English Language Learning through Innovative ICT Solutions that Promote Enculturation and Role-Playing

[1]Hariklia Tsalapatas, [2]Olivier Heidmann, [2]Rene Alimisi, [1]Elias Houstis
[1]University of Thessaly, [2]Centre for Research and Technology Thessaly (Greece)
htsalapa@uth.gr, olivier.heidmann@gmail.com ralimisi@gmail.com enh@uth.gr

Abstract

Perceptions about language learning are evolving: instead of expecting all individuals to speak with one particular accent and in one particular way, there is a shift towards embracing the richness of European cultures as this is manifested in the diverging uses of vehicular languages. Situated language learning can be advantageous by enabling the design of learning activities that familiarize an individual with specific work-related situations in varying cultures.This paper presents siLang, an serious gaming approach that is based on the model for situated cognition. siLang exposes learners to the use of the English language by native as well as non-native speakers aiming at providing opportunities for enculturation and role playing within a real-life context with a focus on work needs. Serious-gaming technology, virtual microworlds, and innovative learning content promote interaction, conversation, and verbal communication tasks.

1. Introduction

In today's networked world, virtual mobility for know-how exchange and enrichment of informational resources in relation to professional needs is as common-place as physical mobility. To efficiently communicate in the world of work, professionals often rely on vehicular languages such as English, German, or French. Commonly understood languages, however, are used differently by individuals with diverse backgrounds. For example, a professional who uses English as a vehicular language for basic and professional communication with colleagues from different European countries will be faced with widely varying pronunciations influenced by native languages as well as additional so called "transfer effects": influences on syntax, choice of words, expressions, and more. On the other hand, a professional that is well-versed in culturally-influenced practices for daily and business communication is better positioned to establish effective and trusting professional relationships 0.

In this open and culturally rich business environment where services, products, and people are highly mobile perceptions on language learning evolve. The use a 'lingua franca' in a manner that closely follows that by native speakers becomes less important than effective communication that supports professional activities, embracing linguistic and cultural diversity 0. While professional training programs focus on brining language competency to working levels, they fail to address the diverging use of vehicular languages in international contexts in which workers with culturally rich backgrounds are called to communicate for professional purposes 0.

This paper introduces a situated, serious gaming approach for vehicular language learning aiming at effective work place communication. A serious game is being developed with dual objectives: a) to build language competencies of professionals in vehicular languages with a focus on meeting work place needs, and b) to empower professionals to communicate effectively with native and non-native speakers of vehicular languages by exposing them to typical uses that incorporate transfer effects and cultural influences. Situated learning is used for developing engaging learning scenarios that draw upon real-life activities enabling professionals to build confidence in their communication capacity. Role playing activities further empower professionals to efficiently apply newly developed knowledge at work. The proposed situated learning approach is applicable for developing skills in any vehicular language. In the context of this work, it will be validated towards building English language skills and will be evaluated with professionals from Greece, Italy, Portugal, Norway, and Estonia.

2. Theoretical background: Serious games

Serious games are not a new approach in educational settings. As term appeared in late 60's and a very first definition was addressed by Clark Abt who described serious games as having 'an explicit and carefully thought-out educational purpose and are not intended to be played primarily for amusement; this does not mean that serious games are not, or should not be entertaining' 0. The

'aspect of entertainment', which is not clearly elaborated in Abt's definition, is still vague in more recent definitions.

For example, Zyda 0 considers the 'entertainment' aspect a prerequisite and describes a serious game as a 'mental contest, played with a computer in accordance with specific rules that use entertainment to further government or corporate training, education, health, public policy, and strategic communication objectives'. Stone in his definition of serious games had weakened the aspect of entertainment stressing the fact that serious games 'move beyond entertainment per se to deliver engaging interactive media to support learning in its broadest sense' 0. The aspect of entertainment is absent in Sorensen and Meyer's 0 definition, where serious games are described as 'digital games and equipment with an agenda of educational design and beyond entertainment' 0. According to other definitions aspects of leisure games and game technologies are imported to serious games; for instance, Felicia 0 describes serious games as using 'new gaming technologies for educational or training purposes' stressing also the fact that serious games have the potential to trigger 'educational, therapeutic, and social' mechanisms.

As the discussion evolves, it becomes clear that the research community has not agreed to a single definition of the term 'serious games' 0. However, there is a trend to describe serious games as 'having a learning objective, being an engaging interactive media, and having some game element' 0. siLang follows this trend and adopts this definition of serious games.

2.1 Serious games: application spectrum

A review of existing serious games, revealed the fact that there is an increasing interest for serious game use in many domains 0 due to the fact that they offer opportunities for simulation-based scenarios, 'habituation', and enculturation 0. For example, serious games are used in the health, business, and military sectors; they also have presence in broader professional as wel as educational settings.

The interest in serious games for military purposes emerged 30 years ago and is related to the fact that practice in real military environments is often very dangerous, expensive, time-consuming, hard to plan and schedule, and cannot easily be repeated or reviewed 0. Apart from games that simulate reality, simulating for example the use of a helicopter, other types of military games that focus on strategic planning skill development, decision taking, and communicative norms in military life have raised practioners' interest.

Serious games are also used in the health sector targeting perspective, doctors, nurses, surgeons or other type of trainees within this area. For example, Dental Implant Training Simulation is a 3D, virtual environment where trainees practice 'the proper decision- making protocol to determine if the patients are physically and mentally prepared for dental implant procedures' and are also given the opportunity to execute surgeries in a virtual but realistic environment (information retrieved from http://www.breakawaygames.com/serious-games/solutions/healthcare/).

'Serious games' are also recognized as tools that can change the business processes and impact on the professional skill development practices. There is an increasing interest about serious games in internal training and professional / business education. The big asset of this type of games is the realistic environment that they provide and the authentic content to which they expose users. Coupled with this, serious games decrease training costs as they reduce training staff requirements, they contribute to containing needs related to training facilities, and they ease scheduling demands 0.

In education serious games are used both in formal and informal contexts. This includes second language acquisition and teaching 000, science education, and other subjects where gamefication approaches can be of benefit. Finally,serious games are further used to raise public awareness on issues that are not directly linked to formal or professional education, such as socio-politics.

3. The siLang situated, game-based framework for professional language skill development

The siLang serious game for professional language training is based on 'bricks' of information that represent focused and short actions in the context of broader learning activities. The bricks are combined in an adaptive manner that takes into account the background of the learner, the cultural environment in which the learner will be exposed to, and the learner's professional role.

The game starts by building a profile for the user based on the above parameters; this profile is subsequently used for dynamically creating realistic language learning scenarios that are situated in

real-life experiences and immerse the user into the diverse uses of a 'lingua franca' in various cultural contexts taking into account localized expressions, communication norms, and transfer effects manifested, for example, in pronunciation or syntax. The user is invited to explore a virtual landscape. Examples of siLang learning scenarios include communication in international settings, presenting ideas during a meeting, starting and finishing a meeting, greetings, scheduling/ timetabling, distance collaboration through popular communication services, and more. The design of a siLang learning scenario is demonstrated below in
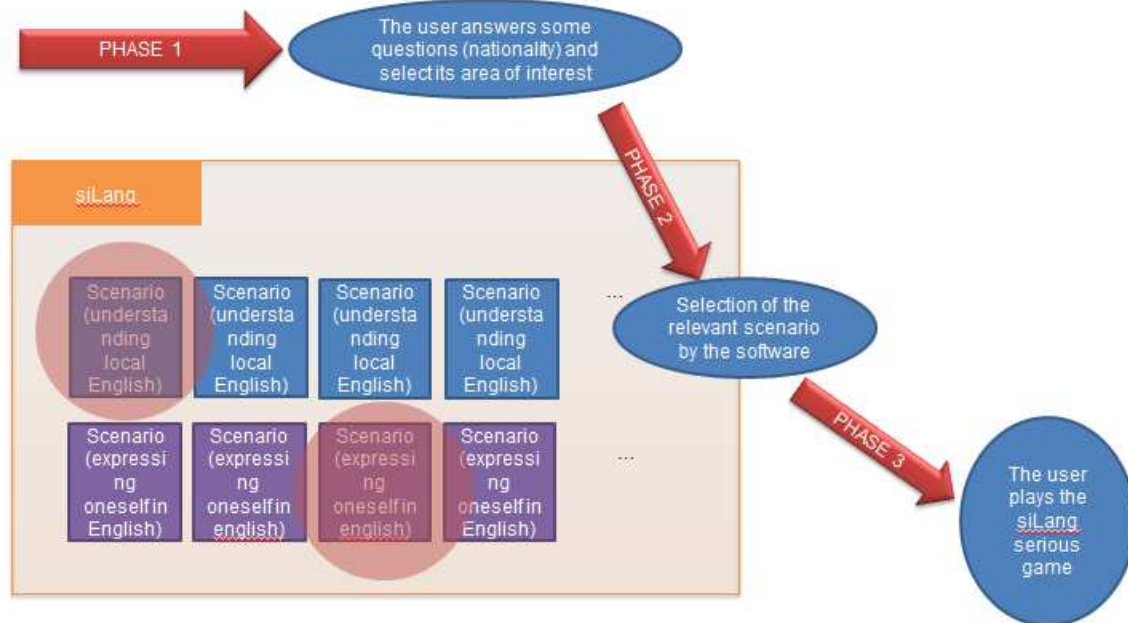

Figure 1.

To ensure that outcomes meet the needs of the stakeholder professional, vocational, and academic communities, siLang design starts with the identification of learning requirements language and cultural skill development. Input is currently generated in Greece, Norway, Italy, Portugal, and Estonia. Information includes field input from instructors on the current status quo in European language training services targeting professionals. It further includes input by professionals on the challenges and difficulties they face in terms of effectively using English for work-related purposes. Common mistakes by non-native speakers are also analysed for integration into realistic learning scenarios that simulate closely real-life experiences.
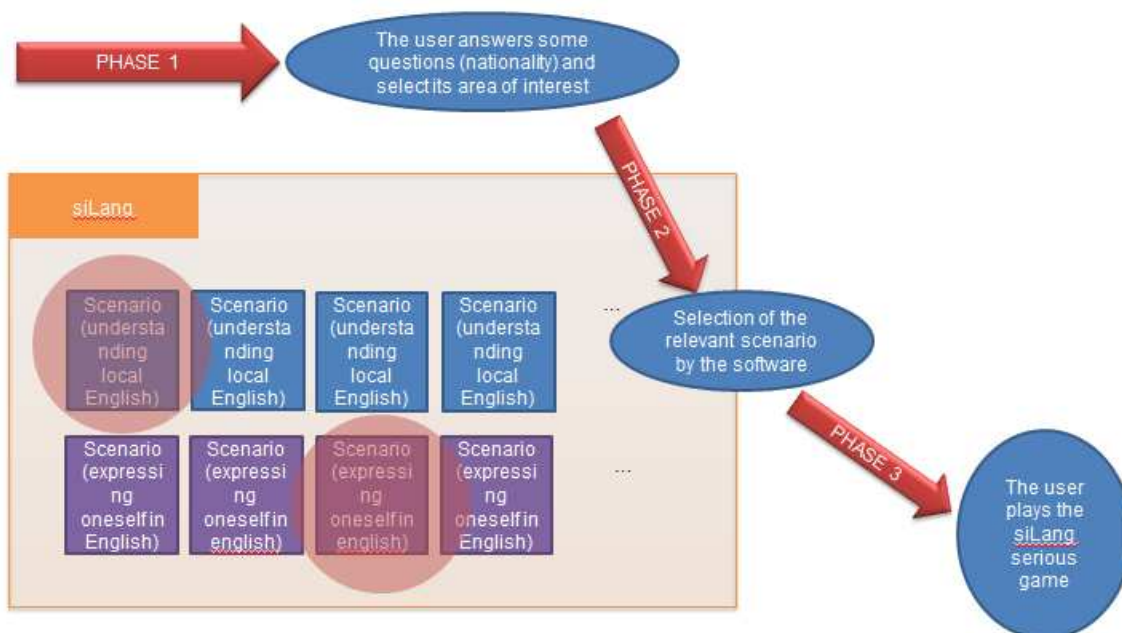
Figure 1. Design of a situated, game-based scenario for professional language training.

Assessment of knowledge developed by learners is integrated in the siLang serious game through a blended feedback mechanism that combines comparison of learner efforts to built in expert responses and a decision making strategy or can take place in the classroom 0. As Mayer and Bekebrede 0 state the game itself has the potential to trigger mechanisms towards learning but it cannot stand alone; the pedagogical design, the embedded pedagogy and the role of the teacher/instructor are crucial factors towards learning outcomes.

Recognizing the importance of supporting the teaching process this work facilitates the integration of the proposed serious game in professional language learning into on-going instructional activities through good practice recommendations targeting language trainers. Multimedia, web 2.0 content contributes to the update of teacher skills on emerging technology-enhanced didactical methodologies including game-based and situated learning in the context of language education with applications to broader learning sectors.

4. Instead of Conclusion

This paper presents the work in progress related to the design and implementation of a situated serious game for language skill building that encompasses meaningful, contextually-based, and 'enculturated' learning experiences with a focus on professional needs. This work will be concluded in November 2014. The services will be evaluation through the engagement of learner and teacher user groups in learning activities that built upon the siLang methodologies and tools and will take place in Greece, Norway, Portugal, Estonia, and Italy.

Acknowledgements

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