



# E-VITA, life simulations in an intergenerational setting

Sonia Hetzner<sup>1</sup>, Lucia Pannese<sup>2</sup>

<sup>1</sup> Università Erlangen-Nuernberg.

E-mail: [sonia.hetzner@fim.uni-erlangen.de](mailto:sonia.hetzner@fim.uni-erlangen.de)

<sup>2</sup> imaginary s.r.l

E-mail: [lucia.pannese@i-maginary.it](mailto:lucia.pannese@i-maginary.it)

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## Abstract

An innovative and unique approach is presented via the development of Serious Games to promote knowledge sharing and intergenerational learning starting from Storytelling techniques.

Concept and method have been developed within the E-VITA project, which aims at developing and experimenting some Serious Games to allow younger generations to directly “live” some experiences that older people have lived before the European Union was established. Thus the complexity of the past can be directly experienced and understood through a game that shows how life was at that time. The first results of this project are here presented.

## 1 Introduction

Learning and education have to deal more and more with the changes of contemporary society which is continuously and abruptly growing, where learning and transferring knowledge is the most important issue characterizing the work of those dealing with Human Resources. New immediate and effective approaches are required both for learning and for sharing and managing information.

At the same time the demographic changes of the European population require innovative approaches and different pedagogical models: the development of new methods to engage different generations in learning processes has become crucial.

The creation and transfer of knowledge can be promoted in different ways, however when we are talking about true life experiences, a game-based approach turns out to be the most effective, being already based on experience, interactivity and involvement. Therefore, in this context, an approach based on interactive Serious Games was chosen.

## 2 Learning and Serious Games

From his experience in teaching and his observations of learners, Edgar Dale (Dale, 1969) developed the “Cone of Experience”, a visual device meant to summarize Dale’s classification system for the various types of mediated learning experiences. The organizing principle of the Cone was a succession from the most concrete experiences (at the bottom of the cone) to the most abstract (at the top). It is supposed to support educational professionals to select the appropriate media according to the experiences that have to be transferred to their students. In a simplified way, Dale’s cone shows that the more students get involved in the process, the more they can remember.

According to this theory, the importance of learning through simulation, e.g. in a game environment, seems to be very promising for sharing experiences and making learning an involving activity.

Furthermore, as Michael and Chen have pointed out (Michael & Chen, 2006), the interaction with games leads to a completely different learning style. According to the authors this new style of learning

- ‘aggressively ignores’ the structure and format of formal instruction.
- is built on extensive “trial and error”, with a ‘failure is nearly free; you just push play again’ mentality.
- includes input and instruction from peers (other players), not authority figures.
- emphasizes the ‘just in time’ learning, picking up new skills and infor-

mation just before they are needed.

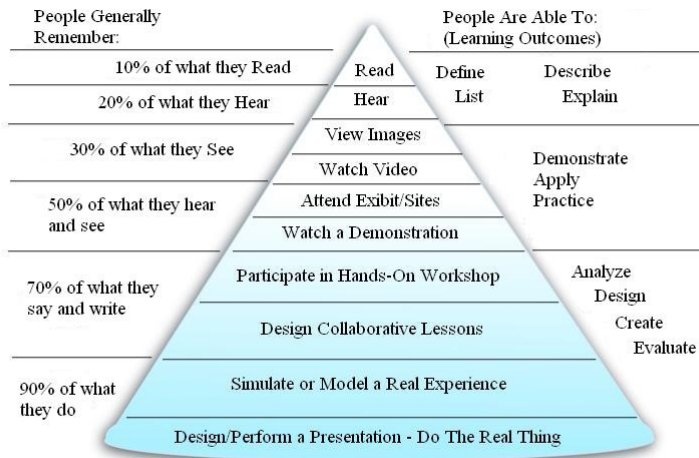


Fig. 1: The “Cone of Experience” (Dale, 1969) - ©Raymond S. Pastore. <http://teacherworld.com/potdale.html>

The general implication of learning with the aid of computer games is that learners have the freedom to abandon traditionally prescribed learning paths and that learning is facilitated by the motivation students have while they play. Far from rigid learning paths, the open structure, that is the underlying principle of educating games based on Storytelling, can be a valuable support to traditional learning methods. Today’s knowledge society is largely grounded on network-shaped connections between pieces of information rather than linear, causal relations. In this perspective, learning with the help of non-linear stories mediated by a gaming experience can significantly contribute to the development of media skills and competences that are essential features for the younger generation.

### 3 When can a learning approach based on Serious Games be adopted?

Some considerations about learning:

- In every learning activity it is always important to motivate and involve students. (Quinn, 2005)
- Learning is a dynamic process that requires both virtual and physical

interaction between the person and the environment.

- Nowadays a computer is normally used in daily life, especially by younger generations, as an instrument for communication, information, learning and entertaining; its use is characterized by exploration, play, deep analysis of some topics of interest. Learning often derives from involvement, and is not necessarily intentionally created or pursued.
- Learning often comes from sharing experiences.
- Learning is often informal: Surveys show that most of the training at the workplace (more than 70%) happens informally (Kim *et al.*, 2004).

There are different ways to engage learners and the selected approach always depends on the educational objectives. In most cases to transfer experience-based knowledge a classic and formal pedagogic approach turns out to be ineffective (Pannese & Carlesi, 2007). The simple report of experiences probably leads to a lower level of memorization and it becomes difficult to put what was learnt into practice and to use it in one's decisional processes.

Therefore it is necessary that the approach chosen keeps learners engaged, turning them from passive listeners into active participants, so that they can express themselves freely, and so that profound insights for long-term thinking can be triggered (Pannese *et al.*, 2005).

Games have always been able to engage people and provoke spontaneous behaviours, independently from the context and from their age (Aldrich, 2005). They demonstrate to be more incisive, when they are more meaningful on a personal level, close to experience, social and epistemological. In order to obtain higher results and motivation it is necessary to match high quality contents with deep involvement (Quinn, 2005), (Kim *et al.*, 2004).

According to a constructivist approach (Bocca, 2003), a game is an interactive world that a player partly creates with his/her own actions and decisions and where s/he can live his/her own experience, which is being retained and used as possible key to decipher new situations.

For all these reasons, when an educational environment is needed, where learning might also mean leaving the normal track, changing scenario or adopting a fresh mental approach, an informal environment based on Serious Games may be the most suitable solution.

## 4 Storytelling in the development of Serious Games

Storytelling exists since man developed language. Stories and experiences were shared in every culture and nation, as ways of education and leisure, as means for passing down one's culture and teaching values. The crucial narrative elements of stories are the messages they transmit, the characters and the plot, as well as the point of view of the storyteller. Storytelling differs from plain

conversation when the narrator interprets the story and enriches it using body language together with a particular way of speaking and acting. Spectators and narrator are involved in a continuous mutual relation of tension.

The current technological development is leading to completely new ways of Storytelling. Starting from individual stories, engaging scenarios can be created, in which it is possible not only to experiment the story, but also to play an active role in it. Schäfer (Schäfer, 2003) talks about a virtual Storytelling which can be applied to the business and to the educational world, using games and other means of interactive communication.

## **5 The E-VITA project, Serious Games and Storytelling for intergenerational learning**

The E-VITA project – European life Experience, [www.evita-project.eu](http://www.evita-project.eu) – co-funded by the DG Education and Culture of the Executive Agency EACEA under the Lifelong Learning Programme - aims at developing and testing Serious Games that allow younger generations to “live” stories told by older people. The complexity of the past is reproduced and directly “lived” through the game experience.

This project intends to promote and study an innovative approach to problem-based learning, as well as to experiment and explore new ways of knowledge sharing and transfer in an intergenerational setting, combining principles of learning with games to the previously presented ones of Storytelling in order to develop Serious Games for younger generations.

A set of “European cultural games” about cross-border experiences of older people in the past divided Europe will be proposed to give users the chance to live the atmosphere and problems of a former Europe. The involving approach arouses profound thoughts about the goals gained by the European integration process, outside of a formal educational context.

## **6 First results of E-VITA**

E-VITA uses an approach based on Communities of Practice (CoP) where the community members reflect and collaboratively explore their life experiences according to the previous description of Storytelling. The main problem in turning the narration, typically linear, into an interactive and involving game, consists in the process through which it is possible to turn different linear structures to an at least partly non-linear one. Another difficulty lies in finding a correct balance between educational elements (instructional design) and entertainment. By neglecting the first one the goal would be impossible to reach, and at the same time by disregarding the second one the player would probably

soon abandon the tool or would not be sufficiently involved to think about the experience lived virtually.

In order to take care of both aspects a so-called participatory design approach has been chosen, in which a sample of the target group is involved in every main phase of the Serious Games development. For this purpose 90 students studying human sciences have been interviewed in Italy and Germany; over 80% of them are women. None of the interviewed have had previous experience with Serious Games, but most of them have had experience with video games. E-VITA Serious Games make students curious because they offer them the possibility to make new experiences, particularly about different life styles, to plunge into the past and to put themselves into other people's shoes, specially in multi-cultural contexts; as they state: "and anyway, even if serious, a game is always delightful!" As far as the period is concerned, the years they are more interested in are those with which they have indirect links through their parents or grandparents, particularly the 1960s and 1970s. The most interesting topics for the interviewed group are the psychological, (multi-) cultural and sociological ones. Their interest is mainly participative and experiential, approach through which it is possible to identify oneself completely with the main character, directly living events and emotions. A typically immersive context is therefore preferred, as it is able to favour complete involvement and offers the possibility to reflect in the mid-long term on how one's behaviours possibly may lead to a change.

In learning processes, Vygotsky (1896-1934), whose pedagogical approach was chosen as starting point for the development of the E-VITA Serious Games, argued that the development of high level cognitive processes (attention, logic memory and concept structuring) must be retrieved in social interactions rather than inside the intellect. Being learning a social process, it has to give the opportunity of shared understanding through the use of a common language in order to mediate the communication of ideas and achieve the internalization of concepts (Bruner, 1984).

## Conclusion and outlook

In the long term the impact of the approach will widely exceed the possibility to transfer information across different generations.

The main research aspect of the E-VITA project is the development and experimentation of an innovative technology-based approach for sharing and passing down knowledge, that might then be used by various organizations in different scenarios concerning culture and knowledge transmission.

E-VITA has just completed the initial phase of participatory Serious Games design; future work will focus on the design and implementation of the games,

involving target users and storytellers at all stages.

Public results will be disclosed on the project site [www.evitaproject.eu](http://www.evitaproject.eu).

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