


Technology and Language learning



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There are many technological systems on the market for language learning and teaching. The technologies we are going to discuss are the following:



QR CODE



VR LEARNING (not related to the course)



AR LEARNING



UBIQUITOUS LEARNING



BUT FIRST...

Example of traditional apps

FluentU

FluentU is a language-learning platform that uses real-world videos and interactive subtitles to create an immersive learning experience. The videos take on a variety of forms, including commercials, music videos, interviews, and more. Accompanying quizzes give users the chance to practice language used in videos.

Rosetta Stone

Rosetta Stone is a computer-assisted language learning software. The software uses images, text, and sound to teach words and grammar by spaced repetition, without translation.



WHAT'S A QR CODE?

A QR code (abbreviated from Quick Response code) is a type of two-dimensional barcode, a handy tool that is becoming more and more popular in our daily lives.

It is composed of black squares arranged in a square grid on a white background, which can be read by an imaging device such as a camera.



Example of QR Code



QR CODE AND LANGUAGE LEARNING

Interdisciplinary study: format QR Code

Università politecnica delle Marche (2011)

Format QR Code consists in the personalisation of English learning by the integration of paper and digital learning material through QR code. The multimedia and multi-channel contents contained by the teacher in the QR code can be decoded by a free software that can be installed or already present on different mobile devices.

The trainees performed various activities in relation to the four language skills:



LISTENING



WRITING



SPEAKING



READING



QR CODE AND LANGUAGE LEARNING

This is an example of how a learning activity with QR Code is developed.

There is a paper-based activity, i.e. dialoguing with a classmate on the topic of the exercise, in this case "Giving directions".

Then there are QR Code activities that can be activities of listening, writing or reading.

Giving directions



Activity 1
Work with a partner. Make dialogues as in the following example. You want to go to...

- a cinema
- a post office
- a newspaper
- a supermarket
- a theatre
- an Italian restaurant

Excuse me! Is there a ... near here?

Yes, Go down ...

Activity 2
Complete the dialogue (units 3-4, ex.4).



Activity 3
Watch the video about *Directions* and answer the questions.





QR CODE AND LANGUAGE LEARNING

By using QR codes, language teachers could share answers to exercises, new words and their pronunciations, audios, videos, homework assignments, information on websites, presentations and many more.

Another benefit of QR codes is that they could be used to increase learners' motivation and arouse their interest.



IF YOU WANT TO LEARN MORE ABOUT IT...

Sperimentazione format QRcode all'ITCG "DaVinci" di Martina Franca 5-31 marzo 2012 Watch later Share

Università Politecnica delle Marche
Progetto FIRB 2007 "Learning4All"
Sperimentazione interdisciplinare format QRcode

ITCG "L. Da Vinci"
Martina Franca
a.s 2011/2012
5 - 31 marzo 2011

Classi 3B GEP e 5B GEP

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Martino Santoro

Martina Franca, 5 marzo 2012



Screencast-O-Matic.com

<http://mondodigitale.aicanet.net/2012-2/didamatica/PAPER/FULL/F152.pdf>

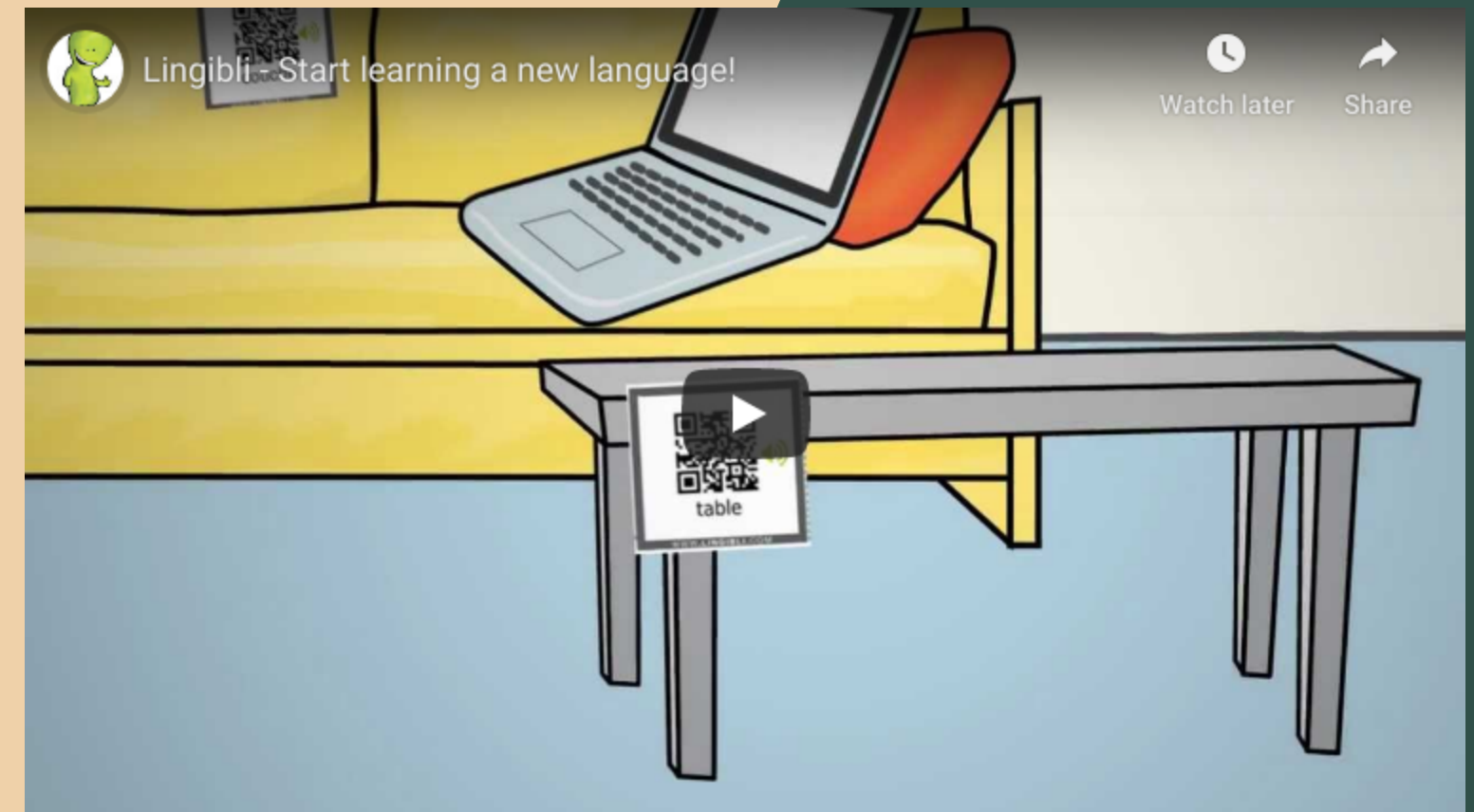
QR CODE AND LANGUAGE LEARNING

Lingibli

The Lingibli app is an iOS and Android app designed to make learning a foreign language easier through QR codes.

Lingibli applies that to QR-readable mini print outs, that have single terms on them and that are supposed to be spread out throughout your home or office and can thus be learned within your daily routine.

When you scan the code you get five sentences that help you understand the word and how it's used.



<https://bit.ly/2TzFdFR>



VIRTUAL REALITY VS. AUGMENTED REALITY



Virtual reality (VR): A fully immersive experience where a user leaves the real-world environment behind to enter a fully digital environment by VR tools;



Augmented reality (AR): An experience where virtual objects are overlapped onto the real-world environment by smartphones, tablets, heads-up displays, or AR glasses.



VR TECHNOLOGY AND LANGUAGE LEARNING

ImmerseMe

ImmerseMe offers to students the opportunity to engage with native speakers in real-life scenarios, without the real-time stress.





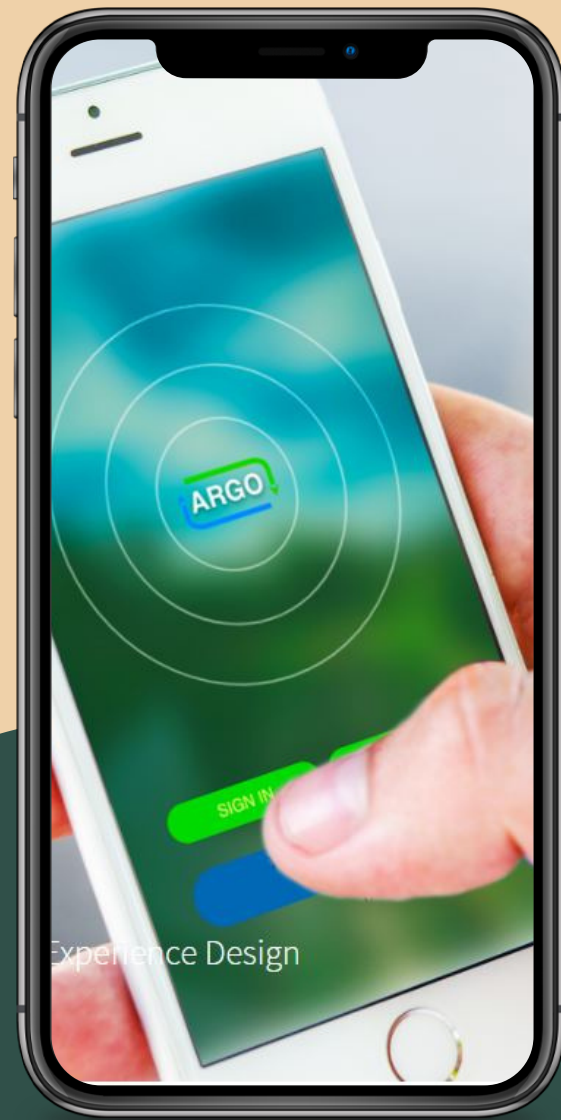
VR TECHNOLOGY AND LANGUAGE LEARNING

ImmerseMe

- Content is differentiated into three levels: Beginner, Intermediate and Advanced;
- Learners can progress through 4 modality of learning modes: Pronunciation > Dictation > Translation > Immersion;
- Choose from over 3,000 interactive scenarios across 9 languages: German, Spanish, French, English, Japanese, Chinese, Italian, Greek and Indonesian;
- The layout of lessons can be customized to match your scope and sequence/curriculum plan.



AR TECHNOLOGY AND LANGUAGE LEARNING



Argo

Argo is an augmented reality application that helps people learn a new language by challenging them to identify objects around them in the language that they want to learn.

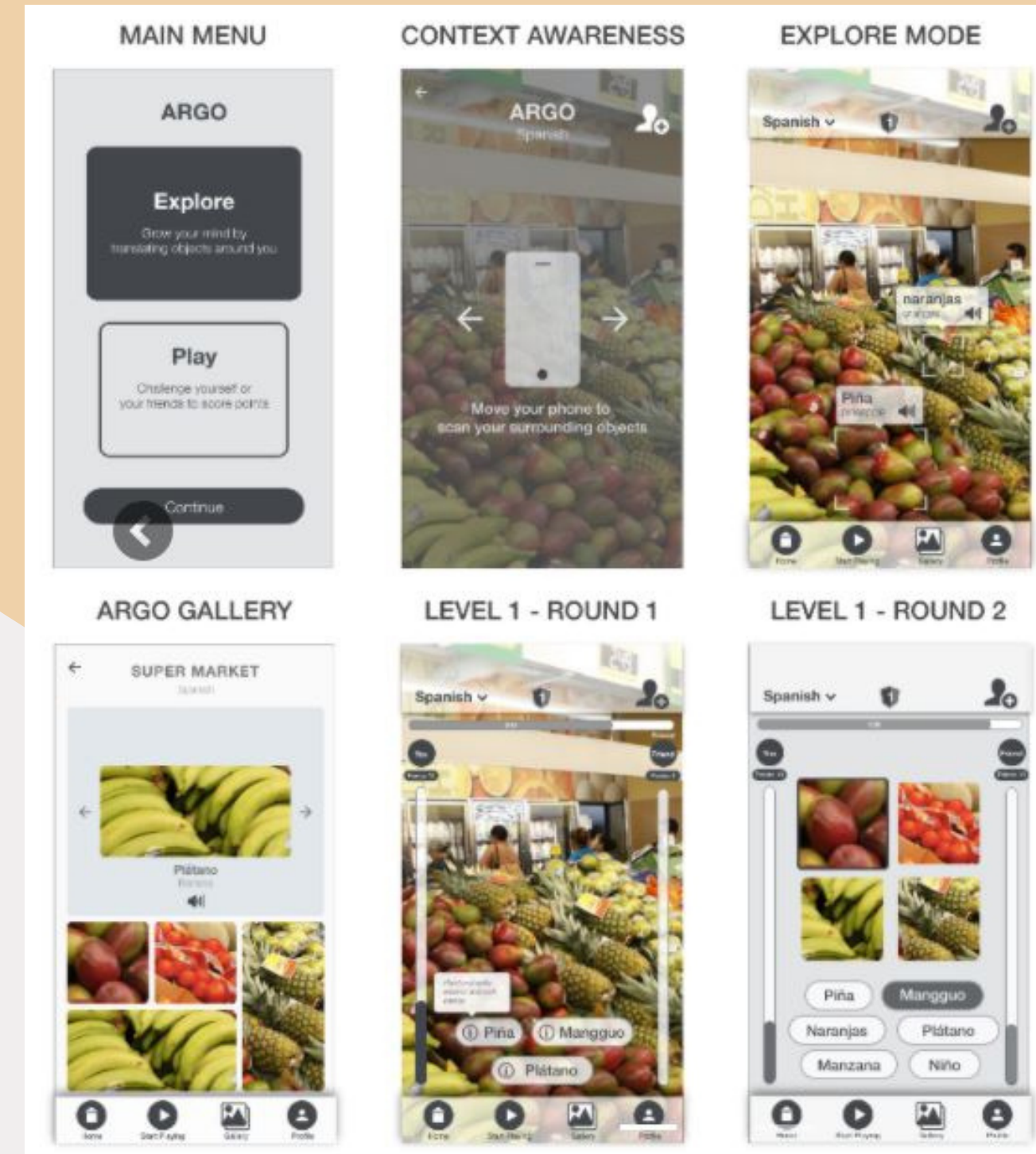
<http://monamishra.com/projects/Argo.html>



AR TECHNOLOGY AND LANGUAGE LEARNING

Argo

Our brain stores visual information in a way that is easy to recall because visual images have more things that we instantly associate with and hence, that connection makes the information more memorable and easier to recollect.



AR TECHNOLOGY AND LANGUAGE LEARNING

Argo

Argo recognizes images as patterns and triggers the application to identify its label with the help of computer vision technology.

powered by the CloudSight, an Image Recognition API;

powered by TensorFlow, an end-to-end open source platform for machine learning.



AR TECHNOLOGY AND LANGUAGE LEARNING

Mentira

Mentira, a project launched in July 2009, is the first mobile, place-based, augmented reality game explicitly oriented towards the development of language skills in Spanish.



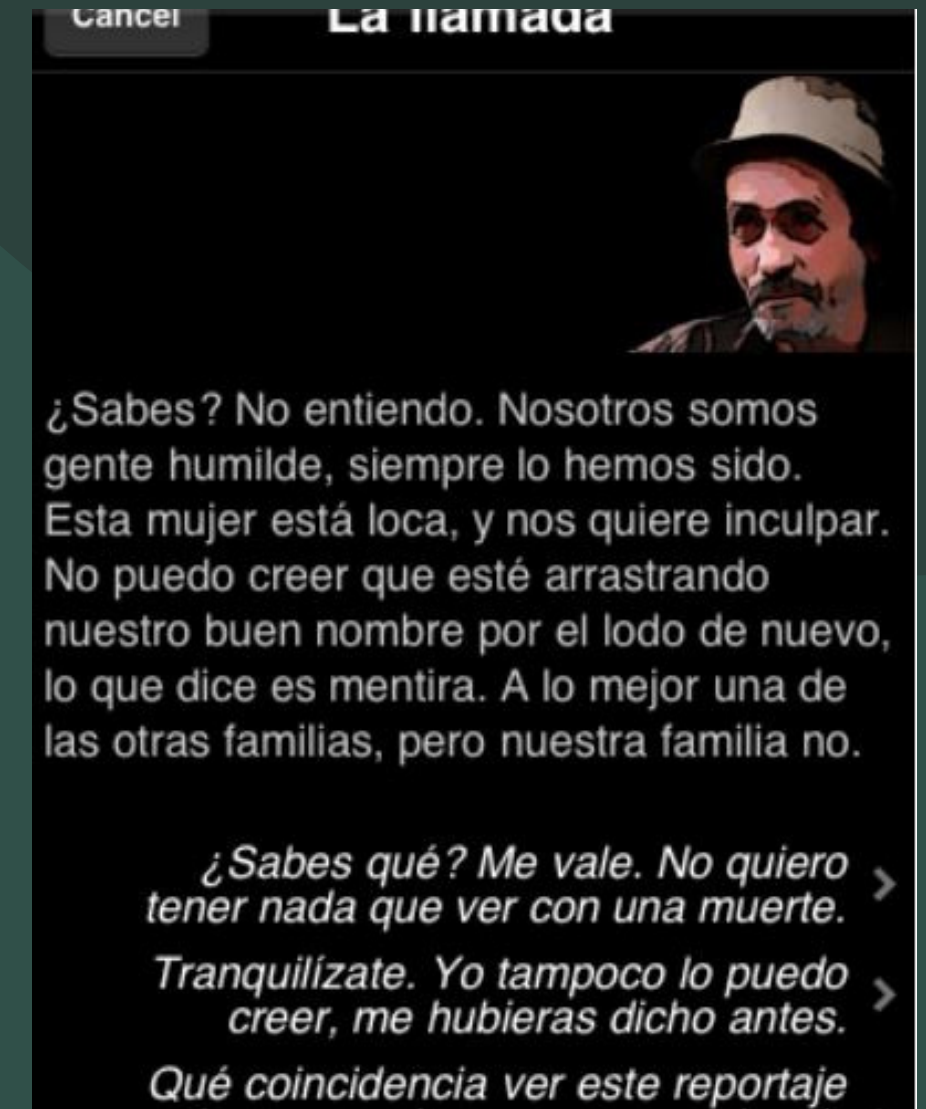
<http://www.mentira.org/overview>



HOW DOES IT WORK?

Mentira

"The mystery is like a puzzle across four separate player families, so that players must work together to understand the full story. The clues a player receives depend upon the family they belong. In the final level, players sort through clues, consult one another, and formulate arguments as to the identity of the killer".





HOW DOES IT WORK?

Mentira



Each conversation is situated at a particular place and time in the game's narrative, somewhere between reality and fiction.



The game is a murder mystery, consisting of current and prohibition era fictional events. The basic structure of the game is **directed conversations** between the player and fictional characters concerning the murder and its solution.

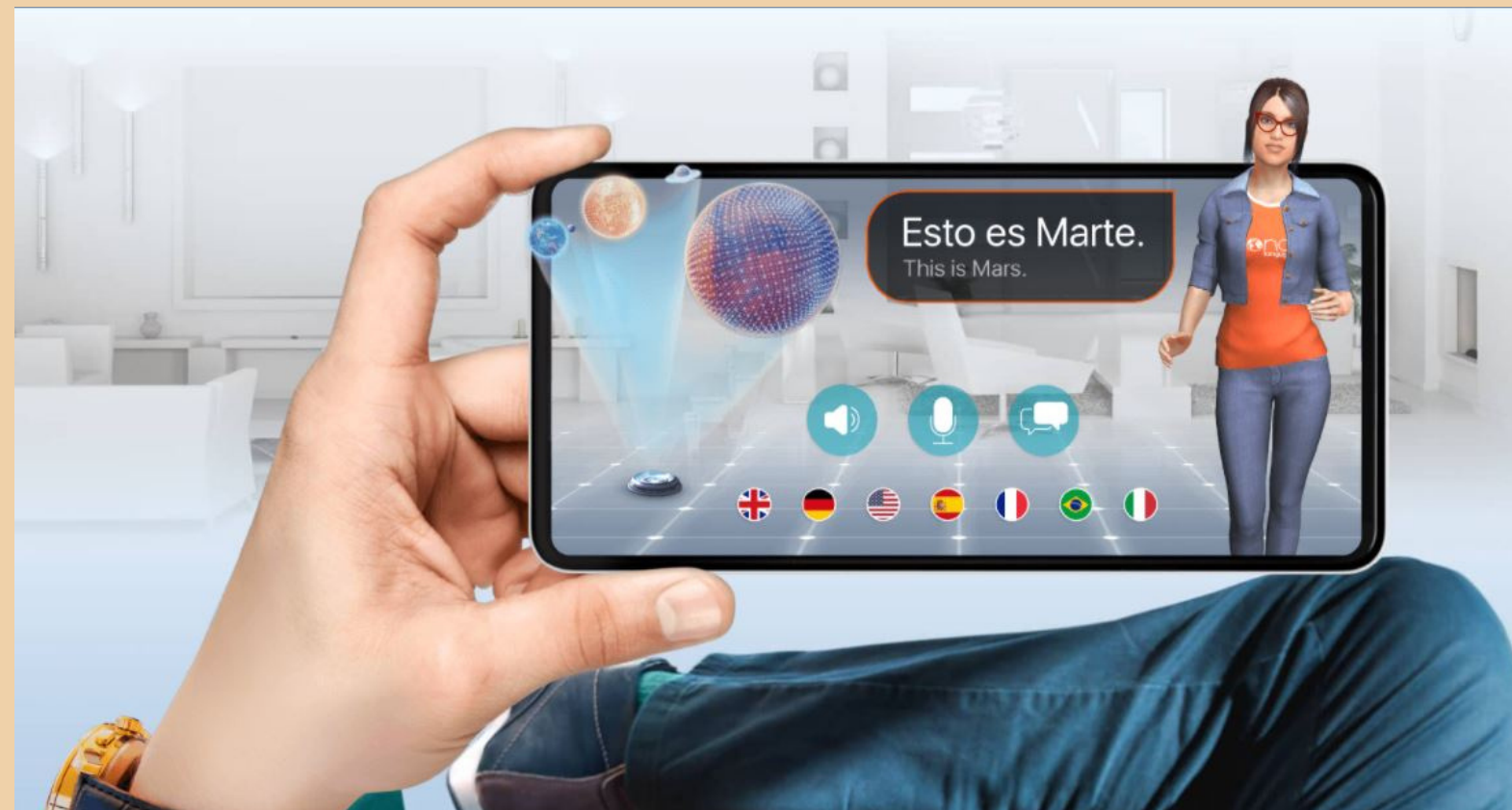


Mentira is powered by **ARIS** (Augmented Reality for Interactive Storytelling) platform, an open-source game editor and client developed at the University of Wisconsin-Madison.





AR TECHNOLOGY AND LANGUAGE LEARNING



Mondly

Mondly is created for language learning and it is based around a combination of daily lessons focused on games and translations into your language, a chatbot and unique augmented reality features.



HOW DOES IT WORK?

Mondly

"Exploration is learning".

Using augmented reality, the designers created a new world within your own. Just as real looking, but only more spectacular.



<https://www.mondly.com/ar>



AR TECHNOLOGY AND LANGUAGE LEARNING

Mondly



Over 30 million downloads in over 190 countries;



App of the Year by Facebook (2017) and Best New App by Apple (2016);



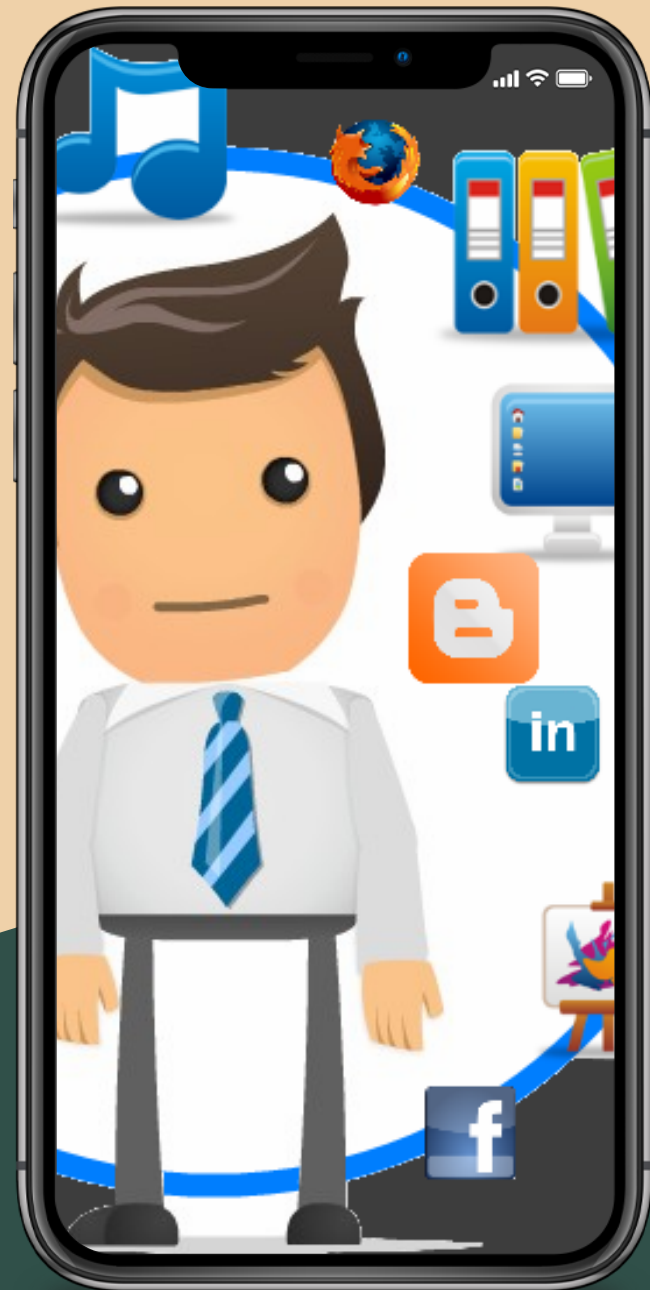
Teaches 33 languages;



Powered by Google ARCore.



WHAT IS UBIQUITOUS-LEARNING?



Ubiquitous learning

Ubiquitous learning is the interaction between humans and computers in order to learn.

U-learning can be defined as an everyday learning environment that is supported by mobile and embedded computers and wireless networks in our everyday life.

The learning process includes the real-life experience augmented with virtual information and is adapted to the learner and learner's environment.



CHARACTERISTICS OF U-LEARNING

These are the most important characteristics of U-learning:



Permanency: Students never lose their work unless they decide to delete it. Also all the learning processes are recorded everyday;



Accessibility: Learners have access to their documents, data, or videos from anywhere;



Immediacy: Wherever students are, they can get any information immediately. Thus, learners can solve problems quickly;



Interactivity: Learners can interact with experts, teachers, or peers in the form of synchronies or asynchronous communication.

FEATURES OF U-LEARNING



System continuously senses the student's location and its surrounding and stores the information into the database;



Based on the environment situation U-learning system provides right information at right time in right way;

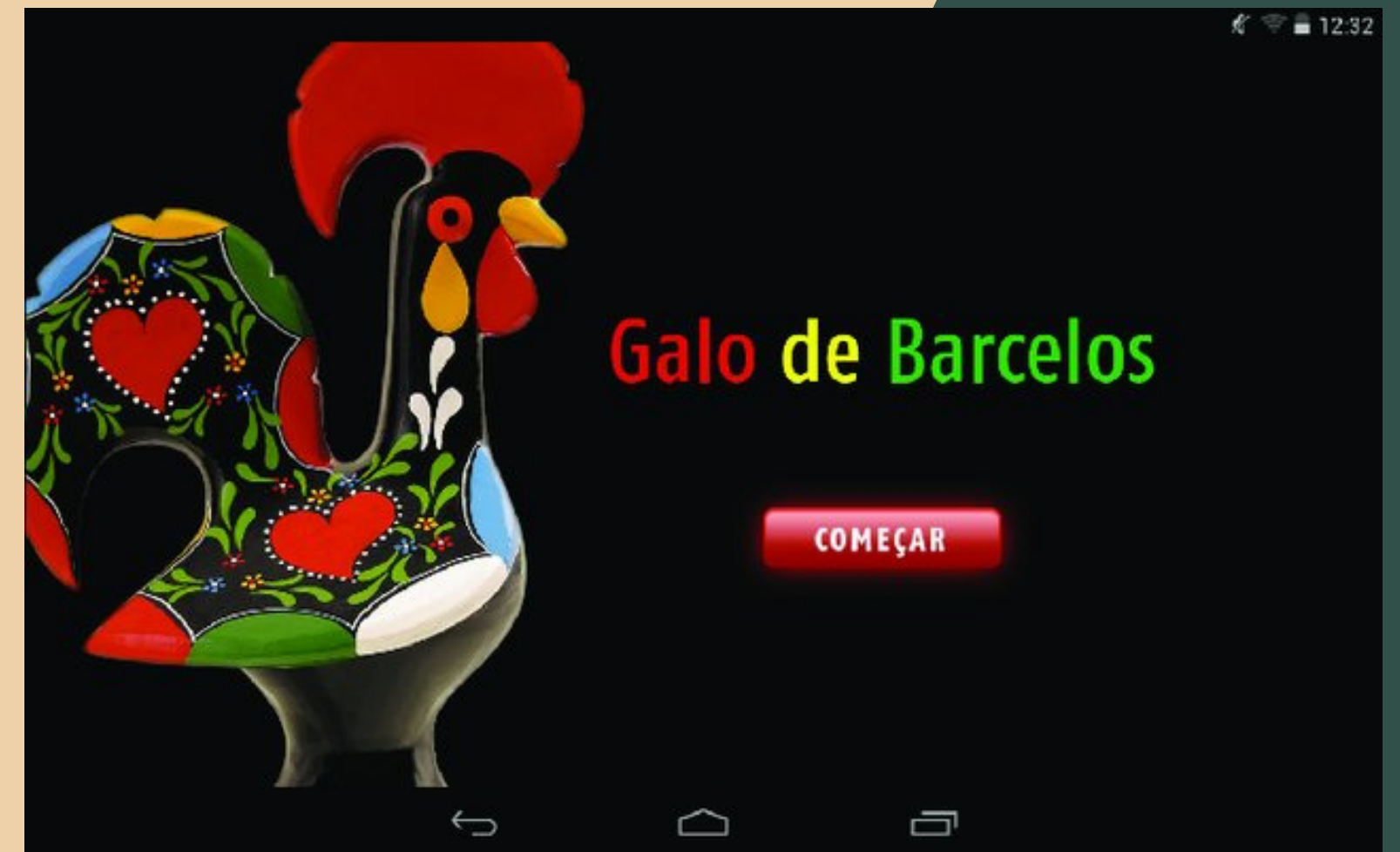


Real time streaming provides better quality services.

EXAMPLE OF U-LEARNING TECHNOLOGY

Galo de Barcelos

Eight Master's students of Minho University (Braga, Portugal) have developed between 2012 and 2013 an Android app for Portuguese language learners: "Galo de Barcelos". Their intention was to create a flexible teaching and learning environment in which teachers and students can navigate as they wish, (passively) querying content or (actively) creating and sharing content.



<https://bit.ly/34Dzm8M>

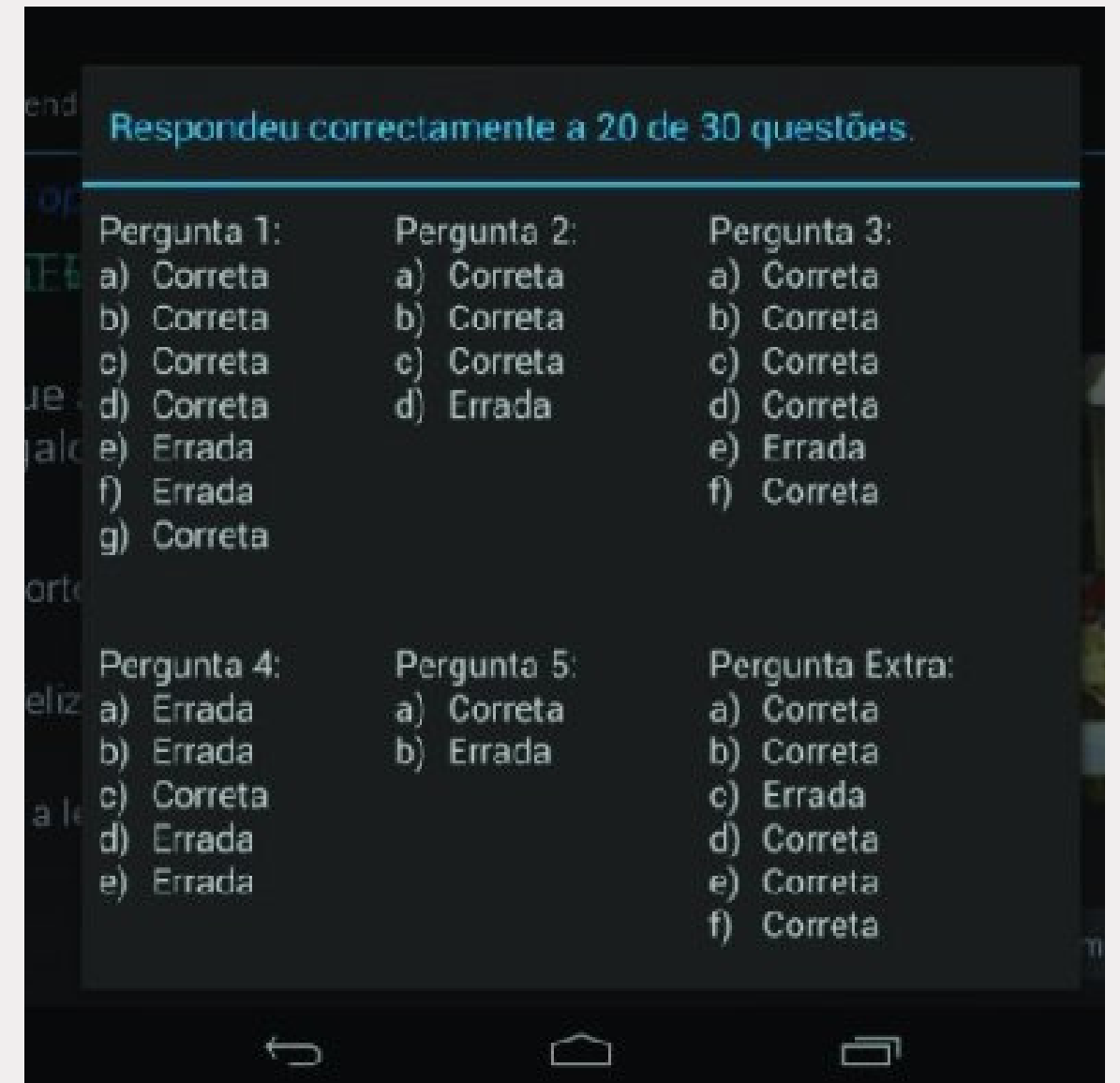
HOW DOES IT WORKS?

Galo de Barcelos

They tried to develop different language skills (vocabulary, grammar, listening and reading skills, etc.) through a wide variety of activities (true/false, filling in the blanks, matching, multiple choice, etc.) and using authentic audio-visual materials.

Students receive specific feedback on their performance with respect to each activity or at the end of each lesson.

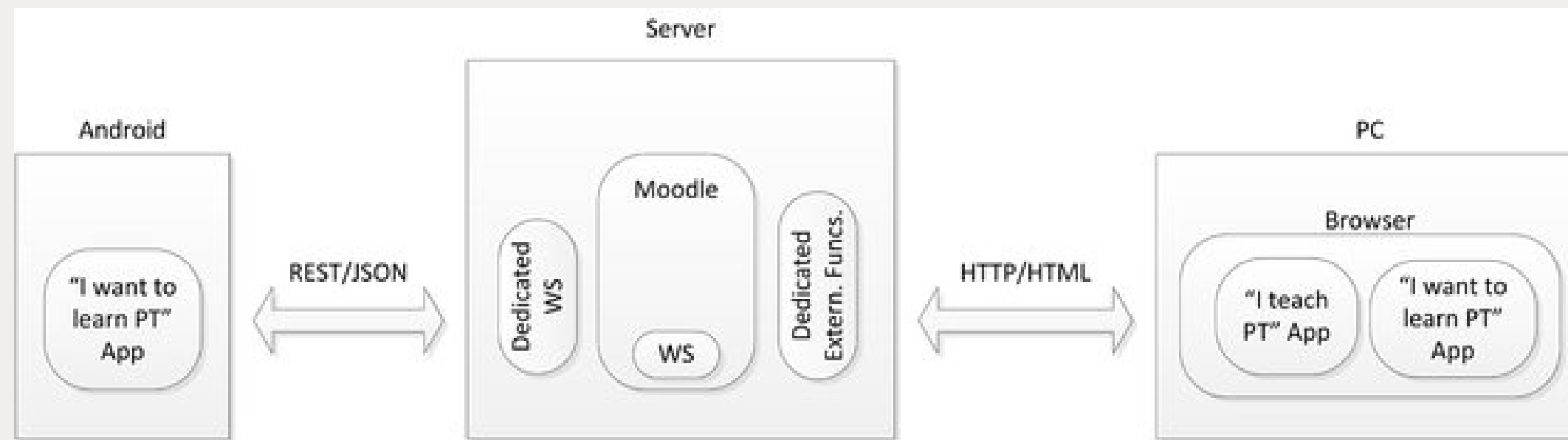
This feedback is useful for learners because it is a tool for active, self-directed involvement, which is essential for developing communicative competence.





SYSTEM ARCHITECTURE

Galo de Barcelos



The server side of this system is central, it stores the contents that are made available to learners in both the web and Android client applications. To implement the system they considered an existing Learning Management Systems (LMS): Moodle.

Moodle was chosen as the basis for the server implementation.

The most important feature of Moodle for the purpose of this project is that it provides a web service access using different protocols and formats.

RFID TAGS FOR U-LEARNING TECHNOLOGY

RFID tag consists of a tiny radio transponder; a radio receiver and transmitter.

Radio-frequency identification (RFID) uses electromagnetic fields to automatically identify and track tags attached to objects.

RFID tags are able to store more information per chip than a barcode, and wireless scanners that have the ability to instantly identify and capture data when within scanning range.



EXAMPLE OF U-LEARNING TECHNOLOGY

Tango

TANGO system detects the objects around the learner using RFID (Radio frequency identifications) tags, and provides the learner with the educational information.



<https://bit.ly/35SZqfE>

FEATURES OF TANGO SYSTEM

Authentic learning: TANGO uses real-world objects as learning materials and facilitates to link authentic objects to vocabulary. The system allows learners to feel and touch the real objects for better impact and increase in learning effectiveness;

Personalized learning: According to the learning records, TANGO asks suitable questions to the learner;

Collaborative learning through objects: TANGO facilitates to share knowledge about real-world objects with questions, answers and comments;

Vocabulary learning anyplace anytime: They assume that RFID tags will be attached with a lot of products in the future, e.g., food, clothes, electronic appliance, and so forth;

Adaptive learning environment: Learner's record will be created when the system is used. The questions asked will be based on 4 different levels according to the learner's history records.



SITOGRAPHY

- <http://mondodigitale.aicanet.net/2012-2/didamatica/PAPER/FULL/F152.pdf>
- <https://bit.ly/2TzFdF>
- <https://immerseme.co/>
- <http://monamishra.com/projects/Argo.html>
- <http://www.mentira.org/overview>
- <http://www.mentira.org/the-game>
- <https://www.mondly.com/ar>
- www.srjis.com/pages/pdfFiles/146684584024%20Deepak.pdf
- <https://bit.ly/3kFCIha>
- https://www.researchgate.net/publication/301723527_Mobile_learning_a_powerful_tool_for_ubiquitous_language_learning
- https://en.wikipedia.org/wiki/Radio-frequency_identification
- <https://bit.ly/35SZqfE>

**Thank you
for the
attention**