Greening the global classroom: Experiences using MOOCs to advance sustainability education

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Greening the global classroom:
EXPERIENCES USING MOOCS TO ADVANCE SUSTAINABILITY EDUCATION

Jessika Luth Richter and Charlotte Leire

Peter Arnfalk, Kes McCormick, Håkan Rodhe
Why a MOOC for sustainability education?

• Outreach for sustainability institutions/programmes on a larger scale
• Maintain capacity of online sustainability education
• Public service purpose of higher education
• To engage and connect learners interested in sustainability (including educators)
• Build an online sustainability educational community
Since 2005, two Masters programmes in Environmental Management and Policy (EMP) and Masters in Environmental Science, Policy and Management (MESPOM)
  ○ First year of EMP delivered online since 2006
2005-2010 IIIEE hosted the Energy for Sustainable Development online course (www.e4sd.org)
Until 2012 IIIEE hosted the Young Masters Program (YMP, www.goymp.org)
IIIEE Sustainable Consumption topic lectures on iTunes University
Greening the Economy: lessons from Scandinavia

• The topic...
  – is of high theoretical and applied relevance
  – is recognized by UNEP and by governments
  – reflects the IIIEE research agenda

• The course
  – examples and perspectives from Scandinavia
  – encouraged sharing examples and perspectives from the globe

https://www.coursera.org/learn/greening-the-economy
<table>
<thead>
<tr>
<th>Activity</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Readings*</td>
<td>Complementing video lectures with written material and additional external links</td>
</tr>
<tr>
<td>Quizzes*</td>
<td>Testing knowledge from video lectures and compendium</td>
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<tr>
<td>Forum discussions*</td>
<td>Stimulating learner discussions on the key concepts, deeper learning and application</td>
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<tr>
<td>Course assignment*</td>
<td>Requesting learners’ own reflections and choice of greener initiatives for deeper learning and application</td>
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<tr>
<td>Peer assessment*</td>
<td>Evaluation of other learner assignment work, reflection upon own approach</td>
</tr>
<tr>
<td>Hangout</td>
<td>Allowing for instructors involvement/in-depth explanations, discussions and responses to learner discussions</td>
</tr>
<tr>
<td>In-video polls</td>
<td>Soliciting data from the learners</td>
</tr>
<tr>
<td>Community engagement</td>
<td>Promoting a feeling of a learner group</td>
</tr>
<tr>
<td>Additional literature</td>
<td>Offering more specific information on the key concepts; introducing learners to academic readings</td>
</tr>
</tbody>
</table>
Global Classroom

- > 20 000 signed up
- From 176 countries
- 34 % from emerging economies
- 48% had not heard of Lund Univ.
- 26% full-time students, 13%, part-time students, 61% not students
Student Activity

- Close to 10,000 learners active
- Close to 1,500 learners completed
- 367 learners chose signature track

Number of times our 40 lecture videos and interviews have been watched: 166,500
Number of quizzes and assignments submitted: 22,761
Number of forum entries – posts and comments: 10,127

...viewed 57,000 times

Greening the Economy: Lessons from Scandinavia
by Dr. Kes McCormick, Dr. Luis Mundaca, Prof. Oksana Mont, Prof. Lena Neij, Dr. Thomas Lindqvist, Dr. Håkan Roche
Impact on students: feedback

95% - course material quality "good or excellent"
90% - video lectures "valuable or extremely valuable"
77% - improved understanding "quite a lot/very much"
75% - more or much more favourable view of Lund University and IIIEE
73% - would like, or maybe would like, to study the topic at a university

● Some learners have volunteered to work for the course as veteran forum moderators
● Discussion in forums about how students would integrate learning into their lives
● Compendium is downloaded and distributed
Impact on our Institution: reflection

- From skepticism to enthusiasm
- Library of video resources for on-site courses
- Missing interaction between course and lecturers
- Time still an issue
- Insight into links between research, education, and society
Future considerations for IIIEE MOOCs

- Placing MOOCs in the educational context
- Level of the course?
- What are the limits of “massive”?
- A need to examine learner motivations more in depth, and in the context sustainability education
- Strengthen link between the MOOC and research—both ways
MOOCs for sustainability

- **Potential advantages**
  - Scale and reach
  - Open resources
    - learners, educators, organisations
  - Lifelong learning
  - Mobile learning
  - Networking

- **Potential challenges**
  - Embeddedness
  - Deeper learning
  - Learner/Educator roles and responsibility
Greening the Economy: lessons from Scandinavia
https://www.coursera.org/learn/greening-the-economy/