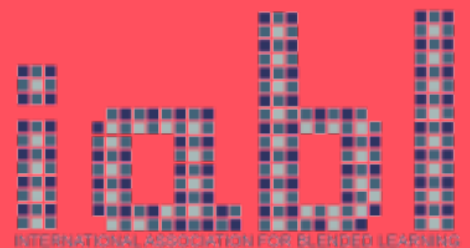# iabl

INTERNATIONAL ASSOCIATION FOR BLENDED LEARNING

April 22-24, 2016
Kavala, Greece

Agnieszka Palalas, Helmi Norman, Przemyslaw Pawluk (Eds.)

Blended Learning for the 21st Century Learner

Proceedings of the 1st
International Association
for Blended Learning
Conference (IABL 2016)

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INTERNATIONAL ASSOCIATION FOR BLENDED LEARNING

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IABL Conference
2016

April 22-24, 2016
Kavala, Greece

iabl 2016

International Association for Blended Learning

Conference Proceedings

Conference title:
IABL 2016
Blended Learning for the 21st Century Learner
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Location: Kavala, Greece

Venue: Department of Computing and Informatics Engineering of
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Ag.Loukas 65404, Kavala, Greece

Conference Chair:
Agnieszka Palalas, Ed.D., Canada

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Agnieszka Palalas, Helmi Norman, Przemyslaw Pawluk

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From IABL, the conference organizer: This is to confirm that all Conference paper submissions are double-blind peer-reviewed by an international review committee prior to acceptance in the Final Program and prior to publication in the Proceedings.

See IABL Review Policy: http://conference.iabl.org/submissions-2

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"International Association for Blended Learning"

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PREFACE

IABL 2016, the inaugural international conference on blended learning organized by the International Association for Blended Learning (IABL; http://iabl.org/) was held in Kavala, Greece, during April 22–24, 2016. The conference was entitled "Blended Learning for the 21st Century Learner" and it aimed to incorporate the voice of the learner along with the knowledge and research contributed by the teacher. IABL 2016 was hosted at the Department of Computing and Informatics Engineering of Eastern Macedonia and Thrace Institute of Technology in the picturesque city of Kavala in the northern part of Greece.

The International Association for Blended Learning (IABL) is a membership organization with an aim to promote excellence in teaching, training, and research in blended learning through the engagement of international scholars and practitioners to meet the needs of today's global learners. The goal of the association is to transform global education through its on-going contributions to the field of blended learning. IABL is the custodian of the annual IABL conference series organized as a key knowledge and research exchange forum where professionals and practitioners share their expertise, experience, and research in blended learning. It is also a networking event for participants from all over the world who represent a variety of contexts, cultures, and perspectives. The IABL conference invites critical inquiry and debate on theories, approaches, principles, applications, and the implementation of blended learning across learning and training milieus.

The IABL 2016 conference invited researchers, teachers, trainers, practitioners, students, and technology experts to present the latest blended learning solutions as well as to discuss and exchange the latest findings and new ideas based on the ongoing research, practice, and experience. Contributions from across the globe and all educational sectors were submitted and carefully considered for inclusion in the conference program. All submissions were reviewed by at least two referees from the IABL 2016 international program review committee based on the full text of the submitted manuscript. The submissions were subjected to a double-blind peer review and evaluated on the basis of the originality of the work, the validity of the results, chosen methodology, writing quality and the overall contribution to the field of blended learning. The authors received the blind reviews and feedback to use in preparation of the final versions of their papers. All the approved submissions which were presented at the conference are included in the e-proceedings.

The IABL 2016 proceedings hence comprise the following categories of papers and other presentation types:

- **Full papers** (3500-5000 words in length) are printed in its entirety; they report on original and significant work in research, development and applications regarding one or more aspects of blended learning.
- **Short papers** (2000-3000 words; full text included) describe new work or work that is still in progress, relevant to one or more aspects of blended learning.
- **Keynotes** (brief abstracts provided): four leading keynote speakers were invited, namely, Marti Cleveland-Innes, Ahmad Majdoubeh, Demetrios Sampson, and Michael Paraskevas. They shared their expertise in blended learning to inform future blended learning research and practice.
- **Panels** (500 word abstracts provided): 4-5 people present their views and arguments on a specific theme or issue related to blended learning, and subsequently discuss them with the audience.
- **Pre-conference workshops** (500 word abstracts provided) offer an opportunity for hands-on skills development in blended learning and teaching.
- **Industry showcases/Practitioner presentations** (300-500 word abstracts included) share best practices in teaching and training in the blended learning context.

IABL 2016 introduced a virtual presentation (blended format) option for authors of accepted papers who could not attend the conference to present in person. Each virtual presentation consisted of three elements: (1) a pre-recorded video (paper presentation), (2) 10-15 minute synchronous presenter-audience chat via Skype, (3) subsequent online discussion using Twitter. Virtual presenters were required to submit their proposal following the same guidelines as f2f presenters and could choose from the following three categories: full paper, short paper, and industry showcases/practitioners presentation. All blended sessions were moderated by a session chair to ensure optimal interaction between the virtual presenter and the f2f audience.

These proceedings comprise the full text of all the full and short papers that were accepted to be included in the conference program and abstracts of the other presentations. In total, ## submission were selected as full papers and ## as short papers. The proceedings editors, A. Palalas, H. Norman, and P. Pawluk, communicated their additional feedback to the authors of these papers and based on their replies, finalized the editing of the volume. All the revised papers and abstracts were then submitted to Mathemagenesis for technical editing and processing.

The authors who have contributed to these proceedings are researchers, practitioners, instructional designers and developers from both educational and commercial organizations representing ## countries: Greece, Canada, Saudi Arabia, Poland, Turkey, Kuwait, ## countries and the USA. We would like to extend our thanks to all participants for their contributions to the conference program and to these proceedings. A special *Thank you* goes to the members of the international Program Committee for their expert contributions and dedicated assistance with the paper reviews and decisions. Appreciation is also extended to Mathemagenesis for improving the design, style, and layout of the e-proceedings and compiling them as a digital resource.

I hope that these proceedings, which share a message of great significance to the theory and practice of blended learning, will assist you in implementing blended learning in your practice.

See you at IABL 2017.

Agnieszka Palalas, Ed.D.
IABL President

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SECTION I

KEYNOTES
BIOS AND ABSTRACTS

KEYNOTES

MARTI CLEVELAND-INNES

Dr. Marti Cleveland-Innes is Professor and Program Director in the Centre for Distance Education at Athabasca University in Alberta, Canada. She teaches Research Methods and Leadership in the graduate programs of this department. Martha has received awards for her work on the student experience in online environments and holds a major research grant through the Canadian Social Sciences and Humanities Research Council. In 2011 she received the Craig Cunningham Memorial Award for Teaching Excellence and in 2009 she received the President's Award for Research and Scholarly Excellence from Athabasca University. Her work is well published in academic journals in North America and Europe. Current research interests are leadership in open and distance higher education, online teaching and learning and the effects of emotion on learning.

For more detail go to http://cde.athabascau.ca/faculty/martic.php

KEYNOTES

AHMAD Y MAJDOUBEH

Prof Ahmad Y. Majdoubeh is professor of English and Dean, Faculty of Language Studies at the Arab Open University (on leave from UJ). He obtained Ph.D. and MA from Cornell University, USA in 1984 and started working at Yarmouk U. He spent his sabbatical year at Philadelphia U. in Jordan during its establishment year in 1991-92. As of 1994, he taught at University of Jordan, was Director of Language Center, Chairman of Modern Languages Department, Director of International Relations, Dean of Arts, and then Dean of Foreign Languages until 2011. He was adviser to the Minister of Higher Education in Jordan for International Cooperation in 2004 to 2009; a member of Higher Education Council in Jordan, twice, from 2009 to 2011. He has been a member of Board of Trustees of Queen Rania's Teacher Training Academy (QRTA) since 2008 and was an adviser of English curricula for the Ministry of Education from 2004 to 2011. His pedagogical interest is in critical thinking and open and blended learning.

KEYNOTES

MICHAEL PARASKEVAS

Dr. Michael Paraskevas received the PhD degree in audio compression techniques using perceptual model of human hearing. His current research interests are in digital signal processing techniques, signal theory, analogue and digital communications, next generation networks and e-government services, as well as in the exploiting the ICTs in the education. He has published more than 30 scientific articles in international magazines and conferences and also he has participated in scientific committees of international magazines and conferences.

He has extensive professional experience on issues regarding planning and implementation of large scale network infrastructures, electronic services and exploitation of ICTs in education and manages a large number of corresponding development projects. In implementation of these projects, Dr Paraskevas have dealt extensively with issues of public supply contracts. He is the Director of the Directorate of Greek School Network at Computer Technology Institute and Press "Diophantus".

He is also Assistant Professor at Informatics Engineering Department of Technological Educational Institute of Western Greece and teaches the courses of Analogue Communications,

Digital Communications, Digital Signal Processing, Information Society and Databases (laboratory). He is also a consultant teacher of the Hellenic Open University as well as the Electronic and Computer Engineer Department of the University of Patras. Dr. Paraskevas is a member of the Technical Chamber of Greece and the Audio Engineering Society.

KEYNOTES

DEMETRIOS SAMPSON

Demetrios Sampson is a Research Professor of Learning Technologies at the School of Education since October 2015. Previously, he has been a Professor of Digital Systems for Learning and Education at the Department of Digital Systems, University of Piraeus, Greece (2003-2015) and a Senior Researcher at the Informatics and Telematics Institute, Centre of Research and Technology – Hellas Greece (2000-2003).

His main scientific interests are in the area of Learning Technologies and Technology Enhanced Teaching and Learning. He is the co-author of 365 publications in scientific books, journals and conferences with more than 3250 citations and h-index 26 as listed in Scholar Google (October 2015). He has received 8 times Best Paper Award in International Conferences on Learning Technologies.

He is the Editor-in-Chief of the Educational Technology and Society Journal (5-year impact factor 1.376). He has served or serves as Member of the Steering Committee of the IEEE

Transactions on Learning Technologies (5-year impact factor 1.697), Member of the Advisory Board of the Journal of King Saud University – Computer and Information Sciences and the

and the International Journal of Digital Literacy and Digital Competence, Member of the Editorial Board of 23 International/National Journals and a Guest Editor in 31 Special Issues of International Journals. His participation in the organization of scientific conferences involves: General and/or Program Committee and/or Honorary Chair in 40 International Conferences, Program Committees Member in 415 International/National Scientific Conferences. He has been a Keynote/Invited Speaker in 68 International/National Conferences. He has been project director, principle investigator and/or consultant in 65 R&D projects with external funding at the range of 14 Million € (1991-2016).

He has been a Visiting Professor and/or Research Scholar at: the School of Computing and Information Systems, Athabasca University, Canada (2010), the Information Management

KEYNOTES

Department, National Sun Yat-sen University, Taiwan (2011), the University of Tunis (2012, 2013), the Faculty of Education, Beijing Normal University, China (2013), Department of Educational Technology, Peking University Beijing, China (2013), Department of Learning Technologies, University of North Texas, USA (2013).

He is a Senior Member of IEEE and Golden Core Member of IEEE Computer Society and he was the elected Chair of the IEEE Computer Society Technical Committee on Learning Technologies (2008-2011). He is a member of the ICT Advisory Board of the Arab League Educational, Cultural and Scientific Organisation (ALESCO) since March 2014. He is the recipient of the IEEE Computer Society Distinguished Service Award (July 2012).

He holds a Diploma in Electrical Engineering from the Democritus University of Thrace, Greece in 1989 and a Ph.D. in Electronic Systems Engineering from the University of Essex, UK in 1995.

SECTION II

FULL PAPERS

SECTION III

SHORT PAPERS

SECTION IV

WORKSHOPS, PRACTITIONER PRESENTATION, AND PANEL ABSTRACTS

WARM-UP WORKSHOPS

WORKSHOP A
HYBRID EDUCATION FOR TEACHER DEVELOPMENT
Many traditionally taught courses are transitioning to either online or hybrid format. This change in method of delivery is received well by the millennial generation, but it remains to be seen how successful this move is to a more experienced population. Last year we transitioned our Teacher Education Program from a traditional delivery method to a hybrid format. This 54 hour course is mandatory for new hires and also taken by experienced faculty evolved into a hybrid format course. The hybrid course involving 18 hours in-class, 18 hours online and 18 hours self-directed learning has been met with great response.

The process of transitioning this course will be relayed to participants as well as improvements and lessons learned through the process. Participants can expect an interactive experience, and take away knowledge about the success and challenges of transitioning a course of this variety. Please bring a laptop as we will explore the components of the course itself as part of the workshop.

Scott Dunhan

WORKSHOP B
GO GAMING IN THE FOREIGN-LANGUAGE-CLASSROOM
This workshop refers mostly to foreign language teachers of the primary and secondary level, with or without teaching experience, who would like to integrate gamification via blended learning in the curriculum, in due to change and differentiate the formative way of teaching the formative way of teaching, by implementing differentiated, intercurricular, intercultural activities and transformative learning. There should be a preparation phase for the workshop, as the participants ought to work on the BYOD (Bring Your Own Device) principle. During the workshop there will be a short introduction to gamification and how it could be combined with blended learning (flipped classroom) and school curricula. Selected digital game applications are presented and implemented. At the feedback phase the participants should fill in an online-questionnaire. All projects will be published on Padlet and on workshop's closed facebook page.

Maria Melina Laina, Angeliki Matallinou

WARM-UP WORKSHOPS

WORKSHOP C
BLENDING AR AND MOBILE LEARNING

The purpose of this workshop is the demonstration of how Mobile Learning can be blended with Augmented Reality to produce educational mobile applications. The workshop will focus on the tools to develop such applications, namely App Inventor, an open-source mobile development environment, and Aurasma, a free augmented reality platform. App Inventor is a web-based programming environment developed by MIT, where Android applications are created. The projects created in AppInventor are stored in MIT App Inventor's servers and are accessible from anywhere. Applications can be run in a connected physical device or in an emulator. The environment allows the use of almost all the features that the Android operating system allows, such as the use of graphics components, location services or the camera, and so the production of a wide variety of applications is possible, ranging from graphics-based games to educational applications. The advantage of the platform is that the design and implementation of an application are done using a visual block-based environment, and therefore no particular programming skills are required.

Avgoustos Tsinakos, Chris Lytridis, Persa Karamanoli

WORSHOP D
MIX IT UP WITH BLENDED LEARNING: A STEP-BY-STEP GUIDE FOR BLENDED LEARNING

The term "blended learning" is being used with increased frequency in both academic and corporate circles. Blended courses (also known as hybrid or mixed-mode courses) are classes combining online and face-to-face instruction. This workshop will provide a basic introduction to blended learning systems and share some practical guidelines that are highly relevant to those who are implementing such systems. To accomplish these goals, the workshop will address five important questions related to blended learning such as: What will my blend be?, How and when will students and I interact?, How will I determine if students are learning?, How and when will I introduce and collect student work?, and Am I ready to deliver this course?

Sofia Nteliopoulou

THEME

BLENDED LEARNING

CONFERENCE TRACKS

1. DESIGNING BLENDED LEARNING

As society progresses into the 21st century we are seeing new generations of learners who are comfortable using technology in their everyday life. At the same time, learning materials are available electronically from anywhere and at anytime. Educators and trainers must design blended learning taking these and other trends into consideration. This track focuses on guidelines and best practices for designing blended learning solutions.

2. TECHNOLOGY IN BLENDED LEARNING

Blended learning implementation can use a variety of technologies in delivery. Also, as technology emerges, educators and trainers must integrate the emerging technologies when implementing blended learning. What technologies are being used or can be used to deliver quality blended learning? What research studies are being conducted on the use of blended learning? This track aims to provide answers to these and related questions concerning the usage of technologies in blended learning.

3. FUTURE OF BLENDED LEARNING

As we move from the early stage of the 21st century into the later stages, we need to look at the role of blended learning in the future. How can blended learning be more effective and motivating for learners? What are some of the trends that will affect blended learning in the future? How are organizations planning to implement blended learning in the future? How does current research inform the future practice of blended learning? These are the issues to be addressed in the Future of Blended Learning presentations.

4. CORPORATE TRAINING: FROM ELEARNING TO BLENDED LEARNING

Traditionally corporate training programs have been on-site and face-to-face, but with development of digital media, various platforms and modes of delivery, training has been much more interactive and engaging resulting in professionals becoming far more responsive. Blended learning is the best method of delivering corporate training if technology is strategically used. The focus of this track is to examine the difference between elearning and blended learning, as well as how technology can be used to compliment face-to-face, instruction-led training in the corporate setting.

5. PEDAGOGY OF BLENDED LEARNING

Pedagogy is the pivotal element of successful learning and it should be underpinned by carefully selected learning theories and in-depth understanding of the needs of the 21st century learner. Pedagogy can be viewed as guidance to learn that comprises teaching practices, methods, strategies as well as teaching philosophies and beliefs. Blended learning pedagogies are addressed in this track.

6. BLENDED LEARNING PRACTICE

The Practice track is the forum for high-quality presentations on innovative applications and practical Blended Learning solutions. These include any combination of learning and training tools and practices that have proven successful in a variety of contexts. The Practice track papers should generally have results from (ideally) real world development, deployment, and experiences delivering Blended Learning solutions. Examples of real-life implementation of Blended Learning solutions are invited both from all educational sectors and a broad variety of industries.

7. BLENDING ROBOTICS IN EDUCATION

In the past, mechanical robots have been used exclusively in the manufacturing industry. Nevertheless, during the last years, robots are phased in alternative industries, in businesses of services, in homes and lately in schools and education. This special track is meant as a forum for researchers and practitioners regarding all aspects of robotic uses in all grades of formal education and informal education. The aim is to provide an opportunity for researchers, social workers and practitioners to discuss and share the latest developments and the new ideas regarding robotics in education in the broadest sense.