AUGMENTED REALITY IN LANGUAGE EDUCATION:
CONTRIBUTING TO THE DEVELOPMENT OF ORAL SKILLS
AND THE MOTIVATION OF STUDENTS STUDYING FRENCH
AS A FOREIGN LANGUAGE

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# AUGMENTED REALITY IN LANGUAGE LEARNING

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<td>French as a foreign language</td>
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Abstract

Motivation is a powerful and undisputed learning factor. Augmented reality is directly related to virtual reality and to New Technologies, particularly using the computer, the tablet, the mobile phone or special components to reproduce or simulate a real environment or to create a fantastic scene, can encourage learning motivation. Augmented reality is a concept with which several sectors have been familiarized, such as medicine, security bodies, transport companies, etc. In addition to the aforementioned areas, augmented reality can also be used in the field of education as a motivation factor to learn French. So far, the teacher has mostly the supervisor’s jurisdiction, but using AR as a learning tool can successfully promote autonomy, motivation and great results to the class and make it more interactive and energetic. The purpose of this study was to investigate if AR can contribute to the development of oral skills of French learners. In order to examine this suggestion, twelve learners, aged 8-12, of A level have been participated in this project. There were divided in two teams. Half of them they were at the control group, in which there was realized traditional teaching and oral production in French in the class, and the other half of them participated at the experimental group in which there was applied an AR Smartphone application, in order to learn and produce French. The project took almost two months and the results were valued according to the teacher’s journal and the learners’ interviews.

Key words: virtual reality, augmented reality, new technologies, motivation, education
Introduction

Undoubtedly, language is an important factor in the formation of the child’s personality, which is closely related to education. Moreover, schools are linguistic environments of intense and profound influence. For most of the day, students engage in language both on a written and spoken level as it relates to thinking, learning and intellectual development.

Today, with the radical entry of technology into our lives, software that is suited to language learning in electronic environments has been created, so learning becomes more interactive and immediate. More precisely education has become to familiarize more and develop a technology-enhanced learning, that emphasizes on innovative technologies like augmented reality, mobile learning (m-learning), ubiquitous learning (u-learning), serious games and learning analytics, in order to goal to a better learning experience and increased satisfaction for the users of enriched multimodal learning environments (Johnson, Adams Becker, Estrada, & Freeman, 2014).

Augmented reality is usually associated with new technologies, particularly with the use of gadgets such as mobile phones and tablets. This is an old concept, but in the last few years we have become more familiar with it, as many sectors can now make use of it. The term was first stated in 1990 by Tom Caudell, a former Boeing researcher. There was a variety of AR applications in the late 1960s and 1970s, that were capable to augment the real world by using virtual data. By the 1990s, there were many companies that used AR in order to visualize and train their employers. Nowadays the possibility to own a personal computer or a mobile device is common and affordable for every individual, consequently the concept of AR can be easily and widely applied, even in traditional educational environments.

There are several definitions that characterize the AR. El Sayed, Zayed, & Sharawy (2011) notes that AR by adding extra information in real life by the use of virtual objects to real life. Also Chen & Tsai (2012) states that AR enhance interaction with 2D and 3D virtual objects that appeal into the actual world and Cuendet, Bonnard, Do-Lenh, & Dillenbourg, (2013) who argue that AR is reffered the projection of digital materials into reality. Moreover Wojciechowski & Cellary (2013) define AR as an extention of virtual reality.
However the AR field is still very immature and there is little research, it seems to be a beneficial educational tool. Studies have emphasized at the increased motivation that provoke to its users during the learning process. (Liu & Chu, 2010; Di Serio et al., 2013; Jara et al., 2011; Bujak et al., 2013; Chang et al., 2014). But not only this, there is a respectful number of benefits. More precisely as Diegman (2015) points out in his research, AR in education increases motivation, attention, concentration and satisfaction. It also enforces student-centered learning and improves collaboration. It provides more details and information accessibility, as well as interactivity. He also argues that AR improves the learning curve, the memory and increases the creativity. Last but not least, its costs are affordable.

Regarding the field of education, the educator has the role of supervisor in his work and by using technology and introducing augmented reality into his class, he manages to transform the lesson into an exciting process, between virtual and real world. The purpose of this paper is to approach the subject of augmented reality and how it can ameliorate the teaching work, the learning of French and especially the development of oral skills. The main goal is to enhance the oral production of French, because it has been noticed that usually the learners have issues with their speaking in the target language. The researcher aim to give them the motive to express themselves in the target language and the same time make them feel comfortable and self-confident while doing it.

This dissertation consists the following chapters. The first three chapters are the theoretical part, where basic concepts of the study are presented and developed, too. In particular, in chapter 1, the concept of augmented reality is clarified and presented in detail. It is a chapter dedicated in presenting AR, comparing it with Virtual Realty, as well as, its software, how it actually works, and its educational potentials. Some kind of AR platforms and mobile applications are mentioned and also described. Chapter 2 presents the concept of language education as well as various aspects of it. More precisely it is presented the importance of learning French as a foreign language and the skills that a student can develop by this process. It is also mentioned that motivation is a very important factor that affects significantly the learning progress, as well as collaboration between the learners and promoted autonomy. Which gives the turn to Chapter 3, where there are presented New Technologies and tools that can positively increase motivation and encourage collaboration between the students
inside the class. Moreover it is analyzed how AR can improve the experience and French language learning, as well as its potentials into a school environment. The purpose of the present study and the research questions that were posed re included in Chapter 4, as well as the design of the activity that was implemented to the young learners of French language, with the use of an AR mobile application in order to develop their skills. Chapter 5 presents the implementation of the procedure, the participants, the demands of the activity as far as the knowledge and the practice. This chapter is completed by the evaluation of the project, according to the teachers journal and the learners’ interviews, and of course the results. Lastly, Chapter 6 includes the discussion about this project and the conclusions that were provided by the research. There are also mentioned some limitations of AR as an educational tool, beneath its benefits.
THE THEORY

1. VIRTUAL REALITY (V.R) PRECURSOR OF THE AUGMENTED REALITY (A.R)

Virtual reality is an artificial environment created on the basis of a computer and in such a way that the user considers that this environment is the real environment. On a computer, virtual reality mainly occurs through vision and sound. The simplest form of virtual reality is a three-dimensional image, which can be accessed based on the keyboards or the mouse of the computer. The term refers to this, therefore refers to the technological capability of a computer to artificially create a software environment with which the user can interact (Burdea & Coiffet, 2003). Consequently, the purpose of virtual reality is to allow a person to experience based on aesthetic-kinetic and cognitive activities in a digitally created world that has aspects of the real world.

1.1 Supervisory gadgets the precursor of virtual reality in education

The enormous potential offered by supervisory tools in education through the processing and exploitation of vast amounts of information make them an important tool for teaching and learning. This is because they not only provide easy access to information, to knowledge, but also because they offer liveliness and simplicity in the subject matter, in relation to the traditionally established school manual. They offer freedom of interaction to the pupil in a pleasant way, as well as the tendency to discover. They enable the teacher to make his teaching creative and enjoyable. Thus, he/she performs his/her work better, which is not overpowered at all, on the contrary it is upgraded, thus giving the pupil easier access to knowledge. Therefore, his role is better and substantially utilized (Weaver & Bollinger, 2008).

Supervisors presenting the various information and data can be considered as the pre-angel of virtual reality, as they bring the student into a world other than that of the book. Some, such as the computer or the interactive table or touch panel, can be considered as a rudimentary form of virtual reality (Weaver & Bollinger, 2008). However, in order to better understand the issue, it is then necessary to present the most important supervisory tools used in education.
1.1.2 Augmented reality

Augmented reality is the superposition of reality and elements (sounds, 2D images, 3D, videos, etc.) calculated by a computer system in real time. It often refers to the different methods that can realistically embed virtual objects in a sequence of images. It applies as well to visual perception (superposition of virtual images to real images) as to perceptions such as tactile or auditory perceptions. These applications are multiple and affect more and more areas, such as video games, education through play, virtual treasure hunts, cinema and television (post-production, virtual studios, sports broadcasts ...), industries (design, design, maintenance, assembly, piloting, robotics and telerobotics, implementation, impact study, etc.) or the medical field (Jurgenson, 2012).

Augmented reality is one of the emerging phenomena allowed by the development and democratization of information and communication technologies at the end of the twentieth century and it participates in certain forms augmented by collaborative work and the collaborative economy (Noelle, 2002). Augmented reality devices usually consist of helmets or glasses and a visualization system to show the user the virtual information that is added to the real one. The headset incorporates GPS systems, necessary to accurately locate the user's situation. The two main visualization systems used are the transparent optical screen and the image mixing screen. Both one and the other use virtual images that are shown to the user mixed with reality or projected directly on the screen (Rosenberg, 1992).

Modern augmented reality systems use one or more of the following technologies: digital cameras, optical sensors, accelerometers, gyroscopes, solid state compasses, etc. Sound processing hardware could be included in augmented reality systems. Camera systems based on augmented reality require a powerful CPU unit and a large amount of RAM to process images from those cameras. The combination of all these elements is often found in modern Smartphones, which make them a possible augmented reality platform (Noelle, 2002).

Augmented reality is a particularly suitable and affordable technology for teaching because of its ease of capturing students’ attention by immersing them in virtual worlds related to the various branches of knowledge, which can help in learning the contents of each subject - cognitive object. Of course, much remains to be done. The
possibilities of augmented reality and education are endless and bring many benefits to students of all ages. Also, a great advantage of the augmented reality is that it can be combined with the internet, which is accessible to almost all schools in the country.

How it works? In fact, the technology adds computer-generated images to real-world images through a mobile phone's camera or specific video glasses. Small cameras located in the middle and outside of each lens send continuous video images to two LCD screens on the inside of the glasses via a mobile processor. Once connected to a smartphone or computer, the glasses combine computer data with reality filmed live, creating a unique stereoscopic field of view on the LCD, where computer graphics superimpose those of the real world.

Embellishing fictional objects a video sequence from a fixed plane poses little problem. Targeted applications often require a lot of realism, it is essential that the addition of objects in a scene does not disturb the coherence of the filmed content. Moving the camera, however, involves movement in the image of the filmed scene. To ensure coherence between the two real and virtual flows, a rigid link must be maintained between the two worlds. In order to give the illusion that these fictitious objects belong to the same world, it is necessary to place them well, to orient them well and to respect scale factors in relation to the objects actually filmed. Placing virtual objects in relation to the objects in the scene requires knowing the position of the camera in relation to the scene. The problem of the location of the camera is therefore important and can be solved by various approaches. It can be used a system of sensors, such as magnetic sensors that measure the magnetic field distortion to calculate their position, optical sensors, encoders on the engines of the cameras' feet or, of course, the video stream.

In the case of the use of sensors external to the system of shooting, the information of this system (angle, position, focal length) is recovered using sensors and the incrustation is directly reproduced with the good scale on the image to increase. However, if one only considers the information acquired by the camera, the augmented reality problem is reduced to a problem of computer vision. In some application contexts such as cinema, all video is available before processing. In this post-production perspective, heavy processing in terms of computing time can be envisaged. Techniques allowing both the 3D reconstruction of a number of points of the scene and the 3D location of the camera are implemented by auto calibration or
beam adjustment techniques. Commercial software based on this principle is already available (Antley, 2012).

In the context of interactive applications the use of auto calibration techniques is not possible. Techniques allowing the location of the camera from the current image (and possibly previous ones) are necessary. If a model of the scene (or part of it) is available, the calculation of points of view is obviously an ideal solution to this problem. In the case where the 3D structure of the scene is (partially) unknown, other approaches, relying for example on the calculation of the displacement of the camera, are conceivable (Antley, 2012).

1.2 Software

Software is a set of machine-interpretable instruction sequences and a set of data necessary for these operations. The software therefore determines the tasks that can be performed by the machine, orders its operation and thus provides its functional utility. The sequences of instructions called programs as well as the data of the software are usually structured in files. The implementation of the software instructions is called execution, and the machine is called computer or calculator. Software can be categorized as system, application, standard, specific, or free, depending on how it interacts with hardware, based on business strategy and program source code rights. The term proprietary software is also used (Beier, 2001).

The software is created and delivered at the request of a customer, or they are created on the initiative of the producer, and put on the market, sometimes for free. In 1980, 60% of production and 52% of global software consumption is in the United States. The software is also illegally distributed and the market value of the products thus distributed is sometimes higher than the turnover of the producers. Free software is created and distributed as commodities produced by cooperation between users and authors (Noelle, 2002, p. 313).

The development of software is a complex process. This is systematized by software engineering, a branch of computer science. Here, the creation of software is described step-by-step in a process from analysis to software modeling to testing as a repeatable process. As a rule, the software is repeatedly adapted and extended after development. The software life cycle can be several years. Software is developed
using specific methods and tools. Different stages of development are run through in each of which different intermediate levels of the software arise: Analysis activities (numerous development documents)-Programming (source code) in operation (machine code or executable code). In the narrower sense of execution on the computer only the latter is considered 'software'. In this context, software is subject of system programs: If, for example, a compiler reads the source code of a program, processes it, and generates a machine code or intermediate code, it is considered data. Once created, software can be duplicated at a relatively low cost, usually through data carriers, advertising, and packaging and paper-based documentation. Software does not wear out through use but is subject to software aging over time.

Software is mostly interchangeable, capable of updating, correctable and extensible, especially if existing policies are adhered to and the source code is available. Because software can be developed using many different programming languages and in many different operating systems and system environments, software standards are required to make information 'cross-system' and enterprise-wide 'understandable' and interchangeable. While the sale of a computer device often focuses on computer hardware, it is primarily the software that gives the computer its added value. The English word software was originally used to describe everything that is intangible in a computer: programs, data, documents, photos (Díaz, 2016).

Software is not synonymous with computer program. Software is a set typically composed of several programs, as well as all the necessary to make them operational: configuration files, bitmaps images, automatic procedures. the programs are in the form of binary code as well as sometimes in the form of source code. The two main categories of software are application software and system software. The application software is intended to help users perform a certain task, and the system software is intended to perform operations related to the computing device. The most important piece of software is the operating system. It is used to manipulate computer hardware, direct software, organize files, and interface with the user6. Commercially available software is always intended for use with one or more specific operating systems (Overmann, 1988; Díaz, 2016).

Software is commonly classified as follows (Overmann, 1988; Díaz, 2016, Fuegi & Francis, 2003):
• System Software: Application-independent software that enables or supports running application software (such as operating system, device drivers, and utilities)

• Support software: Programs that help with development, maintenance, or provide non-application-specific services (such as editors, compilers, virus scanners, database management systems, ...)

• Application software that supports the user in the execution of his tasks and thereby gives him the actual, immediate benefit (e.g. a spreadsheet)

• Standard software is created by a software vendor for use by several / many customers who can purchase this software.

• Individual software is individually created or modified for a single user to solve a specific task, alternatively by a software provider or by their own developers or development departments of a company.

• Legally, a distinction is made when purchasing software between individual software and standard software: For individual software, a work contract or work delivery contract is concluded, the purchase of standard software is considered as a purchase in kind.

• Source code, intermediate code, machine code, device drivers, and other required modules (shipped as a program library)

• Installation programs and associated instructions

• Additional documentation such as documentation for software developers and software users

• Software according to the type of embedding

• Non-embedded software to be installed later

• Software permanently embedded in a device for its control (e.g. in a ROM or as part of an embedded system) is referred to as firmware or as embedded (or embedded) software
Specific software is built to meet the demand of a particular customer, this type of software can be created by the IT department of the company that uses it, or it uses a software editor.

Standard software is created in order to be sold in supermarkets and meets the lowest common denominator of the needs of different users. Standard software is aimed at an anonymous market, sometimes as a result of a pilot experiment meeting the specific needs of certain consumers.

According to the rights granted by the license agreement, we speak of (Overmann, 1988).

- Proprietary software when the author reserves the right to distribute and modify the software.

- Free software or Open source software when it is allowed to run it, access source code to study or adapt to its needs, redistribute copies, modify and redistribute the software.

- Freeware or freeware, for proprietary software that can be distributed, copied and used for free, without license fees.

- Shareware, when the author authorizes others to distribute the software.

As far as augmented reality software is concerned, it could be said that for coherent mergers of real-world images, obtained with a camera, and virtual images in 3D, virtual images must be attributed to real-world locations. That real world must be located, from images of the camera, in a coordinate system. This process is called image registration. This process uses different methods of computer vision, mostly related to video tracking. Many computer vision methods of augmented reality are inherited in a similar way from visual odometry methods. In general, the methods consist of two stages:

In the first stage we can use the detection of corners, regions, edges and threshold, and the methods of image processing. In the second stage, the real-world coordinate system is restored from the data obtained in the first stage. Some methods assume known objects with 3D geometry (or fiduciary markers) present in the scene and make use of that data. In some of those cases, the entire structure of the 3D scene must be calculated in advance. If there is no assumption about 3D geometry is
structured from the movement methods. The methods used in the second stage include projective geometry, adjustment package, representation of the rotation with the exponential map, Kalman filter and particle filters.

1.2.1 Augmented reality tools for designers (DART)

The Designer's Augmented Reality Toolkit is a programming system that was created by the Augmented Environments Laboratory of the Georgia Institute of Technology to help designers visualize the mix of real objects and virtual. They calculate the actual position and orientation of the camera in relation to physical markers in real time. It provides a set of tools for designers: extensions for Macromedia Director - a tool for creating games, simulations and multimedia applications - that allow the coordination of objects in 3D, video, sound and tracking information of augmented reality objects. They connect to the computer to give the user a sense of depth. (Overmann, 1988; Haller, et al. 2006)

1.2.2 Software for augmented reality

According to the international bibliography on this topic, the software used for the augmented reality is as follows (Madden, 2001, Diaz, 2016, Rosenberg, 1992; Hills, 2018):

**ARToolKit**, library licensed that allows the creation of applications of augmented reality, originally developed in 1999 and published by the Lab of the University of Washington. Currently it remains an open source project hosted on SourceForge with commercial licenses available at **ATOMIC Authoring Tool**: is a multiplatform
software for the creation of augmented reality applications, which is a Front end for the ARToolKit library. It was developed for those who are not programmers, and allows you to quickly create small and simple applications of augmented reality. It is used under the GNU GPL license.

**ATOMIC Web Authoring Tool** is a project son of ATOMIC Authoring Tool that allows the creation of augmented reality applications to export them to any website. It is a front for the Fartoolkit library, which is a library written in ActionScript 3.0 that is based on the Java ARToolkit. This library is under GPL license (free for non-commercial use, provided that the source code is made available to the community) and developed by Saqoosha. It is used under the GNU GPL license.

**Blender** is a multiplatform computer program, dedicated especially to modeling, lighting, rendering, animation and creation of three-dimensional graphics. Also of digital composition using the procedural technique of nodes, video editing, sculpture (includes dynamic topology) and digital painting. In Blender, in addition, you can develop videogames since it has an internal game engine.

**Unity** is a multiplatform video game engine created by Unity Technologies. Unity is available as a development platform for Microsoft Windows, OS X and Linux. The development platform has compilation support with different types of platforms. As of its version 5.4.0 it no longer supports the development of browser content through its web plugin, instead WebGL is used. Unity has two versions: Unity Professional and Unity Personal. In addition, since the 2017.2 version, it integrates the Vuforia SDK, for the realization of augmented reality content.

**AR-Media10** is a complement designed to improve the software of third parties that have augmented reality functionality. This script is useful both for digital designers and for users who want to turn their projects into an augmented reality. It recognizes both flat figures and large 3D objects. It is available for 3D Max, SketchUp, Maya, Cinema 4D, Vertorworks, Scia Engineer.

**HP-Reveal** (formerly called Aurasma) is an online web platform for creating augmented reality content. It has an application for IOS and Android.
1.2.3 Augmented reality platforms

Platforms are type of software that allows a group of people to share documents being in distance. The platforms foster the collaborative work. Working groups can be of two types: open or closed. There is always the possibility to send an email to an administrator to be admitted to the group if it is visible. A small group may also be visible or invisible to those who are not members. For example, a group working on the development of a strategic prototype may not wish to make its activity public. Finally, groups can be closed as far as writing is concerned, but open with regard to reading or vice versa. The notion of working group is based on the complementarily, solidarity and interdependence of its members. The simultaneous presence of the members as a means of coordination is, according to the groups, necessary but not exclusive or exclusive. The groups adopting the groups as additional and not exclusive means of coordination are considered as distant groups. These groups, however, allow interactions between members of the group, they opened the door to working groups using them as the only means of coordination. Groups engaging in frequent interactions exclusively using groupware are called virtual groups.

Augmented reality platforms are made up of internet-based technological tools that allow you to create a customized application or use existing applications in Google Play and App Store. Augmented reality applications are created through tools for building apps, APIs and services (Rosenberg, 1992, p. 21):

**Viur12** is a platform that allows you to create digital experiences quickly and safely thanks to its content management portal where you can upload and edit videos and 3D animations, have the option of creating white label applications, integrate augmented reality modules into applications existing, as well as use Viur App.

**Blippar13** is a platform that allows you to create augmented reality and publish it through its various tools, it has SDK to integrate augmented reality to existing applications.
1.3 Visualization techniques

There are three main techniques to show augmented reality (Rosenberg, 1992, p. 32):

**Augmented reality glasses**

The augmented reality glasses are used to show both the images of the places in the physical and social world where the user is located, as well as the virtual objects on the current view. The movement of the glasses must be followed by a sensor so it is not necessary to be connected to a computer. This tracking allows the computer system to add virtual information to the physical world. Its main advantage is the integration of virtual information within the physical world for the user. The graphic information is conditioned to the view of the users.

**Hand or cell phone screen**

The handheld device with augmented reality has a computer device that incorporates a small screen that fits in the hand of a user. All the solutions used to date by the different handheld devices, have employed techniques of overlaying on the video with the graphic information. Initially handheld devices used tracking sensors such as digital compasses and GPS that added markers to the video. Later the use of systems, such as ARToolKit, allowed us to add digital information to the video sequences in real time. Nowadays, vision systems such as SLAM or PTAM are used for monitoring. The handheld screen promises to be the first commercial success of augmented reality technologies. Its two main advantages are the portable nature of handheld devices and the possibility of being applied to camera phones (Rosenberg, 1992).

**Spatial projection**

The augmented space reality (SAR) makes use of digital projectors to show graphic information about physical objects. The key difference is that the screen is separated from the users of the system. Because there is no screen associated with each user, it allows user groups to use it at the same time and coordinate the work.
between them. SAR has several advantages over the traditional glasses placed on the head and on the hand screens. The user is not obliged to carry the equipment on top or to submit to wear of the screen over the eyes. This makes the space projector a good candidate for collaborative work, since users can see each other's faces.

The space projector is not limited by the resolution of the screen, which does affect the previous devices. A projection system allows more projectors to be incorporated to expand the viewing area. Portable devices have a small window to the world to represent virtual information, but in a SAR system you can show a greater number of virtual surfaces at a time in an indoor environment. It is a useful tool for design, since it allows to visualize a reality that is tangibly passive (Rosenberg, 1992).

1.4 Levels of augmented reality

The so-called levels of augmented reality can be defined as the different degrees of complexity presented by applications based on augmented reality according to the technologies they implement. Consequently, the higher the level of an application, the richer and more advanced its functionalities. In this sense, Lens-Fitzgerald, the co-founder of Layar, one of the most widespread augmented reality browsers today, proposes a classification in four levels (from 0 to 3) (Rosenberg, 1992):

- Level 0 (linked to the physical world). The applications hyperlink the physical world through the use of barcodes and 2D (for example, QR codes). These codes only serve as hyperlinks to other content, so there is no record in 3D, or tracking of bookmarks.

- Level 1 (RV with markers). The applications use markers -black and white images, quadrangular and with schematic drawings-, usually for the recognition of 2D patterns. The most advanced form of this level also allows the recognition of 3D objects.

- Level 2 (RV without markers). Applications replace the use of markers by GPS and the compass of mobile devices to determine the location and orientation of the user and superimpose points of interest on real-world images. At this level we also have the recognition of surfaces, where the
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device is able to detect, in real time, a surface in the environment through the images obtained by the camera and position the digital content anchored to that surface.

- Level 3 (Increased vision). It would be represented by devices such as Google Glass, HoloLens, high-tech contact lenses or others that, in the future, will be able to offer a fully contextualized, immersive and personal experience.

1.5 Augmented reality and education

The use of augmented reality can be seen as an effortless and natural consequence with the help of the electronic sub-master. The use of computers as a training aid has a long history in the school field at an international level that goes back to the early 1950s. Since the appearance of the microcomputer in 1977, computers have been considered as an important form of education (Pantelidis X.X).

There are two ways to use augmented reality that could be utilized in the classroom: the first is the traditional desktop computer where the student explores a virtual environment using a computer, keyboard, and mouse. The second augmented reality option, which still looks alien to modern educational - school data - is clearly more resilient and requires the student to wear a special sensor hat and, of course, the glove - to achieve interaction - within a virtual environment. This environment can be supported by a series of large computer screens. Through these two choices, the learner can come in contact with the subject and develop a different interaction with the one created with the use of the textbook (Pantelidis X.X).

Thus, the use of augmented can take off the learning process. For example, French students can have the opportunity to explore a cultural building or a particular historical period such as French Revolution. They will be able to walk to a French city and explore various aspects, of it. This is a great way for students to learn about everyday life in France, which brings the everyday life to the eyes of children in such a way that books or conventional supervisory tools are not able to do so. This is because it is sometimes easier for students to see and hear something than to portray it as a theory. Consequently, students have to leave the classroom environment and move to an environment where they can experience learning.
So what we are saying is that virtual reality can be used in many areas of the curriculum. This includes mathematics, English, science, history, geography, as well as newer subjects such as design technology.

After all, modern students respond to the use of a computer that leads to learning beyond traditional teaching methods. These augmented learning cases are an ideal way for pupils to participate actively in the classroom.

Students can touch and manipulate objects in a virtual environment and create a greater perceptual ability. They also have the ability to interact with sets of data, complex types and abstract concepts that may previously have considered them inaccessible. For some students, learning by doing and telling is easier than learning by listening.

There are many advantages that AR brings to the educational world (Azuma,1997:356), such as

- Enrich the information of reality to make it more understandable to the student.
- Create multimedia training environments.
- Power ubiquitous and mobile learning.
- It facilitates the elimination of superfluous information that may hinder the observation of important information.
- It allows to create safe laboratories or simulators for students.
- You can convert students into "pro-consumers" of learning objects in AR format.
- Power enrich written documents with complementary information in video clip or audio podcast.
- It facilitates the development of an active formation.
- Create playful and motivating environments for training.
- It allows the viewing and observation of an object from multiple perspectives, which are selected by the student.
• The created objects can be used in different methodologies and teaching strategies.

On the other hand, this new educational trend also presents a series of difficulties or disadvantages (Azuma, 1997; Diaz, 2016):

• Lack of investigations.

• The novelty of technology that requires minimal technological skills for teachers and students.

• The novelty of technology.

• The lack of learning objects for their incorporation into teaching situations.

• The cognitive dissociation produced by interacting in a context that mixes the real and the virtual.

• The teacher's training for their educational incorporation.

• Not having a consolidated conceptual framework for its incorporation.

• Which is little known to teachers.

• The speed of how it is evolving.

It should be mentioned that augmented reality has also some other problems. In fact, one problem is the technical burden of augmented reality, especially the tracking of images during movements. The sensors are also affected by the movement. So there is noise, drift and shading of the tracking system. A combination of, for example, GPS with inertial and optical navigation is therefore common in advanced systems. Another problem is the power supply. The currently available batteries are not enough to provide mobile augmented reality systems for a long time. The availability of data, authoring and high complexity of data can also lead to problems. In order to make the embedding of the virtual scene in the real scene as convincing as possible, data are required that also describe the environment in terms of its geometry. Based on this, virtual sections can be drawn through real objects and the occlusion of the virtual objects by the real objects can be calculated. However, this geometry data
is not always available or current. Full integration of virtual objects into real scenes requires hiding background parts so that the objects do not appear transparent. Systems that completely replace direct vision with camera images do not have this problem but are unsuitable for many applications. Also, there are social percussions, too. Since in addition to buildings, monuments and other static objects with ever better hardware and software, people could also be integrated into applications for augmented reality through facial, speech or clothing recognition software, this has far-reaching implications for society (Milgram et al, 1995; Azuma, 1997).
2. THEORIES OF LANGUAGE DEVELOPMENT

Literacy is a concept central to the teaching of language courses. But it is a complex term that is difficult to define with precision. Literacy, which contains the concept of literacy but is wider than it, does not only refer to the tendency of the person to read and write (Dendrinou, 2001). It relates to the ability of the individual to make good use of both spoken and written speech in a variety of social communication situations in order to achieve his or her personal goals by using texts of both written and spoken language but also non-linguistic texts such as images, the maps. This concept therefore encompasses the ability to properly use language structures and the management of written writing conventions in different social environments to meet different needs (Matsangouras, 2001; Mitsikopoulou, 2001).

The term literacy or writing is relatively new in Greek vocabulary and consists of three types (Mitsikopoulou, 2001, p.32-33):

- Identity literacy, where language teaching emphasizes decoding, words as forms, and editorial and grammatical rules.
- Action literacy, where the use of language makes sense within specific social circumstances. In this case the language is not considered fragmentary, in the form of words or sentences, but is considered as a text.
- Stochastic literacy, where the ultimate goal of teaching is to make students capable of producing knowledge. This kind of literacy gives priority to critical thinking, exploration and analysis.

2.1 Language learning and teaching

As far as the approaches to literacy are concerned, there are two. On the one hand there is functional literacy where the concept of literacy is bounded by the communication needs of individuals in a society (Dendrinou, 2001). In other words, it refers to the skills that a person needs to develop in order to meet the demands of modern social reality. Functional grammar critically and functionally addresses the rules and rankings that are assessed in terms of their accuracy and adequacy in relation to actual use of the language. Forms are combined with functions, and
grammatical choices are assessed as style-building mechanisms, and finally style is treated as a category that is not socially and culturally so simple but an indicator of social relations and a carrier of social, political and ideological messages. The four areas of language teaching are understanding the oral speech, producing the oral speech, understanding the written word, producing the written word.

On the other hand, critical literacy is the way in which the program is organized, based on which language is organized and taught, with the ultimate goal of achieving the process by which we transpose or question the dominant meanings through language in the wider social context. Therefore, he suggests critical literacy ways to process authentic texts, underlining how texts work in relation to social reality, ie what ideological positions impart, what they imply. The starting point of critical literacy is the assumption that with language we support positions, we formulate ideological concepts that conflict or not with social reality. Critical literacy aims at social empowerment of all student potential as well as in the development of critical language awareness, ie the way language enters social practices and which members in a society can alter through the alternative use of language (Dendrinou, 2001). Critical literacy explores the ideological reasons that lie within the texts and the purposes they serve by emphasizing the ideological side of practical literacy. Like all language uses in a similar way, and forms of literacy are shaped by specific ideological positions associated with the forms of power (Mitsikopoulou, 2001).

A multiculturalism is a modern pedagogical approach to literacy. It is an approach in which the friction of learners with texts and types of speech from a wide range of media and cultural sources is paramount, in the pursuit of social empowerment of pupils. The concept of literacy and multilingualism in connection with the development of cultural of study has created a wider cultural context on the basis of which the language course is approached and which constitutes critical literacy (Matsagouras, 2001).

The task to be done in school is to broaden the functional potential of the language and to give students the ability to control the functionally diverse forms of language used within the social context. In order to achieve this in practice, the school should take into account not only the children who handle the well-developed language code, but also the children who have a limited language code. In order to be able, therefore,
to meet the social requirements students need knowledge related to textual conventions of structure, linguistic form and content (Matsagouras, 2001).

The textual approach aims to interact students with a variety of textual genres in order to be able to process them, emphasizing the functionality of the texts and critical reading. The textual approach enables students to learn ways in which they can build up and improve their thinking, knowledge, ideas, and reason in order to gain the ability to write communications and then to become thoughtful beings. The purpose of Teaching in the context-centered approach is to gain the ability of students to understand and interpret the content of a text, to incorporate the texts into the textual genre but also in the social context in which they are produced and operated, to critically analyze the relation existing between the lexicographical means and the individual functions of the textual genres and finally to produce texts initially for the school needs and then for the social needs (Matsagouras, 2001).

2.2.2 The CEFR and language learning

The CEFR is a reference instrument for the development of language programs, curricula guidelines, teaching and learning materials, as well as for the assessment of foreign language skills. However, the CEFR is not intended to promote a particular teaching method but to present choices. The European Reference Framework for Languages in 2001 introduces the action-based approach - replacing the communicative approach that was in effect until then - as the most appropriate approach for learning FFL. Their main difference is that the communicative approach is based on the principle of communication competence whereas the action perspective is based on the realization of a task that is to say, it "considers above all the user and the learner of a language as social actors having to perform tasks (which are not only linguistic) in given circumstances and environment, within a particular field of action. If the acts of speech are realized in language activities, they themselves are part of actions in social context which alone give them their full meaning (CECR, 2005).

The Common European Framework of Reference for Languages: Learning, Teaching, Appraising is a guideline used to describe the achievements of foreign language learners across Europe and, increasingly, in other countries. It is a European
standard that is used to measure the level of comprehension and oral and written expression in a specific language. In other words, the grid to evaluate a language concerns the following areas: Understanding, Speaking, Writing.

The CEFR was elaborated by the Council of Europe as the main element of the project "Learning languages for European citizenship" between 1989 and 1996. In particular, the project is the result of a work initiated in 1991 to initiative of the Swiss Federal Government inspired by the earlier work of individuals and institutions since 1971. Its main objective is to provide a method of learning, teaching and evaluation applicable to all languages in Europe. In November 2001, the date of the celebration of the European Year of Languages, a resolution of the Council of the European Union recommended the use of the CEFR to set up validation systems for language skills. The six reference levels are increasingly accepted as a European standard for assessing an individual's language proficiency by level. The levels are, A1, A2, B1, B2, C1, C2. A preliminary version of the Handbook for Linking Language Examinations to the Common European Framework of Reference for Languages (CEFR) was published in 2003. This preliminary version has been tested in a number of projects, including a unique link to the CEFR, linking examinations at different levels, and national studies by review boards and research institutes. Practitioners and academics shared their experiences at a Cambridge seminar in 2007, and the results then informed the 2008-09 manual review project. The CEFR divides general skills in knowledge (descriptive knowledge), skills and existential competence with particular communicative skills in linguistic competence, sociolinguistic competence and pragmatic competence. This division does not correspond exactly to the already known notions of communicative competence, but correspondences between them can be made. The CEFR has three main dimensions: language activities, the areas in which the language activities take place and the skills on which we base ourselves. The CEFR distinguishes four types of language activities: reception (listening and reading), production (oral and written), interaction (oral and written) and mediation (translation and interpretation) (CECR, 2005).

Domains

General and specific communicative skills are developed by producing or receiving texts in a variety of contexts under various conditions and constraints. These
contexts correspond to different sectors of social life that the CEFR calls domains. Four major areas are distinguished: educational, professional, public and personal.

**Skills**

A language user can develop various levels of proficiency in each of these areas and to help describe them, the CEFR has provided a set of six common reference levels (A1, A2, B1, B2, C1, C2).

The communicative or communicative language teaching method focuses on language teaching in which interaction is considered as a means and an end goal in learning a language. It is also known as a communicative approach. The approach has been adopted by the CEFR. It focuses on action in that it considers users and students who learn a language mainly as social agents, that is, as members of a society) to achieve in a set of circumstances in a specific environment and in a specific field of action. Although speech acts are given in language activities, these activities are part of a larger social context, which in itself can make sense of them. (CEFR, 2005).

### 2.2.3 French as a foreign language (FFL)

Nowadays, with the introduction of language curricula at school, we have become aware of the importance of knowledge of a foreign language for the academic training of pupils.

Having this as a fundamental objective in this work, we intend to demonstrate the importance of encouraging the teaching of a second foreign language at primary level. This moment, in Greece, English is the first foreign language taught in the school. Indeed, its linguistic norms but also its culture and mentality are taught so that the students can succeed the best learning. For this reason, it is interesting to note that, after the introduction of English as a foreign language, at the stages of preschool and primary education, it is necessary to include in the school more interactive teaching and more.

La Francophonie or the countries of the Francophone zone covers sixty-eight states. French is the most spoken foreign language after English and the ninth most
spoken language in the world. It is also the only language, with English, that is learned almost in all countries of the world (La Francophonie, 2018).

From a linguistic point of view, it will help our students to learn more easily the vocabulary of English for which French has provided a high percentage. In addition, French is the international language of fashion, theater, dance and architecture. French is the language of Victor Hugo, Molière, Rousseau, Jean Paul Sartre and many other fundamental authors of literature and universal thought. French is one of the most important languages in the world. French is both a working language and an official language of the United Nations, the European Union, UNESCO, NATO, the International Red Cross and several international legal bodies. French is the language of the three host cities of the European institutions: Strasbourg, Brussels and Luxembourg (La Francophonie, 2018). Nowadays, French is the first or second language spoken in more than 52 countries and is spoken by about 150 million people around the world. Since French is the language of choice when learning a second language for many people, French can help us enormously when we travel to one of the countless countries where English is not the main language.

French speaking offers many possibilities. There are different ways to spend seasons in France and have rewarding experiences. It also allows students to study in France, in prestigious universities such as La Sorbonne or in higher schools. Students who are fluent in French can also receive French government scholarships, under certain conditions, to study a third cycle in France in all disciplines and obtain an internationally recognized diploma (La Francophonie, 2018).

In addition, Canada, which is officially bilingual, is the largest trading partner of the United States and requires the labeling of imported products in English and French. Hundreds of French companies have subsidiaries in the United States and France is the largest beneficiary of North American investment abroad. Many companies, such as airlines, import-export companies and other industrial firms, provide jobs to people with a basic or advanced level of French (La Francophonie, 2018).

According to a study published by Eurostat on 23 February 2017 on foreign language learning in European Union French language ranks as the second most studied language by students in secondary school. An advantageous position that comfortably placed it in front of German and Spanish. With over 275 million speakers
worldwide, French can boast of welcoming more and more French speakers into its ranks. In 2015, students in lower secondary education in the European Union reinforced this progress. Of the 17 million schoolchildren aged 11 to 15 who studied at least one foreign language, five million (33.8%) of them were learning French. Far behind English, which unsurprisingly ranks first place in the class with just under 17 million students (97.3%), the French language nevertheless consolidates its position in front of German (23.1%) and Spanish (13.6%). What reassure detractors of French who claim that French has lost its superb abroad (Le Figaro, 2017).

### 2.2.4 Developing skills in a class of FFL

The term "language skills" refers to the ways in which the use of language is activated. Traditionally, didactics classified them according to the mode of transmission (oral or written) and the role they play in communication (productive or receptive). Thus, he has established four in number: speak, write, listen and read (for the last two we sometimes use the terms of oral and written comprehension). More recently, in agreement with studies of discourse analysis and linguistics of the text, we tend to consider a competence other than that of oral interaction, that is, the realization of a conversation during which speech and hearing are activated simultaneously.

Each of these skills includes a set of micro-skills; for example, auditory comprehension requires the ability to correctly recognize and segment the words that make up the phonic chain, and yet, in the written text, the reader is already isolated (Bourguignon, 2014).

In a similar way, communicative and discursive approaches, which recognize the primacy of meaning in the communication process, have highlighted other complementary skills that traditionally incorporated skills. In the case of understanding, for example, one of these complementary skills is the ability to establish relationships between different passages of an oral or written text, or between the text and the knowledge of the world that possesses, to interpret correctly the text. Different discursive genres and types of texts in turn require special communication skills or skills. Thus, in the understanding of the academic discourse,
it is necessary to be able to distinguish the digressions or the jokes of the teacher, to recognize the examples or the particular cases as such, etc. (Bourguignon, 2014). The international bibliography distinguishes between the skills applied to the language system and the skills applied to the use of language (Bourguignon, 2014).

Speaking, for example, there are linguistic elements that are different to each individual (pronunciation of sounds, intonation etc.). By using language, the effective transmission of the message is the goal. However, to achieve this transmission, pronunciation and intonation are not sufficient. There is no need to resort to factors such as morphosyntax, lexical and textual elements in relation to written language as well as the application of a number of procedures arising from the characteristics of the communication context, the identity of the partners or target structures, the knowledge of the world that the speaker assumes in them, etc. Therefore, the linguistic skills applied to the use of language require the ences related to communication strategies.

Oral skills:
• Oral comprehension
  Listen to a document.
• Mark the appropriate answer (identify the characters in a sound document).
• Listen and complete
• Listen and associate (sound and image).
• Listen and complete
• Listen, read and choose.
• Listen and see the picture (example: subway map)
• Listen and correct.
• Oral Expression
• Listen to questions and answer orally.
• Imagine the conversation (image).
• Dramatization.
• Explain and report (example: Addresses).
• Riddles (example: gestures, mimicry).
• Questions and answers.
• Understanding and discussing the text.
• Intercultural oral production.
• Phonetics, rhythm and intonation
• Intonation (interrogation, exclamation, affirmation)
• Rhythmic groups
• Discrimination of sounds
• Repetition (sounds, words, sentences ...).
• Dictation
• Syllabic (oral) division.
• Screening short documentaries

2.2.5 Learning FFL and collaboration between students

According to the curricular design for foreign languages in Greece, the teaching of foreign languages constitutes a sector more than focused on linguistic. In fact, teaching foreign languages is also a synonym of promoting an ethical attitude in terms of processes of social and cultural democratization in a particular linguistic community; First of all, though is knowing that there other persons different. This fact, promote tolerance and acceptance (Bernard,1991).

As far as the French as foreign language is concerned, learning French as a foreign language means that both students and teachers recognize that there is a different mentality, culture and civilization deriving from this language; So, they try to develop that skills that make them approach to this new world. On this path, students have their classmates with them, with whom they share common goals, questions, concerns, etc. For this reason - and not only - the teacher should design a teaching strategy based on the collaborative method and strategy (Bernard,1991). In fact, There is a plethora of teaching methodologies and strategies to be used.

Collaborative learning/teaching is one of them. According to Fullan (1991), it is basically the use of groups in such a way that the students, through common work, achieve to maximize their learning. This strategy is based on the idea that is the members of a particular group have to achieve a set of tasks in that enhances the learning process. Collaborative learning/teaching comes to challenge the teaching methods that have traditionally been applied, such as the grammar-translation method, the direct method, among others already mentioned that have assigned specific roles.
to both teachers and students and that, for certain way, they have forgotten the importance of collaboration between those who learn a language.

The collaboration between in fact, only appears as an option within the communicative approach. However, collaborative learning does not come to solve the problems that both the faculty and the student could face in an academic context but, rather, it is an alternative to consider when teaching a content or putting it into practice. It should also be noted that students do not necessarily learn because of their collective status or that it is impossible to learn without the help of others or others. However, cooperative learning is an interesting and different way that eventually can bring very good results, if appropriate activities can be developed.

The idea of collaborative learning as a novel learning strategy is what drives this project. We sought to work with something creative, different and novel to motivate its participants to improve oral skills in the French language. This responds mainly to the fact that in many of our educational contexts, many times, in the teaching exercise teachers forget the importance of teamwork and peer support as well as of New Technologies (N.T).
3. NEW TECHNOLOGIES (N.T.) IN MOTIVATING STUDENTS TO LEARN FRENCH

Motivation is one of the psychological aspects most closely related to the development of the human being. Motivation is not characterized as a personal characteristic, but by the interaction of people with the situation, so motivation varies from one person to another and in the same person can vary at different times and situations. It is the signaling or emphasis that is found in a person towards a certain means of satisfying a need, by creating or increasing with it the impetus necessary to put that means or action into action, or to stop to do it. Other authors define motivation as "the dynamic root of behavior"; that is, "the internal factors or determinants that trigger action". Motivation is an internal state that activates, directs and maintains behavior (Besse, 1985).

Theories of motivation can be classified into natural and rational theories. According to the underlying theory, human cognition is based on natural forces, impulses, needs, desires, or on a kind of rationality, self-identity. In theories of content and process according to which the emphasis is on the content "what" motivates the process or "how" the motivation takes place. In addition, different schools of psychology have different theories about how motivation starts and how it affects behavior. All contribute, from different perspectives, to clarifying the concepts that explain its origin (Obtaining success, completing an expectation, satisfying a desire) (Besse, 1985).

For years, pedagogues and didactics have been conducting research in the area of teaching / learning to facilitate the role of the teacher and to engage the interest of learners. Motivation is very important in all areas of the individual's life. It is essential for his personal and professional development. From an early age, each of our actions are produced through motivation. In addition, teachers, in this case in primary school, must be able to help students during their learning. It is true that some research has shown that school failure is often linked to lack of motivation on the part of students. It is therefore up to the teacher to try to arouse their interest in improving their performance in class. Motivation determines the specific goals towards which students tend and, therefore, it affects the choices made by students, for example,
choosing the studies they want to achieve in the future and therefore the route they have to travel or in the short term to choose between spending an afternoon studying or doing challenging tasks or playing video games. Motivation leads to more effort and energy. Motivation increases the amount of effort and energy students spend on activities directly related to their needs and goals (Dale et al., 2010). Therefore, motivation is what determines whether they are facing an assignment with enthusiasm or whether they are doing it without interest or with. Motivation increases persistence in activities. Students are more likely to start a task they really want to do. They are also more likely to continue working until they are finished, although they are sometimes interrupted in the process. In general, we know that motivation increases the time spent on students' tasks, which is a fundamental factor affecting their learning and their ability to achieve their goals.

Motivation affects cognitive processes. Thanks to this, students pay attention and are able to deal effectively with learning. For example, motivated students often make the effort to try to assimilate effectively worked in class to learn a lot of content, and are able to determine how it affects them and how they can use in their own lives. Motivation determines which consequences are reinforced and punished. The more motivated students are to succeed in their studies, the more they will be proud of their achievements and, with greater dedication, they will face negative results in the next stages of their learning (Pintrich, 2003).

Motivation can be divided into two different theories called intrinsic (internal) or extrinsic (external) motivation. The first comes from the personal understanding of the world and does not depend on any external incentive since it does not need any kind of reinforcement because they are motivated by themselves and the second depends on external incentives, and focuses primarily on carrying out a task as a means to an end. Some extrinsic factors may be: Money, work time, travel etc. All of these factors can increase or decrease in the space around the individual; However, the intrinsic factors depend on the meaning that the person gives to what she does. While extrinsic factors also depend on this interpretation of the person, these can be radically changed very quickly, while intrinsic factors require assimilation work more appropriate to the individual's mind. Intrinsic factors deal with people's desires to do things because they are considered important or interesting (Tomasello, 1992).
There are three important intrinsic factors:

Autonomy: the impulse that drives our lives, the freedom to control what we do. Mastery: the desire to be better at something that really matters. Purpose: the intention to do what we do through service to something greater than ourselves.

Intrinsic motivation has been studied since the early 1970s. Intrinsic motivation could be defined as the desire to seek new things and new challenges, to analyze one's ability, to observe and to acquire more knowledge. The interest or pleasure resides and they rely on external pressures or the desire for reward. The phenomenon of intrinsic motivation has been recognized for the first time in experimental studies on animal behavior. In these studies, it became apparent that animals displayed curiosity-motivated behavior in the absence of reward. Intrinsic motivation is a natural motivational tendency and a fundamental element of physical, social and cognitive development. Students who are intrinsically motivated are willing to participate and work to improve their skills, which will increase their abilities. Students are more likely to be intrinsically motivated if: they attribute their academic results to factors that are under their control, also known as autonomy or locus of control, they believe they have the skills to be agents effective in achieving their desired goals, also known as self-efficacy beliefs, they are interested in mastering a topic, not just getting good grades. Intrinsic motivation can be sustainable and self-sustaining. Efforts to build this type of motivation are also often the result of promoting student learning. Such results often focus on the subject rather than rewards or punishments. On the other hand, efforts to encourage intrinsic motivation can be slow to affect behavior and may require lengthy special preparation. Students are individuals, so different approaches may be needed to motivate each student. It is often useful to know what interests each student to connect these interests to the subject. For this, it is necessary to know each student Extrinsic motivation refers to the development of an activity to achieve a desired result and opposes intrinsic motivation. Extrinsic motivation is generated by external influences on the individual (Tomasello, 1992,). In extrinsic motivation, the most difficult question to answer is: where does the person get the motivation to perform a task and continue to struggle with perseverance?

In general, it can be said that extrinsic motivation is used to obtain the results that a person cannot achieve through intrinsic motivation.
Regarding extrinsic motivations, the most common are rewards (money or good grades) to demonstrate the desired behavior, and the threat of punishment after bad behavior. Competition is an extrinsic motivator because it encourages winning and defeating others, not just enjoying the intrinsic rewards of the activity. The applause of the public and the desire to win a trophy are also extrinsic motivations. Research in social psychology has shown that extrinsic rewards can lead to an over-justification effect and a consequent reduction in intrinsic motivation. In a study that demonstrates this effect, children who expected to be rewarded with a specific prize for drawing, in later observations, spent less time playing with drawing materials than children who did not receive. However, another study has shown that in the future, third-grade students who are rewarded by a book have more reading behaviors, which implies that certain prices do not weaken intrinsic motivation. Although extrinsic rewards may reduce the desire for an activity, the use of extrinsic coercions, such as the threat of punishment, against the realization of an activity, in reality, may increase the intrinsic interest for the same activity. In one study, some children were slightly threatened to play with a certain toy. It was found that the threat, in fact, served to increase the interest of children in the toy, which was not desired before the threat. Over the years, some researchers have come to the conclusion that there are several phases in extrinsic motivation, ranging from purely external to extreme. Thus, one can speak of external motivation (in which the external factors influence, without the individual controlling them), introjected (in which the retribution begins to be internal), regulated by the identification (the individual continues to work for external reasons), but with more autonomy) and integration (in which the motivation is similar to the intrinsic one, however, is not realized for the simple satisfaction of doing it, as with the previous one). (Besse, 1985). Extrinsic and intrinsic motivation may present a type of positive or negative motivation, depending on the consequences. In other words, the positive motivation is sought by the person with the intention of receiving a reward. However, in case of negative motivation, the only thing that is sought is to avoid an unpleasant consequence.

According to Viau (1994,p.32), a prominent sociologist, motivation in school context is "a dynamic state" that has its origins in the perceptions a student has of himself and his environment and which encourages him to choose an activity, to engage in it and to persevere in his fulfillment in order to reach a goal. Motivation is
an intrinsic phenomenon for the student, but it depends in a large part of the environment in which he is learning. This definition shows that motivation is below the desire to know, after the student has been interested in an activity, and mobilized. In some cases, motivation may be more important than the intelligence and physical condition that a student needs to learn a foreign language. Indeed, we agree with Viau that there are students who cannot learn a language (or do anything else) if they are not motivated to do so. The determinants of motivation are the components of motivation that are directly influenced by the context in which the student finds themselves and they correspond to the way the student perceives the teaching activities. According to Viau sociocognitive pedagogies lead to believe motivation in a school context influenced mainly by the types of perception: the perception of oneself, the perception of the value of an activity, the perception of the competence to do so; perception of the controllability of development itself and its consequences. Sources of motivation are elements, factors or circumstances that give the student some reason. These sources, which are like sources from which behavioral forces can be born, are generally confused with the techniques, because they must be affirmed in them. Thus, each motivational technique seeks to take advantage of the energetic possibilities of the sources, to indicate and guide student learning efforts.

The main sources of motivation are (Viau, 1994,55):

- The teacher's personality: his physical presence, his voice, his enthusiasm, his dynamism, his firmness, his security and his competence; in short, a personality etc
- The didactic material used: it can make the subject of learning more concrete, and interesting
- The practical working arrangements employed by the teacher: for example, participatory teaching.
- The subject of the teaching itself, well programmed, presented in the form of responding to the interests and needs of the students;
- The natural curiosity of the human being
- Social approval
- Fun activity
- Current events
• The desire to avoid punishment
• The tendency to experiment
• The desire to be effective
• The desire to distinguish
• Aspirations
• Competition

3.1 The manifestations of motivational dynamics

Learning is a piece performed by two of the poles, in which the apprentice plays a preeminent role. In fact, students are the last reason for the process, whose purpose is the development of potentialities. From this point of view, externally directed or externally imposed teaching is a better way of encouraging the values and development of the individual personality (Raynal & Rieunier, 1997).

Promoting learning autonomy on the part of the student raises important challenges for both the teacher and the student. The teacher should serve as a guide, facilitate learning, be a mediator, trying not to hinder the process or individual progress and, finally, not to interfere, with the danger of hindering it (Bernard, 1998). For its part, the student can continue to be considered only as a learning beneficiary its role as an actor and responsible for itself must be strengthened. The autonomous student in apprenticeship must meet certain basic conditions.

Among them, it is essential who wants to learn and who is capable of being responsible for autonomous learning, that is to say establish itself as the main responsible and actor of learning. These are two conditions that deserve reflection. First, because not all students are equally ready to take on this type of responsibility. Many are not equipped with learning habits and strategies that promote independence. Therefore, the first step is to train them in the new direction. It is necessary to develop activities that help them to become aware of their own responsibility as learners, at the same time which contribute to the application of techniques to achieve greater effectiveness in learning (Raynal & Rieunier, 1997).

For example, students could be invited to make an effort to understand the meaning of a new word before ask the teacher what he means; the search for meaning
is possible by paying attention to the context, by reflecting on the etymology of the term or simply by consulting a monolingual or bilingual dictionary.

There is a variety of strategies for learning a foreign language that are specific actions, behaviors or steps that students use consciously or unconsciously to improve their performance in the foreign language.

Thus, we take the example that in the classroom, we observe that students use different strategies to work with the classmate, group the words according to their work or in a given task, use gestures, example. All of this happens differently for each apprentice, that is, everyone has their own style of learning and therefore uses some or other strategies. That is, everyone has their own learning style and as a result they use strategies or others (Gohier, 2002, Raynal & Rieunier, 1997).

Key features of effective strategic direction include the following requirements: The strategies must be functional and meaningful;

- Teaching must demonstrate which strategies can be used, how they can be used. Students must believe that the strategies are useful and necessary;

- There must be a link between the strategy taught and the perceptions of the learner on the context of the task;

- The instruction must be direct, informative and explanatory;

- The responsibility to generate, apply and control effective strategies transferred from the instructor to the apprentice.

New technologies and, above all, the use of computers and other gadgets is a new reality, which has become part of our everyday life. The computer and the internet are in most areas of our society as well as in education. Education is based on technological means to become more interactive and attractive to students. Thus, technology could be a means of motivating students to learn a language like French.

The enormous potential offered by supervisory tools in education through the processing and exploitation of vast amounts of information make them an important tool for teaching and learning. This is because they not only provide easy access to information, but also to knowledge, because they offer liveliness and simplicity in the subject matter in relation to the traditionally established school manual. They also offer freedom of interaction to the pupil in a pleasant way, but also the use of
curiosity and tendency to discover, which is also the most effective source of knowledge. Moreover, they enable the teacher to make his teaching creative and enjoyable. Thus, he performs his / her work better, which is not overpowered at all, on the contrary it is upgraded, thus giving the pupil easier access to knowledge. Therefore, its role is better and substantially utilized. (Weaver & Bollinger, 2008). Supervisors presenting the various information and data can be considered as the pre-angel of virtual reality, as they bring the student into a world other than that of the book. Some, such as the computer or the interactive table or touch panel, can be considered as a rudimentary form of virtual reality. However, in order to better understand the issue, it is then necessary to present the most important supervisory tools used in education.

1. Interactive board

The Interactive board is a sophisticated form of touch panel where, through the use of a computer, a projector and appropriate software, the teacher makes the lesson more entertaining, while stimulating the enthusiasm and the interest of the students (Weaver & Bollinger: 2008).

Source: https://cpb-eu-w2.wpmucdn.com/mypad.northampton.ac.uk/dist/4/1203/files/2013/03/Interactive-Whiteboards-1vh9g0c.jpg

2. Pictures-Photos

Image images are an important teaching aid for the teacher because the teacher can
use this supervisor to describe in detail what they are portrayed in order to present the main points of the image to the pupils and in the abstract, but also through the visual contact of the students with it, the teacher makes reference to the emotion and the soul of the students of Daniassis-Afentakis, 1997).

![Image of alphabet play dough mats](https://www.learning4kids.net/wp-content/uploads/2015/06/Alphabet-Play-Dough-Mats-Cursive-a-h-600.jpg?e82ba3)

3. Maps

Maps are particularly useful tools as they encourage and enhance the visibility of teaching work. Maps can be either historical or geographic. In the first category, geophysical elements of different countries are captured, or their political organization, so we speak of gophysic and political maps respectively. In the second category, a historical situation is attributed either to an evolution.

![Image of France map](http://www.cartoonstudio.co.uk/images/CartoonMaps/FranceMap.jpg)
4. Drawings-sketches-shapes

These are simple shapes that capture the main but also the most essential aspects of the lesson, which in summary but mainly in a documentary way, can often not be captured as effectively as the descriptive reason. According to Gestalt Psychology, learning is associated with perception, so the organization tends to perceive the environment in overall forms, which is the dynamic synthesis of individual elements (Weaver & Bollinger, 2008).

Source:
https://i.pinimg.com/originals/a3/c0/62/a3c062533282d20a313b2f5712684092.jpg

5. Slides

Spaces are small viewers of individual images or series of fixed images that are in the form of text, charts, drawing, shape, table, etc. For its use, there is no need for low light or room for darkness as the image displayed by them is distinct even when it is projected on the surface of the wall, and also have a remote control that allows the teacher to move in the room during the projection and thus not lose touch with his students (Weaver & Bollinger, 2008).
6. Rear Projector-Overhead Projector

This is a lightweight projector that is particularly easy to use, so it is used extensively in education as a supportive teaching tool. It consists of a glass surface on which slides are placed whose image is reflected on a screen. The use of the reprographic projector supports the teacher's oral speech as he places, whenever he deems it appropriate, slides on the glass, part of which can overlap and present students at the right time during the learning process (Weaver & Bollinger, 2008).

Source:
https://n7.alamy.com/zooms/72c4e56f48744a1086d348d9766f0362/international-class-during-language-teaching-g1m5k8.jpg

7. Computers -Web-Blogs

Because of its directness and friendliness with the student in combination with the use of the internet and the use of specially designed games for PC, it is now established that HC is an indispensable learning tool both within and outside the classroom (Hou & Sung, 2009). The interactive multimedia offered in education through the UK is a complete aid to the work and to the whole work of the teacher alongside traditional learning. However, it is necessary to use them with a basic schoolbook-book of activities. According to Dansassis-Afentakis, teaching through a computer is a learning process that adapts to the individual needs and the personality of each student, either crude or fast "(Dansasis-Afentakis, 1997,p.275)
8. Radio-cassette-CD reader

The radio, tape recorder or CD reader are instruments that support the teaching process. The teacher can use these tools to cover the cognitive subject. The above instruments have great effectiveness in foreign language learning In particular, when speaking foreign languages, the student speaks realistically and realistically to the speech of natural speakers.

9. Magnetoscope (Video)

The efficiency and effectiveness of video is an undeniable fact. Through the presentation of educational, educational subjects, the pupil receives a direct, visual stimulus resulting in the faster acquisition of knowledge (Weaver & Bollinger: 2008). The ability to pause enables the teacher to comment or draw the attention of students to points of importance during the learning process.


3.2 New Technologies motivating students to collaborate in class of French as foreign language

As far as N.T are concerned, it could be said that modern student as well as teacher should develop digital competences. Currently, the information reaches us in real time and the communications are getting closer in a world without distances, the learning of French allows us to obtain all the necessary information in this language. It is important to realize that the new technologies can help students individually or in common. Besides, we live in an increasingly globalized world and learning a foreign language builds bridges between the countries creating global cohesion that
transcends borders. French language is the vehicle of a culture and transmits the being and the feeling of its so many speakers since French language is spoken in so many countries all over the world. So, students should develop skills, abilities and attitudes that will enable the achievement of linguistic and social goals at the sometime. New Technologies combined with collaborative method could be a considerable option.

In particular, collaborative learning gives students the opportunity to put their oral skills into practice in the French language by discussing a specific topic and giving them the opportunity to express their opinions and points of view around a topic that for some people is controversial. The development of these linguistic competences allows students to cooperate or collaborate with each other in order to achieve common goals and objectives. As Fullan (1991,p.45) points out, collaborative learning is immersed in the theory of social constructivism and is based on the process of knowledge construction through learning from interaction with a group and through tasks carried out in cooperation with others. The objective of this type of learning is to induce the group of students to build their knowledge through exploration, discussion, negotiation and debate.

The communication and coordination activities of team members are facilitated by technologies that bridge the differences in time, space, and level of group support. Technology, through educational platforms or software, can stimulates cooperation help people communicate and collaborate on common project (Hov at al,2009);

Ideally, each member of a group is able to help each person in a collaborative project to perform a common specific work in a more efficient way. Without a doubt, information systems can change and reshape many ideas and theories of the educational process. Their use in the classroom concerns the teacher and the pupils, but the teacher is no longer the center of attention, but rather acts as an intermediary or information guide rather than as a source of information. For teachers, the use of new technologies is the most widely used tool for the design and implementation of computer-assisted courses, computer applications or other technological tools such as mobile phones or tablets. So, technology in the school community allows students to be more active and to learn in a pleasant way and of course to interact each other. By acting, students are more likely to make their own choices about how to acquire, manipulate and use information. As a result, a modern educator must be fully aware
of the latest technology trends and innovations so that students can learn more effectively using the available technologies.

### 3.3 Teaching a foreign language using Augmented Reality

The current trends in education aimed at the student being the architect of their learning, playing a clearly active role in training processes, and the rise of Web 2.0, has made it possible for students to go from being mere recipients of knowledge to becoming in mid message producers; that is to say, they stop being only consumers of information. The significant thing about the educational experiences in augmented reality, is that they offer students the possibility of learning through the construction of audiovisual and multimedia messages, as well as through the guidelines they must follow for such construction: documentation, preparation of the technical and literary script, domain of technology and concretion of the message in the language of the chosen technology. So much so that to be able to undertake these augmented reality, experiences in education, students must learn both the utilities of technology and the audiovisual and telematic language, to, with both, analyze and represent reality.

The use of augmented reality, in training actions and teaching-learning processes depends on a series of variables, such as the degree of motivation, which, according to Keller (2010), refers to the magnitude and direction of the behavior. According to the premises established by Keller there are three variables that will determine the decisive tide of the motivation that a subject has to learn, and are: attention, relevance and trust. These variables are directly related to the degree of satisfaction reached by the students, which will condition a greater or lesser motivation to continue learning, understanding by motivation "the personal perception of utility that leads the individual to develop actions and involves him in activities , which in the educational context would be the reasons that predispose students to participate in the activities that take place in the classroom (Pantelidis, X.X).

The ARCS and TAM models in the analysis of motivation associated with the use of RA. When analyzing motivation in instructional design, one of the most used models is the ARCS model designed by Keller (2010), which states that motivation is determined by the interaction of four dimensions: attention (A), relevance (R), confidence (C) and satisfaction (S). The ARCS model was originally designed for
face-to-face educational interventions, but thanks to the adaptation carried out by Keller (2010) with the preparation of the Instructional Material Motivational Survey (IMMS) questionnaire, it is being used to assess the motivation that incorporation awakens of certain teaching materials (computer-aided teaching or virtual education) to the teaching-learning process. On the other hand, and according to the theories of Davis (1989), the use of any technology is determined by a series of variables, among which is the belief that one has about the consequences of its use; formulating, under this principle, its model technology acceptance model TAM. This model assesses the attitude or predisposition of users to the use of a technology and is determined by two variables:

The perceived utility: extrinsic motivation to the user, and defined by the author of the model as the subjective probability of a person that, by using a certain system, will improve their performance at work. The perceived ease of use: degree by which a person believes that using a given system will be effortless (Pantelidis, X.X).

### 3.4 The augmented reality at school

The education sector should focus on the birth and development of such technology and incorporate it into its curriculum. We also believe that this technology has a unique role to play for pupils of the future.

The benefits of using virtual reality in schools could be summarized as follows:

- It is considered as an active rather than passive experience
- Helps by understanding complex issues, theories and concepts
- It is suitable for all types of learning
- It is a unique experience without distraction

However, despite the benefits of entering augmented reality in schools, it should be said the following:

Firstly, in order to make the right use of it, it is necessary to prepare the teacher properly, as the virtual reality should be selected as an educational tool at the appropriate time during the course and accompanied by an appropriate commentary.
on the subject under study. Secondly, the teacher should acquire specific knowledge of the virtual reality and therefore be educated.

Nevertheless, the cost of introducing virtual reality in schools is by no means insignificant; therefore, its existence in a school, according to the current (Greek) school reality is impossible for now. Nevertheless its use in education is an interesting suggestion that the state should consider to fund (even at some experimental schools at the beginning) with the help of capable and innovative teachers.
4. THE STUDY

4.1 The purpose

The main purpose of this study is to examine if the use of augmented reality (AR) in French language learning can be beneficial in order to motivate the learners to produce oral language. The researcher had observed that, especially learners from level A, in French have difficulties in expressing themselves by using the target language, particularly when they have to communicate with their classmates during the lesson, in order to complete a task or in general when they have to speak French in front of other people.

More specifically, they usually seem to feel anxiety and stress because they have not a good level in the target language yet, in order to use it correctly in any way (grammar, vocabulary, pronunciation). That is the reason why they chose not to speak by delaying their learning process and limiting their speaking skills.

The researcher suggested a mobile application of AR in order to handle with this phenomenon and encourage students to practice their oral speech in French by video-recording themselves while speaking French. The students that took part in this study are all A level in French and just started their learning process. The task that they had to complete was very simple, based in the vocabulary that they have been learning in the past lessons. Also they all needed a mobile phone device or a tablet in order to carry out their task.

Since technology has now also been introduced in education, augmented reality could be an important factor in learning and motivating in practice. Consequently, the goals of this experiment are to:

- examine if AR can promote oral communication in the target language for the A level students
- notice if they actually enjoy the process by reducing their anxiety of expressing themselves in front of public
- suggest some more technology tools such as mobile applications of AR, that can be beneficial during the language learning
4.2 Research questions

Before the researcher started the experiment, there has been set some research questions. More precisely:

Questions

Q1) Does AR and mobile use, motivate learners to feel more comfortable to communicate in FFL?

Q2) Does the learner enjoy the task of speaking in the target language more by using AR than those who complete traditional oral production tasks?

4.3 Design of the activity

AR in education might still be little investigated; however there are plenty of useful AR applications available online for everyone and without cost. AR is a valuable tool and has the ability of combining virtual content with the real world seamlessly (Azuma, Billinghurst, & Klinker, 2011). That is the difference from a Virtual Environment (VE) where the user in actually inside a synthetic environment. Because of this important difference between AR and VR, Azuma (1997) claims that “AR supplements reality, rather than completely replacing it”.

In order to carry out this activity, the researcher chose to use the HP Reveal, which is simple, handful and available online for free. It first started as a platform call Aurasma and after it also developed a mobile application for androids and IOS and renamed as HP Reveal. Its technology uses the gadget’s camera (tablet or cellphone device) to recognize images in the real world, and then apply and overlay media in front of them in the form of animations, videos, sounds, 3D models and even web pages.

The researcher downloaded the HP Reveal application from Google store. It took two weeks in order for her to familiarize and explore its possibilities as a platform and as an application. The mobile application was more practical and easy to use. About the design of the activity, the goal was for the students to learn how to perfectly present themselves in the target language.
More precisely they had to learn a specific vocabulary based on how to say their name, their age, where they come from, what they like and what they hate. Moreover they were taught pronunciation rules in French: which letters are mute (h and some other letters when they are in the end of words like the vowel e). About the grammar uses they learn the personal nouns, the present simple, the irregular verbs avoir, which means to have and être which means to be. Moreover they learned how to recognize and to conjugate the verbs of the first group in French, which end in –er. Last, they were taught the masculine and feminine genre and how to transform their adjectives accordingly.

After two months of teaching and practicing, the HP Reveal application gave them the motive to actually practice autonomously their knowledge and experiment about their self-presentation. That happened after the teacher showed them the result of their task, by presenting herself via HP Reveal on their mobile screens. In order to create their own AR presentation they practiced a lot their speech, by recording themselves on videos, and in two weeks the task came into its end by having almost perfect video presentations by everyone, in all vocabulary, pronunciation and grammar aspects. The procedure is analyzed in detail in the following chapter.
5. IMPLEMENTATION AND EVALUATION

5.1 Participants

Twelve (12) learners of French as a foreign language took part in this research (4 male and 8 female students). They were all beginners of level A1 according to the CEFR (Common European Framework of Reference for Languages). The place that the experiment took place is a private school, so the ages of the learners differed, ranged from 9 to 12 years old. The goal was to teach them how to present themselves and their tastes in public. However the teaching was exactly the same for all the learners, for the practice and the task realization they were divided in two groups.

The first group was traditionally examined during the class hour by asking them things about themselves like:
- What is your name?
- How old are you?
- Where do you come from?
- What do you like the most?
- What do you hate the most?

The second group of the students had to complete another task with the use of AR mobile application. That activity was more autonomous and the learners would be examined during and by the end of this task. The goal was exactly the same but they had to do it by recording themselves with their phone and afterwards by getting presented with the use of AR in front of their students.

5.2 Procedure

This study started with the aim to achieve better results in the class, as far as the oral speech development of the students in French. Great necessity was to encourage them and give them more motivation. The teacher proposed the use of multimedia, internet and technological gadgets such as mobile phones, so the learners and their
parents had to be willing to take part in it and experiment with new technological tools in their learning process. It is about a case study which combines approaches, according to Yin (2013). More particularly, it has been raised data from the teacher’s diary, which contains observations during the project and interviews of the participants, in order to export valuable conclusions about the outcomes.

The implementation lasted for two months. The learners were all A level in the target language, all infants without any pre-knowledge in French. The learners were 12 and they were all attended the same lessons in the class, at the beginning. However they were separated in two groups, as far as the practical part of their lessons and the evaluation part. The teacher discussed with them the possibility of using HP Reveal application, in order to learn and practice their tasks. Half of them, those who seem to be more willing to dedicate time and try to learn with their phones on the hand were the experimental group, and the other half stayed in the traditional learning process.

Nevertheless, in order to get into practice, a lot of hours of theoretical classes were demanded. During the first month all learners were being taught vocabulary as well as grammatical and pronunciation rules. The teacher used a common text book, addressed only for infants and with emphasis in the oral speech production in French.

More specifically the learners learn how to pronounce French correctly. The teacher read to the classroom texts from their books and then she made them repeat it by their own. In this way they practiced all the phenomena until they got used to the correct accents. Due to their young age, the teacher never depended into making them learn by heart the rules, even if it was grammar or pronunciation, but mostly tried to make them learn via mimesis and constant repetitions of the phenomena inside the class.

About the grammar acquisition, it was not possible to teach all those endless rules in French because her learners were infants. So she taught them exactly and only what they needed to learn in order to complete their task. Nevertheless, the primary goal was their oral expression development, self-presentation and pronunciation. So they learned the personal pronouns (je, tu, il/elle, nous, vous, ils, elles), the verbs être and avoir, which were totally necessary even though they are irregular and how to conjugate verbs of the first group, which finish in –er. They also learned how to transform some male adjectives to female and the basic form of the plural, in which they added an –s in the endings of the words. Those rules also demanded some
practical written exercises and of course dedication and homework until the learners were able to correctly use them.

The vocabulary that they learned was about colors, verbs that have to do with tastes like: *j’aime* (I like) or *je déteste* (I hate). They also learned nationalities and countries. Moreover they had to memorize by heart whole phrases like *je m’appelle*, which means *my name is*, and *je viens de* which means *I come from*, without deepening into complicated grammatical explanations, due to the very beginners’ level. The vocabulary was easily learned with pictured vocabulary meanings near the words, presented in their text-books, which was very handful. However some of them needed to be written down in order for them to remember. All the phenomena above were being repeated inside the texts and the book exercises, so they practiced a lot until they could recognize them.

As it has been mentioned before, so far the procedure was the same for all the students. This is the spot where they get divided as far as the practical homework and their examination. The first group examined traditionally by asking them in the class to present themselves in French according to all that they had been taught. Subsequently, it will be presented the examination task of the second experimental group, which applied the AR method.

When they were ready to take the examination task the researcher introduced them the application they were going to use. They all had to own a mobile phone, a tablet or use one of their parents, and download the HP Reveal application. It took less than a minute to do it, unless those mobiles that had not a lot of spare space in their device’s storage so the learner had to delete some files first or buy another memory card. The teacher had already downloaded this application in her cell phone and had created an account that gave her the possibility to upload and edit files for this educational purpose. In order to make the learners understand how it must be the final result, she showed them her own video presentation, as an example, via the AR application. Moreover, they had to follow her HP-Reveal account, after they create their own, in order to have accessibility in her AR uploaded auras.

This application reveals auras by posing the mobile camera in front of pictures or texts (Figure 5). Those auras can be also pictures, or sounds or videos. In this language task we used the video possibilities. The kind of pictures that were used in this task, were authentic sketches made by the learners. Below it will be presented in
detail the instructions that were given to the students and after the work that had to be done by the teacher as far as the technical and technological application.

![Figure 5](https://www.google.com/search?q=hp+reveal&source=lnms&tbm=isch&sa=X&ved=0ahUKEwiprpTxmvxmvXhAhWT7aYKHfRrC4gQ_AUIDigB&biw=1366&bih=657#imgrc=_)

**Figure 5**

Source :https://www.google.com/search?q=hp+reveal&source=lnms&tbm=isch&sa=X&ved=0ahUKEwiprpTxmvxmvXhAhWT7aYKHfRrC4gQ_AUIDigB&biw=1366&bih=657#imgrc=_

### 5.3 The students

Following to the presentation of the HP Reveal application, the students created their personal accounts after the download and they only had to “follow” the teacher’s account (exactly like on Instagram for example), in order to have access to her uploaded auras. After that, they had to write a text in which they would firstly present themselves, their origins and their tastes, as they were taught. In other words they had to prepare their oral speech, by writing it down, as a first step. When the text was completed and correctly written, the learners had to make an authentic picture by creating a “Calligrame” sketch (Figure 5.1 and 5.2) by using the same words that used for their presentation text task.
After they completed this task they had to record themselves in videos in which they would present themselves but orally that time. They practiced in a lot of videos until they reached the best result, as far as their pronunciation mostly. When they had their tasks completed they would send them to the teacher so that she would edit them and upload them as auras into the HP Reveal and after discuss them in the class and evaluate them.

5.4 The teacher

The researcher presented the HP Reveal application into the classroom by showing firstly his own “Calligramme” with his own auto-presentation. The “Calligramme” sketch was used as a background picture and the video of the presentation was the aura used by the HP Reveal.
Afterwards the teacher explained the task step by step and it was applied by the students as it was mentioned already. The teacher during the task received several videos of the learners, for suggestions and corrections. Some of them were almost completely correct from the first time (grammar, pronunciation and vocabulary). Some of them had to be modified one or more times in order to get into the best result. About the “Calligramme” sketches and their drawing there was noticed no problem and it was actually fun and quick to create them.

When the teacher finally received all the correct videos she edited them into the HP Reveal with their background “Calligrammes”. This procedure demanded time in order to make the auras function with the application but in general there were no difficulties. More specifically she pictured the “Calligrammes” (Figure 5.3) that the children designed, with the camera of the cell phone. Before that, in order to make it more easy for the application to “read” the auras she designed a frame around the sketch. In that way it becomes more detectable by the AR camera, in which there is a color indicator of red, yellow and green (Figure 5.3). The pictures that has been taken when the indicator is green are more detectable when they are applied an aura overlay. In the end the teacher integrated the aura video overlay into the “Calligramme” picture of the corresponding presentation (figure 5.4), named it (figure 5.6) and uploaded it online finally, in order to share it with students (figure 5.7). When all “Calligrammes” were finally edited the teacher created a collection of all in a digital wall and all students could go and check with their cell phones all the auras,
watch their classmates auto-presenting themselves with AR videos and learn who they are and what they like (figures 5.8 and 5.9).

Figure 5.3: picture selection in green indicator color
Figure 5.4: overlay video selection

Figure 5.5: overlay application as aura
Figure 5.6: name of the aura

Figure 5.7: upload and share aura
Figure 5.8: wall of “Calligrammes”

Figure 5.9: Auras revealed
5.5 Evaluation of the activity

The students had been experimenting on this task for about one month until they completed it successfully. During the whole two months of the project the researcher was keeping journal notes considering the applicability of the AR as a learning tool, the effectiveness and the emerged problems and the learners’ attitudes. She also interviewed the students after the end of this activity in order to find out how they felt about using AR in order to produce oral speech in the target language, if they consider it an effective language learning tool and if it motivated them more, comparing to traditional examination activities.

5.6 Teacher’s journal

During this implementation, the teacher kept a journal in every class for each student in order to note down the development of the activity. More specifically she gave attention to: a) the teacher’s role, b) the learner’s attitude and c) the overall evaluation as far as the effectiveness level of producing oral speech in the L2 by using AR application, the effectiveness on their learning success comparing to the control group students and of course the problems met during the project.

As far as the teacher’s role she noted what she needed to teach to students, what exercises and how many of them were necessary in order for the learners to understand better the lesson, how she presented the application to students and set them the task, how she kept supporting them (technically and theoretically) during the activity.

As far as the learner’s attitude she noted their reaction to the learning objects that they had to learn, their reaction in using mobile and AR as a learning tool, their engagement to the task and in which level AR motivated them to complete it.

Considering the effectiveness of this activity, the researcher noted the problems during the whole procedure, the acceptance of the students, how many times they had to modify their performance video in order to correct it and their willingness to do is. Also their final performance and the level of their success. Additionally she noted if they kept remembering the knowledge they acquired in future similar oral exercises.
5.7 Students’ interviews

In order to obtain better and more reliable results the researcher interviewed every learner about how they experienced this implementation. The individual interviews were conducted in Greek, in order to make students feel more comfortable and express themselves easier. They were asked about their point of view considering the use of AR application as a learning tool, if they already knew it or had used it, if they motivate them and how they feel when they use it for educational reasons, if they feel less stressed and if they enjoy it.

5.8 Results

5.8.1 Teacher’s journal results

The main goal for the teacher was to promote oral speech in the target language. In order to give this task to the learners, she firstly had to teach them the necessary objectives. (Table 5.1). All learners were beginners and had no knowledge in the L2, so from the beginning they had to be taught vocabulary, grammar and pronunciation rules. After that period, the teacher gave them exercises to practice during the lesson time. When the learners had understood well all the rules and they were able to take the task, the teacher presented to them. Since now there have been no serious problems for any student, some of them could understand and remember their lessons better while some others needed more time. Here is the time where the 12 learners get divided in two groups. The control one keeps studying in traditional ways and the experimental one, which was presented the AR application task.
The teacher presented the HP Reveal application to the experimental group and explained them how they are going to do their task. She discussed with them about how to download the application to their phones or tablets. There was only one student that needed to use his parent’s mobile device; four of them had a tablet and one that had his own phone.

From their first reactions they all seemed to be impressed and interested while the teacher showed them her own “Calligramme” presentation as an example. (Wow!, Unbelievable, Are we going to do the same for ourselves?). They were motivated from the first time to start it. The teacher gave them instructions step by step. The vocabulary and the grammar rules were already understood so they mostly had to practice their pronunciation. They were auto-recording themselves until they had the correct result. Most of them sent the records 3-5 times to the teacher for correction. The teacher recorded her voice every time with the correct pronunciation and sent it back to the learner, in order to show him how to get into the perfect result of the task.

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<thead>
<tr>
<th>Teacher’s role</th>
<th>Goals</th>
<th>Encourage learners to practice French orally</th>
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<td></td>
<td>Management</td>
<td>a) Teach grammar, vocabulary and pronunciation rules</td>
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<td></td>
<td></td>
<td>b) Present HP Reveal application and how it can be used for the task</td>
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<td>c) Ensure the possibility of use by everyone</td>
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<td>d) Give instructions</td>
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<td>e) Organize each learner’s process and handle with their obstacles</td>
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<td></td>
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<td>d) Monitor their progress and compare scores of both groups</td>
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<td>a) First reactions towards the task</td>
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<tr>
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<td>b) Their engagement and motivation towards the task</td>
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<tr>
<td></td>
<td></td>
<td>c) If and how much they enjoyed it</td>
</tr>
<tr>
<td>Overall evaluation</td>
<td>Beneficial outcomes</td>
<td>a) Motivation</td>
</tr>
<tr>
<td></td>
<td></td>
<td>b) Engagement</td>
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<td>c) Autonomy</td>
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<td>d) Continuous practice</td>
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<td></td>
<td></td>
<td>d) Long-term memory knowledge</td>
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<tr>
<td></td>
<td>Inconvenients</td>
<td>Technical problems</td>
</tr>
</tbody>
</table>

Table 5.1 Categories and subcategories of the analysis of the journal
There was no student that completed the task from the first time, but they were all continuing to try until they get there. Two of them never got the perfect result (the one had one word wrong pronounced (des études) and the other used a wrong verb: je vais which means I go while he had to use Je viens which means I come). The teacher showed them their mistake but they were already tired to re-record themselves (even for one more time) so they left it as it was. Besides that everyone else had excellent results and they did not seem to feel embarrassed when sending themselves speaking in French (even for the very first trial recordings), comparing to the control group that they were examined face-to-face by the teacher.

The researcher also noted some technical difficulties. Some of the devices were quite slow because of the bad internet connection and 3/6 of the students had no storage in their gadget. However that was not a big problem, they only had to delete some files or other applications. The biggest issue was the traceability of the auras, as it was mentioned before. Some of their “Calligramme” sketches had to be framed in order to be detected by the application’s camera, otherwise did not work. That took a lot of time to the teacher in order to make all auras work correctly.

To sum up, literally all learners were willing to complete the task, some of them even over-motivated (they wore pretty clothes for their video and tried to seem like real French while speaking, one wore even a French hat). As long-term results there was also observed that those learners from the experimental group with the AR application, remembered still perfectly how to pronounce well French words and how to present themselves to others. So that proves that they practiced a lot in order to finish their task and they were actually focused on it. On the other hand, the control group had still difficulties to present themselves and their tastes (especially after a long time passed from that lesson) and most of them needed time to think or to remember about what they had to say and how to pronounce it correctly.

5.8.2 Learners’ interviews results

The teacher discussed about the project with the learners and encouraged them to answer questions and express their feelings and points of view about their experience:
A great amount of the learners (83%, table 5.2) stated that they feel embarrassed when they have to use the target language and speak it in front of others. “I always think I’m going to make a lot of mistakes when I speak French”, “The others will laugh at me”, “I don’t know how to say it in French”. They feel anxiety that they are examined about their oral skills, they do not have the comfort of time to think about what to say and that stresses them. Also they think that besides the teacher, others will criticize them too, because of their mistakes or their wrong pronunciation. “Everyone looks at me when I speak”, “I know how to say it, but I get stressed”.

When the researcher asked them about what they liked the most about this task, the most of them (67%) found it really creative and innovative. “I could’t wait to start my video presentation”, “It was like in the movies to watch our video appearing in front of our sketch”, “I like that we drawed”. All of the participants were excited from the beginning with this task because they had never done it before and they were interested in knowing how they could apply AR in their sketch. Also the fact that they had their time and their autonomy to realize it made them feel more relaxed (33%)
and complete successfully their oral examination by using video recordings. In general they were all motivated to do it.

Moreover when the learners were asked about the difficulties they mentioned the issues about the traceability of the auras by the application and the storage in their devices. “It didn't work at the beginning because the application couldn’t read my sketch”, “After my teacher edit my sketch it worked”, “I don’t have free storage left to download the application”. So they had issues to deal with, but they were mostly excited about doing the task, it did not take them time to overcome these problems. However the teacher made the most of the work for them, such as a lot of edits for the application readability of auras.

Finally when the students were asked about what they learned by doing this task, they claimed that, afterwards, they were more confident in auto-presentation in French and they liked the fact that they worked autonomously. “Every time my teacher asks me about myself, I know exactly how and what to say”, “I learned how to present myself because I wanted to have a great presentation video”, “I worked a lot on my pronunciation and wanted to seem like a real French”.
6. DISCUSSION

The goal of this project was to study if Augmented Reality applications can be a beneficial tool for French language learning and especially its impact on the learners’ motivation and skills development, as far as their oral speech in the target language. The researcher has observed that most of the students had difficulties in expressing themselves orally in the FFL, so she wanted to measure if AR applications and mobile learning can be actually considered as a useful approach of teaching and learning inside a traditional class.

A variety of sources was used in order to examine if AR is capable in entering the educational environment. Nevertheless, its potentials and especially its educational possibilities are little investigated yet. However the application of the project was more than interesting. The students were willing and motivated to use it as a new educational experience. Technology has taken over a lot of domains nowadays, so does obviously in the educational world. Young learners are familiar with technological gadgets such as tablets, mobile devices, cameras and of course, applications. So why not use them also during educational processes?

In order to examine these suggestions the researcher applied the task based in the HP Reveal application and combined diary notes and interviews to obtain more valuable results. The outcomes were positive as all learners completed successfully their task. As Azuma(2010) has already stated AR in education not only enrich traditional information but also creates a playful environment that, indeed, considered in students’ motivation comparing to learners’ motivation of the control group. They were interested in creating a great video presentation of their own, and they were trying to continuously improve it, which approves Dale(2010)’ s and Keller(2010)’ s theories about the great importance of motivation that can actually relate to more efforts and engagement, in order to reach the target and of course the achievement’ s satisfaction.

It was a common evaluation task, however they did not actually feel that they were tested, they were really having fun by completing it. Also, the importance that they had the opportunity to practice alone and have the benefit of taking their time gave them autonomy and independency. And not only that, they also felt more relaxed during the process, fact that proves that this kind of activity was related directly to their needs, and as Dale(2010) points out, this is a factor that can lead to success.
They were studying and learning without realizing it. When they were ready to expose themselves and they did it with confidence and satisfaction, basic elements of Keller’s (2010) ARCS model. In the end every one enjoyed it. Some even felt very proud of their creation and even wanted to show it off to other people. (“I showed it to my friend at the school and he was impressed”). Digital files are easier to share and to conserve. In a world full of internet, social media, hyper-utilization of cell phones, those kinds of digital tools such as AR, should be definitely promoted and investigated more.

As far as the control group, it is important to mention, that of course they did also learn their lesson and completed their task: to be able to elf-present inside the class. However, when in long-term, they needed to use some of that specific vocabulary or some pronunciation irregularity, they needed time to think about what they have to say and how. In contrast to the experimental group, in which all the learners developed more their oral skills in French and also remembered, even after a long time, every rule and vocabulary they studied during their AR task. That does not prove that AR provoked it necessarily, but it obviously gave them motivation, and there is a huge urge for more investigation about these kinds of educational tools and their benefits.

6.1 Conclusion and further suggestions

The general conclusion of this study is absolutely positive as learners successfully started to produce oral speech in the target language. They started to feel more relaxed during the learning process because they were comfortable by working alone their oral skills for the task and self-evaluate their selves by watching their videos. Additionally the sketch made them enjoy it too. Also they got involved into their first autonomous activity and gained more self-confidence and self-trust, by working step by step without having any instructor next to them or another classmate to criticize their skills. The use of technology gadgets and especially the AR application won their attention and impressed them. With Augmented Reality we also had augmented interest and augmented engagement. It is important to mention that there was no student that gave up or was unwilling to take part to this task, even the ones that in general hated oral production activities.
Moreover their task is an audio-visual creation that will remain. They can share it on the internet and show it to their friends and family, or even for professional reasons in the future years. This fact enforces their confidence for the future French learning and of course gives them satisfaction and pride about their French skills. One more thing really remarkable is that the most of the students kept this HP Reveal application in their device, even after the end of the task, because they liked it and wanted to experiment more with other Augmented Reality creations that they could do, of course not necessarily relevant to French. Their motive was huge and the experiment of this task unexpectedly successful.

Nevertheless, it must be mentioned here the teachers’ role. Educators usually devote most of the time into following the text-book instructions and activities in order to teach their learners, and it is normal because they have a lot to instruct and there is a deadline pressure of the school year. However, it should be considered that not all text-books and not all methods are suitable for everyone. Instructors should take more experimental risks because that brings evolution into the educational domain. Moreover, young generations are literally grown up into technology. Even their “toys” are mostly digital nowadays from their very early childhood. Educators must be well informed and always able to cope with the modern actuality. Mobile phones have become the extension of our hands and it is almost abnormal to forbidden them during the class, like it was usual in the past. In contrast educators must find ways to integrate them into the learning process and explore their possible educational benefits. Of course that demands constant updating and time sacrifice from both teachers and learners. Here it must also be mentioned the importance of the teacher’s support during digital based tasks, like the one of this project. It is an activity that promoted autonomy, but the educator must supervise and lead the learners during the process, in order to work effectively, and not just let them play with it until the time of their evaluation.

To sum up, this dissertation suggested an AR application as a beneficial learning tool. More precisely it was investigated if it can significantly promote motivation into the class and enrich the learners’ development of their oral skills in French. After research, it is proved that AR mobile application impress in general, because it is a new trend, unemployable and therefore they are capable to strengthen the learners (and the teachers’) motivation and engagement. It is also significant that the study
showed that participants not only developed and practiced their oral skills, but they also learned grammar rules and vocabulary that had to use in their task, in order to complete it, and they were able to retain that knowledge in long-term uses too.

6.2 Limitations

However the study of this task seems to have a lot of beneficial outcomes, there should be considered some limitations too. First of all, it must be noted that the use of a mobile device is not one of those limitations. Azuma (2010) notes that there are difficulties about the use of technology and the necessary skills that are demanded but everyone owns a cell phone nowadays, and if not, they can afford it easily and know how to use it, in contrast to computers which are more expensive and less practical. Especially for young generation the cell phone is actually their hand extension. From their very early age they start playing with it, and they continue having as a necessary ‘‘accessory’’ of their everyday life. Even it is for playing a game, chatting on social media or using a GPS guide, mobile phones are indispensable.

Considering the limitations of this study, it should be mentioned that the internet and the technical part of the realization of the task is a real issue. Someone who knows how to deal with them or at least someone who has time to sacrifice in order to familiarize with AR applications is absolutely necessary, so that he will be capable to handle with every possible technical issue. This is mostly the educator’s issue, who must be well qualified and informed about those kinds of activities, before he tries to give knowledge into the class. Moreover the devices must be well preserved and maintained in order to function better and quicker. That demands more specialized knowledge, probably from a computer technician or an expert and of course a good and rapid internet connection.

Apart from the technical part, we could not generalize these results, considering that the participants of this study were beginners and actually a small amount. It is also notable that every individual has his own necessities and needs and not every approach matches to every learner. Probably the most convenient solution is to combine traditional learning-teaching while experimenting with new ideas in the education, and of course technology would be one of these.
The necessity of further investigation is huge in AR as an educational tool. As far as this study, it should be considered that the amount of the learners was just a small sample and the students’ knowledge was only at the very beginners’ level. Their young age did not affect negatively the AR use and in general they had no difficulties in experimenting. In contrast, they were very motivated and enjoyed it.

There is a respectful variety of AR applications that demand further investigation about their benefits as a tool for language learning purposes. This project proved how AR can encourage and motivate young learners to produce oral speech and actually learn, even in long term uses of French, so this kind of digital activities are worth further investigations. There are a lot of unanswered questions and suggestions about AR in education. Undoubtedly it is an impressive tool, but can it be beneficial in teaching-learning or will it just be a trend of mobile applications? It is an affordable tool, but can it be actually useful in education, or its possibilities remain simple and poor, as far as the information they can provide, and it is not possible to expect a lot yet? And what technical competences need an educator to incorporate it inside the class?
Bibliography


Pantelidis V. (X.X). Reasons to Use Virtual Reality in Education and Training Courses and a Model to Determine When to Use Virtual Reality. THEMES IN SCIENCE AND TECHNOLOGY EDUCATION Special Issue,7(2),59-70

Pintrich, P.R. (2003). Motivational Science Perspective on the Role of Student Motivation in Learning and Teaching Contexts. Journal of Educational Psychology,95(4),667-686

Publications


Λάιος, Τ.(2000). *Εισαγωγή στη γλωσσολογία.* Αθήνα: Πατάκης


Παρασκευόπουλος Ι. (1993). Μεθοδολογία Επιστημονικής έρευνας. Αθήνα