7TH INTERNATIONAL CONFERENCE ON EDUCATION AND NEW LEARNING TECHNOLOGIES

BARCELONA (SPAIN)
6TH - 8TH OF JULY, 2015

CONFERENCE PROCEEDINGS
Dear EDULEARN15 participants,

We are delighted to welcome you all to the 7th annual International Conference on Education and New Learning Technologies.

After seven years, EDULEARN has become a reference event for lecturers and researchers from all over the world. It is the ideal place to be inspired by innovative ideas, different educational perspectives and to establish international partnerships.

Above all, we wish to thank all delegates who have participated, sharing their unique experiences and projects. More than 600 attendees from 80 different countries have contributed to the program, making EDULEARN15 a multidisciplinary and truly international conference.

We hope that your participation at this conference will provide you with an opportunity to open your minds to new educational innovations, to share your knowledge with other experts, and to be an active part of the connection between technology and education.

Thank you very much for your valuable contribution to EDULEARN15!

EDULEARN15 Organising Committee
<table>
<thead>
<tr>
<th>Name</th>
<th>Country</th>
<th>Name</th>
<th>Country</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aaron Doering</td>
<td>UNITED STATES</td>
<td>Leslie Eldridge</td>
<td>UNITED STATES</td>
</tr>
<tr>
<td>Agustín López</td>
<td>SPAIN</td>
<td>Lorena López</td>
<td>SPAIN</td>
</tr>
<tr>
<td>Amparo Girós</td>
<td>SPAIN</td>
<td>Luca Marrucci</td>
<td>ITALY</td>
</tr>
<tr>
<td>Ana Tomás</td>
<td>SPAIN</td>
<td>Luis Gómez Chova</td>
<td>SPAIN</td>
</tr>
<tr>
<td>Anna Kasimati</td>
<td>GREECE</td>
<td>Luk Bouters</td>
<td>BELGIUM</td>
</tr>
<tr>
<td>Antonio García</td>
<td>SPAIN</td>
<td>Lynn Boyle</td>
<td>UNITED KINGDOM</td>
</tr>
<tr>
<td>Ashling Ryan-Mangan</td>
<td>IRELAND</td>
<td>Mª Jesús Suesta</td>
<td>SPAIN</td>
</tr>
<tr>
<td>Barbara Tramonte</td>
<td>UNITED STATES</td>
<td>Maria Porcel</td>
<td>SPAIN</td>
</tr>
<tr>
<td>Bernhard Hoppe</td>
<td>GERMANY</td>
<td>Maria-Iulianna Dascalu</td>
<td>ROMANIA</td>
</tr>
<tr>
<td>Chelo González</td>
<td>SPAIN</td>
<td>Marta Dziluma</td>
<td>LATVIA</td>
</tr>
<tr>
<td>Chris Visser</td>
<td>SOUTH AFRICA</td>
<td>Minerva Cordero</td>
<td>UNITED STATES</td>
</tr>
<tr>
<td>Christian Bourret</td>
<td>FRANCE</td>
<td>Miroslav Hudjek</td>
<td>CROATIA</td>
</tr>
<tr>
<td>Cristina Lozano</td>
<td>SPAIN</td>
<td>Mohamed Noor Rosli Baharom</td>
<td>MALAYSIA</td>
</tr>
<tr>
<td>Daniel Boulos</td>
<td>UNITED STATES</td>
<td>Mónica Fernández</td>
<td>SPAIN</td>
</tr>
<tr>
<td>David Martí</td>
<td>SPAIN</td>
<td>Norma Barrachina</td>
<td>SPAIN</td>
</tr>
<tr>
<td>Eamon McAteer</td>
<td>UNITED KINGDOM</td>
<td>Olga Teruel</td>
<td>SPAIN</td>
</tr>
<tr>
<td>Edyta Olejarczuk</td>
<td>POLAND</td>
<td>Peter Haber</td>
<td>AUSTRIA</td>
</tr>
<tr>
<td>Eladio Duque</td>
<td>SPAIN</td>
<td>Peter Juskiw</td>
<td>SWITZERLAND</td>
</tr>
<tr>
<td>Giorgos Georgiou</td>
<td>CYPRUS</td>
<td>Rafael Fernández-Flores</td>
<td>MEXICO</td>
</tr>
<tr>
<td>Gyöngyi Bujdosó</td>
<td>HUNGARY</td>
<td>Ricardo Pistola</td>
<td>PORTUGAL</td>
</tr>
<tr>
<td>Ignacio Ballester</td>
<td>SPAIN</td>
<td>Rita Kumar</td>
<td>UNITED STATES</td>
</tr>
<tr>
<td>Ignacio Candel</td>
<td>SPAIN</td>
<td>Salote Scharr</td>
<td>AUSTRALIA</td>
</tr>
<tr>
<td>Irma Grdzelidze</td>
<td>GEORGIA</td>
<td>Sergio Pérez</td>
<td>SPAIN</td>
</tr>
<tr>
<td>Ismael Serrano</td>
<td>SPAIN</td>
<td>Shujaat Wasty</td>
<td>CANADA</td>
</tr>
<tr>
<td>Iván Martínez</td>
<td>SPAIN</td>
<td>Teresa De Fazio</td>
<td>AUSTRALIA</td>
</tr>
<tr>
<td>Jacques van der Meer</td>
<td>NEW ZEALAND</td>
<td>Thomas Köhler</td>
<td>GERMANY</td>
</tr>
<tr>
<td>James Meek</td>
<td>UNITED KINGDOM</td>
<td>Thomas Shields</td>
<td>UNITED STATES</td>
</tr>
<tr>
<td>Javier Domenech</td>
<td>SPAIN</td>
<td>Thomas Staubitz</td>
<td>GERMANY</td>
</tr>
<tr>
<td>Javier Martí</td>
<td>SPAIN</td>
<td>Tiziano Telleschi</td>
<td>ITALY</td>
</tr>
<tr>
<td>Joanna Lees</td>
<td>FRANCE</td>
<td>Tracy Treasure</td>
<td>AUSTRALIA</td>
</tr>
<tr>
<td>Jose F. Cabeza</td>
<td>SPAIN</td>
<td>Victor Fester</td>
<td>NEW ZEALAND</td>
</tr>
<tr>
<td>Jose Luis Bernat</td>
<td>SPAIN</td>
<td>Victoria Shimanovich</td>
<td>UNITED STATES</td>
</tr>
<tr>
<td>Kalaimagal Ramakrishnan</td>
<td>MALAYSIA</td>
<td>Vincenza Benigno</td>
<td>ITALY</td>
</tr>
<tr>
<td>Krystyna Nowak-Fabrykowski</td>
<td>UNITED STATES</td>
<td>Vivienne Griggs</td>
<td>UNITED KINGDOM</td>
</tr>
<tr>
<td>Laurence Solkin</td>
<td>UNITED KINGDOM</td>
<td>Xavier Lefranc</td>
<td>FRANCE</td>
</tr>
</tbody>
</table>
CONFERENCE SESSIONS

ORAL SESSIONS, 6th July 2015

Flipped Learning (1)
Blended Learning (1)
Teaching Programming Skills
Educating the Educators: ICT Skills Literacy
Meet the Keynote
Planning the Digital-Age School
New Technologies in Primary Education (1)
Technologies in Business & Management Education

Flipped Learning (2)
Blended Learning (2)
Problem Based Learning Experiences
Pre-Service Teacher Experiences
STEM Experiences in Higher Education
Mobile & Tablet Technologies
New Technologies in Primary Education (2)
Experiences in Business Education

Advanced Classroom Technologies (1)
e-Learning Projects & Experiences
e-Assessment & Testing
Training Educational Staff (1)
New Technologies in STEM Education (1)
Language Learning Technologies
Experiences in Secondary Education
Inclusive & Multicultural Education

Massive Open Online Courses (MOOCs)
e-Learning in Distance Learning
Evaluation & Assessment of Student Learning
Training Educational Staff (2)
Experiences in Primary & Secondary Education
Language Learning Experiences (1)
Experiences in Primary Education
Inclusive Learning

POSTER SESSIONS, 6th July 2015

Pedagogical Innovations and Experiences

Experiences in Education
ORAL SESSIONS, 7th July 2015

Computer Supported Collaborative Work
Educational Cloud Based Technologies
Technology Enhanced Learning in HE
Employability Issues
Special Education
Language Learning Experiences (2)
Adult Education and Lifelong Learning
Experiences in Assessment of Student Learning

Mobile & Tablet Technologies: Student Response Systems
Educational Software & Games (1)
e-Learning Experiences
Workplace Training and Employability Issues
International Projects and Cooperation
Pre-Service Teacher Experiences in Language Learning
Learning Experiences in Higher and Further Education
Experiences in Engineering Education

Social & Digital Media in Education
Educational Software & Games (2)
e-Portfolios
Entrepreneurship Education
Student Support in Education (1)
Leadership in 21st Century Education
Learning Experiences in Math Education
New Technologies in Engineering Education

Collaborative Virtual Environments (CVE)
Game Based Learning
e-Tutoring & Mentoring
Quality Management in Education
Student Support in Education (2)
Educational Management
Experiences in Primary and Secondary STEM Education
Experiences in Health Sciences Education

Virtual Learning Environments (VLE)
Educational Software & Games (3)
Advanced Classroom Technologies (2)
Curriculum Design and Development
Plagiarism & Student Identity Authentication
Pedagogical Innovations in Education
New Technologies in STEM Education (2)
New Technologies in Health Sciences Education

POSTER SESSIONS, 7th July 2015.

Emerging Technologies in Teaching and Learning
Challenges in Education and Research
VIRTUAL SESSIONS

Barriers to Learning  
Blended Learning  
Collaborative and Problem-based Learning  
Computer Supported Collaborative Work  
Curriculum Design and Development  
Distance Learning  
E-content Management and Development  
e-Learning Projects and Experiences  
Education and Globalization  
Educational Management  
Educational Software & Serious Games  
Educational Trends and Best Practice Contributions  
Emerging Technologies in Education  
Enhancing Learning and the Undergraduate Experience  
Entrepreneurship curriculum  
Evaluation and Assessment of Student Learning  
Experiences in Research  
Flipped Learning  
Impact of Education on Development  
International Projects  
Language Learning Innovations  
Learning and Teaching Methodologies  
Learning Experiences in Higher and Further Education  
Learning Experiences in Primary and Secondary Education  
Lifelong Learning  
Massive Open Online Courses (MOOCs)  
Mobile and Tablet Technologies  
Mobile Learning  
New Learning/Teaching Models  
Organizational, Legal, Policy and Financial Issues  
Pre-service and In-service Teacher Experiences  
Quality Assurance/Standards and Accreditation  
Special Education  
Student Support in Education  
Technology-Enhanced Learning  
The Bologna Declaration and ECTS Experiences  
Training educational staff  
Transferring Skills and Disciplines  
Tutoring and Coaching  
University-Industry Cooperation  
Vocational Training
ABOUT EDULEARN15 Proceedings USB

HTML Interface: Navigating with the Web browser

This USB includes all presented papers at EDULEARN15 conference. It has been formatted similarly to the conference Web site in order to keep a familiar environment and to provide access to the papers through your default Web browser (open the file named "EDULEARN15.html").

An Author Index, a Session Index, and the Technical Program are included in HTML format to aid you in finding conference papers. Using these HTML files as a starting point, you can access other useful information related to the conference.

The links in the Session List jump to the corresponding location in the Technical Program. The links in the Technical Program and the Author Index open the selected paper in a new window. These links are located on the titles of the papers and the Technical Program or Author Index window remains open.

Full Text Search: Searching EDULEARN15 index file of cataloged PDFs

If you have Adobe Acrobat Reader version 6 or later (www.adobe.com), you can perform a full-text search for terms found in EDULEARN15 proceedings papers.

Important: To search the PDF index, you must open Acrobat as a stand-alone application, not within your web browser, i.e. you should open directly the file "EDULEARN15.pdf" with your Adobe Acrobat or Acrobat Reader application.

This PDF file is attached to an Adobe PDF index that allows text search in all PDF papers by using the Acrobat search tool (not the same as the find tool). The full-text index is an alphabetized list of all the words used in the collection of conference papers. Searching an index is much faster than searching all the text in the documents.

To search the EDULEARN15 Proceedings index:
1. Open the Search PDF pane through the menu "Edit > Advanced Search" or click in the PDF bookmark titled "SEARCH PAPERS CONTENT".
2. The "EDULEARN15_index.pdx" should be the currently selected index in the Search window (if the index is not listed, click Add, locate the index file.pdx, and then click Open).
3. Type the search text, click Search button, and then proceed with your query.

For Acrobat 9 and later:
1. In the “Edit” menu, choose “Search”. You may receive a message from Acrobat asking if it is safe to load the Catalog Index. Click “Load”.
2. A new window will appear with search options. Enter your search terms and proceed with your search as usual.

For Acrobat 8:
1. Open the Search window, type the words you want to find, and then click Use Advanced Search Options (near the bottom of the window).
2. For Look In, choose Select Index.
3. In the Index Selection dialog box, select an index, if the one you want to search is available, or click Add and then locate and select the index to be searched, and click Open. Repeat as needed until all the indexes you want to search are selected.
4. Click OK to close the Index Selection dialog box, and then choose Currently Selected Indexes on the Look In pop-up menu.
5. Proceed with your search as usual, selecting other options you want to apply, and click Search.

For Acrobat 7 and earlier:
1. In the “Edit” menu, choose “Full Text Search”.
2. A new window will appear with search options. Enter your search terms and proceed with your search as usual.
IMPLEMENTATION OF “B-LEARNING” METHODOLOGIES AT THE HIGHER EDUCATION CONTEXT; A CASE STUDY

J.M. Blanco1, I. Bidaguren1, J.T. San-José1, R. Sancibrian2, E. Rojí1, L. Garmendia1

1 School of Engineering; University of the Basque Country UPV/EHU (SPAIN)
2 School of Engineering; University of Cantabria UC (SPAIN)

Abstract

The Open University in Spain is one of the world’s leading providers of flexible, high-quality online degrees and distance learning or sometimes referred to as “e learning”. Its mission is to be closer to people and places, aiming to provide suitable distance learning for everybody. The university campus is physically centred in Madrid but the internal administrative structure is organised in different “associate centres” distributed all over the country in the different counties, acting as local offices.

New teaching resources have been successfully implemented in this student-centred system, based on the student ability required to achieve objectives, specified in terms of the learning outcomes and competences to be acquired. Nowadays this university is developing an extraordinary new educational architecture leading to improve the network that already offers to these associate centres. The educational method followed here fits in the new blended learning concept or “b-Learning”, where, on the one hand “magister and practicum lectures” can be conjugated together with tutorship’s attendance, and on the other hand “personal work” that fellows manage according to their availability by means of study materials, virtual platforms, radio and television broadcasting, etc. One of these elements adopted is based on virtual tools such as the so called Audio Visual technology over IP (AVIP). It allows a better interaction between lecturers and students through both pre-recorded material, ready to visualize, or by live web conferences.

Here, a full description of this learning and teaching tool will be addressed, followed by its application under a particular case study, reporting finally the outputs obtained with an online survey passed to the students, addressing both perceptions and auto-evaluation of their respective role inside this complex scenario of new blended learning processes in which the university is immersed.

Keywords: b-Learning, teaching methodologies, Higher education, ECTS experiences, Open University.

1 INTRODUCTION

Blended learning or “b-Learning” can be considered as a flexible approach to a learning process taking advantage of some online training and assessments online, but also uses other procedures for the completion of a traditional training method, such as classroom sessions, web-based courses and general knowledge management practices [1]. Blended learning can be also used to describe a learning procedure combining various event-based activities; including tutorship’s and other live teaching modalities [2].

It should be differentiated from, on the one hand, the ubiquitous learning or “u-learning” where students become totally immersed in the learning process and on the other hand from the term mobile learning or “m-learning” referring to the use of handheld information-technology (IT) devices, such as PDAs (Personal Digital Assistants), mobile phones, laptops and tablets, in any of the teaching and learning activities [3].

This is a student-centred system [4], based on the student workload required to achieve the objectives of a particular programme, preferably specified in terms of the learning outcomes and competences to be acquired by fellows [5]. In other words, students became to play a key role in this scenario so they should be fully motivated to do so. For achieving this, a virtual tool has been implemented in the learning process eliminating barriers such as distance and availability due mainly to family matters and working conditions.

What are the key features of each approach?. In which situations could be used?. What blended techniques can be adopted to enhance learning? [6, 7]. Three specific attitudes can be distinguished:
- **IT**: Information Technology.
- **$M_t$**: Measured value of a variable at instant $t$.
- **$\bar{M}$**: Measured mean value of a variable at instant $t$.
- **PDA**: Personal Digital Assistant.
- **$R^2$**: Square of the Pearson product moment correlation coefficient.
- **$X_t$**: Predicted value of a variable at instant $t$.
- **$\bar{X}$**: Predicted mean value of a variable at instant $t$.

**ACKNOWLEDGEMENTS**

This work was supported by the Basque Regional Government under Grant IT781-13.

**REFERENCES**


