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The 22nd global, cross-sector conference on technology supported learning and training

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Book of Abstracts
Commissioner’s Welcome Message

As European Commissioner for Education, Culture, Youth and Sport, I am delighted to support the 2016 OEB conference. Over the next three days you will explore many important areas of learning and technology: some established, some emerging - gaming; learning analytics; blended learning; mobile learning. All these topics support your central theme of how we can empower learners and encourage more ownership of learning.

The digital revolution is having a huge impact on education and training. Europe needs to seize the opportunities that digital change brings, so that we deliver higher quality education and the digital skills essential for our young people's future lives and careers. So, one of my key policy priorities for European cooperation in education is to open up, support and encourage innovation in education and training. The European Commission is working to do so in a number of ways.

We work with ministries of education, business and trade unions and other education stakeholders to share experience and best practice on digital skills and technologies in education. Through the Erasmus+ programme we fund research, projects and exchanges across Europe. Our e-twinning network links teachers and classrooms throughout Europe on many thousands of shared projects.

The new EU Skills Agenda highlights the importance of digital skills. We are now working to review and update our recommendation on key competences which will help more people gain the core set of skills they need to work and live in the 21st century. We will focus in particular on promoting both entrepreneurial and digital skills.

The European Commission is also launching a multi-stakeholder partnership, the Digital Skills and Jobs Coalition, to tackle the lack of digital skills in Europe and the thousands of unfilled ICT-related vacancies across all industry sectors.

OEB is unique as it gathers so many stakeholders from business, education, government, research and NGOs. This cross-sector exchange is vital and we need to encourage more conversations like this in Europe. It is only by working in partnership that we can deliver on our goal of modernising and improving education for all.

With 2,300 participants from around the globe, OEB is the perfect lab to generate new ideas. I wish you all a fruitful three days of learning, exchanging ideas and pushing boundaries.

Tibor Navracsics
European Commissioner for Education, Culture, Youth and Sport
Minister’s Welcome Message

Our society is undergoing a process of rapid transformation. Economy 4.0 and Work 4.0 are subjects that dominate politics, science, and the public discourse. These enormous changes present our country with great opportunities, but in this transformation process, people’s needs have to be the focus. Our desire is for everyone to have the chance to gain suitable qualifications, in order to be in a position to develop necessary skills and competences.

The Federal Ministry of Education and Research (BMBF) is manifoldly engaged in the digital change in the realms of education and science. With its „Educational Campaign for the Digital Knowledge Society“, the BMBF has formulated a broad framework for action to address this change. The Vocational Training 4.0 initiative plays a pivotal role in supporting the elaboration of modern occupational profiles. We are promoting sound pedagogical concepts and models for the acquisition of qualifications, and we are contributing to the provision of up-to-date digital devices for industry-wide dual training system facilities. Furthermore, in collaboration with the Federal States, our DigitalPakt#D - the Digital Pact for Germany - is to establish digital learning in schools on the basis of robust infrastructures and effective learning concepts.

I am pleased to see that OEB 2016 has placed the learners’ role at the centre of its agenda. Digital education and training is a cornerstone of every contemporary individual’s qualification efforts. Our task is to ensure that learners are in a position to make optimal use of digital training programmes presented by teachers who are qualified both methodologically and didactically. OEB 2016 will make an important contribution toward the achievement of this goal.

As the patron of the Conference, I wish the OEB 2016 the very best of success!

Prof. Dr. Johanna Wanka
Federal Minister for Education and Research
Organiser’s Welcome Message

The years seem to pass so quickly these days!
It seems like only yesterday that we were here at Berlin's Intercontinental Hotel for last year's OEB. Perhaps it's the eagerness I always feel for the next edition of this wonderful conference, with the chance it brings to see so many old friends and to make new ones.

A year has passed but, in that short space of time, much has changed. Technological innovation is opening up new opportunities that, until recently, were almost beyond the scope of our imagination. Now, the speed at which new products and solutions appear is astounding.

In the period since the last OEB, for example, more software has been developed, which will make autonomous driving a reality. Here in Germany, a new hydrogen-powered train service, 'hydrail', which produces no carbon emissions at all, has been launched. We have seen huge advances in research into the potential benefits of the use of data on health. Reusable rockets have been tested in Texas, heralding a new, and much cheaper, age of space exploration. Chinese research into voice technology is set to transform smartphones. 'Power from the Air' is spreading the reach of wi-fi and other signals, making computers and sensors more pervasive and laying the telecommunication foundations for the Internet of Things.

And research in the fields of artificial intelligence and robotics is opening up extraordinary new horizons of possibility. This year's MIT Technology Report estimates that, within the next five years, robots will be able to teach each other - by learning tasks and then sending that knowledge to the cloud for other robots to pick up later.

The pace of change has been a recurring theme at OEB for many years now. It may not always have been explicit but it has always been there, whether at the front or the back of our minds, as we discussed developments in education and training. Now, however, the pace of change has quickened and we are galloping, rather than cantering, into the future. Technological innovation is happening faster than ever before and it is bringing with it the most comprehensive and profound change in education in human history.

This year at OEB, we'll be focussing our attention on one of the most important aspects of this process of change in education - the future 'ownership of learning.' Technology has made radical change in the ownership and control of learning not only possible but increasingly likely. With every month that passes, more and more ordinary learners - whether students in full-time education or workplace trainees doing a vocational course - are being given the means to take control of their own learning. Developments in technology mean that this trend will only continue and, if the pace of change so far is anything to go by, within ten years, we will be astonished by the scale of the transformation.
I cannot predict what will happen between now and next year's OEB. What I can say with confidence, however, is that the pace of change, and our ability to manage it, will still be firmly on the agenda. We are living in what Thomas Friedman and others have called „the age of acceleration“ and there are few signs that things are going to slow down.

In many ways, our OEB community is at the forefront of this process of change. Our common concern is how technology can be used to improve, enhance and extend learning. In the twenty-two years of its existence, OEB has seen some remarkable changes in education but the scope of what we have already seen will soon be dwarfed, in a very short period of time, by what is to come.

I hope you will enjoy OEB 2016. Our interactive sessions, debates and discussions are a chance not only to learn about the future, but also to help shape it.

You'll even see something of the shape of the future at our exhibition, where companies and organisations from all over the world present their latest products and services. I'd like to take this opportunity to thank them and all our sponsors for their support. We're proud to be associated with them and all they're doing for global education.

Have a very successful conference!

**Rebecca Stromeyer**  
Managing Director of ICWE GmbH
# Table of Contents

**Academia** ................................................................................................................................. 1

Student Attitudes Towards Self-Directed Learning: Results of a Case Study from the MENA Region 1  
Fawzi Baroud & George Abdelnour, Notre Dame University - Louaize, Lebanon

Emerging E-Learning Trends: Propositional MicroLearning, Rapid Content Authoring &  
Auto Content Generation......................................................................................................................4  
Peter A. Bruck, KnowledgeFox GmbH, Austria

Exciting Contents for People to Have Fun Learning Throughout Life.............................................8  
Natalia Castellana Mir, Universitat Oberta de Catalunya, Spain

Different Horses for Online Courses: Exploring Project Based Learning in Blended Settings.........9  
Marianne Checkley, iScoil, Ireland

The Undergraduate Students in Bulgaria and Turkey -  
Between the Mobility and the Traditionalism .................................................................................. 11  
Marina Encheva & Plamena Zlatkova, University of Library Studies and Information  
Technologies (ULSIT), Bulgaria;  
Nilgun Ozdemar-Keskin & Ilker Vatansever, Anadolu University, Turkey

Creating Together: Design- and User-Centered Innovation Approaches  
for New eLearning Products and Services..........................................................................................14  
Michael Leitner, CREATE 21st century, Austria; Özge Subasi, TU Vienna, Austria

Education Through Entertainment: Promoting Learning Through the  
Use of Creative and Engaging Online Resources ..............................................................................16  
Gary Morris, University of Leeds, UK

The Norwegian Virtual School: Data-Driven Real-Time Teaching. A New Teacher Role ............ 17  
Morten Oddvik, Nettskolen Vestfold, Norway
Empowering the Learner in Higher Education Through Blended Learning

Ron Owston, Contact North/Contact Nord, Canada

Putting Change in the Hands of Youth

Chandra Rinie Pudjiatie, Aflatoun International, The Netherlands

How to Review Learning Technology from a Pedagogical Perspective?

Wilfred Rubens, WilfredRubens.com, The Netherlands

Are Early Warning Systems Too Late?

Perry Samson, University of Michigan, USA

Moodle LMS Data Used in Predictive Analysis to Indicate Students Likely to Interrupt Studies

Lasse Seppänen, Häme University of Applied Sciences (HAMK), Finland

Improving Quality in Online Learning: Introducing EOCCS - Online Course Certification System

Anne Swanberg, EFMD Global Network, Switzerland

Blended Learning: The Student Owning their Learning Environment

Hans van Bergen, Utrecht University of Applied Sciences - Faculty of Education, The Netherlands

Blended Learning in Large Classes: Will it Work?

Erik Wilberg, BI Norwegian Business School, Norway

Business EDUCA

Learning & Development in the Digital Age

Sina Fäckeler, AXA Konzern AG, Germany

Owning Learning: the Learning Solution Designer Profile Perspective

Eran Gal, Holon Institute of Technology, Israel
Learning for Business Enhancement .................................................................35
Anna Garseth, DNV GL, Oil & Gas, Norway

Building an Organisation Learning Brand ..............................................................36
Salima Nathoo, Global Learning Leader & Futurist, Canada; Marcia Conner, Consultant, USA

From Learning to Performance: Aligning Work with Cognition ................................37
Clark Quinn, Quinnovation, USA

Developing Emerging Leaders: Getting Your Best Talent to Crack Organisational Challenges ......38
Sandra Ribon Christensen, United Nations Office for Project Services (UNOPS), Denmark

Handing over Controls: Digital Learning in the Hands of the Users ................................40
Snorre Rubin, RegionH E-læring, Denmark

Data ......................................................................................................................43

The Contributions of Data Visualization & Learning Analytics for Online Courses ..................43
Ruth Cobos, Universidad Autónoma de Madrid, Spain

Gaming Learning Analytics ..................................................................................46
Manuel Freire, Universidad Complutense de Madrid, Spain

Bringing XAPI into Higher Education: Learning Analytics, Ownership and Privacy ..................48
Christian Glahn, University of Applied Sciences HTW Chur, Switzerland

The Learning Analytics Blueprint: Moving Your Data Strategy From Concept to Practice ..........51
Michael Moore, D2L, Canada

Behaviour Analytics and Visual Analytics to Improve the Learning Process ..........................52
Pedro Muñoz Merino, Universidad Carlos III de Madrid, Spain
Legal Uncertainty in E-learning Environments ..............................................................54
Paul Przemyslaw Polanski, Kozminski University, Poland

Learning Analytics in Language MOOCs ........................................................................57
Edmundo Tovar, Universidad Politécnica de Madrid, Spain; Rosa Cabedo, Gallén, Spain

Design...................................................................................................................................60

Formative Assessment Strategy in an Online Setting ..........................................................60
Marius Boboc, Cleveland State University, USA

Streamlining the Learning Design Process ......................................................................62
Ferry Boschman & Erik Schakelaar, University of Applied Sciences Windesheim, The
Netherlands; Sarah Grund & Sara Thornes, Leeds Beckett University, UK

Ecology of Online Collaboration and Peer Dynamic Assessment ....................................63
Mark de Boer, Akita International University, Japan

Together, Better - Using Service Design to Give Power to Your People ..........................64
Dom Graveson & Ian Wigston, Hominal, UK

Enhancing the Effectiveness of Learning Design via Peer Review Activities: 
a Module Review Template Approach ..............................................................................65
Stylianos Hatzipanagos & Mark Russell, King's College London, UK

Is Virtual the Next Mobile? Students’ Expectations Towards Digital Distance Learning ........67
Philipp Höllermann, International University Bad Honnef - Bonn (IUBH), Germany

Design Thinking: The Creative Power of Teams ...............................................................70
Ulrich Weinberg, HPI School of Design Thinking, Germany
Engagement

All Aboard! Empowering Learners and Teachers to Flourish in the Digital Age
Leone Gately, University College Dublin, Ireland; Iain MacLaren, National University of Ireland, Galway, Ireland

Peer-to-peer Learning and Teaching through Video and its Potential for Education
Paula Laurel Jackson, Kiddify, Germany

To Own the Learning, we Must Learn to Un-learn and Enjoy to Re-learn
Jill Margerison, The Southport School, Australia; Scott McDonald, Australia

Serious Games and Serious Game Jams: Free Resources and Building Your Network
Stefano Menon & Matteo Uggeri, Fondazione Politecnico di Milano, Italy

The Global Classroom: Engaging the Students, Exploring the Possibilities
Ann Michaelsen, Sandvika vgs, Norway

Youth Employability and Inclusion: Platforms and Networks for Online Learning
Bastian Pelka & Eva Wascher, Technische Universität Dortmund - Sozialforschungsstelle, Germany

Empowering Today's Students Through Independent Study
Andrew Robinson, Cengage EMEA, UK

Engaged, Collaborative Learning Organised by Students?
Helle Rootzen & Sidsel-Marie Winther-Prag, Technical University of Denmark, Denmark

Voucher Education: Students as Leading Change Agents in Personalised Medical Education
Renske Wiersema, Jasper Hollenbeek Brouwer & Simone Kersten, University Medical Centre Groningen, The Netherlands
Becoming a True Learning Organisation? An OEB Community World Café........................................86
Ursel Biester & Soledad Pons, Somos Más Europa, Germany;
Irene Zurborn, Ceddet, Spain; Felipe Duarte, Somos Más Europa, Brazil

BYOD and Teaching Practices – How Do Students’ Own Devices Change Learning Space Design?.87
Harri Kuusela, Lahti University of Applied Sciences, Finland

The Latest Trends: Insights from The Company of Thought ............................................................92
Bob Little, The Company of Thought, UK;
An Coppens, The Company of Thought, Belgium;
Iva Matasic, The Company of Thought, Croatia;
Debbie Richards, The Company of Thought, USA;
Graeme Coomber, The Company of Thought, Australia

New Teaching Practices, Innovative Classrooms, Mobile Learning: SMART Teaching ......................93
Federica Oradini & Gunter Saunders, University of Westminster, UK

Owning Learning. From Teacher-Control to Learner-Control: How to Make the Shift? ....................94
Wim Trooster, Marlieke Edam, Thóra Eymundsson, Geert Holwerda,
Erik Ploeger & Diane van der Linde, Windesheim University of Applied Sciences, The Netherlands

Initiatives for Displaced Populations to Own Learning .....................................................................95
Vincent Zimmer, Kiron Open Higher Education gGmbH, Germany

Open ...............................................................................................................................................97
Engagement in MOOCs? How Designing for Fun and Elements of Gamification Changes the Perspective ...................................................................................................................97
Roberto M. Alvarez Bucholska, IE Business School Publishing, Spain
Open Badges for Distributed Assessment of 21st Century Skills ................................................................. 98
Ilona Buchem, Beuth University of Applied Sciences Berlin, Germany

Towards Openness: How Can We Be Open and Safe in Online Learning? ....................................................... 100
Christian Friedrich, Hamburg University of Technology & Leuphana University, Germany;
Kate Green, University of Nottingham, UK

Who Killed the MOOC? Join the Jury .............................................................................................................. 102
Wolfram Laaser, Akademischer Direktor i.R., Fernuniversität in Hagen, Germany

Organisational MOOCs (oMOOC) and VR Video for Professional Development ............................................. 105
Vegard Meland, John Trygve Aavik & Egil Weider Hartberg, Lillehammer University of Applied
Sciences - Centre for Lifelong Learning, Norway

The Value and the Price: Discussing Open Online Courses ............................................................................ 106
Brian Mulligan, Institute of Technology Sligo, Ireland

Who Killed the MOOC? Join the Jury .............................................................................................................. 107
Brian Mulligan, Institute of Technology Sligo, Ireland

Driving Large Scale Open Education and MOOC Initiatives ........................................................................... 108
Taras Pustovoy & Anna Manaenkova, Moscow Institute of Physics and Technology (MIPT),
Russia; Vasily Tretyakov, Ural Federal University, Russia

“Affordances” of the Media: Creating a Unique Audiovisual Educational Experience .............................. 110
Jeanine Reutemann, University of Applied Sciences and Arts - The Basel School of Design,
Switzerland

Driving Large Scale Open Education and MOOC Initiatives ........................................................................... 111
Martin Riemer, University Medical Center Hamburg-Eppendorf (UKE), Germany

Driving Large Scale Open Education and MOOC Initiatives ........................................................................... 112
Anne Swanberg, EFMD Global Network, Switzerland
Who Killed the MOOC? Join the Jury

Jeanny Wildi-Yune, KPMG AG Wirtschaftsprüfungsgesellschaft, Germany

Skills

Training Made Accessible: OpenClassrooms Trains Unemployed in France
Natalie Cernecka, OpenClassrooms, France

Improving Knowledge Translation, Communication and Patient Flow by Connecting Learners in the Interprofessional Shoulder Community
Dorien Elise Ginsel & Henri Kiers, University of Applied Sciences Utrecht, The Netherlands

AI and Ownership for Educators
Harri Ketamo, HeadAI ltd., Finland;
Jari Multisilta, University Consortium of Pori, Finland

AI and Ownership for Educators
Claudia Moessenlechner, Management Center Innsbruck, Austria

The Digital World and Education: Engaging Learners Through Digital Narratives
Hoda Mostafa, The American University in Cairo, Egypt;
Aziza Ellozy, American University in Cairo, Egypt

Impacting Lives: Employee Engagement Makes the Quadruple Aim
Mary Myers, Kingston General Hospital, Canada

Are Senior Citizens Forgotten in Social Media? A Knowledge Exchange on e-Inclusion Practices
Ida-Maria Pankka, Jouni Ahonen, Riikka Marttinen & Marja Pakarinen, LähiVerkko Project, Finland

Engagement Before Ownership: Reflections on Participatory Radio as a Learning Intervention with Disenfranchised Groups
Andrew Ravenscroft, James Dellow & Colin Rainey, University of East London, The Cass School of Education and Communities, UK
A Cost Effective Way to Apply Non-linear Story Telling in Medical Education

Herwig Erich Rehatschek, Barbara Hallmann, Stefan Heschl, Ursula Leopold, Michael Schörghuber & Paul Zajic, Medical University of Graz, Austria

Adaptive Learning in Emergencies: Case Study of Online Higher Education for Syrian Refugees in Jordan

Sally Ward, British Council, United Arab Emirates; Paula Morais, Denmark

Solutions

Major Challenges in Higher Education: Quality and Scaling Up

Vinayagum Chinapah, Stockholm University - Institute of International Education: Department of Education, Sweden; Henrik Hansson, Stockholm University, Sweden; Ranil Peiris Colombage, Stockholm University, Sri Lanka; Koos Kruithof, Turnitin, The Netherlands

Effective Integration of ICT in Education Using Learning 6.0 Package - Computer Applications for Science Education

Emile Comlan, Novoasoft, Benin

Shareville: Enhancing Student Learning Experience Through Online Realistic Scenarios and Simulations

Dario Faniglione, Birmingham City University, UK

Digital Learning in Haiti

Ann-Katrin Hardenberg, THE MAK'ED TEAM - WE MAKE EDUCATION, Germany

Owning Learning in Africa: A Case Study of FunDza's Online Reading Portal

Mignon Hardie, FunDza Literacy Trust, South Africa

Edupreneurs and Their Take on Learning

Kirsten Heiss, OpenCampus GmbH, Germany
Using Simulation Games and Learning Analytics at Utrecht University ................................................. 147
Johan Jeuring, Utrecht University, The Netherlands

Tech LAB on App Development in the Classroom (BYOD)...................................................................... 149
Diana Knodel & Philipp Knodel, App Camps, Germany

Edupreneurs and Their Take on Learning ............................................................................................... 151
Jon Lacivita & Judson Garrett, Proctorio, USA

The Flipped Lab: Re-Imagining Science Education with Blended Next-Generation Virtual Laboratories ............................................................................................... 153
Mikkel Marfelt, Labster, Denmark

Engaging Students and Alumni Nationwide with a Single Mobile App, Case Tuudo & Finland .....154
Iikka Meriläinen, Caleidon Ltd, Finland

Large Scale National Assessment Using Open Source: a Case Study.................................................... 155
Mark Molenaar, Open Assessment Technologies S.A., Luxembourg

Inspired Learning. Next Generation Digital Learning Environment ........................................................... 156
Ebba Ossiannilsson, Mentorix, Sweden; Nick Etlar Eriksen, MENTORIX, Denmark

Create Your Own Dynamic Podcast in Our Tech LAB........................................................................... 159
Kim Blanksø Pedersen, University College Sjælland, Denmark

Design Skills for Making Great Mobile Learning Apps ............................................................................. 160
Eva Poxleitner, Fraunhofer Gesellschaft - Department: Fraunhofer Academy, Germany

Multimodal Interaction and Personalised Learning .................................................................................... 161
Merja Saarela, Häme University of Applied Sciences (HAMK), Finland

Learning Experience Design: 4 Ways of Innovative State of the Art Learning Strategies....................... 164
Christoph Schmidt-Martensson, CREATE.21st century, Austria
Smart Universities
Dorthe Skovgaard Lund, Jens Dahlstroem & Anders B. Moeller, Technical University of Denmark, Denmark

Edupreneurs and Their Take on Learning
Martijn Slob, AlgebraKIT, The Netherlands

Learning, Design and Cognition: Designing Digital Education Resources for Africa and the Middle East
Corrin Varady, African Digital Content Holdings, Mauritius

TrainTool: Effective Online Soft Skills Development for Everyone
Dirk Verweij, TrainTool, The Netherlands

Various
DistancE-Learning in Europe - Exchanging Experiences and Knowledge
Kirsten Huter, Institut für Lernsysteme (ILS), Germany

Serious e-Learning: Integrating Learning Science with Experience Design
Clark Quinn, Quinnovation, USA

More Than Blended Learning: Designing Effective Workplace Learning
Clive Shepherd, The More Than Blended Learning Company, UK
Video EDUCA ......................................................................................................................... 179

Tech LAB on Motivating Learners Through Video ................................................................. 179
Peer Sverre Andersen, Nils Henry Rasmussen & Siv Svendsen, University College of
South-East Norway, Norway

Modern Mathematics Teaching: "It's all Digital" ..................................................................... 180
Morten Brekke, University of Agder - MatRIC, Norway

Make Sense of Online Video .................................................................................................... 182
Marie Dysgaard Christiansen, KEA - Copenhagen School of Design and Technology, Denmark

A Flipped Approach to Higher Education ............................................................................ 184
Caroline Fell Kurban & Joshua Shannon-Chastain, MEF University, Turkey

Coining the Concept: Tech LAB on Concept Building for Educational Video ....................... 184
Uffe Frandsen & Anders Thiel, University College Sjælland, Denmark

Look at Me and Pay Attention! Enriched Video on the Online Platform Scalable Learning ........ 185
Marjolein Haagsman, Utrecht University, The Netherlands;
Mabelle Hernández, Utrecht University - Educate-it, The Netherlands

Choosing the Right Digital Media to Engage Learners Locally and Globally:
Our UBC Experience ............................................................................................................... 187
Claudia Krebs, University of British Columbia, Canada

Resource and Profitability Assessment of Transition to Flipped Video-based Lecturing ........... 189
Iuliia Shnai, Lappeenranta University of Technology (LUT), Finland