**The implementation of Augmented Reality Technology in English classes**

Motivation is the most important part in childhood education. Many schools have invested a lot in information technology with the hope that it will create some motivation in learning but there is no significant proof that it worked. Augmented Reality may be the answer, since it provides children to interact with virtual object while still in the real world environment. In this research, we have created 3 AR experiments to prove the concept that AR can motivate children in learning English. These AR experiments will concentrate on writing, reading and conversation. Different AR techniques were used for this purpose i.e. marker-marker interaction and user-defined target.

One of the main aims in Foreign Language Teaching is to actualize natural and entertaining educational environment. Foreign Language Teaching Activities should stress on motivational goals furthering interests and motivation of learners and minimizing their anxiety in language teaching activities. So as to adopt that, these activities should be designed to incite students‟ interests, curiosity and include some diverse alternatives from school textbooks to handheld technological devices and other electronic appliances. The alternatives for educational purposes may multiply in results of innovations and individual‟s access to technologies in surrounding educational environment. For the purpose, application of technological innovations and handheld technological devices should bridge the gap between real world and virtual world. In the study, a technological innovation called “Augmented Reality (AR)” is applied. The purpose of the study is to determine attitudes of learners towards AR Application which enables learners to improve their listening skills and promote the motivation towards listening acitivities by using smart phones and tablets. The study focuses on AR assisted learning with listening acitivities in school textbooks. Data were collected from 60 students in a secondary school by using 15 items of the “Augmented Reality Applications Attitude Scale In Secondary Schools” scale. For this AR educational application, three English Language teachers‟ opinions were consulted. It is assumed that the prototype of the AR educational system will enlarge students‟ motivation towards listening activities and listening competence and pave the way for a new teaching activity assisted with AR technology in foreign language teaching by shifting time and place of education and learning.

**Keywords:** English learning, augmented reality, language teaching.

In foreign language teaching, it is imperative to form natural and entertaining educational environment that can promote learners‟ motivation, arouse learners‟ interest, and encourage them to learn foreign language. The activities and educational environment need to be created in such a way that can draw attention of students, increase the motivation and confidence of learners to learn English as a foreign language; conversely, limit negative emotions such anxiety and fear as (Musa, Lie, & Azman, 2012; Yang, Chen, & Jeng, 2010). There is an interrelationship between success and motivation. Some studies conducted before have demonstrated that increasing of motivation facilitated language learning process dramatically (Littlewood, 2001). The various English programs on foreign language teaching have ignored attitudes factors involving motivation and interest and other factors for years. Of the most significant absence is to give enough opportunities to practice English out of the class; that is, in a real circumstances. That’s way the technological applications handheld, wireless, smart phones, tablets have been tested in language teaching and different areas lately to curb the limitations mentioned above (Liu, Tan, & Chu, 2010). With usage of AR application, English teaching has enhances outcomes, motivation and interest of learners, and provide amusing and productive learning system by shifting concept of timing and location of language learning and mainly improve four skills-reading, listening, speaking and writing. Augmented Reality systems can be defined as those that allow real and virtual objects to coexist in the same space and be interacted with in real time (Azuma, 1997).

Yang (2011) maintains that the best way for learning a foreign language is to stay in the community where the target language is spoken for a longer time, collaborating with its cultural surroundings. However, this is not feasible for many language learners due to time and financial restraints. Therefore, authenticity can be provided via AR technology by introducing real-life into the language classroom. Although AR technology has been practiced in many branches of education such as physics, chemistry, mathematics, geometry, health, history and geography, current literature proves that it has been rarely studied in both theoretical and practical basis in foreign language teaching, especially teaching of English, which is considered lingua franca in the world. Considering the advantages of AR technology in education, using this technological tool might contribute a lot to foreign language teaching field in many aspects. Therefore, the purpose of this research is to inform about some of the current applications and literature on AR technology in education and present experimental data about the effectiveness of AR application in language classroom at the elementary level in Turkey. The results of the study can provide pedagogical implications about the effectiveness of this recent technology on English language teaching area, particularly teaching new vocabulary items in the target language, which is one of the essentials of language learning.

El Seyad et al. (2011) state that studies on AR technology mainly focused on the development, usability, and technologies. Wu et al. (2013) found the research method of the studies as partly simple, short-term and including small-sample size. While design-based research (Klopfer & Squire, 2008) and case studies (Dunleavy et al., 2009) have been preferred in terms of methodology, there have been only few studies which employed the quasi-experimental design (Liu, 2009). Therefore, this study adopts a quasi-experimental design which aims to fill a gap in the field. Elaborating some literature on AR application in education and foreign language teaching, Ibanez et al. (2011), and Perez-Lopez and Contero (2013) examined the role of AR technology in Spanish teaching. They designed learning activities in augmented virtuality environment as exploration, collaboration and mixed reality activities. The results of their study suggested that using augmented reality in learning Spanish increased students’ motivation and learning outcomes.

Lui et al. (2010) planned a mobile English learning environment called HELLO and through this technology, learners could benefit from mobile context-aware learning material in Taiwan. This system was implemented by university students and as a result of the survey and a case study upon practice, their satisfaction with the system was at a high level. Barreira et al. (2012) investigated the effectiveness of the augmented reality technology in the 3rd grade of an elementary school in Portugal. The age range of the participants was from 7 to 9 and animal words in English were taught to the experimental group via AR technology while the traditional method was used in the control group. The research revealed that the group taught with AR technology performed better than those in the control group according to the posttest results. Perez-Lopez and Contero (2013) studied the role of AR technology in teaching digestive and circulatory systems at an elementary school. The research findings revealed that AR technology was helpful in boosting learners’ motivation and interest and learners’ performance was higher upon using AR technology. Moreover, it was also understood that AR technology helped to retain information longer in the memory in comparison with the traditional way. Mahadzir and Phung (2013) examined the role of AR technology pop-up books to motivate and to help students increase their English language proficiency. They designed a pop-up book via ZooBurst tool and it was integrated with Keller’s ARCS model of motivation. The elementary school students were taught via AR pop-up book for a year and a semi-structured interview was administered at the end of application. The study showed that AR technology helped boost students’ performance by providing a more motivating learning environment for students.

The numerous previous studies have also stated that AR applications on English teaching has favorable outcomes in favour of students. Vate-ULan (2012) stated the learners increased their achievements by using 3D pop-up book created by AR and enriched the activities and give opportunities to practice language everywhere. Liu et al. (2010) suggested that Augmented Reality supported English Learning enhanced listening, reading and speaking abilities. AR oriented English teaching innovations result in high learner achievements and enable learners to acquire reading, speaking and listening abilities much more successfully than they could before. In the study, The aim is to design an Language teaching application generated by augmented reality social platform which named „Aurasma‟ that anyone can use by downloading from „android‟ and „ios‟ markets in order to enhance listening skill and limit failure of pronunciation by giving opportunities learners to practice listening activities at anytime and anywhere without CDs, laptops and computers by using their smart phones. The study also aims at creating enjoyable and learner-centered training that improve learners‟ motivation and selfconfidence and interest in English decrease language anxiety. For these purposes we try to understand how student‟s attitude towards our augmented reality language teaching application is

Curiosity is one of the most essential tools in learning. However, class environments do not always provide opportunities to liven up the lesson. Due to the development of technology, now teachers can overcome this obstacle by implementing Augmented Reality technology into classroom activities.

Nowadays, students spend enormous time on mobile phones, computers, video games, music players, etc. We as teachers must be on the same wavelength with our students. Thus, teaching increasingly demands technologically-competent and efficient teachers who can capture the attention of digital natives.

Augmented reality (AR)is a great tool which can fully engage students. AR is the result of using technology to superimpose information-sounds, images and text-on the world we see around us. With the help of tablets and mobile devices we can scan various scenes on our living room floor (kids playing soccer, an animal moving across the room, etc) and they seem to be a part of reality. Benefits of AR used in ESL classroom are a bunch. When the teacher implements any element related to AR, students perceive him/her as someone ahead of them. This also leads to greater attention in class.

There are a number of ways Augmented Reality technology can be implemented in ESL classroom.

* Vocabulary teaching is very suitable for AR technology. A traditional coursebook unit related to animals can be turned into an Augmented Reality enhanced coursebook. By using the app **Augmented Reality Effects**, learners can bring animals into life. After downloading the app you can choose the topic of animals, click on the animal you want and it will be turned into life. For instance, when an animated animal is on the phone screen, students can be asked to give a name to it, pet it and tell a story about a day in its life or students might talk as if they were these animals. Movements of animals can be told with references to tenses.
* With the app Augmented Reality Effects, students can experience a number of other crazy activities. They can choose the topic Farm, bring to life those animals which they want, or any other farm-related item and create their own farm. Later on, they can compare their farms with the peer group. They can create their daily menu with the topic of food and drinks.
* With the app **LightSpace**, the students can experience a drawing lesson. The teacher may choose a photo, hand it to students and ask to duplicate the same photo by using the effects in the app. The results can be quite funny and thrilling.
* The app **Augment**offers another range of interesting effects which can be easily projected into the ESL classroom. By using Public Galleries from the app, the students can choose the topic For your Home, and design a perfect flat, or a room. They can be asked to redesign their classroom by placing the furniture items available in the app. When they finish, they can take a photo of the final result and compare with their peers.
* Another great app is **Wonderscope**. Through this app, the learners can interact with the heroes from different stories. They communicate with the heroes by asking them questions or giving answers. Both questions and answers are written on the screen. This enables the learners to be kept engaged and listen to an interesting story in English. In the classroom it can be organized in the following way. The class is divided into 3-4 small groups. Each group is given a mobile device or a tablet and each is given a different story. They experience the story and at the end share their story with the opposite group. As a follow-up activity, each group can list positive and negative heroes, the best part of the story, how they will finish the story, what they will change in it, etc.  When implementing this into reality, the teacher will have a livened class and very engaged students.

On a more sophisticated level, yet still very accessible, instructors and learners can use tools like TaleBlazer or ARIS. These are both location-based mobile game engines that allow users to create their own AR-driven mobile-based games. Taleblazer offers numerous ready-to-play games that users can try out on their own, but the real power lies in the ability to create your own, customized games around course content.

In this study, we found that the students who use AR applications in English learning show positive attitude towards the mobile AR application in addition they had very comfortable and enjoy during the lessons. Besides they have intention to use this technology in the future for other lessons and subjects because of the application attract their attention and increase their motivation. There are several similar studies also in literature access very similar results (Chang, Chen, Huang, & Huang, 2011; Kucuk, Yilmaz, & Goktas, 2014; Vate-U-Lan, 2012) their recommendation‟s that more applications could be designed with new simple effective learning environment. Our recommendation that many different education models, styles and teaching strategies can be used with AR technology in classroom and analyzed teacher‟s opinion which would be suitable. We will adjust our AR application based on the experimental results and the participants‟ feedback to determine in terms of other variable in the future.

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