

NREN educational technologies and services workshop

Budapest, Hungary

4-5 November 2019

Attendees: 38 in total, 15 face-to-face and 23 remote participants

Executive summary

The 2nd NREN educational technologies and services workshop has been held in Budapest as a follow up meeting after the 1st workshop during TNC2019. The objective of this workshop was to further explore the need to form a future task force on educational technologies and services (TF-EDU) and also to discuss the topics selected by the interested partners. The workshop was scheduled for 1,5 days to enable both presentations and in depth discussions.

We started the workshop with the first topic of NRENs educational services and their organisational aspects. We had three NRENs presenting: Vegard Moen, Norway (UNIT), Krzysztof Kurowski, Poland (PSNC) and Dragana Kupres, Croatia (CARNET). All three NRENs shared how they started to develop and create educational services for their educational institutional members, how they prioritized the services, organised internally both governance wise and also financially. After the session the representatives from the Netherlands (SURF) also shared their situation. Participants found it very useful to see the examples and discuss their experiences.

The next topic was eduID, presented by the project lead, Michiel Schok from SURF. He gave an overview of the status of the project, their current plans. After his presentation during the discussions, the following potential collaboration opportunities were added: 1. Sharing use cases for business models, user experiences, common technical thread, overview of tools to use 2. Create a map of the eduID world (including their challenges), involve REFEDS: Identify movement for the federated openID connect (OIDC).

EduBadges was presented as following topic. EduBadges is also a project led by SURF, and links very well with eduID. EduBadges is a tool for flexible education and student mobility: it will provide a more flexible and transparent approach to curriculum and grading for all learners.

During the discussions it was identified that not only alignment on the proposed open badge metadata extensions was needed, but also on the information that goes into this metadata should be aligned to make badges comparable. For example a shared standard to describe the learning outcome. For the adoption and uptake, the project should plan to work on the market analysis, in terms of demands and willingness to recognize formal badges from employers. And of course the plans for developing a sustainable funding model and exit strategy. Already during the workshop a few NRENs and the Up2U project expressed interest to get involved.

Complementing the earlier topics, adoption of open standards was addressed. SUNET presented their involvement and reasons for taking part of forming open standards for educational technologies and why they find it important to be a member of IMS Global. IMS works with all stakeholders: NRENs, educational institutions, ministries, vendors. Their experts regularly identify edu tech trends - observe trends and share them with their members. Many NRENs are running their own projects, procurements and developing tools. For long term planning interoperability is a necessity for ed tech development. Being part of the process of defining standards and having tools certified is very important because connecting them is easier and more efficient when working with standards. Joint forces saves resources and supports faster development and better quality in the services.

As a conclusion of the two days workshop we circled back to the needs of forming a task force on educational topics. The participants supported the idea of creating a structured group for knowledge sharing, especially on the higher, organisational level of educational services and activities among NRENs. The NRENs will then be the connecting force (point) for the activities in the educational institutions (universities) in each country.

Find out more on the [event wiki](#) page.

Pro-action cafe

During the second day of the workshop group discussions were taking place in the form of a pro-action cafe aimed at designing practical actions for the chosen topics - organisational aspects of edu services offer, eduID, eduBadges and Open standards, The cafe was guided by the following questions:

What common ground and what specific issues have we identified? (plenary)

Design the next (possible) steps together. (in groups)

1. **What is the quest behind the question/project?**

Try to go deeper than the story provided by the topic host. The invitation for the guests on the table is not to give advice, but to help the host of the table to gain new insights.

2. **What is missing?**

3. **How can we collaborate together to add value? What are the next possible steps?**

Notes from the workshop

i). Organisational aspects of edu services for NRENs

Link to presentations:

- Norway (UNIT) - [Presentation](#) PDF
- Poland (PSNC) - [Presentation](#) PDF
- Croatia (CARNET) - [Presentation](#) PDF

Summary:

- There is a difference in levels of schools and users to provide services to per NRENs.
- Governance difference per NRENs have an impact on the development, implementation and offer of edu services.
- Some lessons shared:
 - Future Lab Project - choosing carefully what and where to experiment. Having physical presence with teachers (PSNC)
 - Innovation process as a part of formal approval processes (SURF) - see [SURE Lifecycle Product Management Slides](#)
 - Knowledge sharing important (even differences useful, f.ex. shutting down of the services) (UNIT)
 - What do we call an educational service? Not unified approach. (CARNET)
 - The need to produce and the need to innovate should not exclude each other.

ii). eduID

Link to presentation: [Presentation Slides \(PDF\)](#)

Summary:

- The group should find out who else is doing a similar service (NRENs, others)?
 - Many similar eduID projects and initiatives...e.g. MyAcademicID
 - Switzerland (Switch, eduid.ch)
 - Germany (DFN, <https://doku.tid.dfn.de/de:aai:eduid>)
 - Different service with the same name:

- Czech Republic (eduid.cz)
- Hungary (eduid.hu)
- Luxembourg
- Montenegro (candidate federation)
- Poland (Pionier.id)
- Competitive advantage of edulD:
 - Other authentication services are institution based, leaving option for more than one ID per person - edulD solves that problem (one and only ID per person)
 - Students retain the control, not the institutions - added value should be listed
- Continue to share the process of development and challenges, good, bad practices - the forthcoming meeting announced (when, who?) - interested parties are invited to join!
- Addressing already now the global / international aspect - think of how to redefine goals and scope of the service. Should edulD follow the cross border nature of student mobility? Can it function within the national borders, in the future of education which is (supposed to be) borderless?
- Federation of edulDs - as one possible approach.
- Bottleneck is not technology but the adoption by the universities

Actions (Michiel, Michael, Zvonko, Janos, Gyongyi & all remote participants: Misi, Tomi, Vicente, Marjut, Jean, Arjan, Marina, Alejandro, Csaba):

1. What is the quest behind the edulD project?

- a. *Giving universities the opportunity to create flexible education so students can go to different universities easier than these days.*
- b. *Avoid multiple account for students - same person*
- c. *After transitioning data / history is lost - no portfolio building (= how to access my content within a service from multiple identities)*
- d. *Lifelong learning*
- e. *Access to service*
- f. *A unique student number (tracking the student - starting from elementary school - by the ministry)*
- g. *Account linking as alternative?*
- h. *Educational logistics*
- i. *edulD as a transition towards separating the identity from the attributes*
- j. *EC initiatives for cross-county*
 - i. https://eacea.ec.europa.eu/erasmus-plus/news/call-for-proposals-the-european-universities_en

2. What is missing from edulD project?

- a. *Unique ID should be standardized internationally*

- b. *How to handle the question of parents linked to the students' ID for minors?*
 - c. *Authentication and especially authorization to be built in*
 - d. *Lifelong learning from the beginning of education (pre-uni, uni, post-uni)*
 - e. *How to handle SAML / OpenIDConnect (OIDC)? Currently both are supported in SURFconext.*
- 3. How could we collaborate together to add value to it?**
- a. *Share the use cases:*
 - i. *business models*
 - ii. *user experiences*
 - iii. *common technical thread*
 - iv. *Which tools you can use?*
 - b. *Create a map of the eduID world:*
 - i. *What are the challenges per countries?*
 - ii. *Identify willing NRENs / edu institutions to start collaborating*
 - c. *Involve REFEDS: Identify movement for the federated openID connect - how to introduce OIDC (Remark from Michiel, nov 8th: See https://openid.net/specs/openid-connect-federation-1_0-10.html for work in that area)*

iii). eduBadges / eduCredentials

Link to presentation (PDF): <https://edu.nl/nbffg>

Link to promotion video: <https://youtu.be/nrTEdLaiZjs>

Summary:

- Tool for flexible education and student mobility: It will provide a more flexible and transparent approach to curriculum and grading for all learners.
- Microcredentials within formal system of education: Accredited Educational institutions (not the open education).
- EduBadges for formal micro-credentials (earning studypoints) and for non-formal micro-credentials (extra curricular activities, no studypoints).
- Badges are also being used for informal learning outside the educational institution and open recognition: not the domain for the NREN.
- Metadata extensions for badges to support Bologna Tool Diplome supplement standards. (IMS Global, other countries) - agree internationally on them (European profile)
- Need alignment on the information that goes into this metadata to make badges comparable. For example a shared standard to describe the learning outcome.
- Long Term issues

- Policy support
- Long term financing? Maintenance of information?
- 18 Dutch HE institutions are willing to pay for the service...etc or governments / ministries
- Stackable and suitable to make learning pathway visible for students
- Formal part of the learning part - role for NRENs
- Other possible solutions:
 - W3C Verifiable Credentials (VC) standard: W3C [WG](#)
 - EuroPASS (16 European countries) uses W3C VC extensions - SURF is pilot partner
- Up2U open badges collaboration - still in need for open source open badge tooling.
- Design their own curriculum (long term vision for the students)
- Software development collaboration (open source tooling is limited)
- Who is interested in the topic? Who is committed to work with the SURF innovation group? Can we form a coalition of the willing?
 - PSNC
 - Up2U project partners
 - NORDUnet
 - FUNET / CSC - Finnish Universities
- **Actions:**
 - **IMS Global contact - liaison**

1. **What is the quest behind the question/project? (Frans , Erik, Topi)**

Try to go deeper than the story provided by the topic host. The invitation for the guests on the table is not to give advice, but to help the host of the table to gain new insights.

- a. Iceland and Finland have specific use cases to enable student mobility. Need for a system like edubadges.*
- b. Maybe not a problem solver for this moment, but it is easy to foresee the educational system would benefit when it could be more flexible. Now is the time to invest in standards and align across borders.*
- c. For formal learning no legacy systems yet.*
- d. Alignment of metadata to compare badges is key, but also needs alignment in what information needs to go into specific metadata fields (i.e. LearningOutcome).*
- e. Student motivation: make learning pathways visible, get rewarded for the extra curricular activities (like gamification, but not quite the same as: [https://en.wikipedia.org/wiki/Nosedive_\(Black_Mirror\)](https://en.wikipedia.org/wiki/Nosedive_(Black_Mirror)) ;-)*

2. What are we still missing

- a. A shared standard for learning outcomes
- b. Metadata for badges - unified way of stating in Higher ed institutions
- c. Buy in from employers - recognition for formal badges
- d. Funding - motivation to provide certificates for single courses
- e. To see the student need for recognition of their competences
- f. Exit strategy

3. What are the next possible steps?

- a. Up2U will have a look at the edubadges software
- b. NORDUnet will investigate internally if they can start up the project
- c. Finland will investigate internally if they can start up the project
- d. Share in English the related documentations, publications, source code
- e. Define exit strategy(ies)
- f. Poland will investigate internally what additional open standards can be added to a pilot phase of Up2U and new edu services for K12, in particular eduBadges

iv). Open standards

● **Link to presentation:**

<https://ki.box.com/s/ui5r7tpqc4jkvm5l02rphqmu8nseykgs>

<https://ki.box.com/s/1ebwgu1t5v2l2c6c9bcz0tl96jz8kf8k>

Summary:

- NREN awareness (LTI, LOM and many others).
- Interoperability is a necessity for ed tech development - e.g. LTI, edu-API
- EdTech Ecosystem
- Connecting everything together - by creating standards
- Certify the ed tech products of the providers (NRENs, universities, vendors, etc.)
- IMS experts identify edu tech trends - observe trends and share them with members
- Number of certificates as the criteria for measuring impact?
- IMS Europe is interested in Europe wide collaboration - who is interested?

1. What is the quest behind the question/project? And the Actions (Nynke, Wietze, Kristijan, Jean-Francois):

- a. Get awareness of the open standards and the importance of serious adoption at NREN's, universities and suppliers
 - i. Conferences/meetings
 1. IMS Europe conference

- 2. NREN's meetings for universities and/or vendors
- ii. Publications
 - 1. NREN newsletters
 - 2. Local language
 - 3. Option: Mention Open Standards in general in communication
- b. Get serious adoption of the standards to really enable the ecosystem
 - i. Collaborate with NREN's
 - 1. Talk to NREN's that are already are a member - what are the benefits?
 - 2. Talk to smaller circle of NREN's that are involved already and possibly interested in becoming an advocate
 - 3. Talk to a larger circle of NREN's
 - 4. Collaborate on membership - added value
 - ii. Collaborate with universities to include open standards
 - iii. Collaborate with suppliers to include open standards. Focus on LTI Advantage
 - 1. Suppliers present on how they really use it
 - a. Side event of TNC
 - b. NREN suppliers days
 - c. Hackathons for startups
 - d. Awarding by IMS Global
 - i. Announce awards on yearly NREN-event and other communication
 - ii. Interesting offers for membership
 - iv. 1-1 help in interesting European projects. Pan European (Horizon 2020) accelerator projects - make startups aware of open standards and help them use them from the beginning. E.g. LEA.

What is missing?

- a. Added value for NREN on becoming IMS member
 - i. certify your products, help shape the standards, education and training technical support, help with strategic questions, bootcamp, bring NREN's together that normally wouldn't meet.
 - ii. Action: talk to existing NREN members what the membership is bringing.
- b. Decentralized approach, communication per language
- c. We need ambassadors/vocal points in the countries - Empower the ambassadors to speak on behalf of IMS Europe - We need a contact person in every NREN
- d. Leadership information, have the current member NREN's as an example.

Extra:

Get open standards on the agenda of the European and local governments. Long term goal.

Topic for next time?

SURF Acceleration plan for educational innovation with ICT:

<https://www.surf.nl/en/the-surf-cooperative/acceleration-plan-for-educational-innovation-with-ict>

Why TF-EDU?

The last part of the workshop was dedicated to the discussion on the next steps of founding the Task force on education services and activities. The purpose of the future TF will be to provide a platform for NRENs, their partners and other interested parties to join forces and support each other to evolve educational services and activities within NREN community. This community is seen as a rich source of knowledge and experience that can speed up the development as well as the absorption of edu services on the European level, has a more comprehensive approach as it is crossing the national borders, and often proves to be more cost efficient and fun when working together and building with and on other NRENs knowledge.

The group concluded that the TF-EDU will open the space for sharing own practice (good as well as failures to learn from), and in this will have two major tracks:

- A. TF will serve as a strategic platform for creating overviews of edu technologies landscape in NREN community and beyond;
- B. TF will liase between interested parties and support the creation and work of smaller working groups that will dynamically form around specific services, challenges and opportunities in the area of edu technologies.

All participants of the meeting agreed to support the creation of a Task Force on Education: FUNET, Srce, Jisc, CARNET, SURF, NORDUnet, RENATER, IMS Europe, SUNET, KIFU, ARNES.

Roadmap:

- Within 2 weeks the refined Terms of Reference (ToR) will be shared with the workshop participants and educational members.
- After receiving the new ToR NRENs and interested partners will confirm officially via email the support to form a TF and also nominate and/or vote on a chair. Response within 2 weeks.
- After the final confirmation of support to create a TF the GCC will receive an official submission request.

Next steps:

- Next workshop and first TF-EDU meeting planned for TNC20.
- Participants from the workshop and from educational related topics are asked / encouraged to submit presentations for TNC20 before **28 November 2019**:
<https://tnc20.geant.org/submission-guidelines/>:
 - NRENs educational services structure and benefit - success stories, learn from failures...etc (PSNC, Jisc, CARNET, SURF, others?)
 - Learning analytics - experiences, challenges (UK, Croatia, Netherlands, Poland, Armenia, Finland...etc)
 - Interoperability future work (LTI, Caliper...etc)
 - eduID (Netherlands, Hungary, Czech Republic, Poland...etc)
 - eduBadges (Netherlands, Slovenia, Up2U...etc)
 - Up2U (break it down to: badges, LTI, NDGLE...etc)
 - Shutting down services / exit strategies (UNIT, SURF...etc)
 - Existing and new standards on the way (IMS)
 - Learning record store? GDPR challenges? Possibilities?
 - ...etc.
- eduID early 2020 meeting invitation to be shared by Michiel Schok.