Enhancing EIA and SEA education in Denmark: Collaborative competence-building

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A few results from mapping 20 years of Danish IA research (1997 – 2021)

Peer-reviewed articles within IA (excluding LCA)
Significant call for continuing education

Research
1. Revealing significant challenges and potentials for practice

State of practice
1. Significant increase in the need for environmental assessments – doubling over 10 years
2. Practice in the field require greater scope and detail
3. Massive shortage of labour

Policy context
1. Shorten or reorganizing master programmes
2. Cutting study places

Further, more than 20,000 screenings per year
(Source. The DREAMS project, https://dreamsproject.dk/reports/)
Professional development & continuing education

Professional development

- Umbrella term describing ongoing learning process where practitioners enhance skills and knowledge.

Continuing education

- Formal learning activities, often provided by higher education institutions, that practitioners with a completed degree undertake.
Elements composing the Danish ecosystem of continuing IA education

Courses by associations and private companies

Education by universities

AD-HOC

Short & tailormade courses
Courses connected to the annual ‘EA day’ at Aalborg University

Empty-student scheme
EIA in practice
(7.5 ECTS, University of Copenhagen)
Environmental regulation
(7.5 ECTS, University of Copenhagen)
Climate and environmental law
(10 ECTS, Aalborg University)
Environmental Assessment and scenarios
(5 ECTS, Aalborg University)
Sustainability Assessment and Societal Decision-making
(5 ECTS, Aalborg University)

PERMANENT

Master modules
Environmental Assessment of Projects
(10 ECTS, Aalborg University)
Environmental Assessment of Plans
(10 ECTS, Aalborg University)
Life Cycle Assessment with focus on carbon footprint
(5 ECTS, Aalborg University)
Problem-based learning as the educational method
### Main characteristics of PBL

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<tr>
<th>Problem orientation</th>
<th>Students work with authentic, complex problems – theoretical or practical</th>
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<td>Project organization</td>
<td>Students independently plan, carry out, lead, and communicate about a project process</td>
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<td>Experience learning</td>
<td>Students integrate their own experiences and interests</td>
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<td>Student-directed learning</td>
<td>Students have the leading role and ownership of the learning process</td>
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<td>Team-based collaboration and social learning</td>
<td>Students collaborate to solve problems in an interpersonal way learning from each other</td>
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<td>Interdisciplinary learning</td>
<td>Students deal with complex problems and thus need to apply interdisciplinary studies</td>
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<td>Exemplary practice</td>
<td>Students can transfer the learning outcome to other situations, including transferring theoretical knowledge to practice</td>
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Table 1. PBL principles in short (Barge, 2010; Kolmos, Fink and Krog, 2006; Kolmos et al., 2008).
‘The Aalborg Model’

Through PBL, students:

• Work with real-world problems related to environmental assessment and sustainability (SDGs),
• Corporate with societal actors,
• Attempts to find solutions,
• Develop teamwork ability,
• Develop the agency towards sustainable development.

• Main EIA and SEA teaching and learning takes places within the projects
Core values embedding PBL

(1) Growing the Pie
Actors in the ecosystem collaborate to produce education-growing strategies and initiatives – honouring each other’s contribution.

(2) Bridgebuilding research and practice
Continuing education is an arena for making research and practice meet to inspire and qualify each other’s work.

(3) Inclusiveness and transdisciplinarity
Participants and teachers represent all the IA actor

(4) Knowledge sharing
Honest sharing of experiences, perspectives, and challenges.

(5) Leadership and agency
Supporting IA actors to explore and seek agency through their own practice and organization

(6) Relevant for society
Guided by contemporary societal concerns and challenges for IA to proactively engage with

(7) Sustainability at the forefront
Underlying WHY we are having IA - and the underlying environmental policies and objectives related to the environmental factors
Impacts of the ecosystem and value based collaborative competence development

- Rich and diverse educational landscape based on mutual respect and shared goals of developing capacity and competence.
- Arena for making research and practice meet to inspire and qualify each other’s work.
- Space for exchange across authorities, consultants, researchers and developers builds a sense of community and shared meaning.
- Creating trust and network – also beyond the educational arena.
- By ensuring that education is responsive to societal challenges, EIA and SEA stay relevant as an agent for change.
- Indices of significant impact on the development of EIA/SEA practices in Denmark.
Illustration of a PBL framework for SEA/EIA teaching

PBL implementation examples through:

1. Project work
2. Courses and lectures
3. Engaging with stakeholders

Link to: Sourcebook
Let’s invest in the cyclist and the team
Let’s continue the conversation!
Post questions and comments in the IAIA24 app.

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