Adults Learning for Intergenerational Creative Experiences

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Newsletter: Issue 3

A.L.I.C.E.: Training the Trainers

Focus on: TUC and training activities introduction

Summary of contents

In this Newsletter our aim has been to introduce the partner TUC and the advancement of the project regarding its advanced training programme. This issue presents TUC's background and activity as well as its role and how the organization is contributing to the A.L.I.C.E. project, namely through the creative language of Digital Games and through specific adult learning pilot programmes that will be implemented in Greece. Furthermore, the issue presents the results of field testing a digital storytelling platform (eShadow) inspired by the traditional Greek Shadow Theater and describes how it will be integrated in the adult learning activities that will take place in Greece. Finally, this newsletter reports on the preparatory activities for setting up the ALICE Advance Training Programme.

The Laboratory of Distributed Multimedia Information Systems at the Technical University of Crete and its role within the ALICE project

Nektarios Moumoutzis

TUC/MUSIC was established in 1990 in the Department of Electronics and Computer Engineering of the Technical University of Crete which is located in Chania, Crete, Greece. It has participated in over 40 EU projects and Excellence Networks as Partner, Coordinator and Technical Leader. It is a center of research, development and teaching in the areas of distributed information systems, application engineering, computer graphics, and simulation engineering. TUC/MUSIC is leading the quality management activities of the project and participates as a technical partner and technology facilitator responsible for the creativity language of digital game... **READ THE FULL ARTICLE**

Promoting intergenerational learning in Greece

Nektarios Moumoutzis

Starting from early February 2012, just after the ALICE kick off meeting, a team has been established by TUC to investigate issues and approaches for implementing ALICE ideas and vision in Greece. The final outcome of this investigation is the definition of the three (3) Adult Learning Pilot Programmes that will take place in Greece... **READ THE FULL ARTICLE**

Games and Social Media to Promote Intergenerational Learning

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The widespread use of video games and their success in engaging players attracted the interest of many researchers and scholars from the educational domain that studied thoroughly the opportunities offered by games to increase the learner's motivation. Moreover, another aspect that attracted the interest of researchers is that games give access to immersive learning in virtual situations that are very near to real world complex environments... **READ THE FULL ARTICLE**

EShadow: A tool for digital storytelling based on traditional Greek shadow theatre

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Storytelling is a very common educational practice that is used in every level of education. Storytelling promotes children's learning, helps them organize their thoughts, extends their imagination and creativity, reinforces their collaboration skills (through cooperating with their mates in generating a story) as well as their writing, presentation, and problem-solving skills. Storytelling is also an important tool for teachers because it can make difficult topics easier to understand, it provides them with the means to integrate multimedia content in the curriculum and helps them generate discussion topics in the class... **READ THE FULL ARTICLE**

Bootstraping ALICE: Identifying and training our adult trainers

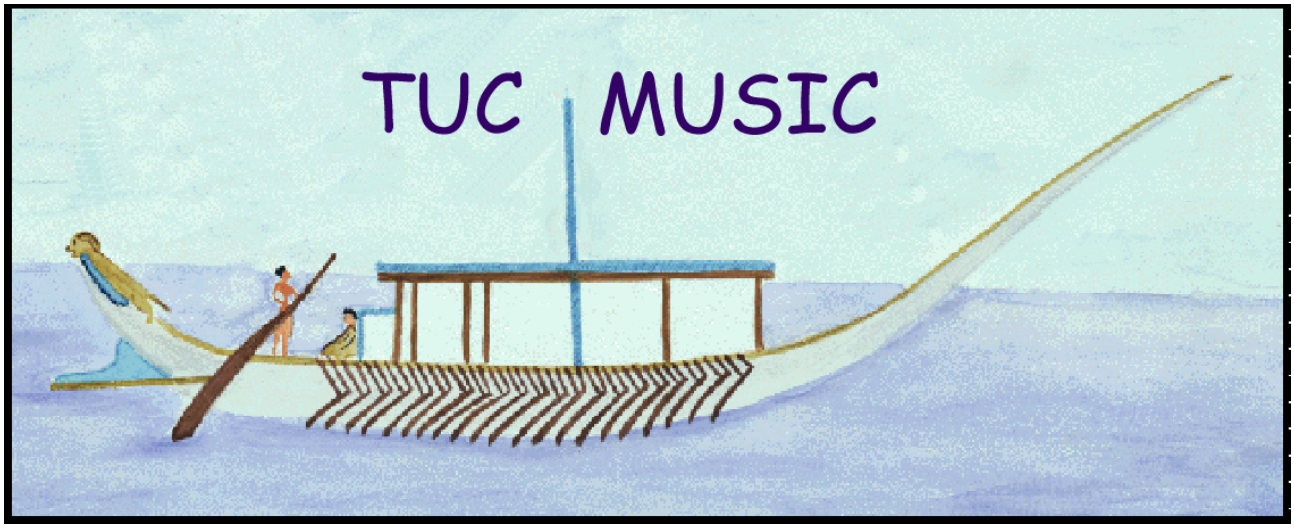
Nektarios Moumoutzis

The ALICE approach to promoting intergenerational learning through the use of creative languages relies heavily on the creation of community of “change agents” that will enable local communities to embrace ALICE values and methodologies and facilitate adults in their development to master creative language and create new learning opportunities for children … **READ THE FULL ARTICLE**

Full Article 1

The Laboratory of Distributed Multimedia Information Systems at the Technical University of Crete and its role within the ALICE project

Nektarios Moumoutzis



The Laboratory of Distributed Multimedia Information Systems at the Technical University of Crete (http://www.music.tuc.gr), TUC/MUSIC for short was established in 1990 in the Department of Electronics and Computer Engineering of the Technical University of Crete which is located in Chania, Crete, Greece. It has participated in over 40 EU projects and Excellence Networks as Partner, Coordinator and Technical Leader. It is a center of research, development and teaching in the areas of distributed information systems, application engineering, computer graphics, and simulation engineering. It

In the general area of systems development, TUC/MUSIC has performed research in the areas of high performance distributed multimedia architectures, information systems offering advanced functionalities, data base systems, information retrieval systems, digital libraries, service oriented architectures, and graphics systems. In the area of simulation engineering, the TUC/MUSIC Laboratory is conducting research in the areas of real-time perceptually-based selective rendering algorithms, fidelity metrics for immersive simulations, uncertainty modeling and visualization and human factors engineering.

In the area of application engineering, the TUC/MUSIC Laboratory has performed research in the topics of large distributed multimedia delivery networks for intelligent TV applications, semantic interoperability infrastructures, web and mobile based application development methodologies, natural language processing, as well as standard-based software infrastructures for multimedia applications in areas such as e-learning, culture and tourism, business applications, TV Applications and medicine. It also has extensive experience in issues related to usability aspects of modern applications, the design of intuitive and efficient graphical user interfaces both for the desktop and the web, and their evaluation following standard methodologies.

In the application domain of eLearning TUC/MUSIC has extensive experience in interoperability issues between digital libraries and eLearning applications, usage of eLearning standards such as LOM, SCORM, IMS LD, IMS QTI to build modern ubiquitous learning systems as well as to support distant learning and blended learning educational activities. It has develop and manages the MOLE platform (see http://demo.moleportal.eu demo installation)

for supporting and managing learning processes exploiting modern multimedia and communication technologies. MOLE is supporting the courses in the Department of Electronic and Computer Engineering at the Technical University for several years and is used in a number of past and on-going projects.

In the context of the ALICE project TUC/MUSIC is leading the quality management activities of the project. Its director, prof. Stavros Christodoulakis is the internal evaluator of ALICE. Apart from this role, TUC/MUSIC participates as a technical partner and technology facilitator addressing important technical aspects relevant to the project bringing its expert knowledge in the eLearning and Digital Libraries field and the experience from other projects such as LOGOS, CHIRON, DELOS, KNOSOS, pSkills, NaturalEurope and Organic.Mednet. TUC/MUSIC is interested in exploiting results from the various projects (pSkills, Delos, internal projects) and in particular:

1. To reuse and adapt the Common European Curriculum for IT fluency skills so that it is tailored to the needs of adult learning in the context of media literacy and digital fluency;

2. To exploit tools for digital storytelling, games and children's creatiity (e.g. Scratch – http://scratch.mit.edu) and investigate the applicability of new technological platforms (e.g. AppInventor programmatic interface of Android - http://appinventor.mit.edu/) and interactive devices to facilitate the development of interactive stories and digital games exploiting mobile devices;

3. To investigate the applicability of traditional storytelling approaches (such as Shadow Theater) in the context of digital storytelling;

4. To investigate appropriate classification schemes and their standardized representations for children literature works towards their inclusion in Europeanna.

Another important direction that TUC/MUSIC will investigate in the context of this project is the collaborative development of digital stories starting from script writing, storyboards and exploiting collaborative development environment such as Scratch 2.0. Scratch 2.0 is expected to be available within the time-frame of the project and integrating functionality for the collaborative development of rich media creations through a web-based programmatic interface.

TUC/MUSIC is responsible for the development of the ALICE learning unit on digital games and social media to support intergenerational learning. It is also responsible for training ALICE trainers and facilitating them in the adoption of the creativity language of video games within the ALICE framework.

Finally, TUC/MUSIC is responsible for undertaking the implementation of adult learning pilot programmes in Greece.

Full Article 2

Promoting intergenerational learning in Greece

Nektarios Moumoutzis

Starting from early February 2012, just after the ALICE kick off meeting, a team has been established by TUC to investigate issues and approaches for implementing ALICE ideas and vision in Greece. Currently the team consists of local primary and secondary education teachers, one postgraduate and one graduate student in TUC as well as the TUC project coordinator.

Initially, the team focused on the investigations of possible interventions based on the creative language of digital games. The investigation was based on Scratch (http://scratch.mit.edu) and how it could be used for the development of educational games for primary school children. The results of this initial investigation was that:

- It is viable and effective to enable teachers of primary education to develop game designs in the form of storyboards and paper prototpypes.
- It is rather difficult for those teachers to develop their own games. Game development needs skills that are difficult to develop especially for teachers with no technical backgroups.
- A more effective approach is to engage game developers (skilled teenagers or volunteer programmers) and promote their collaboration with the "user groups" in the spirit of open source software communities where users and developers collaborate with distinct roles. Users provide requirements and test the final products. Developers create the software and make the necessary refinements. They also provide constant support to the users.

After this initial investigation and following the above conclusions, the team focused on a specific target group: *children with learning difficulties, their parents and teachers.* The team communicated with the administration of a local Special Primary School and developed paper prototypes (board and card games). A local group of programmers (Chania Linux User Group) was contacted as well as local computer science teachers in secondary education to organize the game developers communities that will complement the user communities.

In parallel with the above investigations, TUC team started, just after Easter 2012, a parallel investigation regarding the creative language of Music and Sound. The focus was on oral storytelling and story animation using the eShadow prototype system for the preparation of animated stories inspired by the Greek Shadow Theater (see the corresponding article in this issue about eShadow).

The team developed an educational scenario in collaboration with a local Greek Shadow puppet player and organized a rather wide experiment during a local event held in Chania on 11/5/2012 in the context of the Student Creativity Fest 2012. The aim of the

experiment was to investigate possible uses of the tool in the context of in-school and after-school learning settings. After the event, two schools expressed interest in collaborating with for the preparation of animations with children for their school fests at the end of the school year. TUC team worked with the interested teachers and the animations were developed and presented during each school fest.

Following this initial investigation phase, TUC is organizing an open event in the context of the Exhibition on Greek Shadow Theater (Athens, 12/11-15/12/2012) that will engage schools and families in a similar process of creative learning through eShadow. Special attention will be given to raising awareness with respect to the ALICE project and involvement of schools in the ALICE pilots in Greece. Future plans include the organization of a similar exhibition in Cyprus where sessions devoted to learning through games will be also investigated.

Currently, TUC is contacting members of the board of directors of a local parents association as well as officials from the Municipality of Sfakia, to organize a learning interventions related with the development of digital stories by primary school pupils for historical events, traditional professions and other folklore topics in collaboration with elderly people.

For better framing the above mentioned directions of possible local interventions, TUC has defined three themes of Adult Learning Pilot Programmes (ALPPs) within which all envisioned adult learning interventions will take place:

ALPP 1 - Animating folk tales and stories from traditional literature and children literature

The animating of the tales and stories will be based on eShadow, a storytelling and gaming prototype developed by TUC inspired by the Greek Traditional Shadow Theater. This ALPP will be based on the Music creative language (using sound to animate stories). It will also use the children literature metaphors creative language, whenever possible and depending on the stories to be selected for animation. The communities to be involved will be school communities, associations of parents and elderly people that will offer their knowledge of folk tales and traditional stories.

ALPP 2 - Virtual Laographic Museum of Chania

This ALPP will run in collaboration with the corresponding Italian ALPP where children will be supported to act as biographers of elderly people to collect and digitize stories related to local history, past professions, crafting techniques, cultivating plants, local food recipes etc. The creative language that will be employed is digital storytelling. School communities will be involved including parents associations. Two are the candidate areas for implementing this ALPP: The municipality of Sfakia at South Crete or the Municipal division of Akrotiri at Chania.

ALPP 3 - Social Inclusion through games

The objective of this ALPP is to promote social inclusion of children with learning disabilities and their families. With the direct involvement of the teachers of these children, games will be designed in order to help them in their understanding of certain concepts in Mathematics, Greek Language and other school subjects. The game designs will be given to communities of skilled teenagers or adult volunteers (programmers) in order to be implemented. At this phase, school communities of students of secondary education will be also involved (in the context of the computer science courses). Finally, the games will be given to the children with learning disabilities, their parents and teachers. After an evaluation phase, suggestions for refinements will be given back to the developer communities and new game versions will be developed. During the process, communities involved will communicate directly in order to promote mutual understanding and fight the social exclusion of the target group of this ALPP.

Full Article 3
Games and Social Media to Promote Intergenerational Learning
Nektarios Moumoutzis

The learning potential of video games

The widespread use of video games and their success in engaging players attracted the interest of many researchers and scholars from the educational domain that studied thoroughly the opportunities offered by games to increase the learner's motivation. Moreover, another aspect that attracted the interest of researchers is that games give access to immersive learning in virtual situations that are very near to real world complex environments (e.g. physical environments, emergency situations, dangerous workplaces etc.) [Gee, 2003; Sandford et al., 2006].

Following this work games started to enter the learning field in many ways from the practical viewpoint of the educator that wants to offer an engaging and mind-opening learning experience. This is important not only for primary and secondary schools but also for universities, vocational training and adult learning. The most obvious way to do so is to exploit existing video games within a learning framework to achieve certain learning objectives. A more elaborate approach is to design and develop educational video games or serious games. These games are designed and developed to serve a well-defined learning purpose and not for entertainment alone.

The term *game-based learning* is used to describe the above mentioned approaches to learning through playing games. Game-based learning offers to the player the opportunity to explore a world without the intervention of an instructor promoting authentic learning and learning by doing. The learner is able to control his/her own learning experience and participate in highly interactive scenarios that could be encountered in real-world settings where one faces open-ended problems that facilitate the development of problem-solving skills and not only simple fact memorization.

Gaming literacy

Going beyond game-based learning, it is important to note that playing games is just the entry point for a more deep understanding of games that is the focus of the so called *gaming literacy*. Within the gaming literacy framework games are considered as objects of study in which children and adults should improve their communication and critical thinking skills just like other types of media like literary works, films etc. From this perspective, the aim is to promote skills towards three complementary directions:

- Game comprehension through appropriate analysis that promotes the acquisition of the language, technology, genres, values, stereotypes, and production processes of games.
- Critical consumption through reflection on one’s own behavior as a

game player in order to better exploit free time. Time spent for video game playing, game preferences, social aspects of game play, type of entertainment offered are issues related to this critical self-reflection.

- Game production using modern tools that enable non-technical people to develop their own simple video games and be engaged in their design and development by creating rules, characters, narratives, graphics, audio, and animations.

Games and youth culture

Other aspects related to games stem from the relationship between gaming and youth culture, describing the penetration and impact that these media have and the role they hold in children's and adolescents' lives. Investigations on these matters are mainly undertaken by sociologists. Their findings are very important for educators and caregivers, because they promote a more appropriate and respectful approach to children and teenagers offering intelligent responses to the children's and teenagers' learning needs (for an overview see the Video game culture lemma in Wikipedia - http://en.wikipedia.org/wiki/Video_game_culture).

Another aspect of paramount importance is the protection of children's rights by moderating their access to media products and respecting their growth. To moderate the access of children to violent or vulgar game content, various organizations have been established and initiative have been undertaken such as the Pan European Game Information (www.pegi.info), that classifies the commercial game titles of the Entertainment Software Rating Board (www.esrb.org) in the USA.

Using games to offer intergenerational creative learning experiences

ALICE seeks to shed light in all of the above issues that ink games to our modern society from the perspective of their potential as mediating the relationship between adults and children. Digital games can promote intergenerational dialogue and playful learning that strengthens family bonds. ALICE aims at exploiting digital games and digital game development tools to create opportunities for transformative experiences for both adults and children. In such a setting, children can creatively express themselves and develop their own identity while the adults (parents, grandparents etc.) are promoting the social values and cultural norms that are important for the development of the children. Furthermore, elderly people could find new meaning in their lives through new ways of authentic and deep communication with their grandchildren.

Training ALICE trainers on the creative language of games

All the issues described in the previous sections are integrated in the syllabus of the ALICE Advanced Training Programme within Learning Unit 5 on Games and Social Media to Promote Intergenerational Learning. The Learning Unit aims at a gradual introduction to the creative language of video games through investigation of different types of games and exploration of their value as a means to develop key competencies and promote intergenerational dialogue. Introduction to game design and development with practical activities using Scratch. A holistic approach is followed to games and social media for learning through guidelines for the establishment and support of game communities through the use of social networks. The Learning Unit consists of four modules:

1 – Introduction: Understanding and classifying games

This module introduces the core concepts of games, discuss on their learning value and present the most important game genres with respect to their learning potential. It presents the educational value of games from the perspective of intergenerational learning. The module integrates practical activities on

transforming ordinary games into a learning environment promoting intergenerational dialogue.

2- Analysing and selecting games: Identifying games for adults and children to play and learn together

This module presents methodologies and tools to analyse and evaluate games to support game selection and deeper understanding of

ducators, adults and children to game design and development.

4 – Establishing and supporting game communities

This final module of the learning unit presents a holistic approach to connect game players and game developers within the context of game communities supported by social media. The practical activities of the module focus on establishing and supporting game communities to connect families and primary school communities that use games to learn and technically skilled teenagers/volunteers that develop and refine games for them.

games. The practical activities of the module promote self-reflection on own behaviour as game player(s).

3 – Tools to invent games

This module Introduces detailed game design methodologies and use of modern game development tools to create games. The practical activities of the module introduce e

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Full Article 4

EShadow: A tool for digital storytelling based on traditional Greek Shadow Theatre

Marios Christoulakis

Introduction

Storytelling is a very common educational practice that is used in every level of education. Storytelling promotes children's learning, helps them organize their thoughts, extends their imagination and creativity, reinforces their collaboration skills (through cooperating with their mates in generating a story) as well as their writing, presentation, and problem-solving skills. Storytelling is also an important tool for teachers because it can make difficult topics easier to understand, it provides them with the means to integrate multimedia content in the curriculum and helps them generate discussion topics in the class [1].

With these in mind the Laboratory of Distributed Multimedia Information Systems and Applications at the Technical University of Crete, has initiated the eShadow project. EShadow aims at developing a storytelling collaboration platform inspired by the Greek traditional shadow theater. Shadow Theater is

popular in many countries around the world like Greece, China, Taiwan, France, India, Turkey, Malaysia and others. Children in Greece watch traditional shadow theater plays, learn about shadow theater in school and play with shadow theater puppets. With our current eShadow prototype we give children and adults (teacher, parents etc.) the ability to create their own shadow theater plays, collaborate with each other for the creation of the play, share their creations and also give them the ability to play with a motion sensing controller that resembles the traditional way of controlling shadow theater puppets.

Our first experimentation with eShadow reveals that it is very easy to use, attracts the interest of children, parents and teachers, extends the creativity of children and attracts the interest of children for educational use Children from two elementary schools in Chania have already used eShadow to create original plays for their annual school festival. In the following sections we give details about the design and implementation of eShadow as well as the design and the results drawn from testing it with children from local schools. Finally, we present how eShadow is being exploited in the context of the ALICE project.

What is eShadow

Figure 1: Screenshot of eShadow

EShadow is an on-going internal project of Laboratory of Distributed Multimedia

Information Systems and Applications (TUC/MUSIC). This project is about an electronic shadow theater application inspired by Greek traditional shadow theater. This project targets the following main goals:

- To adapt traditional shadow theater in modern times.
- To preserve traditional art as much as possible and make traditional shadow theater more popular.
- To create a learning tool for both children and adults.

With eShadow users can create, record, share and watch digital shadow theater plays. It provides alternative methods for controlling the virtual puppets either through mouse or through a motion sensing controller. EShadow also offers the ability to video chat for collaborative creation and watching of plays. **Errore. L'origine riferimento non è stata trovata.** displays a screenshot of eShadow during a play.

It supports intrafamily communication scenarios that promote intergenerational bonding and playful learning. For example, a child, who lives in the United States of America, could present a shadow plays story to his grandparents in Greece. The grandparents are able to watch and encourage him or even try to cooperate with him/her by controlling other virtual puppets on-line. They also have the ability to watch and communicate with their grandchild through the video chat facility embedded in eShadow. Such kind of new opportunities for intergeneration bonding that overcomes the physical separation of children and their grandparents is important for children's development and contributes to the well-being of the elderly [2].

Development process

During the development of eShadow we followed a development process which consisted of many evaluations, including a think aloud evaluation [3] with users aging from 10 to 40, and iterations on which we revised the user interface and the handling of virtual puppets. Furthermore, most of the principles listed in for the development of new creativity support tools to support creative thinking were followed during the development of eShadow.

Experiments

The first public demonstration of eShadow took place in Chania in an Student' Creativity Exhibition that was organized by the municipality of Chania and the local office of Secondary Education under the coordination of the Counselor of Informatics in Western Crete. During the exhibition students had the opportunity to present the projects that they created in their computer science classes as well as to watch and test the creations of other students. Also other students (that did not present a project) visited the exhibition as part of a school trip accompanied by their teachers. Our lab was invited to the exhibition to make the first public presentation of eShadow.

First experiment methodology

Students and teachers visiting the exhibition

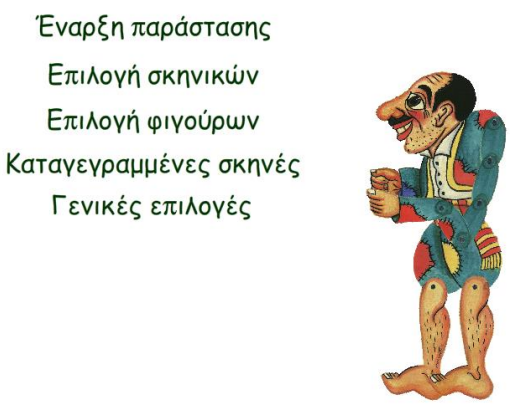

Figure 2: Screenshot of the main menu

Figure 3: Students watching the play created with eShadow

space of eShadow had the opportunity to watch a seventeen minute shadow theater film that was created with eShadow in cooperation with Mr Nikos Mplazakis, a professional traditional shadow theater performer. Figure 3: Students watching the play created with eShadow watching the play. After watching the film they were given the script of the shadow play (written in paper) divided in nine separate scenes. The next step was to organize students in groups of 2-4 persons. Each group selected one of the nine scenes and then used eShadow to perform and record it. After the event, the student-produced scenes from each school were processed to develop a complete film.

shows the children creating their scenes using eShadow.

The experimental setup consisted of two computers for the students to test eShadow and record the scenes. Each computer had one motion sensing controller connected, a mouse and a microphone. In the beginning of each team session the controls for the motion controller and the mouse were explained to the students. This was the only help provided to them. No other explanation was given about the interface or the location of the options because the objective was to test the usability and HCI metrics of the eShadow interface. Note that the questions made by the students about the interface and the location of some options were minimum and almost exclusively in the form “This is where i press to begin the recording?” while the children where pointing at the correct button. This confirms that the interface was easy to understand. This finding is further supported by the feedback received through the questionnaire survey (see below).

After the explanation of the controls the students were free to interact with eShadow. Due to hardware limitations the maximum number of virtual puppets that could be controlled simultaneously was two. If the team consisted of more than two members, the students that did not control a virtual puppet were doing the voice acting for the virtual puppets. Each team had two options. The first was to recreate a scene from the film they watched (this is the reason they were given the written script) or to improvise and create a completely new scene.

No specific time limit was imposed in order

to minimize interference. The time limit was set from the escorting teachers according to the timeframe of the school visit. After each team finished its experimentation with eShadow, the students were invited to fill a questionnaire. This questionnaire was the major means of documenting user feedback and complemented the direct observations made.

Questionnaire design

The questionnaire consisted of 3 demographic questions, 26 rating questions (0-9) and 2 text completion questions. The completion time for the questionnaire was about 3-4 minutes.

The questionnaire was designed to collect data for evaluating the usability aspects of the prototype and its creativity support. For the usability evaluation a standard methodology was adopted[4]. To measure the creativity support of the prototype, a topic that is not so well-engineered, the approach adopted stems from design principles that the software designer can follow in combination with metrics such as the user interest shown, the time they spent on the system, the improvisations they made etc [5].

Figure 4: Students creating scenes with eShadow

First experiment results

More than 100 children and teachers participated in the evaluation made during the exhibition. 50 questionnaires were collected. This difference can be explained by the fact that some of the children did not have time to complete the questionnaire due to time limitations set by their teachers. 3 questionnaires we discarded because one or more sections were not filled. Questionnaires that had less than four questions unanswered were considered valid. The missing responses, in this case, were not taken into account. The calculation of questionnaire reliability was made using Cronbach's alpha metric which gave a value of 0.908, which is absolutely acceptable. The overall results were supporting the hypotheses that eShadow is a usable and creativity-promoting tool. The mean value of all responses was 7.9 (the range of the values was 0-9).

The participating students did 31 recordings with eShadow. From these 20 were based on the scripts from the film they watched and 11 were improvisations they made on the fly. This result is very encouraging because in the limited timeframe available, the students had to learn the controls and the interface and make their recording of the scene. The percentage of improvisations (1/3 of the total recorded scenes) is also an indication of the potential of eShadow regarding children's creativity support.

As already stated the only time constraints were set by the escorting teachers. On average the teams spent 15 minutes for each session with eShadow. The minimum time was about 10 minutes and the maximum time spent was about 25 minutes.

Second experiment methodology

After the exhibition, some teachers expressed interest in using eShadow with their students in their classes. They wanted to exploit eShadow as a storytelling tool in order to create plays for their schools annual festivals. Following this request, a process was

Figure 5: Photo from the children's school presentation

proposed to the teachers that included a preparation stage before the usage of the system. The version of EShadow that they used had some technical constraints. The first one was that only two virtual puppets could be moving at the same time. The second limitation was the number of virtual puppets and sceneries available for use. The number of virtual puppets available was 8 and the number of sceneries was 3.

With these limitations in mind teachers created the script for the play they wanted to record with their students. The objective was for the children to have the major role in the creation of the script and the teacher's role was to facilitate the process. The created scripts consisted of small stories along with the characters and dialogs. When the scripts were ready the children used eShadow in the classroom and recorded the play based on their script.

The next step of this experiment did not involve the children but the cooperation of the eShadow team with the teachers in order to produce the video from the children's recordings. The steps of this process were to:

- Export the video from eShadow.
- Clean up the sound of the recordings (they were made in a class room and there was a lot of noise).
- Provide music for some parts of the play according to teachers' instructions.
- Develop the final film using the videos, the audio recordings and the music files.

Second experiment results

From the second experiment the results are mostly empirical. In this second experiment the children showed again a great interest in eShadow. Even though they were not instructed to do so, the children generated again many improvised recordings along with playing with each other. Two very distinct examples of games the children played were the following:

- *Two boys playing:* They improvised a fighting game where the virtual puppets were trying to fight each other (inspired by street fighting as they stated).
- *One boy and one girl:* The girl's virtual puppet wanted to marry the boy's virtual puppet and she was chasing him in order to give him a kiss.

Some of the videos that the children produced along with the original video that was shown to them can be watched here: http://www.youtube.com/eShadowtheater

Conclusions and Future Work

EShadow leverages on the rich tradition of Shadow Theater to create an engaging storytelling environment to promote intergenerational learning and creativity. The findings from the questionnaire results are absolutely aligned with the initial expectations of the development team and further strengthen by the qualitative finding regarding the creativity support facilitated by the current prototype. As already stated almost all the twelve design principles that are proposed in [3] were followed during the development of eShadow. Although this has introduced a level of complexity during the development of eShadow, it emphasizes the fact that eShadow is on the right track of becoming a creativity support tool for both children and adults.

In the following months, eShadow will be used in the learning interventions that will be organized in Greece in the context of the ALICE project (http://www.alice-llp.eu/) to enable the animation of selected folk tales and stories inspired by children literature. Furthermore, eShadow will be presented in an exhibition on Greek Shadow Theater in Athens that will take place in Athens, Greece from 15/11/2012 to 12/12/2012 where more intensive field-testing with schools will be done.

In parallel, a tool enabling users of eShadow to develop their own virtual puppets and scenery is under development and will be soon ready for testing.

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ALICE trainers as "change agents" for intergeneration learning

The ALICE approach to promoting intergenerational learning through the use of creative languages relies heavily on the creation of community of "change agents" that will enable local communities to embrace ALICE values and methodologies and facilitate adults in their development to master creative language and create new learning opportunities for children while, at the same time, strengthening family relations and intergenerational bonds in general.

These "change agents" are the ***ALICE trainers.*** After following a well defined advanced training programme, ALICE trainers will implement adult learning interventions and follow participatory evaluation approaches to document the effectiveness and prospects of the ALICE approach.

Identifying ALICE trainers

Selecting the right people to undertake the role of ALICE trainers was a delicate task that all ALICE project partners undertook from the very first months of the project. In many cases, preliminary investigations were initiated to experiment with local communities before actually finalizing the selection of candidate trainers. In parallel, the ALICE advanced training programme curriculum was defined and finalized. On June 2012, the trainer selection process was initiated officially by UCF-CISRE, the coordinator of the ALICE project, under the direct responsibility of prof. Umberto Margiotta as the Scientific Coordinator of the ALICE advanced training programme.

The results of the ALICE training selection process were published on 21 July 2012 and are available in electronic form on the ALICE website at the following address: http://www.alice-llp.eu/blog/?p=152.

According to these results the selected ALICE trainers are distributed in five countries as follows:

- 9 trainers were selected from Italy (3 from FNCC and 6 from UCF-CISRE) with degrees in education, childhood sciences, history, literature, psychology and philosophy.
- 18 trainers were selected from Romania with main background in psychology, history, economics, sciences and education.
- 4 trainers were selected from Switzerland with studies in communication and informatics.
- 8 trainers were selected from Greece having degrees in informatics, literature, pedagogy and philosophy.
- 4 trainers were selected from UK with background training in the English language, anthropology and sociology and engineering.

Figure 6: Photo from TUC NAS

Figure 7: Photo from FNCC NAS

In terms of scientific and professional background, the selected ALICE trainers are covering a broad range of disciplines that are highly complementary with respect to the interdisciplinary nature of adult learning and the specific objectives of the ALICE project and the advanced training programme:

Discipline	Number of trainers
Social sciences	2
History	2
Law	1
Econonics	1
Literature and Foreign Languagues	8
Psychology	7
Engineering	2
Sciences and Mathematics	2
Educational Sciences and Pedagogy	7
Philosophy	2
Communication sciences	3
Informatics	6
TOTAL	43

The next steps

Having finalized the community of ALICE trainers, the next step was to start the ALICE training course, initially through the organization of National Awareness Sessions to present the ALICE project to the ALICE trainers selected in each country and introduce them to the use of the ALICE virtual space through with the network learning activities of the training programme will be implemented.

Most of these sessions were implemented late July and early September 2012 and presented in the ALICE site in distinct blog posts as follows:

- UK (Mosaic Art and Sound) http://www.alice-llp.eu/blog/?p=158
- Italy (UCF-CISRE) http://www.alice-llp.eu/blog/?p=144
- Italy (FNCC) http://www.alice-llp.eu/blog/?p=129
- Greece (TUC) http://www.alice-llp.eu/blog/?p=140

Following these awareness sessions, the actual network learning activities of the training programme are schedules to start on 10/09/2012 and last for the next six months. On March 2013, the actual implementation of the trainers' local community projects will start in Italy, Greece, Romania, Switzerland, and UK.

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