The RCE as a framework for university – community interaction in education and research: reflection, evaluation and lessons learned

Jana Dlouhá, Jiří Dlouhý
Charles University Environment Centre
Where we are?
Knowledge generation process: trends

Since 1960s:
• information society
• knowledge society
• learning society
• network society
• ...
• living knowledge society?

## Attributes of Mode 1 and Mode 2 knowledge production
(Hessels, L. K., & Van Lente, H. 2008)

<table>
<thead>
<tr>
<th>Mode 1</th>
<th>Mode 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Academic context</td>
<td>Context of application</td>
</tr>
<tr>
<td>Disciplinary</td>
<td>Transdisciplinary</td>
</tr>
<tr>
<td>Homogeneity</td>
<td>Heterogeneity</td>
</tr>
<tr>
<td>Autonomy</td>
<td>Reflexivity/social accountability</td>
</tr>
<tr>
<td>Traditional quality</td>
<td>Novel quality control</td>
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<tr>
<td>control (peer review)</td>
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</tbody>
</table>
## Alternative diagnoses of science (Hessels, L. K., & Van Lente, H. 2008)

<table>
<thead>
<tr>
<th>Concept</th>
<th>Aim (descriptive or prescriptive)</th>
</tr>
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<tbody>
<tr>
<td>Finalisation science</td>
<td>D/P</td>
</tr>
<tr>
<td>Strategic research/strategic science</td>
<td>D (P)</td>
</tr>
<tr>
<td>Post-normal science</td>
<td>P</td>
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<tr>
<td>Innovation systems</td>
<td>D/P</td>
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<tr>
<td>Academic capitalism</td>
<td>D</td>
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<tr>
<td>Post-academic science</td>
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<tr>
<td>Triple Helix</td>
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</tbody>
</table>

**The various diagnoses of science** put emphasis on different characteristics of scientific knowledge production (*NPK = New Production of Knowledge*)

<table>
<thead>
<tr>
<th>Levels</th>
<th>Characteristics</th>
<th>NPK</th>
<th>Post-normal</th>
<th>Triple Helix</th>
<th>Post-academic science</th>
<th>Academic Capitalism</th>
<th>Strategic science/research systems</th>
<th>Innovation systems</th>
<th>Finalisation science</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cognitive</td>
<td>Choice of research agenda (research content)</td>
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<td>X</td>
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<td></td>
<td>Methods (teamwork, transdisciplinarity)</td>
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<td>X</td>
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<td></td>
<td>Epistemology (socially robust knowledge)</td>
<td>X</td>
<td>X*</td>
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<tr>
<td>Organisational</td>
<td>Map of disciplines (transdisciplinarity)</td>
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<td>Values/labour ethic of scientists (reflexivity)</td>
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<td>Norms of quality control (extended peers)</td>
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<tr>
<td>External relations</td>
<td>Interaction with other societal ‘spheres’ (industry, government)</td>
<td>X</td>
<td>X</td>
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<tr>
<td></td>
<td>Incorporation of non-scientific expertise (participation)</td>
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* NPK is unclear on this point.
What to do?

...in the context of *sustainability science*
SD declarations & commitments: HEIS (higher education institutions)

Analysis of 11 declarations (Lozano): Collaboration and outreach priority in all of them

7 strategies of the DESD (UNESCO):
1. vision-building and advocacy;
2. consultation and ownership;
3. partnership and networks;
4. capacity-building and training;
5. research and innovation;
6. use of Information and Communication Technologies (ICTs);
7. monitoring and evaluation.'

Lozano, R., et al. (2011). Declarations for sustainability in higher education: Becoming better leaders, through addressing the university system. *Journal of Cleaner Production.*

Context

- Regional learning for sustainability - overall aim of L4SD is to empower citizens to act for positive environmental and social change. Regional Centres of Expertise (RCEs) have been developed on the principle to create a local/regional knowledge base to support L4SD actors, and promote major goals of L4SD in a resource-effective manner.
- RCEs were proposed by the UNU in 2004 as a “network of formal, non-formal and informal education and learning-related institutions that addresses need for equitable partnerships between the combined expertise of communities, professions, NGOs and governments and create an innovative platform for multi-stakeholder dialogue that enables diverse groups to interact, learn collaboratively and take collective decisions and actions towards SD”.
- main aim of the regional network is to support joint projects and activities and better coordination, sharing information, knowledge, expertise and experience between actors
Regional Centres of Expertise on ESD (Fadeeva, Z., 2012)

Formal education
(Research centers)
Universities
Secondary Schools
Primary Schools

Non-formal education
(Science) museums
Botanical gardens
Zoos
Natural parks
Local Governments
Community leaders
Media
Local businesses
Local NGOs

Vertical links
Lateral links
Horizontal links
Generic areas of RCEs actions

• Research
• Training
• Learning materials
• Policy work
• Networking
European RCEs Projects 2008/09 (n=91)

- Education/Training: 42%
- Research/Development: 7%
- Ecology: 10%
- Economy: 1%
- Social/Health: 4%
- Infrastructure/Supply/Deposit: 7%
- RCE Internal: 17%
- Other/Across Themes: 12%

Graphic: RCE Graz-Styria
RCEs around the world

There are 88 acknowledged RCEs as of September 2011

Global RCE Network (Fadeeva, 2012)

Regional Centres of Expertise on Education for Sustainable Development

100 RCEs today

www.ias.unu.edu/efs
What has been done?

...and how do we know it?
Five principles of regional SD processes
Graz Model for Integrative Development Processes
Mader, C., 2009)

- leadership, social network, participation, learning and research.
- principles are interrelated e.g. to achieve a supportive social network, a shared vision needs to be built up through the participation.
- principles are suitable for the evaluation of processes; e.g. RCEs self-evaluate themselves
The role of HE in regional cooperation

- RCEs represent an effort to reassess the links of universities with the outside world
- By including universities within RCEs, they become agents in social learning processes, they invite people to learn cooperatively, over time, from each other
- As a result, theory and praxis are integrated within RCEs to bridge the gap between knowledge, pro-SD values and unsustainable actions, practices and policies

The problem

What is the most appropriate way of engagement in the process?

- To provide feedback about transformation in terms of innovative practices, environmental improvements and social change that occurs within a region and within universities themselves is the focus
- But most RCEs (and other forms of regional cooperation) are not yet in the stage that some “real outcomes” are available.
- So, we should concentrate on characteristics of the learning process in the region (that includes potential for transformative regional development); information about learners involved, their characteristics and relations would be valuable, too.
Concept of regional learning network (RLN)

Envisioned qualities in RLN

RLN good practices

Narrative description

Criteria of quality in selected areas

Quality descriptors

Indicators

Assessment of RLN

Best practices database and handbook

Categories: learning, e-learning, research, networking
Indicators as a tool for reflection on sustainability oriented (learning) processes

- are a normative tool created to be milestones on the path towards some intended state. They capture important features of a transformation process, express the information in a simple way and communicate it to those who will use it for policy making purposes.
- provide important new information about an issue, process or condition, reflect it, and are used as an information resource for practical actions to undertake change.
- show how well a system is working, document success of some project or strategy, provide information about its progress, stages and best strategies to achieve the goal. They assist in planning processes, improving them, indicate progress achieved.
- provide feedback that could improve desired (sustainability oriented) development, help to deal with uncertainty and change and also illustrate the complex nature of sustainable development and L4SD.
Learning, network, research
(cooperation, communication, innovation, transition, governance, reflective practices, regional sustainable development)

Indicators

Evaluation

Strategies, policy making, network building, governance
3-LENSUS project database

Electronic database – a virtual warehouse of Europe-wide regional learning projects related to Learning for Sustainable Development (L4SD).

Projects characteristics:

- multi-stakeholder orientation, i.e. one university/research institution and at least two other regional actors involved
- an element of *regional* sustainable development
- focused on lifelong learning
Welcome to the

Database on Learning for Sustainable Development!

The 3-LENSUS project has created this database to collect and share innovative projects promoting Learning for Sustainable Development in Europe. The projects included in this database focus on the following aspects:

- multiple stakeholder orientation (a university/research institution + at least one other regional actor involved)
- regional sustainable development
- lifelong learning

Search the projects!

Get inspired by innovative projects on Learning for Sustainable Regional Development! Click on the picture or here to access the database and view the projects:

Add your project!

Have you implemented a project on sustainable development which you want to make accessible to other interested people? Learn more about adding your project by clicking here:

More information on adding your project
## List of indicators

### Project description

<table>
<thead>
<tr>
<th>Database indicator</th>
<th>Database question</th>
<th>Indicator value</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Project title</td>
<td>Please enter the title of the project</td>
<td>1 = Title makes it clear what the project is about; 0 = unclear</td>
</tr>
<tr>
<td>2. Project objectives</td>
<td>Provide a short overview on the objectives and vision of the project (max. 800 characters). Please include a clear statement of how your project's sustainability is demonstrated.</td>
<td>3 = objectives are clear &amp; understandable from an L4SD perspective, 2 = understandable but linkages between vision and goals not well defined, or not well described, 1 = not clear</td>
</tr>
<tr>
<td>Database indicator</td>
<td>Database question</td>
<td>Indicator value</td>
</tr>
<tr>
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<td>----------------------------------------------------------------------------------------------------</td>
</tr>
</tbody>
</table>
| 3. Number of involved stakeholders | Name the core project partners and their role in the project, including the type of institution by choosing one of them from the drop down menu. Note that the order of institutions doesn't have to be hierarchical. If there are more than five institutions involved, please name as many of them as feasible in the extra field below. | 0 = less than 3 stakeholders  
1 = 3 stakeholders  
2 = 4 stakeholders  
3 = 5 stakeholders  
4 = 6 or more stakeholders |
| 4. Number of different types of institutions | Name the core project partners and their role in the project, including the type of institution by choosing one of them from the drop down menu. Note that the order of institutions doesn't have to be hierarchical. If there are more than five institutions involved, please name as many of them as feasible in the extra field below. | 0 = university only or 1 other type  
1 = university + 2 other types  
2 = university + 3 other types  
3 = university + 4 other types  
4 = university + 5 other types |
| 5. Target groups                   | Tick the group(s) targeted by the project:  
11 choices                                                                                                                                                                                                 | 1 = 1 target group  
2 = 2-3 target groups  
3 = 4-5 target groups  
4 = 6-7 target groups  
5 = 8 and more target groups |
| 6. Involvement of target groups    | Indicate how the target group(s) are/were involved in the development of the project: by informing the target group(s), by consulting the target group(s), by involving the target group(s) in the design of the project, by involving the target group(s) in the decision making process | 1 = informing the target group (least advanced)  
2 = consulting the target group (more advanced)  
3 = involving the target group in the design (even more advanced)  
4 = involving the target group in the decision-making process (most advanced) |
| 7. Number of learners              | Tick how many learners participated in the project in total. Learners may include both project partners and target groups.                                                                                           | 0 = no answer  
1 = 0-9 learners  
2 = 10-49 learners  
3 = 50-99 learners  
4 = 100-499 learners  
5 = more than 500 learners |
# Learning indicators – L4SD aspects

<table>
<thead>
<tr>
<th>Database indicator</th>
<th>Database question</th>
<th>Indicator value</th>
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</thead>
</table>
| **8. Number of learning approaches** | Tick the kind of learning approach(es) that are applied in the project (several answers possible):  
• Online learning  
• Collaborative learning  
• Practically-oriented learning  
• Theoretically-oriented learning  
• Intercultural learning  
• Intergenerational learning  
• Project-oriented learning  
• Other:                                                                                          | one point per learning approach                      |
| **9. Number of different types of learning interactions** | Specify which learning formats and interactions have been used in the project and how many (max. 800 characters). Please be precise as in the following examples: three workshops over a six month period; an online discussion forum that remained active for two months and involved 20 participants; an online conference lasting three hours; formal classes held in a school building twice a week for a month | one point for each different type of interaction  |
| **10. Innovative aspects of learning**            | Provide some information about new and innovative approaches the project takes regarding ESD in comparison to standard forms of learning (max. 800 characters). | 1 = not clear  
2 = innovative aspects are described but not well justified  
3 = description of the innovative aspects of the learning is clear and well rationalized |
## Sustainable development indicators

<table>
<thead>
<tr>
<th><strong>Database indicator</strong></th>
<th><strong>Database question</strong></th>
<th><strong>Indicator value</strong></th>
</tr>
</thead>
</table>
| 15. Impact description: Social | Describe the impacts your project is seeking to achieve in the three dimensions of sustainable development. | 1 = inadequate information or confusing answer  
2 = impact is described but not well argued  
3 = Impact is clear and relevant to SD |
| 16. Impact description: Environment | Describe the impacts your project is seeking to achieve in the three dimensions of sustainable development. | 1 = inadequate information or confusing answer  
2 = impact is described but not well argued  
3 = Impact is clear and relevant to SD |
| 17. Impact description: Economic | Describe the impacts your project is seeking to achieve in the three dimensions of sustainable development. | 1 = inadequate information or confusing answer  
2 = impact is described but not well argued  
3 = Impact is clear and relevant to SD |
## Research indicators – reflection of learning, social, ... processes

<table>
<thead>
<tr>
<th>Database indicator</th>
<th>Database question</th>
<th>Indicator value</th>
</tr>
</thead>
<tbody>
<tr>
<td>13. Research method</td>
<td>Choose the research method(s) being applied in the project (several answers possible): • Interview • Questionnaire • Case Study • Survey • Experiment • Action research • Observational research • Other:</td>
<td>one point for each research method</td>
</tr>
<tr>
<td>optional</td>
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</table>
| 14. Description of  | Provide information about the benefits of integrating research activities into your project (max. 800 characters), e.g. data for indicator development, etc.                                                   | 1 = inadequate information or not clear at all  
                                                                  |                                                                                                       | 2 = benefits are described but not particularly well justified  
                                                                  |                                                                                                       | 3 = benefits of research are clear and justified                                                      |
Learning indicators – e-learning network characteristics focused on their social functions

<table>
<thead>
<tr>
<th>Database indicator</th>
<th>Database question</th>
<th>Indicator value</th>
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</thead>
</table>
| 11. Online learning activities **OPTIONAL** | Name the online platform, learning management system or content management system that is used in the project (e.g. Moodle, Typo 3, website) & tick the online tool(s) that is/are being used in the project (several answers possible). | 1 = website (less advanced)  
2 = e-reading (more advanced)  
3 = interactive environment (most advanced) |
| 12. Purpose of online learning activities **OPTIONAL** | Describe the reasons and purpose of applying online learning activities in the project, and where you see the added value (max. 800 characters).                                                                 | 1 = inadequate information or not clear at all  
2 = reasons and purpose are described but not particularly well argued  
3 = reasons and purpose are clear and well argued |
<table>
<thead>
<tr>
<th>Region</th>
<th>Project characteristics</th>
<th>Social network</th>
<th>Learning - L4SD aspects</th>
<th>Sustainable development</th>
<th>E-learning</th>
<th>Research</th>
</tr>
</thead>
<tbody>
<tr>
<td>Austria</td>
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<td>Czech Republic</td>
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<td>Norway &amp; Czech Republic</td>
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<td>Greece</td>
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<td>Austria</td>
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<td>Germany</td>
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<td>Norway &amp; Czech Republic</td>
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<td>Czech Republic &amp; Austria</td>
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<td>UK &amp; Czech Republic</td>
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<table>
<thead>
<tr>
<th>Online Purpose of Online activity</th>
<th>Learning impact of Online activity</th>
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<tbody>
<tr>
<td>Austria</td>
<td>Czech Republic</td>
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<tr>
<td>Czech Republic</td>
<td>Germany</td>
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<td>Norway &amp; Czech Republic</td>
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<td>Czech Republic</td>
<td>UK &amp; Czech Republic</td>
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<tr>
<th>Total Subtotal (Reflection)</th>
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<td>Czech Republic</td>
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<td>Norway &amp; Czech Republic</td>
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<td>Czech Republic &amp; Austria</td>
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<td>UK &amp; Czech Republic</td>
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<td>Czech Republic</td>
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What does it mean?

...do we have enough evidence?
Overview of indicators of SD oriented learning applied to different ESD databases.
Accent in knowledge production

Intellectual capital ➔ Social capital

Consequences for:
✓ learning process
✓ (reflexive) research
✓ publication procedure:
  • review process
  • media used
  • quality assessment
  • certification
  • ...

⇒ Intellectual capital ➔ Social capital
THE END!

jana.dlouha@czp.cuni.cz