



Lifelong  
Learning  
Programme



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## WP2- Analysis of use of game based learning initiatives

NATIONAL REPORT

Country: Greece

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## 1. Introduction to the Report

This report presents the results of the survey about game based learning (GBL) initiatives conducted in Greece in 2013. The survey addressed three groups: international project managers, human resources professionals and experts in game based learning initiatives. The experts were drawn from a variety of economic sectors, and the areas of education, ICT, energy and research were represented. The survey was carried out by online questionnaires, interviews and a focus group.

The Learn Play Manage Project (LPMnAge) is a European Project, funded by the European Commission under the framework of the Lifelong Learning Programme, Leonardo da Vinci, sub-programme Development of Innovation. The main objective of the project is to create a social game to develop the necessary competences to work as a manager of international projects.

The current version of the national report has been elaborated by the Hellenic Open University; the sole Greek partner in the LPMnAge project, which will be in charge of the development of the social game-based training tool, with a focus on technical development and involvement in all project activities.

## 2. Methodological approach to elaborate the report

This survey of game based learning initiatives will provide the ground basis of the status quo and a referent point so as to start the discussion about the development of more training initiatives. It was conducted during February – April of 2013 and the process of collecting a satisfactory number of data has proved substantially more time consuming than what was initially estimated; we attribute that to the relative national immaturity of the field and the disappointing situation of the national job market.

We used a qualitative methodology through primary sources (interviews, questionnaires, discussion groups, etc...) and secondary ones (bibliographical research, databases, Internet, etc...), with the direct involvement of the target group.

The main objectives of this survey are:

- to analyse the pedagogical potentials of games and social games applied to competences development,
- to identify those variables that influence the successful implementation of game-based learning initiatives,
- to detect good practices in the EU or international level,
- to collect success stories that could be used as inspirational experiences for adults training practitioners.

### 3. Desk research

By using the internet, bibliography, reports, HOU managed to gather enough information regarding the game based learning initiatives applied to professional environments in Greece.

Number	Author	Year of publication	Subjects approached	Publisher	Comments or Remarks
1	Vasiliki Maratou	2011	IMPLEMENTATION OF A VIRTUAL ENVIRONMENT EDUCATION FOR SOFTWARE TECHNOLOGY ISSUES	Hellenic Open University	The aim of this thesis is to implement a role game in a virtual three-dimensional, interactive, environment that simulates the real environment of a company. The scenario of the game and the virtual environment is tailored to train students on Project Management, as part of the wider area of Software Engineering.
2	<i>Theodouli</i> Terzidou, Thrasyvoulos Tsiatsos, Antonia Dae, Odysseas Samaras, Apostolia Chasanidou	2012	Utilizing virtual worlds for game based learning: Grafica, a 3D educational game in Second Life	IEEE	<a href="#">ICALT 2012-International Conference on Advanced Learning Technologies (ICALT2012)</a> – Rome 7-10 July 2012
3	T. Tsiatsos, A. Konstantinidis, T. Terzidou, L. Ioannidis, and C. Tseloudi	2011	It reviews and compares the most promising collaborative virtual environment platforms, which have been used or proposed for supporting educational activities in terms of their potential to support collaborative e-learning. The most promising environment according to the results of this review is Second Life.	IGI Global	CSCL Techniques in Collaborative Virtual Environments: The Case of Second Life. In Vincenti, G., & Braman, J. (Eds.), Teaching through Multi-User Virtual Environments: Applying Dynamic Elements to the Modern Classroom. (pp. 139-156)  DOI: 10.4018/978-1-61692-822-3.ch009  <a href="http://www.irma-international.org/viewtitle/46504/">http://www.irma-international.org/viewtitle/46504/</a>

4	Ioannis Leftheris, Thrasyvoulos Tsiatsos, Ioannis Cham psas, Apostolos Mavridis and Theodouli Terzidou	2012	Paper on Design and Evaluation of a 3D Collaborative Game to Support Game Based Learning	Academic Publishing	Proceedings of the 6th European Conference on Games Based Learning Hosted by University College Cork And Waterford Institute of Technology in Ireland  <a href="http://academic-conferences.org/pdfs/ECGBL_2012-Abstract-booklet.pdf">http://academic-conferences.org/pdfs/ECGBL_2012-Abstract-booklet.pdf</a>
5	Dimitri Darzentas, Jenny Darzentas and John Darzentase	2012	Paper on Mastering Technology for Greater Autonomy: Device Familiarisation for Older Users via Games	Academic Publishing	Proceedings of the 6th European Conference on Games Based Learning Hosted by University College Cork And Waterford Institute of Technology in Ireland  <a href="http://academic-conferences.org/pdfs/ECGBL_2012-Abstract-booklet.pdf">http://academic-conferences.org/pdfs/ECGBL_2012-Abstract-booklet.pdf</a>
6	Stavros Demetriadis, Thrasyvoulos Tsiatsos and Anastasios Karakostas	2012	Paper on Scripted Collaboration to Guide the Pedagogy and Architecture of Digital Learning Games	Academic Publishing	Proceedings of the 6th European Conference on Games Based Learning Hosted by University College Cork And Waterford Institute of Technology in Ireland  <a href="http://academic-conferences.org/pdfs/ECGBL_2012-Abstract-booklet.pdf">http://academic-conferences.org/pdfs/ECGBL_2012-Abstract-booklet.pdf</a>
7	Christos Malliarakis, Maya Satratzemi and Stelios Xinogalos	2012	Towards the Constructive Incorporation of Serious Games Within Object Oriented Programming	Academic Publishing	Proceedings of the 6th European Conference on Games Based Learning Hosted by University College Cork And Waterford Institute of Technology in Ireland  <a href="http://academic-conferences.org/pdfs/ECGBL_2012-Abstract-booklet.pdf">http://academic-conferences.org/pdfs/ECGBL_2012-Abstract-booklet.pdf</a>
8	Vasilis Daloukas (Secondary School Teacher of Informatics, Greece), Maria Rigou (University of Patras, Greece) and Spiros Sirmakessis (Technological Institution of Mesolonghi, Greece)	2012	Article: Is there a Place for Casual Games in Teaching and Learning?: The Snakes and Ladders Case	Volume 2, Issue 1 of International Journal of Game-Based Learning (IJGBL)	DOI: 10.4018/ijgbl.2012010102

9	Maria Saridaki (National and Kapodistrian University of Athens, Greece) and Constantinos Mourlas (National and Kapodistrian University of Athens, Greece)	2011	Motivational Aspects of Gaming for Students with Intellectual Disabilities	Volume 1, Issue 4 of International Journal of Game-Based Learning (IJGBL)	DOI: 10.4018/ijgbl.2011100105
10	Gavriilidou Maria Eleni	2008	Design Principles for Educational Games	Aristoteleio University	<a href="http://invenio.lib.auth.gr/record/114472/files/ptuxiaki1.pdf?version=1">http://invenio.lib.auth.gr/record/114472/files/ptuxiaki1.pdf?version=1</a>
11	Vasileiou V.	2009	Educational value of computer games. E-Learning		blog. Available at: <a href="http://billbas.wordpress.com/tag/computer-games/">http://billbas.wordpress.com/tag/computer-games/</a>
12	Kardiolaka K., Tasidis I., Chatzis T., Makridou Mpousiou D.	2007	An Educational Approach of e-Games "The Financial Adventures of Nestor."		Proceedings of the 4th Hellenic Conference with International Participation "ICT in Education", Syros.
13	Kekes, J.	2002	Playing 'digitally' in the Classroom: Pros and Prospects		Proceedings of the 3rd Conference ETPE "ICT in Education", Volume I, University of the Aegean, Rhodes
14	Proveleggios Petros, Fesakis George	2011	"Educational applications of serious games: The case of the game Food Force»		European Conference on Games Based Learning
15	Stefanos Koursaris	2010	Articles for Video Games in Education (VG Ionio)		blog. Available at: <a href="http://vgioniop2007092.wordpress.com/page/3/">http://vgioniop2007092.wordpress.com/page/3/</a>
16	Meimaris, M. & Gouskos, D.	2009	The Game of Learning: Educational Processes with Help of Digital Games		Proceedings of the International Scientific Workshop of Educational Planning "Change and Governance of Education Systems", 29-31 May, Rhodes.

Additionally, ten (10) practices that were indicated by the people who were interviewed focused on social game based learning initiatives were collected and are being presented in the following table.

Title of the good practice	"The Magic Potion" An Adventure Game for Learning	Amnesty the Game	Lysias	Oikopolis	2020 Energy
Country	GREECE	GREECE	GREECE	GREECE	Consortium: EnerGia-Da (Italie), Artistole University of Thessaloniki (Grèce), Brook Lapping Productions (UK), MED Media Education (Italie), Computer Technology Institute (Grèce), RTBF (Belgique), RTVSLO (Slovénie), Herafilm (République Tchèque), RAI (Italie), Brunel University (UK), HafenCity University Hamburg (Allemagne), TVC (Spain), Tralalere (France)
Brief description of the good practice. Why is it worthwhile to be considered a good practice? Highlight the strong points of the good practice	It is a digital learning adventure game for children with mild intellectual delay deprivation which is developed by the New Technologies Laboratory in Communication, Education and Media Faculty of Communication and Media at the University of Athens under EPEAEK Devise (scientific officer Professor Michael Meimaris). The Magic Potion game was	The information and the scenario selected is very powerful since the player can directly influence the game path and at the same time, inform friends online of real facts related to the death penalty. User friendly game, with many new information on diverse countries in the world where the death	The overall purpose of the lesson plan is learning through play. Students are invited to identify objects and to answer interdisciplinary questions by participating in a nationwide contest, having been informed of the conditions of safe navigation on the Internet.	It is an educational adventure game dealing with the issues of pollution, usage and management of water. The game deals with complex issues like subterranean waters, waste management, citizens' habits as well as local actions.	The game offers complex questioning on the issues of efficiency and the reduction of our energy consumption, renewable energies and sustainable development.  It holds a comprehensive selection of information, but doesn't replace a course.  It illustrates the key concepts linked to sustainable development without answering to all the questions and addresses some big picture debates that society has on energy questions.  By anchoring the training in reality, the



	<p>awarded in June 2009, at European level with the distinction Comenius Edumedia Medaille.</p> <p>Strong points:</p> <ul style="list-style-type: none"> <li>• Extended academic research has minimized the majority of the doubts related with the use of videogames as learning tools, on the basis.</li> <li>• The adventure game for learning developed through the EPINOISI project has mostly focused on player constructivism processes as well as on the social and affective settings of gameplay, to cater for different types of learning needs.</li> <li>• The EPINOISI project, taking into consideration Bruner's arguments on the importance of narrative in the development and the maintenance of culture, has tried to</li> </ul>	penalty is still legal.			<p>game makes theoretical data and concepts lively.</p> <p>The game encourages the sharing of points of views and experiences between peers while giving a true role to the educator.</p> <p>The game promotes the children's sense of responsibility and a citizen centred approach.</p>
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	<p>keep a balance between narrative and gameplay.</p> <ul style="list-style-type: none"> <li>• The plot of the game is simple, to eliminate risks of confusion</li> <li>• The aim is to learn, while taking advantage of fun, gameplay and have a good narrative</li> </ul> <p>Fifteen (15) researchers specialized in different areas cooperated, designed and developed the interactive applications, animation and graphics using computer, pedagogy, special education, psychology and communication studies.</p> <p>In the context of the EPINOISI project an effort was made to provide players with a gaming experience of multiple rewards at three discrete levels: 1. Player Rewards. 2. Story Rewards. 3. Meta-</p>				
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	Rewards				
Promoter of the initiative (person or institution that developed it)	<p>Funding of the EPINOISI project by the Greek Operational Program for Education and Initial Vocational Training (EPEAEK) through European Social Fund and national funds.</p> <p>It was developed by the Laboratory of New Technologies in Communication, Education and the Mass Media, Faculty of Communication and Mass Media Studies, University of Athens</p>	HGDA – Hellenic Game Developers Association	Private School Doukas, Hellenic Telecommunications Organization and Microsoft Hellas	Point Blank	Produced with the financial support of Intelligent Energy Europe (European Commission) in the framework of the Energy-Bits project.
Target group	For students with mild intellectual disability	Adults	Students	destined for children aged 6 and up	for teenagers (14-18 years old) encourages more responsible and efficient behaviours in energy consumption and promotes renewable energies.
Type of game used to implement the initiative and its use	Serious games	Facebook online serious game created in order to support Amnesty International efforts to worldwide abolish the death penalty	The theoretical framework of the lesson plan is based on learning-based game (Game Based Learning). The games are considered to create incentives and made	educational adventure game for environmental issues	serious game

			attractive through entertainment, rules, goals, interaction, adaptability, victory, challenge, problem solving, and images offered through them (Prensky, 2001). This inducement offered through entertainment is one of the advantages of games against other educational media and is a part of the natural learning process (Bisson & Luckner, 1996).		
Contents included in the game	The game consists of four episodes, including narrative scenes and around 20 different games on mathematics, language, social and communication skills and daily living skills. Each episode is designed with separate logic and the structure of the game is not binding on the player, who can enter and leave at any time from any episode and to bypass the narrative scenes or individual games. It	<ol style="list-style-type: none"> <li>1. Click and share comments about the death penalty on your Facebook account,</li> <li>2. Publish on Facebook and receive points for saving prisoners,</li> <li>3. Follow a scenario helping prisoners and influencing government policies about the death penalty</li> </ol>	The pupils play seeking clues and answering questions on different subjects such as maths, science, geography, astronomy, the New Greek, History, from religious education, the arts, sports, and issues of everyday life.	The user takes on the role of a small child that discovers that the waters around his village are polluted. He begins his journey, aiming to understand what is at fault. During the game, the hero explores the urban and natural environment, discovering several of the causes of pollution as well as possible solutions.	<p>The serious game introduces energy issues with a sustainable development message in a fun way through 9 interactive missions.</p> <p>For more than a century people have been using and depleting energy resources carefree, as if they were endless. In 2020 the world could find itself in a deadlock. The player has the power to go back in time and to rewrite history.</p> <p>The player's objective: to reduce the consumption of energy, increase energy efficiency and choose the best renewable energies. He finds help with 3 advisers:</p>

	facilitates the ability to change the flow of the educational process and the non-linear approach various issues				economical, environmental, social, but it is up to the player to take the good decisions to improve our collective future!
Competences developed by playing the game	communicative and social skills for students with mild intellectual disability	Basic ICT skills, knowledge about the value system, develop negotiation skills, learn about human rights.	It emphasizes to the cultivation of imagination and critical thinking, the activation of the student and his/her involvement in processes by which he/she conquers knowledge.	Develop critical though	develop critical thinking and motivation.
Educational and pedagogical approach	Design of the instructional process which is largely based on the theories of Bruner [12] and Gagne [13]. Gagne's theory in particular, spanning both learning and instruction, brings forward five types of learning capabilities: manipulation of verbal information, both oral and written; manipulation of information in symbolic forms and problem solving; cognitive strategies involving creativity and control over	Amnesty International opposes the death penalty in all cases without exception regardless of the nature of the crime, the characteristics of the offender, or the method used by the state to kill the prisoner.	The specific objectives of the educational process: <ul style="list-style-type: none"> <li>• The pedagogical and didactic approach of knowledge with exploratory and playful way (game based learning).</li> <li>• Creative activity and experimentation.</li> <li>• Discovery of learning.</li> <li>• Emphasis on review troubleshooting and developing skills rather</li> </ul>	constructivist educational principles	Based on the codes and rules of video games, 2020 Energy's gameplay is at the crossroads between playing and learning. The educator and the teenagers easily find their mark.  Missions replace the wording of a subject or problem  The rules of the game lay down the framework for reflection  The sustainable development advisers give back an answer sheet with information and commentaries  Scores replace grades and leaves the

	<p>one's own learning process; motor skills encompassing physical activities; and attitudes that influence one's personal choices.</p>		<p>than memorization and quote information.</p> <ul style="list-style-type: none"> <li>• The emphasis on interdisciplinarity, which is achieved by selecting questions from all courses taught by students.</li> <li>• The emulation among students on issues related to their interests and school knowledge.</li> </ul>		<p>possibility to turn in work</p> <p>With fun elements, the text content, rich, stays the central part of the serious game.</p>
Number of users-players	<p>90 trainers and 200 trainees of the EPINOHS project and 500 students</p> <p>P v1.0 has been released to the trainers and trainees of the EPINOISI project on September 2008, tested in-class by 200 special education teachers and about 500 students during October – November 2008 and recently (June 2009) released in its final version (tMP 2.0), which incorporates the feedback and improvement suggestions that have been obtained from in-class evaluation.</p>	Individual but with social aspects	Students from primary school to high school, who attend schools in Greece, Cyprus and abroad took place in the competition (the number of users is not available)	N/A	n/a

Transferability – reusability	The EPINOISI R&D project has tried to enable special education teachers employ the potential of digital games-based learning as a supplementary in-class tool, in a blended learning approach which still maintains the social and affective aspects of learning.	To adult training			It can be used as an introduction to the notion of sustainable development or to assess the acquired skills at the end of a school programme.
Sustainability of the game	<ul style="list-style-type: none"> <li>- Awareness of the participants</li> <li>- Development conclusions for more targeted future research efforts</li> <li>- Transfer knowledge to digital applications designers</li> </ul>		prize awards to participants of the 17th Contest LYSIA	<ul style="list-style-type: none"> <li>- Raise awareness about its existence</li> </ul>	<ul style="list-style-type: none"> <li>- Awareness of the participants</li> <li>- Development conclusions for more targeted future research efforts</li> </ul>
Impact (indicate quantitative and qualitative indicators used to assess it)	The ultimate goal of Special Education is to prepare every student for adult life at the highest possible level of autonomy. To this end, the special curriculum needs to be localized on what is needed to cope with the learner's natural and cultural environment. It also improves computer	The game is about informing adults on the death penalty around the world and how one can help. People learn about actions and procedures needed in order to raise awareness. People are enticed to take action.	The teacher and students discuss the benefits of the Internet, but also the risks. The teacher gives useful information, news and advice in relation to the proper and safe use of the Internet by children. Encourages students to visit the site <a href="http://www.saferinternet.gr">www.saferinternet.gr</a>		

	literacy, manual dexterity, of the players and gives a "realistic" virtual playing experience thanks to the good graphics.		and learn about its activities.		
Evaluation (indication the qualitative or quantitative methodologies/tools to implement it)	The game was evaluated during this time firstly by the Pedagogical Institute and then applied to 160 school grades of Special Education throughout Greece by 90 trainers and 200 trainees of the EPINOISI project as well as by 500 students, with very positive results.		The student through participation in the contest has self-assessed the adequacy of his knowledge both in terms of school subjects as well as in general knowledge. The teacher rewards students with better marks and / or coordinate discussion about what the students gained through their participation in the contest.		
Improvement areas	Further evaluate the conditions for successfully applying digital games for learning in class settings, and (b) further expand and investigate the possibilities for combining gameplay and narrative, with an objective to establish a cross-fertilization relationship between		Add more thematic areas		

	<p>these two. To this end, the authors are currently looking at the different ways in which digital games and traditional storytelling and orality can interact, incorporate and inspire each other.</p>				
<p>Further information/ Additional Comments</p>	<p><a href="http://www2.media.uoa.gr/epinoisi/docs/papers/STEG2009.pdf">http://www2.media.uoa.gr/epinoisi/docs/papers/STEG2009.pdf</a></p>	<p><a href="http://www.p4i-project.eu/admin-gestion/resultados/files/Success%20stories-compilation%20of%20game-based%20learning%20initiatives%20in%20adults%20education.pdf">http://www.p4i-project.eu/admin-gestion/resultados/files/Success%20stories-compilation%20of%20game-based%20learning%20initiatives%20in%20adults%20education.pdf</a></p>	<p><a href="http://www.lysias.gr">http://www.lysias.gr</a></p>	<p><a href="http://www.pointblank.gr/en/work/oikopolis">http://www.pointblank.gr/en/work/oikopolis</a></p>	<p><a href="http://www.2020energy.eu/en/serious-game">http://www.2020energy.eu/en/serious-game</a></p>



Title of the good practice	ACE Manager	Virtual tour of the Parthenon Frieze "	«Play the game», Install Project	BeTheManager!	KNOWLEDGE GAME
Country	France	Greece	Greece	Greece	Greece
Brief description of the good practice. Why is it worthwhile to be considered a good practice? Highlight the strong points of the good practice	<p>The company bnp Paribas developed an online business game designed by experts and involves students from schools <a href="https://acemanager.bnpparibas.com/">https://acemanager.bnpparibas.com/</a>.</p> <p>Students from the best business schools around the world get to play the role of a banker and experience the bank's three core businesses: Retail Banking, Investment Solutions and Corporate and Investment Banking.</p>	<p>The Parthenon Frieze, a unique work of art, is presented in a new website (<a href="http://www.parthenonfrieze.gr">http://www.parthenonfrieze.gr</a>) which utilizes new technologies to present and elevate cultural content online. The application provides the possibility of immediate access to the frieze, both as a database for scholars and, as digital games for schools and their pupils.</p>	<p>Users are able to enter the 'game' either through computer or through a mobile device (smart phone) and pass through various levels of increasing difficulty, depending on how well they are informed on the matters of LLL.</p> <p>The following have been delivered:</p> <ul style="list-style-type: none"> <li>- Pool of questions to be used by the Game-based learning application</li> <li>- Web game-based learning application</li> <li>- Mobile platform game-based learning application</li> </ul>	<p>The videogame "BeTheManager!" is used as an assistant tool towards in education of students at HOU, and more specifically is used in the management of an informatics project which follows a methodology based on the well-known "waterfalls" model. It is an educational simulation of the management of a medium level project, where the player has the role of the manager in a software development company.</p>	
Promoter of the initiative (person or institution that developed it)	bnp Paribas	It was carried out by The Hellenic Ministry of Culture and Tourism (YSMA-Acropolis Restoration Service,	The partnership of the project consists of the Region of Western Greece - PIP, the National Certification Agency Qualifications and Vocational	created by Software Quality Research Group of HOU	WOW Group (Greece) for the client Multirama (IT Retail chain).

		Department of Information and Education) in collaboration with the National Documentation Centre (EKT), is valuable for specialists and the general public alike.	Guidance - EOPPEP and Technological Institute of Patras		
Target group	Students in higher education, who are working towards a Bachelor's or Master's degree and are under 26.	for schools and their pupils	Adults (any age).	Students	Adults (any age).
Type of game used to implement the initiative and its use	Online business game	Online application	Online learning Game	Online learning Game	Facebook game, general quiz game.
Contents included in the game	<ul style="list-style-type: none"> <li>- Teams of 3 register and compete online</li> <li>- Players tackle multiple business cases while experiencing 3 core businesses</li> <li>- Top team get selected to participate to the Grand Final where top students battle it out</li> </ul>	The unit "The Parthenon" includes a text and illustrations that show the architecture and sculptural decoration of the temple. The sculpture comprises the statue of Athena Parthenos, the pediments, the metopes and the frieze. The frieze is	During the time the user plays the game, he will be able to connect through the internet and get the required info in order to answer the questions. A number of those that will be able to answer the questions will earn a reward.	The main objective is to cover the gap that exists in the educational process of the software engineers between the theoretical background received during the courses in software engineering and the lack of practical experience in the software projects management.	5 level game, one needs to collect as many points as possible (general quiz questions) and win competitions and products. The products are donated by companies. The levels get more difficult as you move along the levels. The questions are timed.

	<p>Teams will be given 9 Case studies to be resolved representing the Organising Company's three fields of activity: Corporate and Investment Banking, Investment Solutions and Retail Banking. These Case studies are simulated assignments through which the Qualified Teams are put in the situation of a banking professional responsible for conducting case studies and must make decisions enabling them to work their way through the simulation</p>	<p>analysed under the following units: the Theme, the Panathenaia, Interpretive Theories, Designing and Construction, History, Conservation, Bibliography. The contents are presented through three-dimensional cards that include the relevant texts and accompanying pictures.</p>			
<p>Competences developed by playing the game</p>	<p>financial management, negotiation skills, cooperativeness, communication skills, etc (Develop competences relative to businesses)</p>	<p>They are games of memory and they are designed to attract children to closer observation of the details of the frieze.</p> <ul style="list-style-type: none"> <li>• In this same category of games, the children are asked to exercise</li> </ul>	<p>Inquisition of knowledge</p>	<p>Inquisition of knowledge</p>	<p>This „Knowledge Game” (Παιχνίδι Γνώσης) is an engaging trivial game with different levels and a bonus scheme based on credits and in-game boosters.</p>



		<p>their powers of observation, they are asked to put together a puzzle.</p> <ul style="list-style-type: none"> <li>• The game is intended to enliven the relief scenes of the frieze and to help the children to imagine their colours.</li> <li>• In the game they try to find the correct position of the 16 blocks of the West Frieze (compare images).</li> <li>• In the games the children have to match text with picture.</li> </ul>			
Educational and pedagogical approach	The competition sets out to highlight, in the form of a serious game, the central role of the professional banker in financing clients' projects, in full accordance with economic realities.	This virtual representation of the Parthenon Frieze presents, in an articulate and transparent way, in both Greek and English, a comprehensive overview of a masterpiece of		Discovery learning: Everyone was able to report some software engineering or project management principles which were discovered by themselves during t the educational activity.  - Learning Through Failure: In order to find the right strategy for a particular issue needed a game or two to find out what is not to do and	

		<p>significant archaeological value. At the same time it is characterized by scientific documentation, becoming thus an essential tool for the archeologist/researcher, as well as for the teacher, who can use it as an educational implement.</p>		<p>this discovery to implement a strategy that is ultimately successfully. Thus, almost all replied that low score gathered initially, did not disappoint but instead was a strong incentive to try again again.</p> <p>- ARCS motivation theories of Keller: From the observation and the comments volunteers seem t felt somehow engaged with the game due to the atmosphere created by the game through simulation. Furthermore, everyone said that during the game they used acquired knowledge from relevant courses to find a strategy to follow.</p>	
Number of users – players	<p>In 2013, Ace Manager–The Fifth Set attracted nearly 19,000 participants from 136 countries.</p> <p>In 2012 year, Ace Manager attracted 14,205 participants from 136 countries.</p> <p>Countries with the highest representation in the game were: China (3,724 participants), India (2,599), Italy (1,821), France (1,029), Turkey (1,009),</p>	<p>While the museum kit has been used by a total of some 35,000 pupils</p>	n/a	39 volunteers	n/a



	<p>Canada (706), Morocco (661), Belgium (623), the UK (547) and Russia (546).</p> <p>- 23,320 fans on the Ace Manager Facebook page</p> <p>- 827 followers on Twitter</p>				
Transferability – reusability	<p>Moreover, the Bank is well-placed to offer exciting career prospects to new recruits. Today some 68% of all Group customers and staff are located outside France, and BNP Paribas is constantly looking to recruit talented people from highly diverse backgrounds all over the world for a range of over 300 different job-types.</p>	<p>It has been given to 120 institutions in Greece and 90 abroad, the new application provides the possibility of open access to virtually all who are interested.</p>	<p>Apply it to more projects</p>		<p>This can be used in a general exam where students/trainees can be asked to answer general questions (from a multiple pool coming random) in diverse areas such as art, ICT, geography, history, management, etc.</p>
Sustainability of the game	<p>Win a trip to Paris, prize money, tennis tournament tickets</p>		<p>to link employment growth, familiarize largest populations in the country with our methods and practices of LLL, and ultimately contribute to the development of society by removing any obstacles to their access structures LLL and recognition and</p>	<p>the educational game could be incorporated within some relevant module of HOU</p>	

			certification of qualifications		
Impact (indicate quantitative and qualitative indicators used to assess it)	The contest is part of BNP Paribas' overall strategy for enhancing brand recognition and employer-brand appeal among students. The competition is particularly useful for this purpose outside France. While the Group brand is extremely well-known among corporate clients in a number of countries, it is less well-known among students.				This game was rated the most popular Greek Facebook App game during one month in 2011
Evaluation (indication the qualitative or quantitative methodologies/tools to implement it)	BNP Paribas has therefore set itself the target of becoming one of the most attractive employer-brands among students worldwide.			In general, the students found the educational game «Be The Manager!» as satisfactory enough. The most of the users easily understood the operation of the game while they believed that the time required to complete the game was balanced and not tiring. Besides, the game didn't help them to solve queries had on the development of software. Everyone said that playing the game was a pleasant experience.	
Improvement areas					



Further information/ Additional Comments	<a href="https://acemanager.bnppa-ribas.com/">https://acemanager.bnppa-ribas.com/</a>	<a href="http://www.parthenon-frieze.gr/#/play">http://www.parthenon-frieze.gr/#/play</a>	<a href="http://www.creation-net.gr/thegame/">http://www.creation-net.gr/thegame/</a>	<a href="http://quality.eap.gr/Publications/XM/Conferences%20English/C66%20-%20Management%20Game.pdf">http://quality.eap.gr/Publications/XM/Conferences%20English/C66%20-%20Management%20Game.pdf</a>	<a href="http://www.p4i-project.eu/admin-gestion/resultados/files/Success%20stories-compilation%20of%20game-based%20learning%20initiatives%20in%20adults%20education.pdf">http://www.p4i-project.eu/admin-gestion/resultados/files/Success%20stories-compilation%20of%20game-based%20learning%20initiatives%20in%20adults%20education.pdf</a>
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## 4. Major findings of the interviews

Interview questions included basic information (such as the name of the interviewees, age, gender, organisation, years of experience, job position, etc.) while a minimum of five interviews was requested to collect a sufficient number of information.

Personal information	Interviewees				
	No1	No2	No3	No4	No5
Gender	Male	Male	Male	Male	Female
Age	44	33	27	32	38
Organization	Technological educational institute	Laboratory specializing in interactive and print applications	Research and technology organization focusing on research and development in Information and Communication Technologies (ICT)	Private startup Software company focusing in next generation 3D entertainment applications and state-of-the-art visualization technologies.	Higher educational institute
Years of Experience	10 years' experience as a developer in general and 3 years specifically in games	12	5	12 years' experience in the field of 3D graphics (since 2000)	10
Job position	Assistant Professor at TEI of Athens	Interaction Developer	Researcher	Technical Director	Post doc Researcher
Please describe your professional experience and field of expertise.	<p>1. Teaching the past 4 years the course "Embedded Systems", Department of Informatics, TEI of Athens, under which students are taught how to use mobile applications as well as applications game-based learning</p> <p>2. I have supervised theses concerning, the development of game-based learning application</p>	<p>- Degree in Computer Science - Master in Digital Art - Digital Communicator (post doc) I have taught from 2001 - 2009 Multimedia Programming Lesson at University of Barcelona</p> <p>Area of interest: Rich Media, Interactive Narrative, Entertainment on the field of culture, serious games</p> <p>My main experience is the development in flash and I have developed five to six games of this type (from games to</p>	<p>The last 5 years I was working on the development of interactive applications / games using wireless sensor networks and mobile devices.</p>	<p>Cofounder of the EyeLead Software, <a href="http://www.eyelead.com">www.eyelead.com</a>, working on software development and content graphics, programmer, and director of photography on a film about the Planetarium, organize groups for IT projects with focus on gaming, have worked with large companies (such as Qualcomm) in projects involving software development</p>	

		<p>installations)</p> <ul style="list-style-type: none"> <li>• <a href="http://www.pointblank.gr/work/o-%CE%B2%CE%B9%CF%8C%CF%84%CE%BF%CF%80%CE%BF%CF%82-%CF%84%CE%B7%CF%82-%CE%BA%CE%B1%CF%86%CE%AD-%CE%B1%CF%81%CE%BA%CE%BF%CF%8D%CE%B4%CE%B1%CF%82">http://www.pointblank.gr/work/o-%CE%B2%CE%B9%CF%8C%CF%84%CE%BF%CF%80%CE%BF%CF%82-%CF%84%CE%B7%CF%82-%CE%BA%CE%B1%CF%86%CE%AD-%CE%B1%CF%81%CE%BA%CE%BF%CF%8D%CE%B4%CE%B1%CF%82</a></li> <li>• <a href="http://www.pointblank.gr/work/%CE%B7-%CE%B6%CF%89%CE%AE-%CE%B1%CF%81%CE%BA%CE%BF%CF%85%CE%B4%CE%AF%CF%84%CF%83%CE%B1%CF%82">http://www.pointblank.gr/work/%CE%B7-%CE%B6%CF%89%CE%AE-%CE%B1%CF%81%CE%BA%CE%BF%CF%85%CE%B4%CE%AF%CF%84%CF%83%CE%B1%CF%82</a></li> <li>• <a href="http://www.pointblank.gr/work/%CE%BF%CE%B9%CE%BA%CF%8C%CF%80%CE%BF%CE%BB%CE%B9%CF%82">http://www.pointblank.gr/work/%CE%BF%CE%B9%CE%BA%CF%8C%CF%80%CE%BF%CE%BB%CE%B9%CF%82</a></li> <li>• <a href="http://www.pointblank.gr/work/%CE%BC%CE%BF%CF%85%CF%83%CE%B5%CE%AF%CE%BF-%CF%83%CE%B9%CE%B4%CE%AE%CF%81%CE%BF%CF%85-zerain">http://www.pointblank.gr/work/%CE%BC%CE%BF%CF%85%CF%83%CE%B5%CE%AF%CE%BF-%CF%83%CE%B9%CE%B4%CE%AE%CF%81%CE%BF%CF%85-zerain</a></li> <li>• <a href="http://www.pointblank.gr/work/%CE%B5%CE%BC%CE%B5%CE%AF%CF%82-%CE%BF%CE%B9-%CE%BA%CF%85%CE%BD%CE%B7%CE%B3%CE%BF%CE%AF">http://www.pointblank.gr/work/%CE%B5%CE%BC%CE%B5%CE%AF%CF%82-%CE%BF%CE%B9-%CE%BA%CF%85%CE%BD%CE%B7%CE%B3%CE%BF%CE%AF</a></li> </ul> <p>We have developed two applications for museums in Spain (Museum of Iron and Museum in New Catalonia) are interactive installations that are based</p>			
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		on personal experience. Some are virtual games for environmental issues (Ecopolis) other are adventures etc. Our games are usually constructive type where there is not one proper solution but the appropriate stimuli are transmitted to the user.			
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1) *Please analyse the implementation of social games as learning methodologies in professional contexts: last trends and evolution in the past decade.*

Game Based Learning (GBL) applications related to the "immersion" process of the learners in a virtual environment. Learners are involved in the learning process both emotionally and psychologically and in evaluating their performance objectively (scores) when compared to the other players in the community. Over the last decade, the growth of social media has given a new, more social dimension to the meaning of GBL. It should be noted that during the last decade (after 2003) the number of scientific publications in the field has increased dramatically.

There is quite a change in the mindset. Some time ago, social games and games in general were not considered as something serious. They have marvellous advantages and earlier reservations that they were a "childish" component of the learning process are now eliminated.

There is now a new term, "gamification", which refers to the transfer process of specific gaming concepts (eg scores) to a non-gaming environment. During the last two years, the term "serious games" became popular in Greece through specialised workshops. In Greece, when a client has specific requirements about a game, a classic approach is adopted and there is a discussion with the client to allow development needs to be highlighted. In a speech in the event "LUDUS Days on serious games", in Athens (4-6 October 2012), many guests from the fields of industry attended the event and apparently did not know that games can serve as a learning tool.

In recent years, social games are used as a means of learning and improving skills in young and older ages. New attractive learning methodologies are being developed to allow co-operation in games.

A game developer discerned that there is enough game playing (gamification). There have been applied games which have served as emulators for experiential training in many technology aspects.

2) *Assess the use of social games in the development of professional competences of adult professionals.*

The GBL process is determined by three factors: *Competition*, *Engagement* (after you start the game the student does not want to stop, something that is due to four factors: challenge, curiosity, control of the situation and imagination), *Reward* (the student receives some "payment" in the form of points or reputation). The ability to concentrate on a specific educational subject provided by GBL makes it an excellent choice for adult education.



Social games on facebook are being used on a daily basis and at all sorts of times within a day. Many people who play such games do not consider themselves as gamers. The most important thing is to use gaming mechanisms such as rewards, rules, sportsmanship, social participation, i.e. all these that deliver “added value”.

Adults, older and younger alike, are attracted much more easily by social games and the competition that such games offer can help them improve professional skills, compared to traditional methods.

*3) What pedagogical and educational approaches are being used to develop social games addressed to professional competences development?*

The GBI-related educational techniques used are the following:

- Demonstration (during the demo application)
- Case Study
- Role playing

*4) What is the added value and benefits (for the companies and the professionals) of using social games as a learning methodology in professional contexts?*

The added value of social gaming as an educational methodology in a professional environment is related to the possibility of applying the knowledge acquired within the virtual environment application.

The biggest benefit of using a social game is the social aspect i.e. to improve social skills in a controlled environment through education, and a sense of community, to bring people together in a common effort, inclusiveness, teamwork (many players looking for a common goal), to develop strategies/tactics, strengthen the brand (it is the promotional part which keeps the user in touch with the brand and keeps alive the message in his mind).

The game should be consistent with the identity / persona of the company. For example, the company bnp Paribas developed an online business game designed by experts and involves students from schools <https://acemanager.bnpparibas.com/>.

Social games are very attractive compared to traditional learning methods (seminars, books) and this is another advantage. Through an enjoyable process where some fun is also involved users can be trained on a particular subject field.

Moreover, another benefit is that the procedures would entail a large implementation risk in reality and it is much easier to understand them when they are transferred in a



form of games and then we can deal in reality with less chance of error, for example in the field of industry, military command (simulators for shooting) and other procedures.

*5) Which professional competences can be developed through the use of social games?*

Apart from the skills associated with training subjects *per se*, the development of social games can positively affect abilities/skills such as communication, collaboration, problem solving initiatives, competition (emulation and competition), and social skills in a safe environment. Other professional competences that can be developed are skills related to organizing, planning and negotiating.

*6) Can you please identify success and unsuccessful factors that influence the use of social games as a learning methodology for professional competences development?*

Factors affecting the success of a GBL system:

- Motivating the user
- Well-chosen educational goals
- Alignment of the educational goals with the learning scenarios of the game
- Successful assignment of "scores" in the learning subjects of the game
- Seamless transfer of gaming tools (high score tables) to a non-gaming context
- Strong content
- Strong narrative (good narrative flow), to help to better involve the users
- Rewards must support progress and their frequency should be well judged (the game should be neither too difficult nor too easy)

On the other hand there are some factors that can tilt the balance away from success:

- The main message should be clear
- Concepts should not be presented in a funny (comic) way
- One should not support behaviors that are unknown to the users (if we want to train someone)
- Control must be exercised at all levels
- A balance of competition and fair play is not easy to strike
- Too much negative feedback (i.e. related to "bad" performance) can decrease motivation, so positive feedback should be preferred, if helpful.
- The audience must adhere to the game design assumptions
- Do not try to make huge learning steps; try to build on previous experience of the users (adapt learning to the user's needs)



7) *What are the most important risks or barriers identified for the implementation of social games in professional competences development?*

There must be a critical mass of players to interact (unless you decide to open-up game access without restrictions). Lack of appropriate infrastructure (in terms of equipment, software and staff) to support large numbers of users. To develop a successful online game, one should aim at a target of at least 10 simultaneously online players, at any given time (on a 24-hours, around-the-world basis); this leads to about 30,000 playing sessions per month. The major risks relate to:

- Poor / inadequate development of the game on a technical level
- Losing the aim of the developed game
- No correlation with educational goals
- Bad / boring training scenario

8) *Are cultural, linguistic or technological issues barriers to expand the use of social games?*

There can be all kind of barriers related to cultural, linguistic, technological issues, though the effect of such factors, compared with the conventional training can be minimized. For example there may be developers who speak English while the game users may not know the technical terminology and not being able to interact and perceive different metrics.

9) *Which is the business potential of social games applied to the development of professional competences?*

Lifelong learning sets up new horizons in adult education. The need for lifelong learning creates a customer base for all those applications that are targeting specific audiences with well-structured learning objectives and measurable learning outcomes.

As 3D graphics are easily accessible demand for such games has increased. Educational applications are more interesting when one has some basic knowledge and can easily find guidelines; at least to know the very basics to operate the system.

10) *How can a social game based learning initiative approach the potential buyer/user?*

A social game based learning initiative can approach the potential user via

- Advertising in conventional media
- Social media
- Advertising in scientific / professional associations



- Participation in general and specialized fora
- Providing information that other channels cannot convey (for example, to offer specialized knowledge).

*11) What measures or actions do you recommend to enhance the use of social games in professional environments?*

- Ability to update content and game scenarios through friendly CMS which can be updated based on new data for the professional practice.
- Expert system through which it will be possible, through user feedback, to identify the problems / shortcomings of the existing system
- Inform policymakers that there is the possibility of using social games
- Organize various workshops, publish articles, organize conferences where the role of experts is to increase the awareness

*12) What are the most relevant economic sectors and profiles of professionals using social games for professional competences development? Why?*

The majority of the respondents did not know though they believed that only the large companies can use them as they can cope with the cost. All people can use social games to develop their skills and the work environment is the most common one; many games are played exclusively on working hours.

*13) In the specific sector of international project management: would you be able to assess the current context? Are social games used as training resources? Why? Why not?*

The interviewees were not able to answer this question!

*14) Can you please analyse the impact and potential of social games for the development of international project management competences?*

The object of international project management (IPM) is extremely difficult to be taught in practice, due to the fact that it is extremely specialized, while the number of available jobs is rather small. Moreover someone is able to self-assess his/her skills through the game and manage to develop them.

The development of skills related to international project management, in addition to the benefits that can be reaped from GBL in its general form, can benefit greatly from social games development, which allows user interaction when playing the game.





15) *What specific competences regarding international project management can be trained through the use of social games?*

- Crisis Management
- Interpersonal Relationships
- Understanding Internal Procedures
- Meeting and Interaction with other executives
- Overview of procedures that a project manager is not usually involved with
- Collaboration
- Cooperativeness
- Project monitoring (via performance points, task completion rates, etc.)
- Planning, organizing

16) *Could you share any good practices regarding game based learning initiatives in professional contexts? If possible, in the international project management field.*

A respondent answered that together with the University of Patras there has been developed a game for the Parthenon. The game should be of interest and practical value to architecture-related audiences (not something such as solve the equation) something that has to do with the design. There are specific types of knowledge which can be transferred in the simulation processes.

Some other good practices are:

- KTM-advance.com (for executive education, i.e. bnp paribas)
- Playgen.com (games for socially excluded municipalities and communities)
- Adventurine (this company is not engaged in serious games)

17) *Can you please make some specific recommendations for the development of the LPMnage social game? (contents, pedagogical approach, etc)*

Such a game should be easy to use, to have the right content, aim to the correct player profiles, not require much time by the user (should not see it as a liability), include the right game mechanisms (high scores, levels), should be small (not trying to cover a lot of things), and the player should feel that he/she can acquire some knowledge through the game. Also, if there is a need for developing a



game with multiusers playing in real time we should see whether is possible to work simultaneously due to time difference.

It would be good that the consortium can make a brainstorming to see the fields that could be included in the game, decide on the skills you want to develop and then develop the game, emphasize on testing in specific users with specific features to see how they react.



## 5. Major findings of the questionnaires

One type of questionnaire was used, using the Survey Monkey online platform, at <http://www.e-encuesta.com/answer.do?testId=XdSY3Mcd5nQ>.

The questionnaire was translated to Greek and, then, the HOU team conducted a small research-feasibility-test to locate people who would be suitable to answer the questionnaire. After that, those people were invited, mainly by email, but follow-up reminder telephone calls were also made.

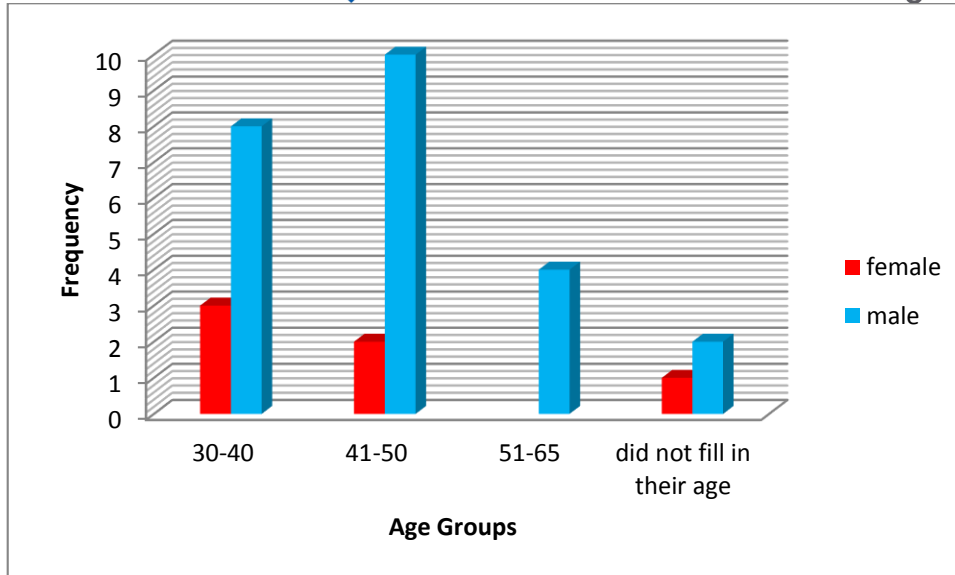
Our main source of research answers was the non-profit organisation Hellenic Management Association (HMA) which incorporated five Institutes specialising in a particular function of Management and four Sectors that deal with general business issues; HMA has around 1000 members in total. Besides this organisation, we contacted educators from Higher Education Institutes, partners from other projects, and human resource managers.

The survey was not anonymous and all the people from the aforementioned target groups were informed that the data provided would be only used in the context of the LPMnage project and only the project partners and the European Commission would have access to them.

The first part of questions concerned personal data (name, age, nationality, phone, email, professional information), while the second part referred to specific information about the level of familiarity with social games, usage of social games, readiness and interest in the use of serious games as a training tool, experience in training/education, estimation of the major competences required of professionals working in the field of international management projects etc.

Thirty people (30) people with Greek Nationality filled in the online questionnaire; 80% were male (24 respondents) and 20% were female (6 respondents); their age ranged from 30 to 65 (see below diagram on age and gender distribution).

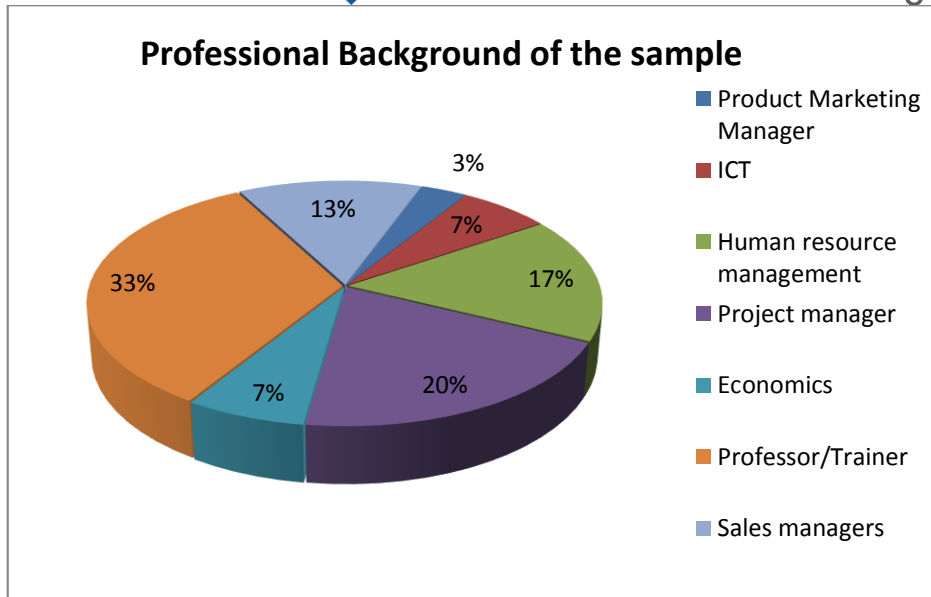
Chart 1. Respondents based on their age and gender



### Professional Field

We have analyzed the professional background of the sample and classified them into the following categories:

- ICT
- Human resource managers
- Project managers
- Professors / Trainers
- Economics
- Sales managers
- Product Marketing Manager



The sectors of Education/Training (33%), Project management (20%) and Human Resource management (17%), sale management (13%) comprise the majority of responders, while the sectors of ICT (7%), economics (7%) and product marketing management (3%) are less well represented.

Below, we present the participants profile, with their main occupation and years of experience. We note that 6 out of 30 opted to not declare their occupation while 5 out of 30 did not fill in their experience. In addition, participants were asked to fill in their training activities; 10 out of 30 did not fill in this field at all. The majority of the responders have a considerable experience in organizing and/or participating in learning activities.

No	Main Tasks	Training Tasks	Years of experience
1	N/A	N/A	21,5
2	<ul style="list-style-type: none"> <li>- Technical Supervisor in cooperation program 2011</li> <li>- Work Package Leader in FP7 program</li> <li>- Research and development in research projects</li> </ul>	<ul style="list-style-type: none"> <li>- Participation in the educational process of the Applied Electronics Laboratory (Department of Electrical and Computer Engineering, University of Patras).</li> <li>- Fellow in TEI of Patras (Department of Electrical Engineering - Department of Business Administration)</li> <li>- Fellow in TEI of Messolonghi (Department of Telecommunication Systems and Networks)</li> </ul>	11



3	Financial project management	N/A	8
4	- ACCOUNTING-TAX WORK - HUMAN RESOURCE MANAGEMENT-PAYROLL - FINANCIAL RESULTS	Part-time temporary research associate in TEI –Administration and Accounting Department, Economy Department	23
5	product Development	education	14
6	Counseling, educational issues in HRM, General Management in specialized companies topics	N/A	30
7	Responsible for all Human Resources Management aspects of the company	N/A	N/A
8	General Manager	Seminar Leader in HMA, MISKO. BARILLA, TOYRISTIKH, CHAMBER, BIC etc.	33
9	Responsible for all Human Resources Management aspects of the company	N/A	3
10	Coordination of Operational Procedures Development Enterprise of Western Greece	I haven't run educational activities within my duties	11
11	Organization and operation of the Sales Department	Marketing – Sales	12
12	N/A	N/A	27
13	N/A	N/A	N/A
14	Organize, direct and educate medical representatives to act in accordance with the strategy and the activity plan of the Department to achieve the qualitative and quantitative objectives of the company at a predetermined operating costs for products liability	Territory management , Time management and sales skills	23
15	Writing proposals for funding, find partners, organizing partnerships, managing and monitoring the project, writing final reports etc.	Spanish Language, Project Management	7
16	Personnel administration, cooperation with local and international organizations	Staff training through Geriatrics Society of southwestern Greece	5
17	Planning and coordination of national and European projects that support the local community and economy, the employment, the tourism promotion, the entrepreneurship, and protect/manage/ improve the natural/architectural/cultural environment of the Region.	Certified Trainer at the Introductory Registry of Adult Trainers of the National Accreditation Centre for Continuing Vocational Training in Theory and Practice	12



18	<ul style="list-style-type: none"> <li>- Submit European &amp; national proposals / Implementation</li> <li>- Network Management (local &amp; interstate range)</li> <li>- Coordination of Working Groups</li> </ul>	<ul style="list-style-type: none"> <li>- Educator in training activities</li> <li>- Rapporteur at conferences and workshops</li> <li>- Coordinator of working groups</li> <li>- Training / updating / monitoring of members</li> </ul>	22
19	Coordination and implementation of all the activities	<p>Supervision and final selection of educational material for training telecenter managers (LLP project CIBERA)</p> <p>Create educational framework for adult users with a specialized language portfolio (LLP project Prof-ELP)</p> <p>Create a Methodology for on-line language learning open source application virtual word (LLP project V-Lang)</p>	12
20	<ul style="list-style-type: none"> <li>- Develop training programs and community initiatives</li> <li>- Implementing Training Programs for Unemployed</li> <li>- Responsible for Quality Management System</li> <li>-Member of a project team of ongoing European projects and Plans</li> </ul>	<ul style="list-style-type: none"> <li>- Design and development of training programs and projects</li> <li>- Member of a project team of ongoing European projects and Plans</li> </ul>	9
21	<p>Specialized in Certification Exams of graduates in Organic Farming</p> <ul style="list-style-type: none"> <li>- Teaching in VET Centres of Western Greece as a Certified Instructor in Agriculture, Economics and the Environment</li> </ul>	<p>Professor from 1980 to 1992 at Agriculture at ATEI of Patras and ATEI of Kalamata</p> <ul style="list-style-type: none"> <li>- Moderator and Speaker in Education Programmes of the Economic Chamber of Greece</li> <li>- Teaching in Vocational centres of Patras</li> </ul>	25
22	N/A	N/A	N/A
23	Teaching, research	Teaching, CASE STUDY	15
24	Educate business managers on Entrepreneurship	<p>Business Plan</p> <p>business Strategy</p> <p>e-Commerce</p> <p>Marketing</p>	20
25	Research in training needs, design and implementation of educational projects, writing and implementation of European co-funded projects for education and lifelong learning, entrepreneurship, mentoring the strengths, success.	Teaching in higher education in undergraduate and graduate programs in Business Administration (Organizational Behaviour, Human Resource Management, Staff Development, Corporate Communication, Research Methods), adult training courses	11
26	N/A	N/A	N/A
27	<ul style="list-style-type: none"> <li>-Research and teaching activity in the field of ICT in education</li> <li>-management of the Department</li> </ul>	Training activities in face to face (University of Patras), distance (HOU) and blended learning (University of Patras).	20



28	Cooperative Research Staff at Hellenic Open University, Thematic Unit of Informatics42 (Advanced Topics in Software Engineering)	Cooperative Research Staff at Hellenic Open University, Thematic Unit of Informatics42 (2006 to 2013). Scientific-Teaching Assistant at TEI Patras in Programming lessons (2005-2013). Lecturer in the Department of Engineering / Computer Engineering and Informatics, University of Patras in course Quality Assurance and Standards (2005-2011).	8
29	Project management	Training in project selection, financial methods, scheduling, quality project management	15
30	N/A	N/A	N/A

In this section, we present the main findings from the analysis of the data gathered by the responses regarding the social games.

**Question 1:**

Are you familiarized with the concept of social game?

Replies	Frequency	
	Count	Percentage
Yes	12	48,0%
No	13	52,0%
Total	25	100%
Response rate 25 out of 30 (83,33%)		

**Question 2:**

Do you use social games to perform your professional tasks?

Replies	Frequency	
	Count	Percentage
Always or most of the time	1	3,7%
Usually / frequently	2	7,4%
Sometimes	2	7,4%
Hardly ever	12	44,4%
Never	10	37,0%
Total	27	100%
Response rate 27 out of 30 (90,00%)		

**Question 3:**





In case you answered “always”, “usually” or “sometimes” to question 2, could you please provide any examples of social game used by you? If you answered “Never”, please move to question 5.

- Role playing and team work. Trainees are divided into groups and undertake roles of representatives of the European Commission and the coalition in a discussion on "Saving the economy."
- Directed discussion. The trainer defines the topic and asks from the learners one by one to say a word related to the previous word that was heard. For example: Trainer says: "Administration," Trainee 1 says: "Captain," Trainee 2 says: "Team", etc. and at the end after finishing the discussion and having recorded all the words there is debate about their correlation with the topic.
- Case study. Search specific proposals by the trainees in order to solve a specific problem and by using inductive reasoning to return to the general topic.
- Every 15 days a meeting is held along with my team where we find solution offers to our problems eg. Climate Navigation Game
- We use the role playing where the participants undertake roles through which they need to achieve their targets every time. For example, when referring in training for entrepreneurship mentors, participants take on the role of mentor or mentee person respectively and try to solve real problems faced by an entrepreneur, to propose solutions to manage situations.

**Question 4:**

Which difficulties or barriers did you find to use social games in adult training? (select as many options as you consider necessary)

Replies	Frequency	
	Count	Percentage
Lack of interest from the professionals	3	33,3%
Lack of social games that answer the training needs of professionals	3	33,3%
Lack of materials in my mother tongue	3	33,3%
Difficulties to integrate social games in the training programmes already established	2	22,2%
I felt I didn't have the necessary competences to exploit this methodology in the best possible way	1	11,1%



Difficulties to validate and get recognition of the learning achieved through the use of a social game	4	44,4%
The company considered that social games are not a professional educational methodology	1	11,1%
Other (please indicate it)	2	22,2%
Total	9	100%
Response rate 9 out of 20 (45,00%)		

Other (please indicate): There is not enough information about what a social game is and what it aims to achieve.

### **Question 5:**

Please, rate the usefulness of using social games to perform your professional tasks?

Replies	Frequency	
	Count	Percentage
Very useful	3	13,0%
Rather useful	4	17,4%
Useful	10	43,5%
Not useful at all	0	0,0%
Other	6	26,1%
Total	23	100%
Response rate 23 out of 30 (76,67%)		

### **Question 6:**

How do you assess the impact of social games in adult education?

Replies	Frequency	
	Count	Percentage
High impact	10	43,5%
Medium impact	12	52,2%
Low impact	1	4,3%
Total	23	100%
Response rate 23 out of 30 (76,67%)		

### **Question 7:**

Which benefits can social games bring to the professional competences development?  
(select as many options as you consider necessary)

	Frequency
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Replies	Count	Percentage
Enhance the participation of adult learners in further education	9	39,1%
Facilitate learner's access to further education	5	21,7%
Enhance more flexible and adaptable training contexts	12	52,2%
Optimization of time and resources both for professionals and companies	6	26,1%
Development of competences that are not approached by traditional methodologies	17	73,9%
Facilitate the task trainers working in the field of professional competences development	7	30,4%
Enable professional training more attractive and motivating	10	43,5%
Other (please indicate it)	2	8,7%
Total	23	100%
Response rate 23 out of 30 (76,67%)		

**Question 8:**

Which competences can be developed through the use of social games? (select as many options as you consider necessary)

Replies	Frequency	
	Count	Percentage
Creativity	15	65,2%
Leadership	6	26,1%
Flexibility	13	56,5%
Innovation	12	52,2%
Communication competences	13	56,5%
Interpersonal competences	13	56,5%
Intercultural competences	8	34,8%
Social competences	13	56,5%
Competitiveness	7	30,4%
Other	1	4,3%
Total	23	100%
Response rate 23 out of 30 (76,67%)		



**Question 9:**

Which are the major competences needed by the professionals working in the field of international management projects? (select as many options as you consider necessary)

Replies	Frequency	
	Count	Percentage
Foreign languages competences	15	65,2%
Time and resources management	18	78,3%
Intercultural competences	10	43,5%
Leadership	10	43,5%
Working under pressure	14	60,9%
Adaptability	18	78,3%
Cope with stress	4	17,4%
Flexibility	18	78,3%
Other (please indicate)	0	0,0%
Total	23	100%
Response rate 23 out of 30 (76,67%)		

**Question 10:**

We would very much appreciate if you could offer us some recommendations for the development of the LPMnage social game.

1. To design and innovative game, something has not happened before! Eg Risk management scenarios, quality management, decision-making under pressure!
2. The social game should reflect intercultural differences through different scenarios and actual roles (culture, language and expression ability, approximate time). It is also important to apply an assessment method that will certify the informal learning and skills that will be developed through playing.
3. I believe that that in the first phase should be pilot tested in a selected group of professionals from the public and private sector and from different geographical areas of Greece. Then in a second phase you could choose the people would finally join the game at European level.
4. I am not experienced in using the social games, but reading some general information about this project, I understand that the level of management and cooperation in European projects are very useful points.
5. Get, if possible, the indicative data of some projects that have been implemented in the past, study them and be able to edit them (eg to change their data and see the results). Use the pilot social game of LPMnage project for a thematic Unit of Hellenic Open University as part of a student work and gather feedback from the participants.



6. Participants expand the skills that can be implemented in their daily work, find innovative idea, increase competitiveness, improve social cohesion of team work



## 6. Major findings of the focus groups

The Hellenic Focus Group took place on April 13th 2013 at the Patras premises of Hellenic Management Association (HMA), and a group of people were asked the respective list of questions that was distributed by Inveslan and there was an open discussion among the members. The moderation and the opening of the discussion were conducted by Dimitris Kalles. At the beginning of the discussion, Dr Kalles thanked the members for their participation and started to fully explain the idea and concept of the project, as well as the objectives of the focus group. He also highlighted the innovative way of learning through games and the evolution in the using the social games as learning methodologies, by elaborating on the definition of a serious social game.

The target group consisted of project management and sales management professionals who have many years' experience in the field of management and human resource management.

One participant has been an employee of the Athens Brewery Company; with 28 years of experience, acting as regional head of sales, and a supervisor of 10 people. Another participant has been working for the last 23 years as sales manager of pharmaceutical companies, also having some experience in teaching; in close collaboration with 8 scientific consultants, he is responsible for the company's activities in southwestern Greece.

Another participant is a co-owner of one of the oldest surviving SMEs in Greece in the field of manufacturing of agricultural sprayers, dusters, garden tools and other agricultural and industrial equipment. He has studied outside Greece and has earned an M.Sc. in operational management.

The large companies appear to have strategies to improve employee competences on management and insist on such ongoing training procedures as they are considered to be of high value not only for the employee but for the employer as well. There are learning courses (also e-learning courses) organized by the administration of the company about certain specific work topics and general management skills (time and project management, negotiation, communication and the cooperation with senior staff and peers). Besides those, there are some courses on demand, tailored to the educational needs that the majority of employers have highlighted on their annual evaluation reports. Moreover, once a month, the employees are encouraged to share their ideas, good practices and their needs.

On the other hand, the SME did not share this approach with traditional learning procedures, particular as the economic climate is still bleak. But it did recognize the need to train its employers by using new methods (learning technologies in general and games in particular).

The most important skills were considered as follows:



- to be familiar with modern technological tools (skype) which increase direct communication, reduce cost and perceived distances,
- to be consistent,
- to be able to reschedule tasks.

People who expect to work in an international level should first of all be able to adapt to the working conditions of the new environment, be flexible, efficient, have computer and communication skills, possess knowledge of a foreign language, and be able to work in teams.

Some personality traits, coupled with a less developed background and limited knowledge can make people apprehensive of using modern methods; their confidence in their ability to be productive is undermined. A manager should carefully implement such initiatives, to perform the initially planned objectives according to the timetable (fulfill quality and quantity indicators), to be able to encourage and motivate the group to apply in practice what they (the learners) have learned via the variety of training initiatives.

The labor market acquires people, who have the basic formal education (a relative degree) and are intelligent enough to appreciate the need to adapt, use new methodologies, manage change and fit the corporate culture.

The most common way to motivate the employees is to reward the best ones, based on certain evaluation criteria, by providing them with additional education-related benefits (for example, sponsoring an MBA degree, or an intensive English course).

Besides the above, there is a wide range of non-formal low cost training initiatives (participation in summer schools, workshops etc).

At the end of the focus group, the participants discussed the extent to which social games based learning initiatives could be applied. The participants suggested that although this concept is not mature in Greece yet, there seems to be room for social gaming initiatives aiming at middle level executives (10 to 15 years of experience) of the large companies and to the top managers of SMes.



## 7. Conclusions and remarks

It was recommended that we should present in our game a simulation and not a real situation, as not to get lost into details. Moreover, though it is important to train the players with explicit readymade solutions to problems, it is also important for a player to be able to experiment, to enhance the review/assessment of their skills, to draw conclusions.

Summarizing, the benefits of a social game were considered to be that education is pleasant in contrast with classical education. A social game is perceived as something innovative, engaging, something that increases the willingness to learn and to participate.

The term “social gaming” was not considered a successful one, since in “classical” games a lot of social elements now come up, making the “social game” term somewhat obsolete. If we want to develop a system simulator for authentic education we should create a system that involves people as it is the only way to exchange information systematically through social games.

The professional skills that can be improved through the use of social networks are those having to do mainly with communication. There are different vocabularies among groups who use social networks, and messages as body language cannot be communicated.

It appears that social games are really an innovative way of learning, essential, low cost, exportable, easily scalable, and an enjoyable experience for all users. A social game based learning initiative can have maximum impact if it comes after specific and traditional ways of learning; as an extra step.

The usage of a social game for the development of international project management competencies appears to be a safe way to investigate how effectively you can manage difficult situations (crisis situations) not encountered in everyday life. In any case we have to define the needs of international project manager.

It is clear that the identification of training objectives, training scenarios and evaluation of players should follow international standards dictated by both the literature and from the job description as certified in some countries. If the job description is not recorded, then we may need to that as a matter of priority.