Curriculum Vitae

of

Ricardo José Vieira Baptista

January of 2015

Abstract

Ricardo José Vieira Baptista is a scholarship researcher at the project New Tools for Certification in Game‐based Learning at Faculty of Engineering of the University of Porto (FEUP). He completed his Master thesis in 2008 at same Faculty and is, in the present moment, a student in the Doctoral Program Digital Media at the University of Porto.

His professional experience, after getting a degree in Computer and Systems Engineering at the University of Madeira, is composed by a set of experiences related to entrepreneurship, project management, object‐oriented software development and more recently, coordination of human resources for training in specialized and technical domains. Through these experiences he was able to better grasp several aspects related with integration in multidisciplinary teams based on team work and task performance by objectives.

Ricardo José Vieira Baptista was a teacher of secondary school of "Associação Promotora do Ensino Livre" (APEL), where he taught in areas of Information and Communication Technologies (ICT), software applications and computer programming in secondary technology courses of education, where besides being a teacher, he was also director of the Informatics course.

He is actively involved as a researcher in the group of R&D Graphics Interaction & Learning Technologies (GILT) at the College of Engineering of the Polytechnic Institute of Porto (ISEP), in several European projects related with serious games: Serious Games Network (SEGAN), Games Based Languages Learning (GABALL) and Serious Learning Games (SELEAG). More recently, he collaborated with Center for Information Systems and Computer Graphics (CSIG) at INESC Technology and Science – INESC TEC, as scholarship at the European project ICARUS – Unmanned Search and Rescue (FP7).

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1 Personal Data
1.1 Contact Information

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1.2 Academic Qualification

Master in Multimedia Technologies at Faculty of Engineering at Porto University, on July 31st2008, with final mark "Very Good", entitled "Role Play Game ‑‑ A strategy in the educational context" under the supervision of Prof. Carlos Vaz de Carvalho.

Professionalization Course in Service for teaching at University of Madeira on June 30th of 2008, with final mark at curricular year of 16 and at 2rd year (training) of 18 out to 20.

Degree in Systems and Computers Engineering at University of Madeira on October 10th of 2001, with a final mark of 14 out of 20.

1.3 Positions held

Scholarship researcher at *FEUP* on IC2 Institute project: "New Tools for Certification in Game‑‑based Learning", from November 1st of 2014 to October 31st of 2015.

Scholarship researcher at *INESC TEC*: "ICARUS ‑‑ Integrated Components for Assisted Rescue and Unmanned Search operations", from April 3rd of 2013 to September 30th of 2014.

Scholarship researcher at *FEUP* on FCT project: "ERAS ‑‑ Expedita Virtual Reconstruction of Cultural Heritage Sites" (reference PTDC/EIA‑‑EIA/114868/2009), from October 1st of 2011 to March 31st of 2013.

Coordinator of vocational training at "*Análise Estatística Madeira*", from March 3rd of 2009 to September 30th of 2011.

Director of the technologic course of Informatics at the secondary school of APEL, from September 1st of 2006 to August 30th of 2011.

Director of the technologic course of Electronics and Electro at the secondary school of APEL, from September 1st of 2006 to August 30th of 2007.

Teacher of ICT and programming at secondary school of APEL, from September 1st of 2004 to August 30th of 2011.

Managing Partner of "*TBFM – Serviços e Inovação em Informática*" exercising the functions of systems analyst, administrative and financial project manager, from January 1st of 2001 to December 31st of 2006.

2 Professional Activities

The professional activities of Ricardo José Vieira Baptista are divided into two components: the first connected to the business and entrepreneurship, and the second associated to education and training.

The business component was focused on creating a start-up in the area of new technologies, where he assumed the role of managing partner of "*TBFM – Serviços e Inovação em Informática*". This experience was associated with various software development projects for several public and private entities. Also, he collaborated with other companies in the software development area on common projects.

The education and training component was focused in the area of ICT and computer programming in secondary technology courses of education, where besides being a teacher, he was also director of the Informatics course. He has pedagogical skills to teach, as well as trainer. He also gave training in Technological Specialization Course in Banking and Insurance (Level IV), short courses and specialized training for teachers.

Until October 1st 2011, he was scholarship researcher in the project "ERAS - Expedita Virtual Reconstruction of Cultural Heritage Sites" (reference PTDC/EIA-EIA/114868/2009) by FEUP partner.

The following sections display the various activities undertaken both in the business and in education since the beginning of his career to the present date.

2.1 Teaching Activity

2.1.1 Lecture
2013/2014
- 1st *semester of Master Masters in Geographical Information Systems and Spatial Planning*
Course: Relational Databases
- 2nd *semester of Master Masters in Geographical Information Systems and Spatial Planning*
Course: Introduction to Programming in GIS

2014/2015
- 1st *semester of Master Masters in Geographical Information Systems and Spatial Planning*
Course: Relational Databases
- 2nd *semester of Master Masters in Geographical Information Systems and Spatial Planning*
Course: Introduction to Programming in GIS

2.1.2 Former school years
From September 1st of 2008 to August 31st of 2011
Professionalized teacher at the secondary school of APEL in informatics group;
Courses taught: object-oriented programming and software applications;
Informatics teaching group delegate;

Director of the technologic course of Informatics;
Coordinator of Eco-School project;

From September 1st of 2007 to August 31st of 2008
Professionalization Course in Service teacher at the secondary school of APEL in informatics group;
Courses taught: object-oriented programming and software applications
Director of the technologic course of Informatics;
Coordinator of Eco-School project;

From September 1st of 2006 to August 31st of 2007
Professionalization Course in Service teacher at the secondary school of APEL in informatics group;
Courses taught: object-oriented programming and Information Technology and Communication
Director of the technologic course of Informatics and Electronics and Electro technical course;

From September 1st of 2005 to August 31st of 2006
Teacher at the secondary school of APEL in informatics group;
Courses taught: object-oriented programming and Information Technology and Communication

From September 1st of 2004 to August 31st of 2005
Teacher at the secondary school of APEL in informatics group;
Courses taught: project management and strategic planning of information systems.

2.1.3 Training
From July 10th of 2010 to November 19th of 2010
He was an instructor in training for teachers at the company *"Análise Estatística Madeira"*, lecturing the practical component of the Coaching, Team Leadership and Motivation in school context course, in total 50 hours;

From September 1st of 2008 to July 30th of 2011
He was a lecturer of Computer Management Module on Technology Specialization Course in Banking and Insurance - Level IV at the company *"INETESE – Associação para o Ensino e Formação"*; 5 courses: CET1, CET 2, CET 3, CET 4 and CET 5 (250 Hours)

2.2 Empreenship and SME activity

From March 3rd of 2009 to September 30th of 2011
He was the coordinator of the areas of innovation and training at the company *"Análise Estatística Madeira"* where he assumed the functions of pedagogical coordination and planning and development of training courses for teachers.

From January 1st of 2001 to December 31st of 2006

He was Managing Partner of "*TBFM–Serviços e Inovação em Informática*" exercising the functions of systems analyst, administrative and financial project manager and software engineering.

Projects involved:

During year 2001: Development of Management System Users of a clinical nursing care at home (company: "*Clínica24*").

From 2002 until 2004: Development of Management System for Maritime Cargo at the Port of Funchal -- Madeira Island (company: "*Operações Marítimas da Madeira – OPM*", belonging to "*Grupo Sousa, SGPS*").

From 2003 until 2006: Development of Management System of the areas of regulation in the production, marketing and quality control of Madeira Wine (company: *"Instituto do Vinho Madeira"*).

During year 2004: Development of Management System for intervention for children and youth under the supervision of the Commission for the Protection of Children Youth (company: Commission for Protection of Children and Young People of Funchal Council).

During year 2003 (1stVersion), during year 2005 (2ndVersion): Development System Income Statement Accounting program integrated with commercial and financial management Primavera Software (company: "*Grupo Sousa, SGPS*")

From June 1st to 2004 until September 30th to 2005

He was partner with the company *"Expedita -- Arquitectura e Gestão de Sistemas de Informação"*, exercising the functions of systems analyst and developer on online system management for all stakeholders of Shipping operations.

3 Publications

3.1 Thesis

Baptista, Ricardo*: Role Play Game – Uma estratégia no contexto educacional*. MSc thesis, Faculdade deEngenharia da Universidade do Porto, 2008.

Baptista, Ricardo: *Biztalk – Comunicação entre Aplicações*. Degree thesis, Universidade da Madeira, 2000.

3.2 Journal

3.2.1 Index publications (ISI, Scopus, Inspec, DBLP)

3.2.2 Others publications

Baptista, Ricardo; Nóbrega, Rui; Coelho, António; Vaz de Carvalho, Carlos: *Juegos para la certificación de guías turísticos de espacios urbanos.* Novatica, XL(230), 64--70, 2014.

Baptista, Ricardo; Vaz de Carvalho, Carlos: *TimeMesh – A Serious Game for European Citizenship*. Journal Game--Based Learning, vol. 1, nº1, 2013. ISSN #2034--8800
Available online: http://eudl.eu/doi/10.4108/trans.gbl.01--06.2013.e2

Baptista, Ricardo; Vaz de Carvalho, Carlos: *Role Play Gaming and Learning,* In IEEE Learning Technology, vol. 12 nº 1, January 2010.
Available online: http://www.ieeetclt.org/issues/january2010/index.htm

3.3 International Conferences

3.3.1 Index publications (ISI, Scopus, Inspec, DBLP)

Gouveia, D.; Lopes, D.; de Carvalho, C.V.; Batista, R.: Time Mesh: An Educational Historical Game. In Proceedings of the Fourth International IEEE Conference on Digital Game and Intelligent Toy Enhanced Learning (DIGITEL), Takamatsu, Japan, pp. 171--173, 2012. doi: 10.1109/DIGITEL.2012.49.

Batista, Ricardo; de Carvalho, C. V.: Learning through Role Play Games, In Proceedings of the 38thASEE/IEEE Frontiers in Education Conference, Saratoga Springs, NY, USA, 2008. doi: 10.1109/FIE.2008.4720599.

3.3.2 Others publications

Baptista, R.; Nóbrega, R.; Coelho, A.; Vaz de Carvalho, C*.: Location--Based Tourism In--Game Certification*. In In Procceding of 9th Internacional Technology, Education and Development Conference (INTED 2015), Madrid, Spain, 2nd -- 4th March, 2015. ISBN: 978--84--606--5763--7

Abstract online: http://library.iated.org/view/BAPTISTA2015LOC

Goncalves, R.; Baptista, R.; Coelho, A.; Matos, A.; Vaz de Carvalho, C.; Bedkowski, J.; Musialik, P.; Ostrowski, I.; Majek, K.: *A game for robot operation training in search and rescue missions*, In Procceding of 11th International Conference on Remote Engineering and Virtual Instrumentation (REV14), Porto, Portugal, 26–28 February, pp. 262 –- 267, February 2014, doi: 10.1109/REV.2014.6784272.

Baptista, Ricardo; Coelho, António; Vaz de Carvalho, Carlos: *Methodology for Creating a Competences Certification Correlation Matrix*. In Proceedings of 6th International Conference of Education, Research and Innovation (ICERI2013), Seville, Spain, 2013. ISBN 978–84–616–3847–5 Abstract online: http://library.iated.org/view/BAPTISTA2013MET2

Adão, Telmo; Baptista, Ricardo; Peres, Emanuel; Magalhães, Luís; Coelho, António: *Reconstructing traversable buildings for archaeology with ERAS*. In proceedings of 2nd International Conference on Virtual and Networked Organizations Emergent Technologies and Tools (ViNOrg '13), Póvoa de Varzim, Portugal, 2013.

Baptista, Ricardo; Coelho, António; Vaz de Carvalho, Carlos: *Methodology for In--Game Certification in Serious Games*. In Proceedings of 5th International Conference on Education and New Learning Technologies (EDULEARN13), Barcelona, Spain, pp.3152–3162, 2013. ISBN: 978–84–616–3822–2.
Abstract online: http://library.iated.org/view/BAPTISTA2013MET

Baptista, Ricardo; Vaz de Carvalho, Carlos: *Funchal 500 years: Learning Through Role Play Games.* In Proceedings of the 2nd European Conference on Games Based Learning, Barcelona, Spain, 2008.

3.4 National conferences

Baptista, Ricardo; Rodrigues, Roberto; Coelho, António; Reis, Luís Paulo; Sousa, Augusto; Magalhães, Luís: *Extração de Informação de Texto Formal para a Modelação Expedita de Edifícios Monumentais*. In Atas do 20º Encontro Português de ComputaçãoGráfica (20EPCG). Instituto Politécnico de Viana do Castelo, Viana do Castelo, Portugal,pp. 133–134, 2012. ISBN 978–989–97491–5–3

Baptista, Ricardo; de Carvalho, Carlos Vaz: *Experiência de Ensino através de Jogo RPG num contexto específico.* Actas de Challenges 2007, V Conferência Internacional de Tecnologias de Informação e Comunicação na Educação, Braga, Portugal, Maio de 2007.

4   Activities of Research and Development (R&D)

Ricardo José Baptista is scholarship researcher at FEUP whose research activity focuses on the extraction of information to support procedural modeling and geospatial systems. He collaborates as a researcher in the group of R&D Graphics Interaction & Learning Technologies (GILT) at the College of Engineering of the Polytechnic Institute of Porto (ISEP), focused on the research area of serious games and learning. More recently, he was scholarship researcher at INESC Technology and Science – INESC TEC, and to maintain the collaboration with Center for Information Systems and Computer Graphics (CSIG).

4.1   R&D Projects

4.1.1   Projects at FEUP

Ricardo Baptista has already participated in two research projects both as scholarship.

Part of the research team of the project "ERAS -- Expedita Virtual Reconstruction of Cultural Heritage Sites" (reference PTDC/EIA--EIA/114868/2009).His collaboration started in 2011 and had a duration of 18 months. The responsible for the project is Professor António Augusto de Sousa from INESC Porto/FEUP. With this project we intend to develop a tool for archaeologists for the reconstruction and visualization of archaeological sites with georeferenced complete buildings (including indoor and outdoor), based on parameter values consistent with the rules set for the considered time period and the issues of architectural nature. The resulting buildings can be created without any initial knowledge and according to the set of rules are defined. Existing buildings, whether they are well preserved or ruined, or the buildings no longer exist, but for which there is textual information (existing, for example, in old books or documents), are modeled from that information to create some rules that serve as constraints in the generation process.

The second research project, New tools for Certification in Game--based Learning, is a collaboration between two researchers: António Coelho (FEUP) and Craig Watkins (UT Austin). The primary aim of this proposal is to conduct preliminary research on game--based learning in formal and informal education. Specifically, we seek to explore how game based learning might impact the learning and training, as also to begin mapping the challenges of designing game--based learning that has real impact.
This proposal pretends to explore what kinds of game--based platforms and analytics can support this purposes, and also what kinds of skills and competencies define expertise.
His collaboration started in 2014 and lasts of 12 months.

4.1.2   Projects at INESCTEC

ICARUS Project– Unmanned Search and Rescue
Part of research team of project "ICARUS" as scholarship with the focus in development of training and support system of operators and supervisors based in serious games and simulations. This project will develop a new unmanned Search and Rescue (SAR) devices which can offer a valuable tool to save human lives and to speed up the SAR process. ICARUS

concentrates on the development of unmanned SAR technologies for detecting, locating and rescuing humans. There is a vast literature on research efforts towards the development of unmanned Search and Rescue tools. However this research effort stands in contrast to the practical reality in the field, where unmanned search and rescue tools have great difficulty finding their way to the end-users. The ICARUS project addresses these issues, aiming to bridge the gap between the Research community and end-users, by developing a toolbox of integrated components for unmanned Search and Rescue.

4.1.3   Projects at GILT / ISEP

Ricardo José Baptista is involved in research projects funded by European commission in several programs: SEGAN, GABALL e SELEAG.

Project Games Based Learning Languages – GABALL
(reference 531327-LLP-1-2012-1-PT-KA2-KA2MP)

The GABALL project seeks to address the reinforcement of EU Micro and SME's managers' skills in the process of internationalization to internal and external markets (Brazil) through electronic business platforms.

The project started at December 1st to 2012 and lasting 36 months.

The project will also target final year Higher Education students that can potentially become entrepreneurs and are planning to start up their own companies. The project will aim for the improvement of languages and culture skills relative to the use of e-marketing and e-commerce tools, the establishment of relations through electronically supported social platforms and the encouragement of entrepreneurship.

The project methodology is based on a Serious Game approach that provide rule based, professional, real-life situations and contexts of interaction where the player tries to achieve learning objectives and improve personal skills and social competencies.

The participation in this project focuses on WP3 (Research), WP4 (Scenario Design and Scripting) and WP5 (. This WP3 will handle the specification, design and development of the Community of Practice (CoP). Therefore it includes the conceptual aspects (organization in Special Interests Groups, access policies, coordination, etc.) but also the technical aspect related with the underlying technical platform.

The WP4 will focus on the design of six role-playing scenarios that depict the main and most common activities that SMEs' managers face in their day-to-day work at international level. Potential language learning scenarios are the following: (1) Internationalization (2) Markets and Innovation (3) Financing and tax Obligations (3) E-commerce terms (4) E-Marketing terms (5) Legal and institutional environment and (6) Cultures.

The WP5 corresponds to the development of a serious game online platform and a set of six digital scenarios using innovative technologies for language learning, allowing a friendly and interactive use. This WP also includes the subsequent testing and improvement of the platform and scenarios. In the end of this WP, a complete prototype will be ready for piloting.

Project Serious Games Network – SEGAN
(reference
531327-LLP-1-2012-1-PT-KA2-KA2MP)

This project started at December 1st of 2011 and lasting 36 months.

The participation in this project focuses on WP4 – Community of Practice. At this stage all the individual components of the Community of Practice platform are ready and tested. This WP corresponds to the implementation of the integrated model of the CoP. where members discuss, analyze collaboratively and help or teach other in Special Interest Groups -- SIGs. Experts and practitioners will join these communities to provide their own practical view. A major concern relates to the dynamics of the social interaction – a SIG coordinator will be nominated to ensure that each group is active, developing activities and looking for new members. A template activity plan will be given to each SIG coordinator to help this task.

All these processes will be evaluated continuously, so that results can contribute to an upgrade of the environment and the methodology.

Project Serious Learning Games – SELEAG
(reference 503900--LLP--1--2009--1--PT--COMENIUS--CMP)

This project started at October 1st of 2009 and lasting 24 months.

As the secondary school of APEL was partner of project, Ricardo Baptista as a coordinator, which role will be related to the definition and design of one of the scenarios (Madeira Island) and user observation. They will be involved in the development of the prototype and the local implementation for social and cultural proximity with the theme being developed. They will also be responsible to address the evaluation of the effectiveness of the game in view of the cultural proximity of the learners with the subjects. APEL will host the final meeting and game fest.

The objective of the project SELEAG is to evaluate the use of Serious Games for learning history, culture and social relations. The project will develop a pedagogical methodology that integrates motivational learning resources (games) to promote the collaboration between children and their knowledge of history, geography, culture and social relations that shaped Europe. Learners will be integrated in a larger community of learning that includes all the schools belonging to the project.

The expected result is an extensible, online, multi--language, multi--player, collaborative and social game platform for sharing and acquiring knowledge of the history of European regions will be developed. At the same time learners will be developing abilities and transversal competencies like decision making, leadership, etc. Initially 3 different but interrelated geographical scenarios will be used so that students/players will be involved in a play that replicates the evolution of these European places over the last 600 years in social, cultural, economic, resources, military aspects. Learners will assume roles of characters that have had relevant positions in that evolution. The game will emphasize the cooperation between European countries, rather than the military history, to strengthen the notion of European citizenship.

A methodology will be developed to evaluate the multidisciplinary learning (history, geography, economics, etc.), social awareness and changes in attitudes towards learning and towards a European identity. The assessment will take place in European countries with children aged 11--16 and will determine the value of serious games for this age group. It is not expected that the project results will dramatically change the way schools teach, but it is

intended that the project will demonstrate that learning through serious games is a valid alternative and that serious games can be an effective learning tool.