchanges.

Practical Considerations

While, hopefully, the above examples of BYOD MALL implementations demonstrate their feasibility even in the most technologically restricted environments, there remain some very basic practical considerations which also need to be taken into account. Some schools flatly prohibit the student-use of mobile phones on campus. There are very good reasons for this as they can be very disruptive. No teacher wants students to be texting or playing games in class. Disruptive technology, however, is nothing new in the classroom. Students have been sneaking notes back and forth in class for as long as there have been pencils and paper to allow them to do so. Yet schools do not forbid students to use paper and pencils on campus. Instructors who find themselves in a situation where the student-use of mobile phones is banned need to talk to the powers-that-be about relaxing this restriction to allow the pedagogical use of mobile devices in class and on campus.

Engaging in BYOD MALL is time-consuming. It requires of the teacher considerable preparation to scaffold task-based assignments and integrate them into the curriculum with follow-up communicative language activities. So, too, the implementation of task-based activities requires that substantial class time be devoted to student discussions. Student-centered classroom discussion, however, is time well spent since it engages learners in negotiation of form and meaning activities that are essential to language acquisition (Gass, 1997; Lyster & Ranta, 1997).

The logistics of disseminating digital resources to students, of collecting, sharing and returning their work also requires special attention. There is, however, a freely available solution to this challenge and that is to create a class-based Google Drive (Gdrive). With Gdrive, commonly shared folders can be set up for students and instructors to store all their digital materials. Being cloud-based, these are then accessible anytime/anywhere from any device, desktop, laptop, netbook, tablet, smartphone.

Given the considerable requirements of BYOD MALL implementations, it is advisable to start with a simple mobile-assisted activity, such as a picture-based or audio recording-based task, and gradually progress to more ambitious and challenging projects. Lastly, teachers, no less than students, learn best

through social interaction. Two heads are better than one. When setting off in the direction of BYOD MALL, working collaboratively with colleagues is strongly recommended.

<Note>

[1] ReLANpro (www.relanpro.com) offers a free license in North America and Europe for their mobile BYOLL (Bring Your Own Language Lab) system for one instructor and up to 29 students per school. Schoolshape (www.schoolshape.com) gives worldwide free access to its basic Learning Platform with no restriction on the number of instructors or student users.

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