Project SILVER

Deliverable number 4.1.1/.2: *Gaming for IGL and Manual for Trainers*

Authors: Teppo Räisänen, Antonia Ypsilanti
Affiliation OULU/SEERC
Finland/Greece
Language version (EN)

Management summary

This document gives the user and trainers background information on the GIGL as well as instructions for use.

Table of contents

Table of Contents

1   Introduction to the GIGL (Gaming for IGL)

Serious games or game-based learning refers to the use of computer games in raising awareness about educational topics, and developing new knowledge and skills by enabling learners to engage and participate in situations that would otherwise be impossible to experience (Corti, 2006). Although there is no consensus in the definition of serious games, most researchers agree that serious games are designed for training, stimulation and education in virtual environments, with an element of engagement and pre-defined learning objectives (Susi, Johannesson & Backlund, 2007).

GIGL is a serious web-game developed to facilitate IGL in organizations. It is a supplementary tool, part of the IGL toolkit that has been developed and tested in all partner countries. The University of OULU in Finland and SEERC in Greece, were responsible for the design, development and testing of the game. Specifically, GIGL was tested for readability, usability and contextualization with data from all partner countries. The results of our findings can be found in relevant reports of

the project and published papers in the forthcoming special issue of the Journal of Education and Information Technologies. The dialogues of GIGL are translated in all partner languages.

During the design phase desk-research was performed in consideration of the selection of characters, technological demands, and usefulness of the game, since the end-users will be both younger and older adults. We found that some of the beneficial aspects of game-based learning include the elevation of several cognitive skills, directly or indirectly implicated in the learning process. Due to the nature of game-based training, learners are exposed to new technologies, requiring them to adapt to new learning environments, something that has been a challenge for older workers. Therefore, older generations optimize their learning ability by benefiting both from the content of the training as well as from the exposure to new technologies.

We found several barriers that were taken into account in developing GIGL. We established that there are specific factors that determine successful design, development and implementation of serious games with major emphasis on specifying the goals and expected learning outcomes of the game. Engagement can be increased with the use of vivid graphics to attract and maintain attention. We also ensured easy access, with minimal requirements for installation and play (not many technical requirements).

2 Instructions for use

The game can be launched through SILVER-project web-site at
http://www.intergenerationallearning.eu/

It works on any modern web-browser (including Internet Explorer, Google Chrome, Mozilla Firefox and Safari) with a Unity-pluging. The game will prompt the user to install Unity-plugin if it is not already installed. Unity can also be installed from http://unity3d.com/webplayer/.

2.1 Playing the Game

The initial screens of the gameplay contain language selection and instructions, which should be enough for you to cope with the basics of the game. The game itself consists of four [three] levels, which must be completed in a given order. The tasks of the levels are centered around building toys in a toy factory. You will act in a role of [Ed], who in the beginning of the game is about to start his first working day in the factory. As the game progresses Ed will travel through the decades of his working career. Working with the trendy toys of various time periods and collaborating with the other workers of the toy factory will keep him and you challenged for a while.

You will find out that the difficulty level of the game will increase level by level. Also, all the levels must be completed within a given time frame. Failing to do this will result in failing the level. In case of a failed level, you can always choose to retry the level. The number of the retries is not limited.

2.1.1   Moving the character

Ed, the main game character, is moved by using the arrow keys of the keyboard. The directions are mapped to:

● UP   move forward

● LEFT   turn left

● RIGHT   turn right

UP and LEFT/RIGHT keys can also be pressed simultaneously, which will result in Ed turning to the desired direction while moving forward.

2.1.2   Dialogues between Game Characters

The tasks of the game will require Ed to discuss with the other workers of the factory. To start a dialogue with a chosen character, just move Ed to a close distance. (Some workers might not be willing to talk with Ed, but most of them should be quite talkative) During dialogues you can select between options of the Ed's spoken lines. The selection can be done by [either]

● Mouse clicking on the selected option

● [Using the numeric key press indicated by the specific option]

2.1.3   Crafting Toys

Each toy needs a specific skill or set of skills to the manufactured. To obtain the skills and

manufacture the toys the workers of the toy factory must be able to cooperate and learn from each other. To find out what is required to be build a toy just do as with the human characters: walk nearby the toy. The game display will display information about the toy. Please note that some of the build tools might be initially disabled but enabled later during the game level as Ed and his coworkers gain new skills.

3   Manual for trainers: Game on Intergenerational Learning-GIGL

Serious games or game-based learning refers to the use of computer games in raising awareness about educational topics, and developing new knowledge and skills by enabling learners to engage and participate in situations that would otherwise be impossible to experience (Corti,

2006). Although there is no consensus in the definition of serious games, most researchers agree that serious games are designed for training, stimulation and education in virtual environments, with an element of engagement and pre-defined learning objectives (Susi, Johannesson & Backlund, 2007).

GIGL has been designed, developed and tested as part of the tookit to facilitate IGL in organizations with different generations. The game was designed after considerable desk-research from experts in the field of game design and cognitive psychology. The purpose of the game is to facilitate IGL with an interesting and stimulating game that is based on a scenario in the workplace between older and younger workers. Central to the concept of learning is the acquisition of new skills and competences, through engagement and motivation in formal, non-formal and informal settings. According to surveys, informal training constitutes more that two-thirds of workplace learning (Kim, Hagedorn, Williamson, & Chapman, 2004). GIGL aims to provide an alternative means of informal learning in organizations that will be appreciated by all age groups. The success of learning using serious games lies in the actual involvement of trainee, which in turn, creates increased cognitive links with real-life situations allowing the individual to make relevant associations, to use mnemonic strategies with the facilitation of multi-dimensional educational aids (e.g., visual, auditory). This pedagogical approach promotes engagement, familiarity, and intrinsic learning (i.e., unintentional learning), applicability to work-related situations by transforming the individual from a passive to an active state.

The success of web-based serious games lies in determining the specific objectives o the game at the design phase. This has been successfully done in GIGL through desk research and data collection through interviews from experts on IGL (for an overview of the findings see the relevant extensive reports).

Briefly, the objectives of GIGL are:

1. To facilitate the practice of IGL in organizations
2. To increase awareness on issues relating to IGL
3. To expose older learners to new technologies
4. To provide a realistic scenario of the barriers and facilitators on IGL in the workplace.

All staff members of an organization can use GIGL; it is available in 5 EU languages (EL, FN, NL, GE, EN). For the trainers purposes GIGL can also be used as an icebreaker to introduce IGL in organizations with low awareness levels, and as a starting or finishing point in training sessions on IGL. Finally, trainers can prompt learners to use GIGL independently since the instructions are very simple and the technical requirements are kept minimal.