



TEAMWORK
SERIOUSLY
AFFECTS
YOUR BRAIN

ANNUAL REPORT 2014

**AALBORG CENTRE FOR PROBLEM BASED LEARNING
IN ENGINEERING SCIENCE AND SUSTAINABILITY
UNDER THE AUSPICES OF UNESCO**



United Nations
Educational, Scientific and
Cultural Organization



AALBORG UNIVERSITY

• Aalborg Centre for Problem Based Learning
• in Engineering Science and Sustainability
• under the auspices of UNESCO

CONTENTS

CONTENTS	2
1. PREFACE	3
2. STAFF	4
3. ORGANISATION	5
4. GLOBAL NETWORK	6
5. RESEARCH AND PHD TRAINING	7
5.1. PHD PROGRAMME	7
5.2. EXTERNALLY FUNDED RESEARCH PROJECTS	8
6. ENGINEERING AND SCIENCE EDUCATION FOR SUSTAINABILITY	9
7. PBL AND STAFF DEVELOPMENT INTERNALLY AND EXTERNALLY	10
8. KEYNOTES AND PARTICIPATION IN CONFERENCES	13
9. VISITS TO AALBORG UNESCO CENTRE	13
10. PUBLICATIONS	14
11. APPENDICES	16

1. PREFACE

It gives us great pleasure to announce that on 26 May 2014 the new Aalborg Centre for Problem Based Learning in Engineering Science and Sustainability, under the auspices of UNESCO, (hereafter Aalborg Centre) was formally launched. The Aalborg Centre was formally opened by the Minister Sofie Carsten Nielsen, Ministry of Higher Education and Science, Professor Maciej Nalecz, Director of Science Policy and Capacity Building, UNESCO, and Rector Per Michael Johansen, Aalborg University. More than 125 participants, including national and international partners, from the private and public sectors participated in a series of workshop and conference activities at Aalborg University.

The inauguration of this new Aalborg Centre is the result of a long application process lead by the UNESCO Chair in Problem Based Learning (PBL) in Engineering Education. Since 2009, the UNESCO Chair in PBL realised that the amount of activities and the organisational structure would match a centre construction more than a professorship. In 2012, Aalborg University therefore applied for a UNESCO Category 2 Centre. The UNESCO Chair invested in this application process and, in November 2013, the UNESCO General Conference finally approved the Centre.

The first year will be a transitional period moving activities from the UNESCO Chair in PBL to the Aalborg Centre. The Aalborg Centre builds on the work carried out by the UNESCO Chair in PBL by continuing the previous activities and establishing a series of new activities within sustainability and PBL for primary and secondary schools. The UNESCO Chair in PBL has a specific function within the Centre, helping to develop the leadership of the Centre in PBL especially for developing the interdisciplinary research programme and research training.

With the establishment of the Aalborg Centre, the scope of the activities have been broader and especially two aspects are important to mention: 1) Education for Sustainable Development is now one of the core pillars in the research profile and subsequently in the educational activities, 2) Outreach to schools and high schools is an areas that we will focus more on – especially STEM (Science Technology Engineering and Mathematics) and PBL.

Change in engineering and science education happens all over the world. The Aalborg Centre will contribute to the worldwide movement for educating scientists and engineers that are capable of developing technological solutions responding to sustainable and societal issues. It is the aim of the Aalborg Centre to act as a catalyst and agent of organisational change towards more student centred learning and sustainability within engineering

and science. That aim will involve research on and dissemination of knowledge of existing changes in different parts of the world. The change to student centred learning is a complicated process as it involves both new ways of organising the learning and new interaction in the organisation. The change agenda also involves education of change agents that can work on the cultural and disciplinary boundaries. The education of change agents will be done by both the PhD programme as well as the Master programme, where the participants will learn theory, research methodologies and contextual change strategies.

2014 has been dominated by establishing the Aalborg Centre. Three organisational bodies have been established:

- The Advisory Board which is the governing body. The members of the Advisory Board come from UNESCO member states, UNESCO and Aalborg University. The first meeting was held 27 May 2014.
- The Consultative Committee with more than 35 experts from all regions in the world and representing academia and the private and public sectors. Communication among the members of the Consultative Committee is done by virtual means.
- Finally, there is an internal Management Committee with members from Aalborg University and the taskforce leaders having meetings twice a year.

Several business plans have been developed: Strategic Plan 2014–2020 and Work Plan 2014–2015. Both plans have been discussed in the Advisory Board and Consultative Committee and have been developed further based on the response. Furthermore, the Aalborg Centre has set up six task forces and developed the Task Force Plan 2014–2015. The six task forces have been established and kicked off in late 2014. There are task forces for:

- 1) Global Network,
- 2) Research Strategies,
- 3) PhD Training,
- 4) Training of Sustainability,
- 5) Training of PBL
- 6) Outreach

All the task forces have developed action plans and the future work will be organised with this frame. The Strategic Plan and the Work Plan are available at the homepage: <http://www.ucpbl.net/about/organisation/strategic-plan/>, http://www.ucpbl.net/digitalAssets/109/109312_work-plan_june2014.pdf

2. STAFF

ACADEMIC STAFF



Anette Kolmos
Director, Professor



Erik de Graaff
Professor



Lars Bo Henriksen
Professor



Tony Marjoram
Guest Professor



Roger Hadgraft
Professor, RMIT,
Adjunct Professor



Jette Egelund Holgaard
Associate Professor



Mona Dahms
Associate Professor



Bettina Dahl Søndergaard
Associate Professor



Pia Bøgelund
Part-time Assistant Professor



Aida Guerra
Research Assistant



Claus Spliid
Teaching Assistant Professor



Steen Hyldgaard Christensen
Associated Adjunct Assistant
Professor



Fenzhi Zhang
PhD Student



Jan Schlünssen
PhD Student



Bente Nørgaard
PhD Student



Shota Furuya
PhD Student



Vikas Shinde
PhD Student



Prarthana Coffin
PhD Student



Mohamad Termizi Borhan
PhD Student



Annette Grunwald
PhD Student



Mahyuddin Bin Arsat
PhD Student



Christina Madsen
PhD Student



Hashim Bin Mohamad
PhD Student



Kjell Staffas
PhD Student



Ron Ulseth
PhD Student



Bart Johnson
PhD Student

ADMINISTRATIVE STAFF



Marianne Nyborg



Morten Andersen



Anni Møller Brændstrup

3. ORGANISATION

The Aalborg UNESCO Centre is managed by an Advisory Board supported by a consultative committee and a management board.

Advisory Board:

Dean of the Faculty of Engineering and Science, Aalborg University, Eskild Holm Nielsen (Chair)

Representative of UNESCO:

Professor Maciej Nalecz, Director, Division of Basic & Engineering Sciences UNESCO

UNESCO member states:

Vice Chancellor, Professor William Otoo Ellis, KNUST Ghana
Professor and President of the Chinese Society of Education, Zhong Binglin, Beijing Normal University
Former Vice Chancellor of the Peninsula Technikon, Brian Figaji,
Vice President of the Engineering Council of South Africa and member of the UNESCO Executive Board for South Africa

Aalborg University:

Head of School, Henrik Brohus
Head of PhD School, Jes Vollertsen
Head of Department, Lars Bodum
Professor Erik de Graaff

Consultative Committee:

The Aalborg Centre has established a Consultative Committee involving around 40 wide-ranging specialists in PBL, sustainability, engineering and science education from academia, industry and professional organisations around the world. For the list of members please see:

<http://www.ucpbl.net/about/organisation/consultative-committee/>
<http://www.ucpbl.net/about/organisation/consultative-committee/>

Management Committee:

There is also an internal AAU Management Committee consisting of the leaders of the different task forces and AAU representatives across the engineering and science departments and schools. For members of the Management Committee please see:

<http://www.ucpbl.net/about/organisation/management-committee/>



4. GLOBAL NETWORK

The development of a global network is one of the main activities of the Aalborg Centre. The objectives of the global network are to bring researchers, teachers, practitioners, companies and policymakers together to share knowledge and experiences on how to develop engineering and science education.

THE 5TH INTERNATIONAL RESEARCH SYMPOSIUM ON PROBLEM-BASED LEARNING 2015

The 5th International Research Symposium on Problem-Based Learning (IRSPBL) will take place in Donostia, San Sebastian, from 6–10 July 2015. This is a joint conference on the Learner in Engineering Education together with Active Learning in Engineering (ALE) and Project Approaches in Engineering Education (PAEE) hosted by Mondragon University. This is an extraordinary activity to combine these three organisations which are all working for change in engineering and science education and an important international signal.

By December 2014, a total of 233 abstracts, which have authors from 42 different countries, had been submitted for the three conferences.



WEBINARS

In September 2014 the Aalborg Centre organised and hosted its first webinar on the theme of PBL history and diversity. The webinar initiative aims to strengthen and develop the Aalborg Centre for PBL, Engineering Education Research (EER) and Education for Sustainable Development (ESD).

The Aalborg Centre makes previous webinars available as open access resources. Fifteen to twenty people participate each time, and it has provided great experience in running webinars. There have been participants from all regions of the world taken part.

The following webinars have been held:

- 25 September: Introduction to PBL and change strategies, Anette Kolmos, Aalborg University
- 24 October: History of PBL, Virginie Servant, Erasmus University
- 18 November: PBL models and professional practices: Aalborg and Maastricht Universities as examples, Erik de Graaff, Aalborg University
- 17 December: PBL in medical education: The McMaster experience, David Kwan, Santou University and McMaster University

VISITORS' WORKSHOP

Twice a year, visitor workshops are planned; see list of visitors in the appendices. The visitor workshops are working well: each time there are around 15–20 people participating and engaged in discussion on PBL, change and creating contacts and networks.

OPEN SOURCES

The Aalborg Centre wants to offer free and open access to a series of resources on PBL and education for sustainability. During 2014, we have been applying to the Grundfos Foundation for a donation to the development of IT based cases. We are very grateful for receiving a donation from the Grundfos Foundation to sponsor open sources on sustainability. This has been approved for early 2015.

Otherwise, the open source policy at the Aalborg Centre is to record guest speakers, PhD defences and webinar presentations and give open access to these afterwards.

5. RESEARCH AND PHD TRAINING

A new profile for the research programme has been developed anchored in three core research fields: problem and project based learning, engineering education research and education for sustainable development. There will be activities within each of the isolated fields and across the fields.

Several applications have been handed in during 2014 and the application plan for 2015 has been developed.

5.1. PhD PROGRAMME

During 2014 five PhD students defended their PhD theses:

Mahyuddin Bin Arsat: "Effectiveness of Sustainability Incorporation in Engineering Curricula: A Framework for Course Design" on 3 June

Aida Guerra: "Problem Based Learning and Sustainable Engineering Education: Challenges for 21st Century" on 4 June

Mohamad Termizi Bohan: "Problem Based Learning (PBL) for Malaysia Teacher Education: Design, Implementation and Evaluation" on 1 October

Vikas Vithal Shinde: "Design of Course Level Project Based Learning Models for Indian Engineering Institutes: An Assessment of Students' Learning Experiences and Learning Outcomes" on 2 October

Jan Schlünssen: "A Conceptualization of Effectuation through an Analysis of the Entrepreneurial Process – From Being a Student to Becoming a Founder, CEO and a Multimillionaire" on 10 November

The UNESCO Chair accomplished a joint PhD programme with UTM, Malaysia. There have been several trips to Singapore and Malaysia to promote this new programme. We are aiming for new enrolments on this programme during 2015 and 2016.

PHD COURSES

At the Aalborg Centre, several PhD courses are run by staff members:

- Research Design
- Professional Communication
- Project Management for PhD students
- Design-based Research, which has been running as a mixed distance and face-to-face learning mode
- Engineering Education – History, Reforms and Future Challenges runs as a full distance learning course 2014–2015
- Individual supervision

The Aalborg Centre is working on a specific PhD certificate aimed at PhD students at the Doctoral School in the Faculty for Engineering and Science. This certificate will worth 10 ECTS credits for course work on sustainability and PBL. This certificate is still in pipeline due to funding issues.

Furthermore, the Aalborg Centre is working on online PhD courses to facilitate distance PhD students. We have had our first experience with full distance learning courses and we will develop further. A further programme will follow in 2015.





5.2 EXTERNALLY FUNDED RESEARCH PROJECTS

A few of our externally funded projects are highlighted here. To see them all please go to: <http://www.ucpbl.net/research/research-projects/>

OBEL SPONSORED PROFESSORSHIP

The OBEL Family Foundation has offered to sponsor a UNESCO Professorship from 2014 to 2019 to lead the Aalborg Centre. We are very grateful for this donation as it strengthens the leadership of the research profile of the Centre.

GRUNDFOS

The Poul Due Jensen Fond has given a donation which will be used for developing an interactive, "free", open source website with an in-depth case study of the Shanzu project in Kenya. The case will be an interactive digital study of many of the dilemmas that engineers face in their work. It will be based on a Grundfos donated project at Shanzu that has sponsored a renovation of the water and energy system and installed high technology pumps. However, the installation of the pumps was not without difficulties – and this is the case that will be described and is the starting point for the students' learning process.

BUILDING STRONGER UNIVERSITIES (BSU)

The Danish International Development Agency (DANIDA) offers funding for capacity building at university level in a series of African and Asian universities. The Centre is involved in activities concerning training of academic staff in e-learning and PBL at seven African universities and capacity building within research and education at Kwame Nkrumah University of Science and Technology (KNUST), Ghana.



THE DANISH ENERGY FOUNDATION

Practice-oriented teaching networks – learning in reality – strengthen primary and secondary school pupils' interest in climate and science.'

The aim of the project is to:

- Develop, establish and explore new forms of local cooperation between schools, companies, Aalborg University, and municipalities on energy and climate, and by means of these network engaging youth on science and climate subjects.
- Develop science teaching with a problem based approach where teaching in classroom is integrated with practical learning outside school.

Identify barriers and opportunities for cooperation between these actors, and develop tools that address barriers and exploit the opportunities.

MAPPING STUDIES OF PBL IN AFRICAN AND SOUTH AMERICAN UNIVERSITIES

Two new projects will be started in 2015 – both are mapping studies of PBL. The first one will be a mapping of PBL and innovation in Engineering Education in the South American region and the other one will be a mapping of PBL the African region across subject fields. There are no such studies in the moment and it is a way of making regional experiences and resources visible.

6. ENGINEERING AND SCIENCE EDUCATION FOR SUSTAINABILITY

In 2014 the Task Force for Engineering and Science Education for Sustainability was established and the following activities were carried out:

- Mapping of staff development activities in Higher Education Institutions (HEI) in Denmark as part of an EU project.
- A comparative study of the strategies to implement sustainability in HEI in Denmark and Australia based on a network approach.
- Fundraising to support new ways of integration of sustainability in Engineering Education.

In 2015, the focus will be on creating an understanding of the inter-linkages between sustainability and specific disciplines and applying this knowledge in at least three case-experiments to integrate sustainability in specific programmes. In parallel to this, the fundraising in 2014 has resulted in funds from the Grundfos Foundation to provide a case-based online learning platform based on PBL principles. This educational platform for ESD will be open-source and is targeted to a worldwide community of engineering educators and students.

7. PBL AND STAFF DEVELOPMENT INTERNALLY AND EXTERNALLY

In 2014, there was both AAU-internal PBL training and external training. Internally at AAU, there is collaboration with the AAU Learning Lab and the AAU-PBL Academy (responsible for pedagogical training and PBL activities for academic staff across the entire university).

Seven students have been enrolled in the Master in Problem Based Learning (MPBL) and will experience an entire new curriculum with new courses on aspects of PBL. The MPBL is still a fully online programme. The aim of the MPBL is to support

participants in achieving skills and competences for changing to PBL at a course level as well as at a curriculum level. For more information about the Master in Problem Based Learning please see here: <http://www.mpbl.aau.dk/>

Externally, many workshops have been held at many continents. Below are some of the highlights in 2014. The full list is available at: <http://www.ucpbl.net/about/brochures-annual-reports/>



27 MAY

AALBORG UNIVERSITY, DENMARK
Symposium on the Aalborg Model of
Problem Based and Project Based Learning
at the launch of the UNESCO Centre
for PBL and Sustainability
Erik de Graaff



**31 JULY –
2 AUGUST**

MAE FA LUANG UNIVERSITY, THAILAND
PBL facilitation workshop

Claus Monrad Spliid,
Mohamad Borhan,
Prarthana Coffin



**30
OCTOBER**

AALBORG UNIVERSITY, DENMARK
PBL visitor workshop

Anette Kolmos, Erik de Graaff,
Claus Spliid, Lars Bo Henriksen,
Mona Dahms



**5-7
NOVEMBER**

**TOMSK POLYTECHNIC
UNIVERSITY, RUSSIA**
**PBL facilitation and PBL
in engineering education**
Anette Kolmos, Erik de Graaff



**10-12
NOVEMBER**

**BSU; KWAME NKURUMAH
UNIVERSITY OF SCIENCE
AND TECHNOLOGY (KNUST), GHANA**
**Workshop on e-learning and
problem based learning**
Mona Dahms



8. KEYNOTES AND PARTICIPATION IN CONFERENCES

In 2014 eight keynotes were given. The full list is available at:
<http://www.ucpbl.net/about/brochures-annual-reports/>

Staff from the Centre have participated in 13 conferences all over the world in 2014.
The full list is available at: <http://www.ucpbl.net/about/brochures-annual-reports/>

9. VISITS TO AALBORG UNESCO CENTRE

Every year, the Aalborg Centre is the host of visitors, and in previous years we have had around 30 groups coming in. After the start of visitor workshops, which are held twice a year, the number of visits has been reduced.

This year, the Aalborg Centre has been responsible for organising
11 visits to Aalborg University.

10. PUBLICATIONS

- Arsat, M. B. (2014). *Effectiveness of Sustainability Incorporation in Engineering Curricula: A Framework for Course Design*. Aalborg: Department of Development and Planning, Aalborg University.
- Bayard, O., Areskoug, M., Nørgaard, B., Jensson, P., Hannemose, N., & Reynisdóttir, K. (2014). KNOWLEDGE TRANSFER AND DELIVERY FORMS FOR CONTINUOUS EDUCATION IN SMALL AND MEDIUM SIZED ENTERPRISES. *Swedish Production Symposium 2014*.
- Borhan, M. T. (2014). *Ph.D: Problem Based Learning (PBL) for Malaysia Teacher Education: Design, Implementation, and Evaluation*. Aalborg: Department of Development and Planning, Aalborg University.
- Bøgelund, P. (2014). Flere og mere internationale ph.d.-studerende - Hvad betyder det for ph.d.-vejledningen. *Dansk Universitetspaedagogisk Tidsskrift*.
- Bøgelund, P. (2014). How Supervisors Perceive Phd Supervision – And How They Practice It. *International Journal of Doctoral Studies*.
- Bøgelund, P. (2014). *Instruction for PhD Supervisors – A Practical Guide to Prepare You for Collaboration with PhD Students*. Aalborg: Aalborg University.
- Bøgelund, P. (2014). *Introduction for International PhD Students – A Brief Guide to Prepare You for a New Working Environment*. Aalborg: Aalborg University.
- Christensen, O. R., & Henriksen, L. B. (2014). Mathematics in Context: Learning University Mathematics through Problems. *Nordisk matematikdidaktikk*.
- Dahl, B. (2014). Assessment of University Students' Teamwork Competencies in Group Projects. In S. Oesterle, C. Nicol, P. Liljedahl, & D. Allan (Eds.), *38th Conference of the International Group for the Psychology of Mathematics Education & 36th Conference of the North American Chapter of the Psychology of Mathematics Education 6* (p. 53). Vancouver: The International Group for the Psychology of Mathematics Education.
- de Graaff, E., & Kolmos, A. (2014). Innovation and Research on Engineering Education. In J. Spector, M. Merrill, J. Elen, & M. Bishop, *Handbook of Research on Educational Communications and Technology* (pp. 565–571). New York: Springer Science + Business Media B.V.
- Edström, K., & Kolmos, A. (2014). PBL and CDIO: Complementary Models for Engineering Education Development. *European Journal of Engineering Education*.
- Geschwind, L. A., & Kolmos, A. (2014). Higher Education Research and Engineering Education Research: Comparative Perspectives. *SEFI: European Association for Engineering Education Annual Conference* (p. 45).
- Gosses, M., Sjoer, E., & Nørgaard, B. (2014). A New Conceptual Model for Finding and Fostering the Drives towards CEE. *IACEE14th World Conference on Continuing Engineering Education* (p. 91). Stanford University.
- Guerra, A. (2014). *Problem Based Learning and Sustainable Engineering Education: Challenges for 21st Century (Vol. I & Vol. II)*. Aalborg: Department of Development and Planning, Aalborg University.
- Henriksen, L. B. (2014). Conceptualising Engineering As 'Spiel' and Disclosure: On Engineers, Technologies and Processes. In K. M. Jørgensen & C. Largacha-Martinez, *Critical Narrative Inquiry: Storytelling, Sustainability and Power* (pp. 229–242). Nova Science Publishers, Incorporated.
- Holgaard, J. E., Laursen, E., Ryberg, T., & Stentoft, D. (2014). Morgendagens problembaserede læring. In I. Askehave, *Aalborgmodellen: problembaseret læring* (pp. 26–30). Aalborg: AAU Kommunikation, Aalborg University.
- Holgaard, J. E., Ryberg, T., Stegeager, N., Stentoft, D., & Thomasen, A. O. (2014). *PBL: Problembaseret læring og projektarbejde ved de videregående uddannelser*. Frederiksberg: Samfundslitteratur.
- Jamison, A., Kolmos, A., & Holgaard, J. E. (2014). Hybrid Learning: An Integrative Approach to Engineering Education. *Journal of Engineering Education*, 253–273.
- Jukic Matic, L., & Dahl, B. (2014). Retention of Differential and Integral Calculus: A Case Study of a University Student in Physical Chemistry. *International Journal of Mathematical Education in Science and Technology*, 45(8), 1167–1187.
- Kolmos, A. (2014). PBL i en global verden. In I. Askehave, *Aalborg Universitet 40 År: Aalborgmodellen – Problembaseret Læring*. Aalborg: AAU Kommunikation, Aalborg University.
- Kolmos, A., & de Graaff, E. (2014). Problem-Based and Project-Based Learning in Engineering Education: Merging Models. In A. Johri & B. M. Olds, *Cambridge Handbook of Engineering Education Research* (pp. 141–161). Cambridge: Cambridge University Press.
- Krogh Hansen, K., Dahms, M.-L., Otrell-Cass, K., & Guerra, A. (2014). *Problem Based Learning and Sustainability: Practice and Potential*. Aalborg: Faculty of Engineering and Science, Aalborg University.
- Krogh Hansen, K., Otrell-Cass, K., Guerra, A., & Dahms, M.-L. (2014). *Good Examples Catalogue: Problem Based Learning and Sustainability in Engineering and Science Education – Practice and Potential*. Aalborg: Faculty of Engineering and Science, Aalborg University.
- Magnell, M., Geschwind, L. A., Gumaelius, L. B., & Kolmos, A. (2014). Faculty Approaches to Working Life Issues in Engineering Curricula. *121st ASEE Annual Conference & Exposition*. Indianapolis.
- Nørgaard, B., Jensson, P., Bayaard, O., & Areskoug, M. (2014). Investigating Requests and Expectations for Future Methods of CEE: In the Perspective View of Scandinavian Managers and Employees. *IACEE 14th World Conference on Continuing Engineering Education*. Stanford.
- Schlünnsen, J. (2014). *Ph.d – Students unLtd: A Conceptualization of Effectuation through an Analysis of the Entrepreneurial Process – From Being a Student to Becoming a Founder, CEO and a Multimillionaire*. Aalborg: Department of Development and Planning, Aalborg University.
- Shinde, V. (2014). *PhD: Design of Course Level Project Based Learning Models for an Indian Engineering Institute: An Assessment of Students' Learning Experiences and Learning Outcomes*. Aalborg: Department of Development and Planning, Aalborg University.



14. APPENDICES

1. WORKSHOPS

24 JANUARY

MMAUA Institute, Sao Paulo, Brazil
IIDEA Workshop on PBL
Mona Dahms, Erik de Graaff

23-24 MARCH

Esprit, Tunis, Tunisia
UCPBL workshop on PBL
Erik de Graaff

27-28 MARCH

Aalborg University, Denmark
PBL Visitors workshop
Anette Kolmos, Erik de Graaff, Claus Spliid, Lars Bo Henriksen,
Mona Dahms

27 MAY

Aalborg University, Denmark
Chair of the Symposium on Problem Based and Project Based
Learning at the launch of the UNESCO Centre for PBL and
Sustainability
Erik de Graaff

18-19 JUNE

TU Berlin, Berlin, Germany
Workshop on PBL
Erik de Graaff

31 JULY – 2 AUGUST

Mae Fa Luang University, Thailand
PBL facilitation workshop
Claus Monrad Spliid, Mohamad Borhan, Prarthana Coffin

6 – 8 AUGUST

University of Dar es Salaam, College of Engineering and
Technology; hosted by Makerere University, Kampala, Uganda
"Problem Based Learning: A teaching and learning tool
for enhancing innovative capacity in EAC higher education
engineering institutions"
<http://www.raeng.org.uk/policy/international-policy-and-development/international-development/programmes>
Mona Dahms

11 – 13 AUGUST

Kwame Nkrumah University of Science and Technology
(KNUST), Ghana
Workshop on e-learning and problem based learning.
Mona Dahms

27 – 29 AUGUST

University of Dar es Salaam, College of ICT, Tanzania
Workshop on e-learning and problem based learning.
<http://www.bup.fi/index.php/baltic-university-programme-in-finland/the-finnish-bup-centre>
Mona Dahms

15 SEPTEMBER

University of Birmingham, UK
IIDEA Workshop on Capacity building
<http://www.birmingham.ac.uk/facilities/mds-cpd/conferences/sefi-2014/index-new.aspx>
Erik de Graaff

30 OCTOBER

Aalborg University, Denmark
PBL Visitor workshop
Anette Kolmos, Erik de Graaff, Claus Spliid, Lars Bo Henriksen,
Mona Dahms

5-7 NOVEMBER

Tomsk Polytechnic University, Russia
"PBL Facilitation and PBL in Engineering Education"
Anette Kolmos, Erik de Graaff

5 – 7 NOVEMBER

Kilimanjaro Christian Medical University College (KCMUC),
Tanzania
Workshop on e-learning and problem based learning.
Mona Dahms

10 – 12 NOVEMBER

BSU; Kwame Nkrumah University of Science and Technology
(KNUST), Ghana
Workshop on e-learning and problem based learning.
Mona Dahms

3 DECEMBER

University of Vic, Spain
Workshop "Project Organise, Problem Based Learning (PoPBL):
Experiences from Aalborg University. Workshop on Problem
identification and problem formulation lead to a project
proposal" in 4th INTERNATIONAL WORKSHOP ON HIGHER
EDUCATION
<http://www.uvic.cat/IW>
Aida Guerra

4-7 DECEMBER

APJC-PBL
Phuket, Thailand
Workshop: WS6-1 : How to bring in reflection on students PBL collaboration
<http://www.2014jointpbl.org/index.php/program-overview/>
Anette Kolmos and Prarthana Coffin

8-12 DECEMBER

Tomsk Polytechnic University, Russia
"Facilitation in a PBL learning environment"
Jette Holgaard, Aida Guerra

2. KEYNOTES

20-22 JANUARY

ALE 2014, Universidade de Caxias do Sul (UCS), Brazil
12th Active Learning in Engineering Education workshop
"Attracting young people to engineering 'Continuing the discourse on activating research"
<http://www.ale2014.com/>
Erik de Graaff and Michael Christie

19 MARCH

Republic Polytechnic, Singapore
"Global Trends in PBL – Challenges and Opportunities"
Anette Kolmos

1-3 APRIL

CSEDU, Barcelona, Spain
"Team Learning in Engineering Education"
<http://www.csedu.org/?y=2014>
Erik de Graaff

8 APRIL

Gdansk University of Technology, Poland
"Changes in Teacher Roles in PBL"
<http://innocase.zie.pg.gda.pl/wordpress/wp-content/uploads/2014/04/Conference-Programmefinal.pdf>
Erik de Graaff

16 – 20 JUNE

Central university of Technology (CUT), Bloemfontein, South Africa
CUT keynote Innovation in Teaching and Learning
Mona Dahms

5 SEPTEMBER

University of Lisbon, University of Aveiro, University of Porto and University of Leiria, Portugal
1st National Congress of Pedagogical Approaches on Higher Education (CNaPPES), "The PBL Aalborg Model". In Diário Económico
Aida Guerra

27 – 29 OCTOBER

Baltic University Program (BUP), Rogow, Poland
Workshop on problem based learning in connection with the Teacher Training Conference on Education for Sustainability.
<http://www.bup.fi/index.php/sd-esd-resources/post-conference-info>
Mona Dahms

4-7 DECEMBER

Phuket, Thailand
APJC-PBL
"Strategies for Change to PBL at Course and Institutional Level"
<http://www.2014jointpbl.org/index.php/program-overview/>
Anette Kolmos

3. PARTICIPATIONS IN CONFERENCES

16-17 JANUARY

Chalmers University, Sweden,
European Regional CDIO Meeting
Anette Kolmos, Jette Holgaard

20 – 22 JANUARY

Universidade de Caxias do Sul, Brazil
12th Active Learning in Engineering Education Workshop
<http://www.ale2014.com/>
"Problem Based Learning in Engineering Education"
Erik de Graaff, Mona Dahms

19 MARCH

Republic Polytechnic, Singapore
PBL seminar, Innovation in Education and the Workplace
http://www.rp.edu.sg/Template/articleDetails_WF.aspx?Pageid=1734&id=26397
Anette Kolmos

19 – 21 MARCH

Institute of Industrial Engineers - Waterford, Ireland
Kick off meeting - project WBL-IE
Bente Nørgaard

5 – 6 MAY

Dansk Universitetspædagogisk Netværk, Svendborg, Denmark
DUN Conference 2014
<http://dun-net.dk/konferencer/dun-konference-2014/>
Claus Spliid, Mona Dahms

14 MAY

Department of Electronic Systems, Aalborg University, Denmark
4th International Conference on Wireless Communications,
Vehicular Technology, Information Theory and Aerospace and
Electronic Systems (VITAE)
Mona Dahms

29-30 MAY

Trinity College Dublin, Ireland
Joint Symposium together with The Irish Enquiry and Problem
Based Learning Network
"Creating a global collaborative E/PBL research network:
transforming curricula".
Anette Kolmos and Erik de Graaff.

15 – 18 JUNE

Indianapolis, Indiana, US
121st ASEE Annual Conference & Exposition
[http://www.asee.org/conferences-and-events/conferences/
annual-conference/2014](http://www.asee.org/conferences-and-events/conferences/annual-conference/2014)
"Faculty approaches to working life issues in engineering
curricula"
[http://vbn.aau.dk/da/publications/faculty-approaches-to-
working-life-issues-in-engineering-curricula%2812ebc24b-
3994-4387-9dc4-ae7b25dd1abf%29.html](http://vbn.aau.dk/da/publications/faculty-approaches-to-working-life-issues-in-engineering-curricula%2812ebc24b-3994-4387-9dc4-ae7b25dd1abf%29.html)
Anette Kolmos

24 – 27 JUNE

Stanford University CA, US
IACEE 14th World Conference on Continuing Engineering
Education
<http://iacee2014.stanford.edu/>
1) "Investigating requests and expectations for future methods
of CEE: in the perspective view of Scandinavian managers
and employees"
2) "A new conceptual model for finding and fostering the drives
towards CEE"
<http://iacee2014.stanford.edu/papers.php>
Bente Nørgaard

15-20 JULY

Vancouver, Canada
PME38 – PMENA 36 (38th Annual Conference of the
International Group for the Psychology of Mathematics
Education & the 36th Conference of the North American Chapter
of the Psychology of Mathematics Education)
www.pme38.com/
"Assessment of University Students' Teamwork Competencies
in Group Projects."
[http://vbn.aau.dk/da/activities/pme-38--pmena-
36%287a4d3a64-adf9-4319-baa8-b79664592981%29.html](http://vbn.aau.dk/da/activities/pme-38--pmena-36%287a4d3a64-adf9-4319-baa8-b79664592981%29.html)
Bettina Dahl Søndergaard

28-29 JULY

Medellín, Colombia
The Sixth International Symposium on Project Approaches in
Engineering Education
<http://paee.dps.uminho.pt/> (now only info for 2015)
"How to assess knowledge, skills, and competencies in
engineering projects?"
[http://vbn.aau.dk/da/activities/the-sixth-international-
symposium-on-project-approaches-in-engineering-
education%288562f3cd-a773-462b-befd-2e3f6bd52d00%29.
html](http://vbn.aau.dk/da/activities/the-sixth-international-symposium-on-project-approaches-in-engineering-education%288562f3cd-a773-462b-befd-2e3f6bd52d00%29.html)
Bettina Dahl Søndergaard

19-23 SEPTEMBER

University of Birmingham, UK
Educating Engineers for Global Competitiveness, Annual SEFI
conference 2014
[www.birmingham.ac.uk/facilities/mds-cpd/conferences/sefi-
2014/index-new.aspx](http://www.birmingham.ac.uk/facilities/mds-cpd/conferences/sefi-2014/index-new.aspx)
"Higher Education Research and Engineering Education
Research, Comparative Perspectives"
"Degrading of PhD's through the introduction of doctoral
schools"
Anette Kolmos, Erik de Graaff, Aida Guerra, Bente Nørgaard

3-6 DECEMBER

The American University in Dubai, Dubai, UAE
Educating Engineers for Global Competitiveness, WEEF and
IFEES
<http://weef2014.org/>
Erik de Graaff



4. PRESENTATIONS, PRESS AND MEETINGS

9 - 10 APRIL

Learning Lab, Aalborg University, University Teaching Day
Participants from Aalborg University for workshop 4:
"Integrating sustainability in projects and courses – What? Why?
And How?"
<http://www.learninglab.aau.dk/index.php?id=9125>
Mona Dahms

9 - 10 APRIL

How can we evaluate students during the course and at
the exam? With Palle Rasmussen. The Day of Teaching,
Aalborg. 'Assistant Professor Teaching Certificate'
(Adjunktpædagogikum), Spring 2014.
Bettina Dahl Søndergaard

21-28 MAY

Meetings with staff from Tomsk Polytechnic University about a
training programme for staff members from Tomsk
Anette Kolmos, Erik de Graaff

22 – 24 MAY

Reykjavik University, Iceland
PHASE project meeting
<http://en.ru.is/>
Bente Nørgaard

26-27 MAY

Launch of the Aalborg UNESCO Centre, workshop activities,
poster session and symposium
All staff from Aalborg UNESCO Centre

28 MAY

Meeting with staff from Republic Polytechnic Singapore
Claus Spliid, Bente Nørgaard

28 JUNE

Stanford University CA, USA
IACEE Council Meeting
LINK: <http://www.iacee.org/>
Bente Nørgaard

28-30 AUGUST

Mae Fa Luang University, Thailand
Consultancy meetings w staff about PBL approaches
Claus Spliid

11 SEPTEMBER

Equip Africa Institute, Mount Kenya University (MKU); meeting at
AAU CPH
<http://www.mku.ac.ke/> ; <http://www.equip-africa.co.ke/>; <http://emba.mku.ac.ke/>
Mona Dahms

20 – 21 OCTOBER

Learning Lab, Aalborg University,
Two workshops titled: "Sustainability in teaching and learning
– What? Why? And How?" as part of Module 4, workshop 4:
making changes, Adjunktpædagogikum.
<http://www.learninglab.aau.dk/index.php?id=9036&L=1>
Mona Dahms

3 NOVEMBER

Mount Kenya University (MKU), Kenya
A 1 ½ hour introductory lecture on problem based learning to
Heads of departments and other educational managers at MKU.
<http://www.mku.ac.ke/>
Mona Dahms

2-14 NOVEMBER

Tomsk Polytechnic University
Workshop for staff development "Facilitation in a PBL learning
environment"
Erik de Graaff and Anette Kolmos

2-5 DECEMBER

Reflection and PBL at 3rd Asian-Pacific on PBL <http://www.2014jointpbl.org/index.php/conference-site/>
Anette Kolmos & Prarthana Coffin

8-12 DECEMBER

AAU workshop for staff from Tomsk Polytechnic University
"Facilitation in a PBL learning environment" Jette Holgaard,
Aida Guerra and Claus Spliid

5. VISITS TO THE AALBORG CENTRE

Every year, UCPBL is the host of visitors and previous years we have had around 30 groups coming in. After the start of visitor's workshop which is held two times a year, the

number of visitors has been reduced. This year, UCPBL has been responsible for organising 11 visits at Aalborg University.

DATES	INSTITUTION
13 February	Tampere University of Applied Science, Finland
26-28 February	Erasmus University, the Netherlands
27-28 March	Coventry University, Great Britain
27-28 March	UC State University, US
27-28 March	Dublin Institute of Technology, US
3-7 April	University of Washington, US
4 April	Aarhus University, Denmark
24 April	Ritsumeikan University, Japan
20-29 May	Tomsk Polytechnic University, Russia
26-29 May	Republic Polytechnic Singapore, Singapore
2-3 June	HiST Soer-Troendelag University College, Norway
17-24 June	La Laguna University, Spain
19-28 June	Federal University of Rio Grande do Norte
16-17 October	Minnesota State University, US
21 October	National University of Colombia, Colombia
30-31 October	Brazilian School of Public and Business Administration, Brazil
30-31 October	Sultan Qaboos University, Oman
30-31 October	Sunderland University, Great Britain
30-31 October	Duy Tan University, Vietnam
5 November	University of Tartu, Estonia
21 November	Ritsumeikan University, Japan
8-14 December	Tomsk Polytechnic University, Russia
10 December	University of Jaén, Andalusia, Spain
10 December	Lappeenranta University, Finland

**Learning seriously
affects your brain**

www.aau.dk





United Nations
Educational, Scientific and
Cultural Organization



AALBORG UNIVERSITY

• Aalborg Centre for Problem Based Learning
• in Engineering Science and Sustainability
• under the auspices of UNESCO
•