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# Mall and Augmented Reality

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**Abstract**
The use of mobile technology at anytime and anywhere by learners makes it a very important component of language learning. The rapid progress of Mobile Assisted Language Learning (MALL) has also brought visible changes in foreign language learners' attitudes towards language learning (Kukulska-Hulme, 2009). MALL offers great potential for language teachers to support practice beyond the classroom to encourage anytime -anywhere learning and to facilitate situated learning. On the other hand, Augmented Reality (AR) is a kind of computer-generated reality that intent to duplicate the world's atmosphere in a computer system. Augmented Reality helps teachers to add digital contents with lot of information as well as geographic locations about a place or object. Digital information appears on the screen when you scan any object or place using your tablet, phone or smart devices with AR technology. This digital information is gathered from 3D models, various website, video, etc. The aim of this paper is to explain how mobile technologies and devices can be used via AR to improve young learners' language skills in an interesting, motivating and challenging way. Some practical implications will be drawn for language teaching and some suggestions will be offered for other teachers who may wish to use AR or other mobile learning activities with their students.

**Key words**: mobile assisted language learning, augmented reality, young learners, technology

## Introduction

MALL is gaining popularity as it is integrated into the foreign language curriculum, providing new learning tools to the ‘‘net generation’’ (Oblinger&Oblinger, 2005). For this new generation of students who have been encouraged to ‘‘to take control of what they learn’’ (KukulskaHulme& Shield, 2007) MALL, and particularly podcasting, can play a key role by providing them with instructional materials and low-cost tools as they work toward developing language proficiency.

The use of mobile technology at anytime and anywhere by learners makes it a very important component of language learning. The rapid progress of Mobile Assisted Language Learning (MALL) has also brought huge transformation in foreign language learners'

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attitudes towards language learning (Kukulska-Hulme, 2009). MALL offers great potential for language teachers to support practice beyond the classroom to encourage anytime-anywhere learning and to facilitate situated learning. Mobile technology can help extend learner opportunities in meaningful ways (Thornton & Houser, 2005). It is worth mentioning that mobile technology has had a great influence on the implementation of some techniques and methods of foreign language teaching. In this regard, several studies have been conducted and they have all proved the positive impacts of mobile technology on learners' progress. Through MALL, foreign language teaching has had various contributions to teach and practice vocabulary (Lu, 2008), to practice idioms (Thornton & Houser, 2005), to develop writing proficiency, to practice listening skill (Edirisingha et al., 2007), and to practice the target language pronunciation (Ducate&Lomicka, 2009). As can be noticed above, mobile technology needs to be implemented appropriately considering the fact that if a mobile technology or device becomes popular, it is worth exploring for possible application to language learning (Tai & Ting, 2011).

On the other hand, Augmented Reality (AR) is a kind of computer-generated reality that intents to duplicate the world's atmosphere in a computer system (http://edtechreview.in/trends-insights/insights/1210-how-to-use-augmented-reality-in-the-classroom). Augmented reality helps teachers to add digital contents with lot of information that appears on the screen when you scan any object or place using your tablet, phone or smart devices. This digital information is gathered from 3D models, various websites, videos, materials, etc.

AR-based mobile learning material helps engage learners in numerous learning activities. Liu & Tsai (2013) investigated the use of augmented reality materials to develop writing skills in EFL classes. Teachers can use activities with AR to encourage learners to practice their language skills outside the classroom and to share information with other learners and the wider community. Some exciting projects and studies have been carried out (Holden & Sykes 2011), but so far the potential of AR for mainstream language education is only just starting to be explored.

### *Implementing mobile learning into education*

Mobile learning offers great potential for language teachers to support education beyond the classroom, to encourage anytime-anywhere learning and to facilitate blended learning. Using mobile devices as learning tools is not just teaching via small, mobile devices. New mobile and context-aware technology can enable people to learn by exploring their world, in continual communication with and through technology (Hashemi&Ghasemi, 2011). Mobile technology can enable conversations between learners in real and virtual worlds, such as between visitors to a museum, and visitors to its virtual counterpart. Mobile learning offers a way to extend the support of learning outside the classroom, to the conversations and interactions of everyday life (Sharples, 2005).

Many educators are. Klopfer (2008: pp.1-18), considering the benefits of mobile technologies for learning, identified five essential key characteristics of mobile technologies:

1.Portability
2.Social interactivity
3. Context sensitivity
4.Connectivity to other devices

5.Individuality

In some situations, face-to-face teaching will be quite limited for many learners and they need more time and opportunities to interact and be exposed to the target language (Soliman, 2014). In order to compensate this gap and supplement the EFL face-to-face class, mobile learning or e-learning might be used (Soleiman, İsmail &Mustaffa, 2014). In addition, using real world resources for teaching and learning in the classroom can make education more meaningful and relevant to the students.

***How to use Augmented Reality in the classroom***

AR is a type of mobile application that allows users to overlay the physical world with digital information, for example by attaching pictures, text and audio or video (Lakarnchua&Reinders, 2014). These can be added to particular real-world objects and locations and become available for others to use when using an AR app on their phones. Augmented reality can be best used in the classroom for creating interactive assignments. Here are some of the possible uses of augmented reality in the classrooms (http://edtechreview.in/trends-insights/insights/1210-how-to-use-augmented-reality-in-the-classroom).

1. **Homework**: When scan the student homework page; they can see the video of their teachers assisting them in solving a problem.
2. **Photo Wall**: Display the photographs of the faculty or teacher at the display board. Students can scan the image and get all the information related to their teacher. It helps them to know about their teachers well.
3. **Book Review**: By scanning the cover image of a particular book, students can get the overview of that particular book.
4. **Deaf Students**: Using AR technology flashcard of vocabulary, students can see the video of that demonstrates how to sign a phrase or word.

The potential power of AR as a learning tool is its ability "to enable students to see the world around them in new ways and engage with realistic issues in a context with which the students are already connected" (Klopfer& Sheldon, 2010, p. 86). These two forms of AR (location-aware and vision-based) leverage several smartphone capabilities such as GPS, camera, object recognition and tracking to create "immersive" learning experiences within the physical environment, providing educators with a novel and potentially transformative tool for teaching and learning (Azuma, Baillot, Behringer, Feiner, Julier, &MacIntyre, 2001; Johnson, Smith, Willis, Levine, & Haywood, 2011).

***Implementing of AR in language classrooms via mobile devices***

There are lots of softwares, websites and applications which provide teachers, educators and instructors to implement the AR materials into their courses. Most of these applications work with mobile phones, tablets, and computers. Here, some examples of AR technology will be handled and explained:

*1. AR Flashcards*

This application uses augmented reality to engage the students in learning letters in the alphabet or colors and shapes, etc. Highly recommended for early childhood educators and parents. AR Flashcards are a new way to interact and make Flashcards more entertaining for toddlers and preschoolers. With AR Flashcards, learning will be fun. When you point your mobile phone or tablet pc at the printed flashcard a beautifully rendered 3D animal will pop up on the screen. When you tap the animal, you will hear the letter and animal name (http://arflashcards.com/). This application is effective for young learners to practice and learn English sounds, colors and shapes.

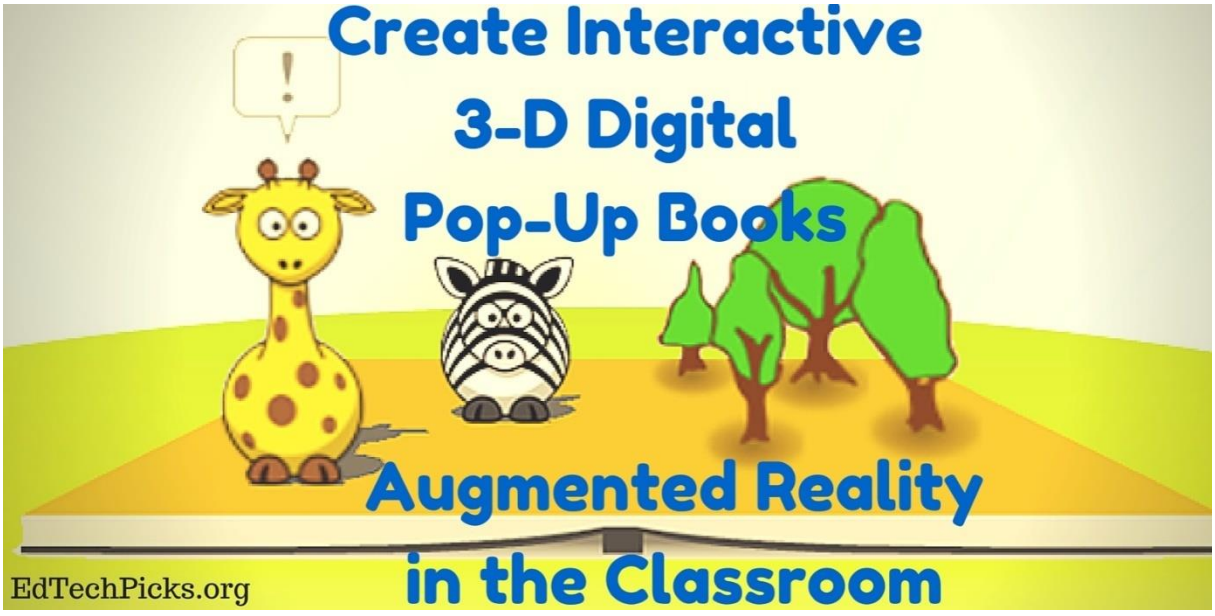


*2. Quiver: Coloring pages*

This website provides a number of coloring pages. You can print those pages and color them. By using the Quiver application on your mobile devices, you will bring the pages into life (http://www.quivervision.com/). This application can be used for improving and practicing writing and speaking skills.


*3. Zooburst*

ZooBurst is a digital storytelling tool that lets anyone easily create his or her own 3D pop-up books. Using ZooBurst, storytellers of any age can create their own rich worlds in which their stories can come to life. ZooBurst books "live" online and can be experienced on your desktop or laptop computer, or on your tablets via the free ZooBurst mobile app. Authors can arrange characters and props within a 3D world that can be customized using uploaded artwork or items (http://www.zooburst.com/ ).




*4. Aurasma*

Aurasma is a popular tool for creating and exploring AR experiences. The Aurasma application works with triggers that teachers, educators, instructors and students create on the web with Aurasma Studio. Uploading trigger images depending upon their choices and

adding videos will be used to make their very own augmented reality experience (https://www.edutopia.org/blog/ar-apps-for-student-learning-monica-burns).

*5. Blippar*

It is an AR creation tool that has been integrated with different educational experiences. Blippar is used with Brainspace magazine. By scanning the Brainspace cover and inside pages, you can see the interactive content that brings the two-dimensional presentation to life. It can completely transform kids' reading experience by pushing them to think more deeply and explore a topic in a new way (https://www.edutopia.org/blog/ar-apps-for-student-learning-monica-burns).

## Conclusion

MALL is available through various technological devices including mobile phones, smart phones, tablets, computers, PDAs, MP3 players, and more. Most of the educators, instructors and teachers who are designing MALL Educational materials is also on the rise. Nowadays, MALL is not only one of the main source of language education for students, but also helps the learning and utilization of newly-learnt language skills. Through mobile participation in short exercises and tasks, learners are able to keep their linguistic talents fresh while reducing the risk of degradation of valuable knowledge, skills and abilities (Hashemi&Ghasami, 2011). Mobile phones can provide teachers and educators a rich learning environment for their learners. Various researches suggest that speaking, listening skills and writing can be successfully done by mobile phone capabilities. In addition, vocabulary retention and practice can be achieved.

Implementing of AR via mobile devices, on the other hand, will provide a number of opportunities to the learners. For example, better understanding, motivation, retaining more knowledge for a long time, thinking critically, inspiring the future endeavors, etc. In brief, AR has great potentials in education, especially in language learning. A new era can be created by its integration with mobile learning and technology.

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