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THE NORDIC ALLIANCE FOR OPEN EDUCATION – STATE OF THE ART, CHALLENGES AND OPPORTUNITIES

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Introduction

Are the Nordic countries forerunners in Open Education? What is the state of the art, barriers and opportunities of Open Education in the Nordic countries? What are necessary actions on policy, institutional and individual levels? These are the main questions of this paper.

Open Educational Resources are discussed widely on a global, European and even Nordic level. UNESCO, which has coined the term Open Educational Resources (OER) some 10 years ago, published in June 2012 a global agenda for OER, the Paris Declaration (adopted by OER World Congress). The Declaration shows the importance of Open Educational Resources and gives recommendations to governments and institutions around the globe. The European Union has started a large-scale initiative on “Opening Up Education” (http://ec.europa.eu/dgs/education_culture/documents/consult/open_en.pdf).

The concept of OER seems promising, potentially leading to educational collaborations, having potential for stimulating innovation in education, reducing cost of education, and broadening access to education for all. However, the awareness on the opportunities of using OERs is still low in the Nordic countries. In contrast to Open Access (for publications) or Open Source (for software development), OER are not yet broadly known and accepted / adopted. It is highly necessary to combine the initiatives and ideas of *open* approaches. This is the case at a user level as well as on policy level (see also Clements & Pawlowski, 2012). Therefore, it is important to promote OER to governments at all levels as well as to institutions.

The Nordic countries seem to be a good ground for openness and sharing: the Nordic countries share many values related to education and technology development; the political

and governmental institutions are quite similar – there is also a tradition for exchange of knowledge and solutions between the countries.

In this paper, we briefly give an introduction to OER and reflect on the state of the art of Open Education in the Nordic countries. In expert workshops by the **Nordic Open Education Alliance**, barriers and possible interventions to overcome them were explored. Based on these, we formulate recommendations as well as propose implementation actions. This study is based on a position paper from the Nordic Open Education Alliance (<http://www.nordlet.org/?=position>).

Background: Open Educational Resources (OER)

In the following, we will give a brief introduction to the concept of OER and current issues regarding global adoption (based on Pirkkalainen & Pawlowski, 2010). The UNESCO 2012 Paris OER Declaration designate OER as “teaching, learning and research materials in any medium, digital or otherwise, that reside in the public domain or have been released under an open license that permits no-cost access, use, adaptation and redistribution by others with no or limited restrictions. Open licensing is built within the existing framework of intellectual property rights as defined by relevant international conventions and respects the authorship of the work”. We define OER as “*Any digital resource which can be freely accessed and used for educational purposes*”. This broad definition includes a lot of different objects, such as digital learning resources, software tools like wikis or authoring systems, simulations or animations, electronic textbooks, but also lesson plans or records of shared experiences. The main aspect is that the resource is usable to improve education. We see that OER shows parallels to and includes other “openness initiatives”:

- **Learning resources:** Currently, the main research field is how to make resources specifically created for learning purposes available and reusable. This includes multimedia documents and simulations, but also simple web resources in HTML or XML format.
- **Articles, textbooks and digital equivalents:** These resources contain typical objects provided by libraries, such as articles, conference papers, books or journals. When becoming freely available, these resources are connected to the concept of Open Access (Björk, 2004; Bailey, 2005).
- **Software tools:** These tools are usually referenced as Open Source or Free Software (Raymond, 1999). Software tools are used for different purposes, such as producing / authoring learning resources, but also for communication and collaboration.
- **Instructional / didactical designs and experiences:** Educators are highly dependent on successfully planning and designing their learning experiences – these resources includes access to instructional designs, didactical plans (lesson plans), case studies or curricula. It also includes one of the most valuable resources: sharing experiences about materials and lessons among colleagues. These resources are also called Open Educational Practices.

- **Web assets:** These are simple resources (assets) like pictures, links, or short texts, which are not usable on their own in a learning context but can be used to support or illustrate certain topics. In many ways, these are resources found by Google or similar search engines.

Summarizing the definition, we see *core OER* as freely accessible, reusable and modifiable / adaptable resources, in a broader sense, also related resources (documents, publications, tools) should be considered as *broad OER*.

OER in the Nordic Countries

In the following, we give some examples and links to successful initiatives in the Nordic countries. The list does not intend to be complete, however, it will be extended by the network. Not all initiatives or links are OER only. Also initiatives and sites related to OER or close to OER are listed. The list has been developed in collaboration with the POERUP project (<http://poerup.referata.com>) which has made significant efforts to map OER across Europe.

Denmark

- EMU is a public portal for educational content in Denmark by UNI-C (<http://www.emu.dk>).
- Materialeplatformen is a national repository for all Danish learning resources (<http://materialeplatform.emu.dk/materialer/index.jsp>).
- The Danish Public Broadcasting (DR) provides a portal for academic lectures (<http://www.dr.dk/DR2/Danskernes+akademi/>).
- Duda.dk (<http://www.duda.dk>) is a comprehensive site with links to educational resources for school children, parents and teachers.

Faroe Islands

- Snar.fo (<http://snar.fo>) is the public portal for educational content in the Faroe Islands. It is maintained by Nám, which provides the educational sector with material, courses and IT support.

Finland

- EDU.fi (<http://www.edu.fi>) is set up and maintained by the Finnish National Board of Education (FNBE), a national agency under the Ministry of Education and Culture. FNBE has a wide range of tasks related to the development of education all through pre-primary and basic education, general and vocational upper secondary education and training, adult education and basic education in the arts. Swedish resources are also available (http://edu.fi/hitta_material/digitala_larresurser).
- Vetamix.net (<http://vetamix.net>) is a collection of learning resources.
- Länkhäven provides selected and qualified learning resources in Swedish and Finnish (<http://lankhaven.edu.fi/oph/search.html?lang=sv>).
- FIN Instructions for teachers, teacher cards (<http://www.peda.net/openkortti>).

- Small Highschools in Finland (<http://www.peda.net/veraja/pienetlukiot>).
- LeMill (<http://lemill.net>) is a collaboration between Finland and Estonia.

Norway

- NDLA (<http://ndla.no>) is a cooperation between 18 counties to provide learning materials using open licensing models for the learning resources and the technical infrastructure. In Norway the counties are responsible for providing learning resources to the students of secondary schools free of charge.
- NRK, the Norwegian state broadcasting company (<http://nrk.no/skole/>), provides OER services developed with public funding.
- delogbruk.no (<http://delogbruk.no>) is a Norwegian Web 2.0 initiative which stimulates educators at all levels to share learning resources and experiences.
- utdanning.no (<http://utdanning.no>) is the official Norwegian national education and career portal, and includes an overview of education in Norway and more than 500 career descriptions.
- ovttas.no (<http://www.ovttas.no>) is a collection of pedagogical articles, pictures, books, videos, and audio recourses for Sami schools.

Sweden

- Länkskafferiet is a Swedish Link Library for educational use. It is meant to be a pedagogical aid for Swedish pupils from 5 to 18 years of age (<http://www.lanlskafferiet.org>).
- The National Agency for Education (Skolverket) is the central administrative authority for the public school system and provides resources through a page with links and information about digital learning resources (<http://www.skolverket.se/skolutveckling/itiskolan/digitala-larresurser>).
- The project OER – Open opportunities for learning involves nine universities with Karlstad University as project coordinator in collaboration with Lund University (<http://oersverige.se>).
- UR access (<http://www.uraccess.se>) is a collaborative service from more than 25 educational institutions. It provides access to all streamed material, radio- and TV-programs provided by Utbildningsradion (UR).
- Spindeln is a search engine for open educational resources for schools (<http://www.skolverket.se/skolutveckling/itiskolan/digitala-larresurser/om-spindeln>).
- Libguides is a portal for resources on OER, and also with links of different kinds on OER, especially for higher education institutions (<http://libguides.lub.lu.se/oer>).
- DELA! (Share!) is a community (Ning) for education and learning (<http://shareanduse.ning.com>).

It can be observed, however, that a lot of regional / institutional initiatives exist but are not linked to national initiatives and thus are not networked appropriately. There is at present a lack of national strategies and policies in how to best exploit the potential of OER in the national education system as a whole and a similar lack of coordinated Nordic initiatives.

Furthermore, there are very few collaborations across the Nordic borders. As a conclusion, OER has received considerable attention but has not been exploited fully yet in the Nordic countries.

Open Education: Barriers in the Nordic Countries

Opening up education seems promising from educational, economical and development perspectives – however, there are currently still many barriers keeping stakeholders (educators, administrators, management, learners, etc.) away from broad OER adoption. We have identified some of the main **barriers** of OER in the Nordic countries. As a second step, we discuss **opportunities and key questions** of Open Education / OER. What is the possible impact for OER on a national, regional (Nordic) and global level?

The barriers have been derived based on a literature review and two expert workshops with stakeholders and experts from all Nordic countries. For each aspect, experts identified barriers as obstacles towards OER take-up. Based on this, the possible impact and necessary actions were discussed and documented.

The barriers identified are rather similar to barriers found in different domains across Europe (see for example Pawlowski & Clements, 2012). We see that there are barriers on all levels: On a policy level, there are no policies in place to promote and support OER in the Nordic countries. The same is the case on the institutional level – there are almost no policies which is a strong contrast to for example Open Access which is widely accepted and promoted by educational institutions. On an individual level, we have explored that still awareness building is necessary. Furthermore, it is essential to overcome fears, for example regarding IPR and licensing. Also, recognition and motivational issues play a major role.

As a conclusion, we can state that the above presented barriers provide a clear picture of the Nordic situation on OER. We see still a lot of obstacles but also potentials and promising possibilities to overcome the barriers. The barriers and possible actions can be used as a basis for future action planning on a policy, institutional and individual level. We can strongly recommend future collaboration to utilize the potentials in the Nordic countries. Furthermore, the great basis of available resources and pedagogical approaches can be a strong base to strengthen the Nordic position on the global educational market by establishing and exploiting international collaborations.

Table 1:

Aspect	Barriers	Opportunities / Impact	Actions
Strategies and Policies: Specific OER Strategies	Lack of Nordic policies on OER Lack of national policies	Provide political guidance, support and engagement	Build a Nordic position on OER Create national OER policies
Enabling environments: Connectivity, mobility, literacy, standards	Lack of interoperability Lack of easy-to-use systems	Creating access to a variety of OER through national / regional portals and communities Utilize OER across platforms and systems	Create flexible portals and collaboration environments Support the development and use of (international) standards
Use and Awareness: Inclusion, access & equality	Lack of awareness and attitudes on policy and user level Lack of support by middle management in institutions	Allow collaborations within and across the Nordic countries as well as internationally	Create Nordic communities Connect to international communities Create and support university policy development
Open Licensing Frameworks (understanding, public funding)	Lack of knowledge on open licenses (e.g. Creative Commons)	Make simple licensing mechanisms, understandable to educators and others	Support and enforce use of open licenses
Sustainable Development and Quality: Supporting teachers, quality, peer review	Lack of uptake by teachers insecurities on quality lack of quality mechanisms	Creating collaborations and shared teaching Increase quality	Provide collaboration support and incentives Create user-based quality mechanisms
Strategic Alliances: across borders, Public Private Partnerships (PPP)	Lack of policy instruments lack of partnerships	Increased international collaboration Supporting educational global collaborations	Provide programs for international shared teaching Support PPP and business model creation
Development / adaptation for culture / language: adaptation, accessibility	Lack of long-term collaborations Lack of accessibility Lack of tool to collaborate across borders	Allowing diversity and support of languages and culture Create access for special needs	Provide accessibility and adaptation guidance
Research: development, efficiency, quality	Lack of research on OER, in particular business models, acceptance, sector-specific uptake and effects	Increase research for OER and related topics, in particular applied research	Create specific OER research programs
Finding / retrieving: Services and tools, interoperability	Lack of knowledge on available tools	Create easy opportunities to find, adapt and embed OER	Use good practices and validated tools from international projects and collaborators
Change / adoption processes	Lack of balanced approaches (bottom up and top down)	Create good practices of both, bottom up (eg initiated by students) and top down (eg providing institutional strategies)	Collect and synthesize mixed approaches to adoption and change

Consequences for the Nordic Countries

We have identified key barriers and possible actions to promote and exploit Open Education. Open Education is an issue which can reform education in the Nordic countries and across the globe – however, it needs strong actions on a policy, research and implementation level. The following recommendations are an initial set which aims at creating discourse in the educational community. They were created based on the Nordic situation but can also serve as a starting point for OER discourse in any region.

Policy recommendations

1. Create a Nordic ministry collaboration on OER, consider making OER a priority for the Nordic Council of Ministers.
2. Provide a position and input to international policy discourse (UNESCO, EU).
3. Create national OER policies for different domains.
4. Support research in critical areas, create a clear research agenda on OER.
5. Support collaboration across borders with selected regions and countries.
6. Consider open licenses for materials developed with public funding.

Institutional recommendations

1. Consider OER as a part of the institutional strategy and engage in OER activities by providing institutional policies and guidance.
2. Provide recognition to educators using and developing OER.
3. Encourage collaborative teaching and learning using OER.
4. Engage in Nordic OER collaborations, consider participating in international OER collaboration.
5. Provide awareness and training on OER, licensing and tools.
6. Utilize partnerships for international exploitation / collaboration.

Technology and implementation recommendations

1. Create collaborations and international communities for OER.
2. Create access channels to portals, repositories, tools and communities on OER.
3. Utilize international standards.
4. Create solutions that are accessible for all.
5. Provide quality mechanisms.
6. Create and share guidance, good practices and experiences.

These recommendations derived from the barriers should serve as a starting point for discussion. However, they also define issues for future (collaborative) research on open education and its adoption process.

Summary

The current OER initiatives such as the Paris OER Declaration can be a big step forward towards access to education. However, it is necessary that governments engage and commit to integration of certain OER recommendations into national and regional policies.

By empirically identifying barriers and possible actions, our study is a starting point for supporting OER adoption on different levels. The action items can be used by stakeholders to determine necessary implementation steps and create action plans. As this process gathers momentum, the OER movement has the potential to create great synergies for access, collaborations and quality of learning, education and training. However, those possible benefits need to be systematically explored, planned and validated.

The Nordic Open Education Alliance aims at contributing towards collaborative research, discourse and policy support. This community encourages the further discussion of this study and in particular recommendations.

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