EMREX

Supporting Student Mobility
Agenda

- Introduction to EMREX
- Technical solution
- Field trial in 2016

“Field trial on the impact of enabling easy mobility on recognition of external studies”
EMREX prehistory

Collaboration between the Nordic countries (Finland, Sweden, Norway and Denmark) began more than 10 years ago.

A couple of earlier attempts at creating a solution for electronic transfer (EMREX) Prestudy done by Nordforum and afterwards decision to start a common project

Funding decision from EACEA in late 2014
Towards automatic recognition

1. Need common terminology (Nordic Glossary)
2. Technical solution for transferring data (EMREX, EWP)
3. Final step is aligning processes to support automatic recognition (FAIR, EGRACONS)

<table>
<thead>
<tr>
<th>Term</th>
<th>Term (MLO/ELM)</th>
<th>EN translation/ description</th>
<th>N</th>
<th>DK</th>
<th>SV SE</th>
<th>FIN</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cost</td>
<td>Cost</td>
<td>MLO: A cost associated with obtaining access to the learning opportunity (instance)</td>
<td>Kostnad</td>
<td>Pris?</td>
<td>Kostnad</td>
<td>Rakenteen säännöt (kuten, sisältöyyster, edeltäyynyt, edeltävat opinnot)</td>
</tr>
<tr>
<td>Course</td>
<td>Learning opportunity</td>
<td>Formally specified education or training process in the form of a course</td>
<td>Emne</td>
<td>Undervisningsaktivitet</td>
<td>Kurs</td>
<td>Opintojakso</td>
</tr>
<tr>
<td>Course</td>
<td>Object: course</td>
<td>Learning opportunity object that awards credits</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Course instance</td>
<td>Learning opportunity</td>
<td>LO offered to students restricted to time, place, pace and form</td>
<td>Undervisningsenhet, Undervisningsaktivitet</td>
<td>Lektion?</td>
<td>Kurtillfälle</td>
<td>Opintojakson toteutus</td>
</tr>
<tr>
<td>Credit</td>
<td>Credit</td>
<td>Credit, a measure of the extent of the learner action according to a framework like ECTS.</td>
<td>Studiepoeng (ECTS)</td>
<td>Belastning</td>
<td>Poäng (ECTS = høgskolepoang)</td>
<td>Opintopiste</td>
</tr>
</tbody>
</table>
Background

“The biggest obstacle for student mobility, after financial support, is the lack of recognition”

(Erasmus Student Network 2012)
What is EMREX?

- EU Erasmus+ project (2015-2017)
- Ministry level initiative
- Increase student mobility (20%)
- Recognition of previous studies
- Electronic and secure transfer of student data between HEIs
- Denmark, Finland, Italy, Norway, Poland, Sweden
Timeline

2015
- Planning
- Specification
- Developing

2016
- Field Trial
- Surveys

2017
- Evaluation
- Upscaling
- Production
Where to use EMREX

Degree mobility
Credit mobility
Transferring students

Before
During
After
Worklife

Eligibility
Reviewing achievement records
Recognition of previous studies

Admission services
Benefits for higher education

- Mobility targets - increases student mobility and crediting
- Enables automatic recognition
- Mobility statistic – reliable and aggregated data
- Non-HEIs e.g. government/student support agencies
- Electronic solution saves time and money
- Reduces risk of forgeries
- Turnkey solution for connecting existing systems:
  - Easy tool to implement locally
  - Student authorization (no new contracts)
  - Local infrastructure (data warehouses, authentication) to be utilized

Students used to google – demand fast and online services
Case: Transferring data from Finland to Norway

HEI SIS (University of Oslo)

Student Mobility Plug-in

ELMO (XML)

National Contact Point (Finland)

Authentication (HAKA)

National data warehouse (VIRTA)

HEI SIS

HEI SIS

HEI SIS

ERASMUS+
Case: Transferring data from Norway to Finland

- **Student Mobility Plug-in**
- **ELMO (XML)**
- **National Contact Point (Norway)**
- **Authentication (Feide)**
- **HEI SIS (University of Helsinki)**
- **HEI SIS (University of Oslo)**
Technical components

ERASMUS+

Technical components diagram with nodes labeled as follows:
- HEI client
- SMP lib
- EMREG
- National services
- ELMO-data
- NCP

The diagram illustrates the flow of ELMO-data and the interaction between these components.
HEI client of SMP

- Initiates the EMREX transfer for the student
- Must implement secure login
- Provides a way to store fetched results in local SIS
SMP library

- Used by the HEI client to ensure that the transfer is standardized

- A library of helpful functions
NCP – National contact point

Entry point for the EMREX network to that country’s data

Must contain functionality for secure login, result-fetching and transfer
Only central component

Registry of available NCPs with metadata

Exposed through web services

Currently hosted in Norway
EMREX uses the ELMO XML format to exchange data

Metadata for learner opportunities (MLO-AD)

European Learner Mobility – Achievement Information (EuroLMAI)
Security

- Login at both client and NCP
- Enforce HTTPS
- Sign ELMO data. Public key in EMREG
- Validate student
Field trial in a nutshell

Why?

- To run the tools in real life situations.
- To develop and improve the tool according to the users’ demands.
- To evaluate the effects of this kind of digital tool.

Numbers

5 Nordic countries and Italy
100+ From various HEIs some hundreds of students will be logging in and downloading their transcripts of records from institutions of higher education.
EMREX field trial in 2016

 Dates

Jan 1 2016 - Feb 28 2017 Field trial will run until Feb 2017 to make sure to include the students who participated in exchange studies during autumn 2016. There will be information at website and support for participating HEIs and students.

 Method and process

-Identify exchange students and
-Identify administrative personnel
-Introduce the project,
-Track their activities to test the electronic transfer of study records between HEIs through developed tools.
Field trial aims to

Goals and expectations

- Promote higher attainment level to student mobility in higher education
- Encourage more effective recognition of prior learning
- Avoid overlapping studies
- Test new ways to enable easier administration of student mobility
EMREX Field Trial Network
Wireframes

https://moquups.com/lundin.goran@gmail.com/2sWGYfXn/p:a2fa73ae2

Italy:
https://moquups.com/megachirone@gmail.com/vULqzxsH/p:ac3457fa0

Sweden:
http://vl9gc1.axshare.com/home.html
What happens after field trial?

- Evaluation
- Plans for an EMREX steering group
- Scaling up to whole of EU (if successful)
- Share the system
  
  All results including code available for everybody – get more HEIs to use the solution
Additional information

- Project internal website
  www.csc.fi/emrex

- EMREX-info email list (Enquiries: mats.lindstedt@csc.fi)

- Stakeholder Forum (Enquiries: mats.lindstedt@csc.fi)

- Official EMREX website
  www.emrex.eu
Questions?

No thanks!

We are too busy