

# Chapter 14

## Serious Games for Students’ E–Assessment Literacy in Higher Education

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### ABSTRACT

*In this chapter it will present partial results from the DevalS Project (Developing Sustainable Assessment – Improving Student’s Assessment Competence through Virtual Simulations), financed by the Spanish Ministry of Economy and Competitiveness (Ref. EDU2012-31804). The results will be focused on the use and usefulness of serious games for e-assessment literacy from a students’ point of view. Firstly, it will introduce the project. Secondly, it will review the serious games that have been developed and implemented in different undergraduate courses. Finally, it will present the results and conclusions of surveys undertaken by students.*

### ORGANIZATION BACKGROUND

The DevalS project was developed and carried out by the EVALfor Research Group (Assessment within Training Contexts) Ref. SEJ509, with funding obtained from the Andalusian Research, Development and Innovation Plan of the Junta de Andalucía, Spain. This research group comprises of teachers in the area of Research Methods and Assessment in Education (MIDE) of the University of Cadiz, established in 1995 to institutionalize the research being carried out in the area.

Both groups are involved in similar areas of work focusing on research methodology, assessment, training and consulting within organizations as well as research and innovation using new technologies. These themes have been developed through a large number of research, development and innovation (R + D + i) projects led by members of the MIDE team and financed through various national and interna-

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tional public tenders and which involved researchers from different branches of knowledge, universities and countries.

Over the past decade many researchers from different universities have worked in this area with the research group and this collaboration has resulted in the official incorporation within the EVALfor Research Group of several Doctors from the University of Seville, primarily in the area of Educational Research Methods. Currently, EVALfor is a competitive and inter-university research team, consisting of research Doctors, university lecturers, doctoral fellows in training, professionals and technicians. EVALfor Research Group collaborates closely with Educational Evaluation and Guidance (GE2O) and InterAction and eLearning (GRIAL) research groups, both from the University of Salamanca, Spain.

The previous experience of the EVALfor Group in recent years in relation to the subject of this chapter is focused on the implementation and the results of the following research projects:

- **DevalS Project:** *The Development of Sustainable e-Assessment – Improving students' assessment skills using virtual simulations.* National Programme of Fundamental Research Projects. Ministry of Finance and Competition. Ref. EDU2012-31804.
- **DevalSimWeb Project:** The development of skills through participation in assessment and simulation using web tools. ALFA European Commission. Contract No. DCI-ALA / 19.09.01 / 11/21526 / 264-773 / ALFAIII (2011) -10.
- **PROALevel Project:** From grading to e-feedforward. Innovative strategies and tools for assessment/feedforward and the development of skills in university students. Ref. EA2011-0057. Ministry of Education. Order EDU / 3537/2011 of 12 December, by which subsidies are granted for the implementation of actions under the Program of Studies and Analysis aimed at improving the quality of Higher Education and university teaching. (BOE. 312 of 28 December 2011).
- **INevalCO Project:** Innovation in skills assessment: Design and development of procedures and tools for assessing skills in mixed/virtual environments with the participation of undergraduate students. Ref. EA2010-052. Ministry of Education. Order EDU / 2680/2010 of 14 October, by which subsidies are granted for the implementation of actions under the Program of Studies and Analysis, aimed at improving the quality of Higher Education and university teaching. (BOE 251, of 16 October 2010)
- **Re-Evalua Project:** Reengineering of e-assessment, technologies and skills development for teachers and university students. Ref. P08-SEJ-03502. Call: Incentives for research excellence projects. Junta de Andalucía, Ministry of Innovation, Science and Enterprise. (BOJA No. 7 of 13 January 2009).
- **EvalHIDA Project:** Assessment of skills using asynchronous tools for dialogic interaction (forums, blogs and wikis). Ref. EA2008-0237. Ministry of Education. Resolution of 14 July 2008 (BOE 194 of 12 August 2008).

## SETTING THE STAGE

The DevalS project *The Sustainable development of e-assessment – Improving the assessment skills of university students using virtual simulations*, was developed under the VI National Plan for Scientific Research, Technological Development and Innovation 2008-2011 and researchers from 8 Spanish<sup>1</sup> and 2 Australian<sup>2</sup> universities collaborated, together with several interested observers from Spain and other

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