

AALBORG UNESCO CENTRE FOR PBL ANNUAL REPORT 2022



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

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LOOKING BACK ON 2022

In many ways, 2022 was a year of organisational and leadership change for the Aalborg PBL Centre in Engineering, Science and Sustainability under the auspices of UNESCO. The first organisational change concerned the establishment of a new Institute for the Advanced Study in PBL (IASPBL), which is where the Aalborg UNESCO Centre for PBL physically moved to. The Aalborg UNESCO Centre for PBL continues as an organisation but is now related to both the Department of Planning and IASPBL. This creates administrative challenges which are still in the process of being solved.

The Department of Planning is responsible for the economy, human resources (HR), management of external projects and the coordination of our teaching activities. The IASPBL contributes with research time to do research on PBL together with colleagues from the two other faculties: SSH (Social Sciences and Humanities) and Health. The IASPBL has become an umbrella organisation for academic staff from all faculties at Aalborg University working on different PBL research.

The economic release from IAS and our externally funded project portfolio have created opportunities for enlarging the number of researchers at the Aalborg PBL Centre and we have had an increase in the number of PhD students, postdoctorate students, and research assistants. The Aalborg UNESCO Centre for PBL is currently the largest research group at Aalborg University, with 37 academic staff,

as well as part-time teachers and associates, such as adjunct professors and adjunct associate professors. Therefore, we have been asked to physically move to the Science and Innovation Hub. We share this huge building with the unit for innovation and student entrepreneurship and a range of student start-ups. Most of these start-ups comprise students or graduates from various degree programmes and they represent the new trend of interdisciplinary collaboration at Aalborg University.

Professor Xiangyun Du took over the research leadership in January 2022 and the development of the research programme and the research output has been taken to a new level, moving from many conference papers to an increased focus on publishing in quality journals. During 2022, there was also clearer research organisation in the four sub-groups: PBL and Capacity Building, Interdisciplinary, Digitalisation and STEM (Science, Technology, Engineering, Mathematics) in schools and high schools. This is an important development, as the number of academic staff has increased, and we need to find new ways of organising research.

After two years with Covid 19, we have returned to travelling and getting new research partners. This annual report just mentions some of the international activities we have been involved in. We receive an increasing number of requests to participate in webinars and keynote addresses at conferences.



By the end of 2022, I will step down as leader of the Aalborg UNESCO Centre for PBL and Xiangyun Du will become Director on January 1, 2023. I think it is time for a shift in leadership and a renewal of our goals, organisation, activities, and success criteria. The organisation is in good shape in all respects, and, with the IASPBL, it creates new opportunities for internal cross faculty collaboration and international projects.

Reflecting on the last eight years as the founding director of the Aalborg UNESCO Centre for PBL, there have been many activities. The UNESCO Chair, which was founded in 2007, was the foundation for the high level of activities. We have facilitated a global network by co-organising the International Research Symposium on PBL (IRSPBL) with host institutions on nearly all continents. All host institutions

have implemented variations of problem and project-based learning (or are about to). There is no doubt that these activities have had an impact on the development of engineering education regionally, partly by physically moving the IRSPBL around, teaming up with different universities and attracting participants from specific continents; partly by emphasising that there has to be research-based development of engineering education, which creates a more persistent structure and sustainable impact. Research contributes by augmenting the 'why' and 'what' changes can be made and maintaining the gains which have been achieved by documentation. Over the last year, we have been preparing for IRSPBL2023, to be held June 21-23 in Boston, at MIT and Harvard.

Some of the core research projects during the last couple of years have been: 1) PRO-

CEED-2-Work, where we followed all Danish engineering students enrolled in the first-year programme in 2010, throughout their studies and when they entered the workplace; 2) the PBL-competence project; 3) variation in PBL models developing new understandings of how project can be applied in engineering education; and 4) core STEM R&D projects both at the regional and national level.

Since the inaugural event in 2014, staff from the Aalborg UNESCO Centre for PBL have held more than 70 international workshops and presented more than 90 keynote talks and webinars. 17 PhD students from 11 different countries have graduated, 9 PhD students have enrolled, and more than 550 publications have been published. Our turnover has also increased, from EUR 800,000 in 2014 to EUR 2,200,000 in 2022. There are three sources of income: internal support for running the Aalborg UNESCO Centre for PBL, externally funded projects, and teaching; the teaching part is the largest. We have seen an increase in all three sources.

The Aalborg PBL Centre has also collaborated with other UNESCO cat2 centres worldwide, especially the International Centre for Engineering Education at Tsinghua, China. We have a contract with UNESCO until 2025 and we will start the renewal process next year, as it takes around 24-36 months to get through the system.

When I started with international collaboration back in the 90s, the question was what kind of evidence we have that PBL is working. That was what our research very much aimed to answer during the

00s and early 10s. However, the question has changed now to what kind of PBL is most efficient in our curricula. Many international institutions are still resistant to change, but in many ways, PBL has become acknowledged and appreciated as a core part of teaching and learning in engineering education. The Aalborg UNESCO Centre for PBL has contributed to that.

Since 2014, the Aalborg UNESCO Centre for PBL has also had an internal impact at Aalborg University. We have contributed to work on digitalisation, variation of project types, development of PBL competence profiles, academic staff development, the implementation of the development of more interdisciplinary projects, and the teaching of PBL to academic staff.

Adjunct Professor Erik de Graaff has stopped at Aalborg University after having been affiliated with the Aalborg UNESCO Centre for PBL since 2009. Erik has been one of the backbones in building up the research in Engineering Education and has helped bring PBL research to a more scientific level. Also, Professor Thomas Ryberg and academic secretary Louise Hartmann left as they both obtained positions at the IASPBL headquarters. Stine Randrup Nielsen returned from maternity leave.

During 2022, we have welcomed a long list of new academic staff, among which were: Professor Xiangyun Du (full-time), Professor Euan Lindsay, Associate Professor Stine Ejsing-Duun, Assistant Professor Giajenthiran (Kalle) Velmurugan, and post-doctorates Mia Thyrré and Juebei Chen. Furthermore, we have three new PhD students and five new research

assistants. We have now reached a stage where we have a group of people employed at the Copenhagen campus and Stine Ejsing-Duun and Kalle are the two main drivers for building up this unit, in close collaboration with the Aalborg team.

Building up and leading the Aalborg UNESCO Centre for PBL has been a great challenge and adventure. Over the years, there has been much international travel and it has always been a pleasure to meet with international colleagues. However, without my colleagues at the Aalborg UNESCO Centre for PBL, this would not have been possible, and their spirit, enthusiasm, energy, and hard work has been admirable. Also, the support from the advisory board has been fantastic, and there have always been ideas and reflections on how we could proceed. Not to forget the support from the engineering deans and rectors from Aalborg University during the years – without basic economic support, this would not have been possible.

From the bottom of my heart, I want to personally thank my Aalborg colleagues, the international advisory board, the management level, UNESCO as well as our international colleagues, and I now look forward to some years where I have time to focus on finishing research projects.

December 2022

Anette Kolmos
Founding Director



LOOKING AHEAD

In the coming year, our goals will be to continue to work on the central missions and initiatives from the 2019-2024 plan, in addition to the renewal of the centre in 2025. With additional brainpower and collective agency, I have no doubt that, together, we can exceed our goals. To reach such goals, we spent 2022 preparing for the directorship transition. Thank you to Anette, who offered her wealth of knowledge to help me understand the structures and details of all aspects of the centre's work. I took the opportunity to talk to all of the group members to hear what they have done, what they envision they would like to do and what can be done to further strengthen our collective values. I would also like to thank the more senior colleagues, who shared their experiences and advice, and express ap-

preciation to the young researchers who shared their vitality and wisdom. In such a value-driven environment, I felt welcomed. I always welcome diversity in ideas, suggestions and actions in our shared future.

Together, we have already discussed what we would like to collaborate on in the year to come, by being explicit in our research themes, funding plans, and international development work, among others. We already have a management team consisting of Euan, Aida, and me, with the support of Anette. With such collaboration, our centre will be led with optimism.

December 2022

Xiangyun Du

RESEARCH FOCUS

PBL AND INTERDISCIPLINARY COMPETENCE

InterPBL

*Anette Kolmos, Jette Holgaard,
Henrik Routhe, Maiken Winther*

The Inter-PBL is funded by the Poul Due Jensen Foundation, Aalborg University and part of the Aalborg UNESCO Centre for PBL. Inter-PBL will contribute to the development of innovative educational models – nationally, as well as internationally – with the aim of educating engineers to work proactively and interactively in an interdisciplinary working environment, in order to deal with the increasing complexity of engineering, and contribute to the sustainable development of society. For that purpose, Inter-PBL will develop curriculum models for students learning interdisciplinary generic competences in a PBL curriculum, based on case studies on: 1) new curriculum practices in interdisciplinary projects, where the students are working on sustainability problems across educational programmes, 2) interdisciplinary projects in companies, and 3) transdisciplinary projects with universities and companies working on common problems. The goal is to develop:

- Theories, methods, and tools for collaboration processes in a variety of interdisciplinary projects in education, with inspiration from good practices in companies.
- Theories, methods, and tools on the learning of PBL competences in interdisciplinary projects and the learning of

meta-competences for the transfer of learning.

- Curriculum models for enhancing the quality of existing PBL models, addressing interdisciplinary, international and national inspirations.

Inter-PBL contributes to new knowledge on interdisciplinary collaborations in student teams and in companies, based on analyses of cases in both education and companies. Inter-PBL also contributes to new knowledge on how meta-competences may be essential for the development of generic PBL competences. The meta-competences are necessary, in order to participate in complex and interdisciplinary project processes in companies and education to learn how to transform knowledge and competences to be applicable in new situations. Finally, Inter-PBL will develop curriculum models to achieve these competences. In order to participate in professional interdisciplinary work, it is important that students have experienced the work processes in educational interdisciplinary projects. Furthermore, reflections on practice and experience will facilitate students' learning and the transformation of interdisciplinary competences.

PBL and Digitalisation

By Euan Lindsay

The increasing digitalisation of engineering practice, academic practice, and the everyday lives of students is driving a seemingly inevitable transition

towards the digitalisation of the engineering curriculum. Our key research question is:

How should engineering education benefit from digital transformation?

Engineering practice is becoming increasingly digital in nature, and a 21st century curriculum must prepare graduates to work in post-digital workplaces. Any future engineering curriculum must understand the digital ways of working which are emerging in the discipline, profession and industry of engineering. Teaching new digital competencies is likely to require new digital approaches for learning. Furthermore, digitalisation provides new opportunities for the teaching of the established engineering curriculum.

With all of the possibilities of engaging learners in new, varied and personalised ways, we need to identify, test, and evaluate the different approaches to see which can enhance engineering education in a PBL context. A digital native curriculum allows students to engage with personalised content asynchronously on-demand and for that content to be structured in flexible modules. Students' engagement with that content will generate valuable data about their learning that can be further used to support their learning processes.

Our mission is to identify the kinds of evidence that can allow us to make informed decisions regarding digitalisation of the curriculum. Our work will be grounded in the PBL-centric Aalborg University learning environment. While digitalisation can support student learning, knowledge is

socially constructed and engineering practice is a sociotechnical activity requiring interaction with others.

We come to these questions from a fundamentally optimistic perspective. We believe that digitalisation has the potential to increase the efficacy of teaching, to provide timely actionable insights to learners and teachers, and to better prepare engineering graduates for the workforce of the future. Engaging deeply with these research questions will allow us to ensure that we do not digitalise for digitalisation's sake but, rather, that we ensure a just transition towards a post-digital engineering curriculum for the future.

PBL in STEM Education

By Lykke Brogaard Bertel

Science, Technology, Engineering and Mathematics (STEM) is a concept applied and interpreted in various ways. In Aalborg UNESCO Centre for PBL, we study the role of PBL in STEM education, both from the perspective of integrated STEM and, at other times, with a specific focus on how PBL can support and develop one of the STEM disciplines. We are particularly interested in how a PBL approach can facilitate collaboration and ease transitions in the education system, both horizontally between subjects, disciplines and contexts and vertically between institutions and different educational levels. We also research PBL in the intersection between specific STEM knowledge, skills, and competences, as well as other competency areas such as entrepreneurship, systems thinking, technology literacy, creativity, moti-

vation and self-efficacy. Within these fields, our research bridges educational contexts and target groups, including student learning and staff development, informal and formal learning settings, and education policy and change management.

PBL and Sustainability

By Aida Guerra

Education for sustainable development is problem-oriented, interdisciplinary, contextual, collaborative, participatory, emancipatory, transformative, complex, and action-oriented. Having said that, problem-based, project-organised learning (PBL) is one of the most suitable learning approaches to sustainable development and this is because of the shared principles that allow the creation of learning environments, which not only enables education within the profession but, also, addresses social and environmental challenges. At Aalborg University, PBL is implemented at a systemic level and teams of engineering students learn by solving real project-based problems throughout their education. A PBL environment provides an opportunity for students to be educated for sustainability and to act and develop their agency for sustainability. Undoubtedly, students are aware of the sustainability crisis and the associated problems, which they will have to face in the future and as part of their professional practice. The literature refers to two main levels, when it comes to students' involvement and interest in sustainability: awareness and engagement. Awareness seems to focus on what is known about sustainability, whilst engagement focuses on what is enacted. Engagement

also highlights the existence of the value-action gap and the activities which students engage in, which go beyond the formal curriculum and learning environment. Students are also more active and engaged in understanding what roles they play as engineers and citizens, and how they can contribute to solving problems. Given the above, the current PBL and sustainability research focuses on the following: 1) What are the different levels of awareness and engagement for sustainability and in what ways do they relate to the development of a student's sustainability mindset and agency? 2) In which ways do students develop their agency for sustainability in a PBL environment? 3) Which PBL activities do academic staff consider most important when educating for sustainability? 4) In what ways do engineering educators' sustainability mindsets determine and influence students' understanding of sustainability?

PBL and First Year Engineering

By Xiangyun Du

First Year Engineering (FYE) experience is a research area that is gaining increasing attention. First year engineering students encounter 'culture shock' in several ways: adulthood, departing from family to friends and colleagues, college life, new disciplines, PBL environment, and others. To address such encounters, the group explores the diverse aspects challenging FYE, including the students' learning agency, systematic thinking, and sources of their learning well-being, among others.

PBL AND CONTINUING EDUCATION

PBL and Educational Change

By Xiangyun Du

Recent decades have seen tremendous worldwide efforts to adopt Problem-Based and/or Project-Based Learning (PBL) as one of the major pedagogical advancement initiatives. The notion of educational change has been widely explored and discussed. Bringing together multiple theories of change, the recent work of our group has examined how a larger scope of educational change can be initiated, led and facilitated through the PBL implementation. In particular, the complexity theory provides us with a lens, to conceptualise educational change as a dynamic, complex, and nested system which embraces multiple interactive sub-systems including teachers, students, curricula, learning environments surrounding the programme and institutes, and policies, among others. This conceptual stand-point allows for seeing learning as being situated within ongoing changes and emerging through the interactions between learners and other competencies of the system.

Connecting practice and research, our engagement in supporting educational change through the promotion of PBL involves works on policy analysis, leadership support, curriculum restructuring, pedagogical development aiming to support teachers' professional learning and their work on developing and implementing PBL teaching designs. One of our focal areas, for both practice and research, is organising pedagogical development (staff/faculty development) activities world-

wide to support the professional learning of teachers. Considered as the key agent for change within institutional settings, teachers' professional learning plays a crucial role in their engagement in changing practices. In this regard, the complexity theory allows for opportunities to theorise teachers' professional learning as a dynamic system which is complex, simulative, context-sensitive, and temporal. A teacher's professional learning is thus conceptualised as a dynamic, active, experiential, participatory, autonomous, and relational process. This process involves diverse aspects of cognitive development, such as efficacy, affect, motivation, and self-regulation, and also the interaction with sociocultural contextual factors, such as institutional policies and conditions. Central to the meaningful learning for teachers is their professional agency, which includes their will, power, stance, and action to change, as well as their ongoing negotiation of multiple identities. Therefore, professional learning activities should incorporate complexity thinking, open-mindedness, dynamism, adaptability to cope with emergencies, self-organisation and connection with others and surroundings.

GLOBAL NETWORK AND ACTIVITIES



Like 2021, 2022 was also a year of intense activity to further strengthen and develop the Aalborg UNESCO Centre for PBL Global Network. If the activities were mainly online in 2021, 2022 not only allowed us to travel and visit other institutions but, also, to receive visitors at Aalborg University. The main activities carried out in the Global Network in 2022 not only comprised staff training and development but also strengthened research collaboration with international programmes and groups within engineering education research.

Aalborg PBL Certificate on Basics of Curriculum Change and PBL 2022

During the spring of 2022, the Centre published the 2nd edition of the Aalborg PBL Certificate on Basics of Curriculum Change and PBL, in collaboration with Universidad Nacional de Colombia (Colombia). The certificate programme consisted of 24 participants from different campuses and faculties, who worked in interdisciplinary teams to (re)design their courses and implement PBL. The

programme was run fully online for the first time.

Mathematics and PBL

Online workshop on PBL and University Mathematics

On May 31, 2022, we hosted an online workshop about PBL and university mathematics for a wide international audience. The focus was on discussing if mathematics and PBL is an odd match? PBL is about students working on a project concerning authentic ill-structured problems from society, while mathematics is both an applied and pure discipline with a body of abstract knowledge. How can PBL be used in mathematics to aid the students' learning of both sides of mathematics, as well as abstract mathematics? The key presentation was given by Bettina Dahl Søndergaard from Aalborg UNESCO Centre for PBL, assisted by associate professors Morten Grud Rasmussen and Jakob Gulddahl Rasmussen from the Department of Mathematical Sciences and Hans Hüttel from the Department of Computer Science. Part

of the webinar comprised discussions in Zoom Breakout Rooms, each led by a presenter, to make room for more discussion.

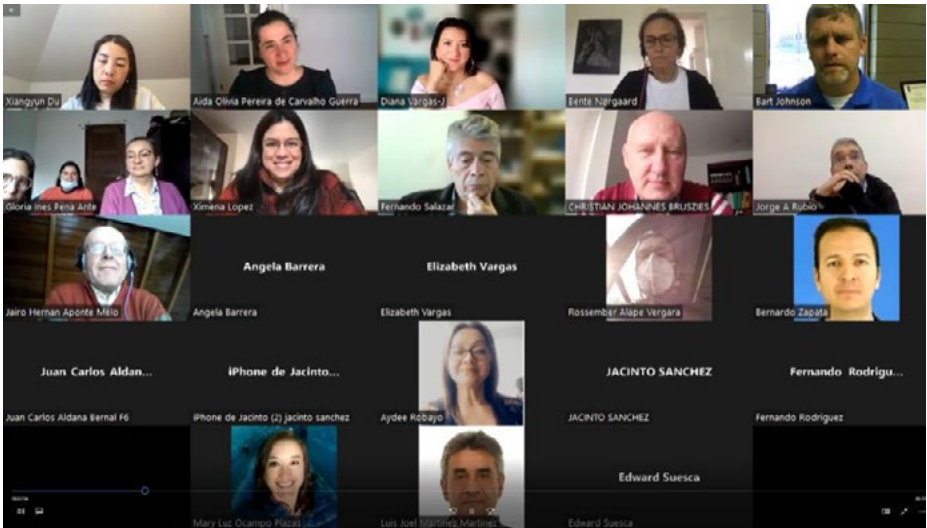
Visitors from the University of Agder, Norway

On May 11-12, a delegation of about 20 mathematics teachers from the University of Agder, Norway, visited Aalborg University to learn more about PBL and mathematics. On the first day, associate professor Lisbeth Fajstrup gave a presentation about how AAU has reorganised first-year teaching in calculus and linear algebra into a modular elective format, where each engineering and science study board elects the most relevant modules for their students. These modules were designed in consultation with engineers from the departments. Later, associate professor Horia Cornean presented how we supervise projects at AAU. Department heads Jens Rauhe (Material

Science and Engineering) and professor Johannes Struijk (Department of Health Science and Technology) presented their (good) experience with the new way of organising and teaching first year mathematics courses. On the next day, Bettina Dahl Søndergaard gave a presentation about PBL and mathematics at AAU. This was followed by a visit from four students from different departments, presenting their experiences with PBL and mathematics/engineering, as well as the format for teaching first year mathematics. This discussion was led by Morten Grud Rasmussen from the Department of Mathematical Sciences. Finally, the discussion turned to future plans.

South Africa University of Pretoria

The Centre welcomed Dr. Lelanie Smith, PhD, from the Faculty of Engineering,



Built Environment and IT at the University of Pretoria, South Africa. During this visit, we discussed curriculum development, project-based service learning and engineering education transformation in South Africa and explored ways in which the Centre can support the Engineering Education Research Network Africa. Ways to connect the Global North and Global South in a joint effort to facilitate diversity, inclusion and student-centred learning in engineering education were also discussed.

**Nelson Mandela University,
University of Kwa-Zulu Natal,
Copperbelt University**

The Centre welcomed Professor Theodore Haupt from Nelson Mandela University, Professor Claudia Loggia from the University of Kwa-Zulu Natal and Dr. Ephraim Zulu from Copperbelt University, Zambia. During this visit, we discussed PBL and interdisciplinary learning for built environment students and construction education, with a particular focus on sustainability, equality, and self-directed learning. We visited the AAU Department of the Built Environment and explored potential pathways for mutual student and staff mobility, training, and ongoing collaboration.

**Research collaboration
PBL and Strategic Environmental
Assessment (SEA)**

In September, the Aalborg UNESCO Centre for PBL collaborated with the Danish Centre for Environmental Assessment (DCEA, Department of Planning, Aalborg University) to host a three-day visit to Aalborg University. This visit included

three tailor-made workshops on curriculum change and course design for PBL and Sustainability (more specifically, Strategic Environmental Assessment (SEA)). Participants came from six eastern Asian universities, namely Hajee Mohammad Danesh Science and Technology University (Bangladesh), Ho Chi Minh City University of Natural Resources and Environment (Vietnam), Jahangirnagar University (Bangladesh), National University of Laos (Laos), Savannakhet University (Laos), and Thuyloi University (Vietnam).

Twente University – Project ATLAS

On September 28, the Aalborg UNESCO Centre for PBL ran two workshops on Problem Based Learning (PBL), Challenge Based Learning (CBL), and the role of the teacher at the University of Twente (Netherlands). The workshop mainly targeted teachers involved in teaching and tutoring students from their interdisciplinary programme entitled ATLAS (learn more about the B.Sc. ATLAS programme at: <https://www.utwente.nl/en/education/bachelor/programmes/university-college-twente/study-programme/>).

Visit at 4TU, the Netherlands

The Inter-PBL project organised a visit to the 4TU at Delft University to establish research collaboration. On September 29-30, a delegation of researchers from the Aalborg UNESCO Centre for PBL and IASPBL visited the 4TU.CEE. It is a “centre of expertise for teachers and scientists within the domain of Engineering Education at the four universities of technology in the Netherlands”. The visit enabled us to identify synergies and explore poten-

tial collaborations by sharing research interests, approaches and outputs around current engineering education trends, namely PBL, CBL, inter and transdisciplinary learning and competences. Learn more about 4TU.CEE at https://www.4tu.nl/cee/about_us/.

EEISHEA



Co-funded by the
Erasmus+ Programme
of the European Union



The EEISHEA Project organised a conference on incorporating Entrepreneurship, Innovation, and Sustainability into curricula using Problem-Based Learning (PBL) On September 28-30, 2022, a conference funded by the Erasmus+ Programme of the European Union was held in Moshi, Kilimanjaro Region. The conference theme was based on the [Erasmus + EEIS-HEA project](#), which ended in October this year. Participating universities were from Tanzania, Ghana, Denmark, Sweden, and Spain.

The conference was designed to enable presentations from each university partner on five thematic areas: Entrepreneurship and Innovation (E&I), Sustainability (SUS), Student-Centred Learning (SCL), E-Learning (E-L), and Teacher Training (TT).

Three keynote speeches related to the future of Higher Education in Africa were also delivered during the conference:

- Dr. Violet Makuku from the Association of African Universities (AAU) in Ghana gave a keynote speech on *“Transforming*

Higher Education for Sustainable Development: the Africa we want” and “Higher Education & Employability in Africa: Challenges & Way Forward”.

- Prof. Mtei presented a keynote speech on behalf of Professor A. Mshandete, Deputy Vice Chancellor of Research and Innovation from the Nelson Mandela Institute of Science and Technology. His keynote speech was entitled *“Integrating Entrepreneurship and Innovation into the Curricula of Higher Learning Institutions”.*
- Dr. Jonathan Mbwambo (SUA staff & former Regional Coordinator for ACE II at IUCEA). He gave a keynote speech on *“Higher Education and Employability in Africa: Challenges and Way Forward”.*

The EU Erasmus+ project - Enhancing Entrepreneurship, Innovation, and Sustainability in Higher Education in Africa (EEISHEA), aimed at developing curricula from the five selected African Higher Education Institutions (HEIs) by embedding transversal skills, knowledge, and competencies in entrepreneurship, innovation, and sustainability. Curriculum development will be based on the principles of student-centred learning and problem-based learning. Thus, the delivery method will be face-to-face, complemented by an e-learning approach.

Workshops on PBL

Visitors Workshop on PBL

In 2022, the workshop for visitors returned to its physical format after two years of being held online. The Centre welcomed two groups of participants from different parts of the world, who wished to know more about PBL and its



practice at Aalborg University. A total of 13 participants attended the Spring Workshop and 16 participants attended the Fall Workshop. In 2023, these introductory workshops will be organised by the Aalborg UNESCO Centre for PBL in collaboration with IASPBL for the first time, with contributions from colleagues from AAU's other faculties.

Tailor-made training for the University of Foggia, Italy

In June, Aalborg UNESCO Centre for PBL ran tailor-made workshops for 14 participants from the University of Foggia, Italy. The workshops aimed to equip the participants with basic knowledge and skills on PBL as a pre-requisite for re-designing their courses.




PHD DEGREES AWARDED



Juebei Chen

Juebei Chen defended her PhD thesis: *Professional Identity in Engineering Education* on 14 September 2022

[Read thesis here](#) 

CURRENT PHD STUDENTS



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Maiken Winther



Sizwe Errol Nxasana



**Anna Overgaard
Markman**



**Svend Hauekrog
Christiansen**

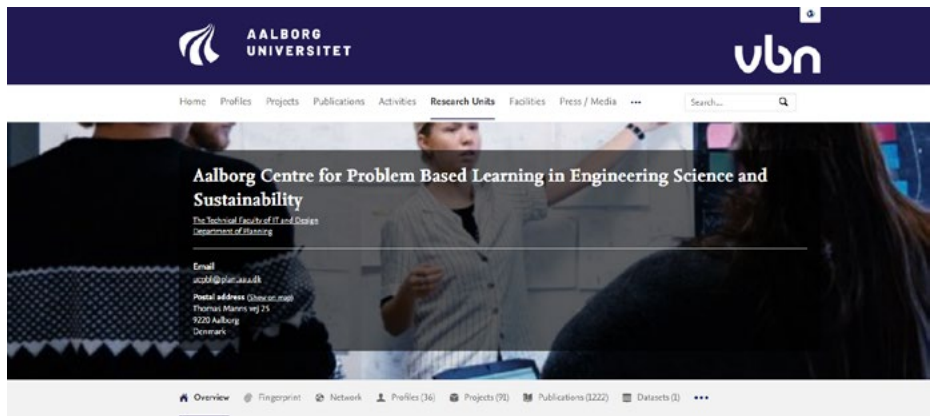


Henrik Worm Routhe

DISSEMINATION

Members of the Aalborg UNESCO Centre for PBL continue to be closely involved in engineering education and international science communities, by participating in their international conferences (namely SEFI, ASEE, FIE, AAEE, etc.), being members of their boards (namely REEN) and guest speakers, and by hosting workshops and seminars (e.g. BNU Expo and SEFI).

One important part of the Centre's dissemination activity is the reporting and publication of research outcomes through conference and journal articles. You can see the full list of our participation in projects and publication of research outcomes on our [Research Profile](#).



STAFF LIST

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