Type of session requested: Presentation
Title of session: OpeningupSlovenia - National research and innovation environment for Open Education
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Goals or intended outcomes: Digital and Open services so good teachers, faculty and students prefer to use them
Clear description of what will be covered: Open education national research environment, open education exemplars and how to open up an EU member country in terms of “open”
Intended audience: open education researchers, open education professionals, open education governmental officers

OpeningupSlovenia - National research and innovation environment for Open Education

1 Introduction and summary
The main goal of the initiative is to follow as closely as possible and go beyond the European Commission’s communication “Opening up Education”¹, which sets out a European agenda for stimulating high-quality, innovative ways of learning and teaching through new technologies and digital content. OpeningupSlovenia is therefore a bottom-up created and top-down supported new and innovative initiative in which Slovenia as a first European member state will attempt to create a unique nationwide research environment in open education. This test-bed comprises of a coalition of all Slovenian universities, compulsory and vocational education institutions with technical, research and industry partners. The objective is to explore means for a fully-fledged open educational system in synergy and parallel with the formal one, develop innovative projects and apply for European Commission funds related to ICT and new aspects of open education. For this purpose OpeningupSlovenia partners will apply separately or as a consortium for funds through the new European research and funding programmes Erasmus+, Horizon 2020 and Structural Funds, and will at the same time continue developing projects using their own resources. The initiative involves 13 participants from industry, academia, research, education and government and was given support by 40 institutions and entities from 18 countries in the SEE region and outside the European Union. Below we describe an initial and developing strategy.

1.1 Motivation and Problem statement
Slovenia believes there is a relatively small gap between current technologies for creation, remix, repurpose and redistribution of OER content and willingness to adopt these approaches in digital and open education in order to achieve an accurate enough conceptualisation for creation of sustainable and scalable open learning environments across all subjects and target audiences. By creating the OpeningupSlovenia case study, Slovenia due to its size and scale is in an ideal position to support the EU in the race with other regions of the world in this field, as the USA and some Asian countries are investing in ICT-based strategies to reshape education and training with a fast pace. Even though current developments in OER cover many relevant aspects and themes, the possibilities to test and deploy solutions in a large scale integrated environment are very limited, possibly even non-existing. There are clear problems facing online education today, namely assessment, quality assurance, validation and recognition instruments used in formal education, innovative learning environments and all levels of training including formal and informal education. These must adapt to the emergence of a much more diversified educational offer, including new education providers and the new forms of learning made possible by technology.

1.2 Objective
The OpeningupSlovenia case study framework will foster research activities through national and EU programmes like Erasmus+ and Horizon 2020 in all aspects of open education, allowing rigorous, transparent, and replicable testing of open learning environments, open education theories, new business models, organisational forms, open education computational tools, and new and emerging technologies for the educational technologies market place. This unique experimental platform will be sufficiently large, open and flexible to enable horizontal and vertical federation within the educational system involving educational, research and business institutions and facilities from the European Union, to

¹ Opening up Education - communication from the Commission to the European Parliament, the Council, the European Economic and Social committee and the Committee of the Regions:
http://openeducationeuropa.eu/en/initiative
stimulate development of new open educational frameworks by targeting audiences of various types including experimental advanced research and realistic users’ assessment.

1.3 Value proposition
OpeningupSlovenia wants to promote best practices and support exchanges across Member States, thus deliver benefits from economies of scale and interoperability to the market. It wishes to encompass and incorporate various ICT-based strategies to reshape education and training. Slovenia proposes an integrated approach toward actions at all levels. We argue that the supply of digital and open content can and should come from within Europe and for this purpose Slovenian players from all educational levels, preschools, primary schools, secondary schools, high schools and all universities, have agreed to join together and expressed their interest in forming an operational think-tank to launch and create the OpeningupSlovenia case study.

2 What the strategy is about
2.1 Start with needs
This strategy is only an initial one and it sets out how Slovenian education will become open by default for changes, research and innovation in open education. It fulfils the commitment we made in the EYCS Council on 25-26 November 2013. By open by default, we mean ICT based solutions and services for education that are research based and at the same time so straightforward and convenient that all those who can use them will choose to do so whilst those who can’t will not be excluded. By research and innovation we mean a research environment for open education based on developments in cloud technologies and gaming, personalisation of learning and mobile devices, open pedagogies, open methodologies and more. We will also present ourselves as an ICT deployment pool for all stakeholders in the European Union.

We estimate that by opening up from closed and offline onto digital and online channels will affect 10,000 pre-school teachers, 15,000 basic education teachers and 7000 upper secondary education teachers with a total of 200,000 pupils and save plan to leverage on innovation expenses, as total public expenditure for formal education in Slovenia in 2011 exceeded EUR 2 billion (5.68% GDP).

Slovenia is improving the way it provides education by moving to an “open” strategy, as ICT based services now present the biggest opportunity to improve education and create a better future. Practitioners and institutions will only
choose to use and develop ICT services if they are far more straightforward, convenient and in line with formal education. Half (50%) of practitioners comply with digital skills online but most people rarely use advanced ICT services that match content for learning and teaching. There are more than 30,000 practitioners and 2000 schools that could benefit from usage of such ICT. There is only a handful of institutions where a significant majority of practitioners who could use the principles of open education option to do. Many have an open option, but few decide to use it.

2.2 Initial Strategy and Objectives
Compliant with this strategy we will:

- **Improve Open Education institutional digital leadership:** The OpeningupSlovenia executive board will include an active open education open and digital leadership. Institutional educational processes will be redesigned, operated and improved by a skilled, experienced and empowered leadership in open education.

- **Foster research in Open Education:** Provide partnerships for funds through the new programmes Erasmus+, Horizon 2020 and Structural Funds, and implement and test the results in real-life scenarios. This research paradigm will lead to the establishment of a National research centre and European incubator.

- **Develop digital capability throughout the complete educational system:** All Institutions will ensure that they have the right levels of digital capability in-house, including specialist skills.

- **Redesign educational services to meet a new Open by Default Service Standard:** All institutions will undertake end-to-end redesign of educational services. There are so far 13 institutions which between them already represent the working sample of the educational system in Slovenia. These are listed at the beginning of this document. Each of these institutions have agreed on 2 significant exemplar pilot projects among themselves in terms of content and ICT learning environments. These were identified and decided in each institutions digital and open strategies in December 2013, alongside internal delivery plans. Institutions started to redesign their curriculums on the basis of innovative ICT services in February 2014 and will gradually implement them in the following months.

- **Build common technology platforms for Open by Default services:** OpeningupSlovenia will lead in the definition and delivery of a new suite of common open technology platforms, based on artificial intelligence tools, to underpin the new generation of open by default services.

- **Remove unnecessary legislative barriers:** OpeningupSlovenia will work with institutions to amend legislation that unnecessarily prevents us from developing straightforward, convenient digital and open services.

- **Design new pedagogical and didactic structures:** One of the most important and challenging tasks within OpeningupSlovenia will be to brake the mental model and strong barriers that are being used in public institutions in terms of didactical procedures and pedagogical measures and processes.

- **Collaborate with partners across public, private and voluntary sectors to help more people use Open Education:** Institutions will build open and digital inclusion into all relevant policies and programmes, and collaborate with private and third sector organisations to remove barriers to internet and devices use, whether caused through lack of skills, motivation, creativity, access or trust.

2.3 Results
Compliant with this strategy in the first 6 months we have achieved:

- **April 2014 - Launched OpeningupSlovenia with main results:**
  - Presence and meeting with Androulla Vassiliou - Commissioner for Education, Culture, Multilingualism and Youth at 'Opening up Slovenia' initiative press conference
  - Introduced the initiative to all Slovenian stakeholders and European Commission
  - Mobilized all stakeholders (teachers, learners, families, economic and social partners)
  - Presented guidelines, strategy and running and planned activities
April 2014 - Hosted the OpenCourseWare Global conference 2014 with main results:
  o Developed international presence in the European education, policy and research market
  o Showcased Slovenian research, development and technology to all relevant communities
  o Gained promotion and push

May 2014 – Started initial bidding for Erasmus+, Horizon 2020 budget with main results:
  o Total submission of 5 proposals mentioning and focusing on OpeningupSlovenia
  o Total value of bids € 3 million.

August 2014 – Stimulated national government at ministerial level for 1st round of national funding with results:
  o Launch of call for participations for proposals for development projects and the establishment of e-services and mobile applications in advanced ICT use in education in between 2014-2015.
  o Ministry to co-finance projects of up to € 70,000.00 euros with the total indicative amount of funds available for public tender up to € 900,000.00.

September 2014 - Received UNESCO Chair in Open Technologies for Open Educational Resources and Open Learning with main objectives:
  o Collection of data from available OER data sources and provide an infrastructure to ingest, process, analyse, aggregate and enrich the data with further metadata.
  o Provision of tools for creating Micro Open Educational Resources (Micro OERs)
  o Introduction of language technologies for multilingualism for OER products.
  o Create technical means for a multimedia based OER creation and delivery.
  o Create infrastructure for user modelling, personalisation and cross-recommendation.
  o Demonstrate, disseminate and upscale the use of prototypes and existing services for OER and Open learning.

November 2014 - Gained leadership of European Open Education Consortium with main objectives:
  o Put forward the legacy of EU Erasmus Multilateral research project “OpenCourseWare in the European Higher Education Context How to make use of its full potential for virtual mobility”
  o Formulate and promote a clear set of recommendations on how to make optimal use of OCW in order to promote virtual mobility for regular students and lifelong learners, on the basis of research and best practices.
  o To make arrangements with relevant partners to put these recommendations into practice as part of an on-going cooperation via OpeningupSlovenia.
  o Initiate a European OCW-network in order to make optimal use of its potential.
  o Extend network to all stakeholders (teachers, learners, families, economic and social partners)
  o Create Open Education Professional Directory to provide a searchable index of experts to help fill this need, and to help professionals find others working in open education.

3 Conclusion
Recent years have witnessed the rapid development of digital distance learning tools such as Open Educational Resources (OERs) and Massive Open Online Courses (MOOCs), all of which present traditional education systems and structures with exciting new opportunities, but also some challenges. Properly exploited, these new resources thus have a huge amount to offer: they can promote knowledge-sharing and intercultural communication; they can broaden access to education, by enabling teaching and learning to take place virtually anywhere; and in their ability to reach large numbers of learners, including by creating virtual communities of common interest, they can increase cost-efficiency. For the purpose of research, development, test, validation and quality and deployment in a real environment.

We would like to publish our paper in Open Praxis.