Output 13 SCORE2020: *International collaboration of regional centres*

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Europe's leading institutional association in online, open and flexible higher education

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Towards sustainable European support structure

This document focusses on the needs for a European support structure related to the continuation of strategic partnership.

Note that some elements of this SCORE2020 work are published as part of a chapter in the UNESCO-COL (2016). Making Sense of MOOCs: A Guide for Policy-Makers in Developing Countries. In addition some analyses are re-used in follow-up proposals in different regions (e.g. the start of Slovenian support centre and of a Czech MOOC platform including support structure, which both are (financially) supported by the government) and at the European level by setting up a strategic MOOC partnership in Central and Eastern Europe (project application IMUSTCEE) and by creating a European MOOC Consortium starting with the big European MOOC platforms.

MOOCs as part of Open Education and their (potential) role for society

A MOOC can be seen as a form of open education offered for free through online platforms. The (initial) philosophy of MOOCs is to open up quality higher education to a wider audience. However, although the concept of open education is often mentioned, it is not always combined with a clear and solid description of what the term means. What “open” means in open education has been the subject of some debate (Open Education Handbook, 2014) and is increasingly becoming associated with “free” only. Note for example that the Open Education Consortium focusses its description to the free and open sharing in education.

In his book “The Battle for Open”, Martin Weller (2014) gives an overview of the open movement, and concludes that “adopting a single definition is -counter--productive” and that motivations for the open approach are the most important. In the traditional historical context open education is aimed at education for people with no or limited access to the educational system. In a somewhat broader context it is recognised that open education is primarily associated with removing barriers to education (Bates, 2015). Instead of providing a definition one could adopt the following statement related to the most common referred purpose of open education: “The aim of open education is to increase access to and successful participation in education by removing barriers and offering multiple ways of learning and sharing knowledge”.

This potential of open education was strongly marked by the Cape Town Open Education Declaration (Shuttleworth/OSF, 2008). Note that the above aim of open education is not related to barriers of access only (i.e., not only aimed at the entry barriers), but at all barriers along the learning paths.

In this context, MOOCs form part of open education and should be defined as such. Mulder and Jansen (2015) explore if MOOCs can be instrumental to open up education. They conclude that some barriers will not or probably cannot be removed easily by MOOCs and their providers. Moreover MOOC themselves do create other barriers like network connectivity (learners need good internet connection), digital literacy and for now also cultural language barriers (as still most MOOC are from Western countries and in English). They state that in general MOOCs are (still) a promising tool for open education.
What is unique about a MOOC?
The uniqueness of a MOOC is related partly to its incorporation of both the open and the online components of education but mainly to its massive dimension. There is no precise number to define “massive,” and it might even depend on characteristics such as the number of people speaking the language of the MOOC offered (Jansen, 2015). It is generally agreed that the number of participants is larger than can be taught in a “normal” campus classroom and that the design of the MOOC is scalable (designed for, in theory, an unlimited number of participants).

How does a MOOC differ from an online course?
A MOOC differs from a “regular” online course in at least three aspects:

- It is designed for, in theory, an unlimited number of participants and as such is related to the scalability of the education service provider.
- It is accessible for everyone at no charge.
- All elements of the course provision are provided fully online.

Scaling up or down along these aspects is possible. See details as described in Output 5 in designing and developing MOOCs.

How MOOCs may benefit society

Widening participation in higher education
It is critical to engage HE in the construction of a global vision and pathway for developing countries to achieve their overall Sustainable Development Goals by 2030. As societies move from being post-industrial information economies to knowledge economies, it should not come as a surprise that HE, as a knowledge producer, is a major force in the emerging global knowledge society. In an age of increasing ubiquity of information and knowledge, and through the ongoing expansion of MOOCs and OER initiatives, it has become easier for people anywhere in the world to acquire high-quality knowledge on demand.

MOOCs are gradually regarded as a way to address the growing number of individuals seeking to gain HE. Evidence points to rising numbers of learners signing up for “wholly online learning” as an indication that there is a real demand for such courses. Prospective students want to learn in their own time and at their own pace, and the Internet is allowing them to access learning opportunities online that previously were beyond their reach.

From the students’ point of view, MOOCs not only provide access to quality educational materials over the Internet but also help them learn flexibly. Moreover, they can compare materials and educational systems through MOOCs. Besides the learning itself, MOOCs provide the opportunity to connect with people who share the same interests or professional profiles. As a result, citizens in general are able to reach out to new groups and generate new ideas, to initiate novel projects or other interpersonal engagements, for a wide variety of purposes.
Equality in and democratisation of education
MOOCs are considered a tremendous opportunity to provide groups of people, particularly those who cannot afford a formal education and are disadvantaged, with access to HE. As courses offered free of charge to people all over the world, thus giving them the opportunity to decide for themselves what, where and when to study, MOOCs may be regarded as contributing to the democratisation of HE, not only locally or regionally but globally as well. MOOCs can help democratise content and make knowledge reachable for everyone. Students are able to access complete courses offered by universities all over the world, something previously unattainable. With the availability of affordable technologies, MOOCs increase access to an extraordinary number of courses offered by world-renowned institutions and teachers.

The ROI of tertiary education for society
One of the big ideas presently in circulation is that MOOCs can contribute to the return on investment (ROI) of education. Learning is a highly valued good, as it is the driving force that enables the advancement of individuals and societies as well as economic, political and cultural development. Access to quality education offers citizens a better standard of life and the ability to engage more productively in all areas of human endeavour. Hence, it is highly advantageous for both individuals and society to invest in education. A high ratio of participation in tertiary education is especially beneficial for governments and society, since well-educated people present lower unemployment rates, live longer, have better health (thereby incurring lower health costs for society) and are more satisfied with life in general (Baum, Ma, & Payea, 2013).

The potential to reduce education costs
Education is a seven-trillion-dollar industry — 570 times greater than the online advertising market and seven times greater than the global mobile industry — and the contribution of open and online education to this industry is rapidly increasing. The rise in digital education is the result of multiple factors, the main one being the booming business of education (Stansbury, 2014). The increasing market share of online education is related to the strong need for flexible, innovative learning approaches and delivery methods to improve the quality and relevance of HE.

In a white paper titled MOOCs and Open Education: Implications for Higher Education, the Centre for Educational Technology and Interoperability Standards states that stakeholders should launch new market disruptions to target those who are not able to go to universities, or . . . launch up-market sustaining innovations by reducing the cost and providing better learning experiences without extra cost or low end market disruptions to target those who look for simple and straightforward courses rather than complicated university degrees. (Yuan & Powell, 2013, p. 18)

The limitations of MOOCs for society
In spite of the benefits of MOOCs outlined earlier in this Guide, the role of MOOCs in education is contested terrain. In some quarters it is argued that MOOCs are not optimally inclusive and accessible to a wide and diverse range of citizens. Consequently, they cannot and must not be seen as the only solution for making quality education accessible to all, or for addressing other social challenges. They provide a possible valuable tool, but additional measures are needed, such as the formulation and development of comprehensive government policies to improve access to education that is adequately funded and based on social equity and inclusion, as well as other types of online or distance learning.
The claims that MOOCs already benefit society cannot yet be supported. Moreover, there is almost “no understanding of the private and social benefits of distance and online education in comparison with those of face-to-face education” (Rumble, 2014, p. 208). However, some studies (e.g., the COL projects described in Carr, Tenywa and Balasubramanian, 2015) indicate that informal distance learning combined with mobile phones does offer tangible social and economic benefits. Generally, though, there is an increasing need to better understand the public and private returns on investing in MOOCs and other new modes of teaching.

In contrast, it has been observed that MOOCs may not promote equality and the democratisation of education. Equity can be defined as reaching out to all who need or want to learn, taking into account their circumstances and competencies. But most MOOC participants today are well educated and have already had access to HE. In addition, to participate in a MOOC, one needs an Internet connection with good bandwidth, as well as digital skills. Further, some MOOC providers no longer offer all of their services for free; instead, they only grant free access to explore learning materials (Straumsheim, 2016). Access to the HE system (i.e., including recognition options) in these cases is therefore limited to those who can afford to pay for them.

Mulder and Jansen (2015) explored whether MOOCs can be instrumental in opening access to education. They concluded that MOOCs and their providers would not or probably cannot remove some barriers easily. Moreover, MOOCs themselves do create other barriers, such as network connectivity (learners need good Internet connection), digital literacy and, for now, cultural and linguistic barriers (as most MOOCs are still from Western countries and in English). Plus, not all MOOCs are formally linked to HE systems. Learning through MOOCs must be incorporated into formal programmes in order to really provide access at the system level. One warning relates to additional educational services that must be paid for (see Chapter 8); for example, the extra costs for gaining a formal credit recognised as a component in a full curriculum might even increase the total costs for a formal degree.

**MOOCs as an instrument of online education**

Technology, particularly the Internet, has “transformed” how numerous sectors deliver their services. Now the question arises as to whether education can achieve similar results. The ongoing evolution of technology also introduces opportunities for opening up education by providing a range of online support services. In general, the term “technology-enhanced learning” is used to describe the positive impact that technology can have upon educational provision as well as how it can enable learners to access learning in new ways.

The Internet has become the showcase for educational institutions throughout the world, making it possible for them to provide information on their range of educational programmes and offer such programmes and courses (partly) online.

In online (and distance) education, learning is a result of online-facilitated experiences that are not constrained by time and/or distance. The label “online” applies to the delivery of course material as well as to teacher–learner and learner–learner interactions. Online (and distance) teaching institutions provide their students with access not only to materials but also to a range of support services both online and offline or face-to-face. Lowenthal, Wilson and Parrish (2009) showed that online learning is an evolving concept consisting of a wide variety of course designs and formats, going well beyond a
one-size-fits-all learning model. Although MOOCs are the new kid on the block, we need to carefully consider their potential impact on the education sector, within the context of online learning.

**Technology-driven innovation**

Investments in these new and improved educational services are made through technology-driven innovation, which is often made possible by constant reductions in costs. ICT can significantly reduce both variable and fixed costs. Fixed costs are those that the organisation will incur regardless of its level of activity (e.g., the costs of hardware and software, the cost of time dedicated by academic and technical staff to developing and maintaining the course). Variable costs increase as the number of students increases; these include the time tutors spend on each student, and components such as the cost of bandwidth and the processing power that each course participant consumes.

In some situations, the variable costs are minimal and the difference between serving a small or a large number of customers is thus negligible. This phenomenon has been called “variable cost minimisation” (Kalman, 2014). ICT has created the possibility of large-scale education by bringing courses into the public domain, as is the case with OER (course content) and MOOCs (a complete learning experience). Online education is growing as a result of (i) the digitisation of educational content, (ii) mass distribution, (iii) personalised learning and (iv) cost reduction. For a university that offers MOOCs to the public, the difference between offering the course to 100 participants or to 10,000 participants is so small as to be insignificant.

Some, such as Christensen and colleagues (2011), have argued that one of the reasons for the escalating costs in tertiary education is the inefficient business model of tertiary provision. They have noted that universities typically bundle a range of services that include teaching, assessment, accreditation and student facilities as a package for all learners, whether they require them or not. MOOCs are opening up a discussion around the unbundling of such services and the possibility for universities to offer tertiary education, or elements of it, at a lower cost

**MOOCs as a tool to improve education in general**

Open and online education is seen as an innovation driver to improve education, and as a base for transforming HE systems. MOOCs are in this respect excellent for promoting lifelong learning. They potentially offer a lot of flexibility for people who want to complete their training in a particular subject or who want to gain new knowledge in a specific area.

There is evidence of growing youth unemployment globally (Moursched, Farrell, & Barton, 2012), with opinions expressed that educational institutions are not preparing young people for current job vacancies (Weise & Christensen, 2014). Both public and private employers often report mismatches and difficulties in finding the right people for their evolving needs. The value of work-based learning — notably of apprenticeships or "dual training" systems — in facilitating employment and increasing economic competitiveness is clearly recognised. In addition, there is a strong need for flexible, innovative learning approaches and delivery methods to improve the quality and relevance of HE. This is not just a matter of up-skilling individuals.

MOOCs can provide “relevant” job training courses to all citizens over the Internet. However, the responsibility to deliver the right skills for the labour market must be shared between businesses, educational providers and other stakeholders, including students. Such a multi-stakeholder approach could aim to supply citizens with the required 21st-century skills and to bring together representatives
from the industry, education and government sectors.

**MOOCs and the SDG 4**

As stated above, MOOCs should not be seen as the big idea itself but rather as being in service of big ideas. Essentially, MOOCs can contribute to SDG 4: Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all. The Education 2030 Framework for Action refers to the role of technology in enabling OER and distance education, stating that tertiary education should be made progressively free, in line with existing international agreements (UNESCO, 2015, p. 14). However, OER contain only information and knowledge (see Chapter 1); they do not provide complete learning experiences in the way that courses do.

MOOCs are (or were originally) seen as the next step in the quest for greater access to quality education for all. As such, MOOCs can potentially contribute to many aspects of education. But a line of reasoning can be set up in which greater availability of MOOCs and other forms of open education can contribute to fulfilling many of the other Sustainable Development Goals:

- MOOCs as a means of achieving higher quality education by making more quality learning materials available.
- MOOCs as a means of training teachers, thereby increasing the quality of teachers and hence of education.
- MOOCs as a means to disseminate educational materials on subjects that can help with achieving other goals — e.g., learning materials to raise awareness about poverty (Goal 1), health and well-being (Goal 3), gender equality (Goal 5), decent work and economic growth (Goal 8), industry, innovation, infrastructure (Goal 9) or action on climate change (Goal 13).

One could position MOOCs as just another milestone in the process of transforming HE into a more open, accessible, flexible, affordable, transparent and accountable entity. In other words, from the point of view of developing countries, MOOCs should be considered another stage in the process of opening up and continuously improving education through the use of ICT. MOOCs have the characteristic advantages of any open and online education method. Nevertheless, they provide a specific group of benefits that should be emphasised.
Present European situation on MOOCs

**MOOCs in the context of European priorities**
The European knowledge economy needs people with the right mix of knowledge and skills: an up to date and solid understanding of their domain, transversal competences, e-skills for the digital era, creativity, skills for innovation and entrepreneurship. There is a strong need for flexible, innovative learning approaches and delivery methods for improving the quality and relevance of higher education. Moreover, this is not just a matter of up-skilling individuals but increasingly knowledge and skills for new (kind of) jobs. MOOCs are seen as a flexible provision to address a number of actions in the new Skills Agenda for Europe. Moreover, they are already used for training on topics and skills related to Skill shortages and gaps in European enterprises (CEDEFOP) and strongly contribute to the “e-Skills for Jobs” campaign of the EC. Not only do MOOCs increasingly provide the right training, the right skills and the right support, MOOC users already perform very well during job interviews. Two consecutive surveys indicate that the most relevant driver for European HEIs in providing MOOCs are ‘Improving the quality of learning’ and ‘Need for (e-)skills and jobs’

Although MOOCs are becoming mainstream, the European efforts are hardly visible and known, even to European organisations. Since the rise of MOOC already 6 years ago, the MOOC movement seems still dominated by the United States. However, different independent studies show that at least 40% of HEIs in Europe are having MOOCs or planning to develop MOOCs soon, compared to 12% of HEIs in the US. Moreover, it seems that European HEIs are clearly confident regarding MOOC development and implementation. The European institutions are having a more positive attitude towards MOOCs and those offering MOOCs have positive experiences.

This calls for a cross-institutional and even cross-national response as MOOCs operate and face competition on a global level. All evidence suggest strong MOOC involvement with sufficient tools, expertise and know-how existing in the EU, but the initiatives are nationally isolated and the cross-sectoral exchange lags behind (University-Business Cooperation Report). Only by involving all partners and initiatives, a competitive counterpart to the global dominant players can be formed. A project like the Czech initiative is essential to showcase the possibilities and strength of Central/Eastern European institutions.

Moreover, MOOCs are about scalability. The high production costs for MOOCs only break even, when a critical mass of learners and efficient cross-national collaboration is reached (economies of scale). This is the reason why cooperation at national level or beyond is needed to foster an intensified knowledge exchange between players from different countries to develop appropriate solutions to those regional and EU-wide challenges. The opportunities to provide scale in learning opportunities and open education is a key reason for the continuation of SCORE2020 collaboration.

University education becomes increasingly more international. The autonomy of universities is under pressure by regulations on macro-effectiveness of educational programmes. For online education this results in the bundling of expertise in the joint offering of courses with other educational institutions (networked curricula, research schools, etc.) and with other non-profit organisations (associations) and increasingly with the corporate sector (learning environment, MOOC platforms, world-wide marketing, etc.).
In the follow-up activities of SCORE2020 are strongly related to Opening up Education, as a joint concerted effort and integrated approach of DG Connect and DG EAC. Next to providing flexible, innovative teaching and learning for all through ICT, we must contribute to the modernising EU education with the focus on digital competencies and provide the necessary European infrastructure and interoperability. Moreover this 2013 EU Communication also strongly addresses the importance of equity, quality and visibility. European MOOC developers report that MOOCs must be part of the social dimension of European HE system and are using MOOCs to open up education in a manner consistent with these values and to increase life-long learning and social mobility.

**MOOCs seen as possible flexible solution**

MOOCs are seen as flexible, innovative learning approaches, based on the skills required by today’s and tomorrow’s labour force, for improving the quality and relevance of higher education. Research shows that learners perceive MOOCs to benefit them in terms of improved job performance, personal improvement, and the development of skills for a potential new job. MOOCs are therefore considered to be a tool for designing a strategic opportunity to meet local requirements and develop related skills and capabilities (e.g., Patru and Balaji, 2016).

**Massive participation in strongly increasing number of MOOCs**

The MOOC hype in the media might be over, but investment and uptake of MOOCs are increasing significantly worldwide. By the end of 2015, approximately 4,200 courses were offered by 500+ universities to 35 million students. This has increased by 2016 to 6,850 courses by over 700 universities to 58 million students (Class Central, 2016).

**Lacking visibility of European MOOC efforts**

However, these figures exclude many European MOOC offering as Class Central mainly list MOOC offerings of the big (commercial) MOOC platforms. Many European universities have built an own platform or use a regional platform with a limited visibility. Most universities are not accepted by the big MOOC platforms in the US by lacking the reputation (in ranking) and finances to become a partner. Consequently European efforts in MOOCs are less visible. Also the efforts of OpenEducationEuropa to make European MOOC efforts were incomplete and were stopped recently.

**European needs hardly known**

Consequently, also research data about MOOC participants, needs in society, etc. are strongly biased towards US dominance and lack evidence what really is going on in Europe. As many European MOOC efforts are local, there is a lack of coherent research at a European level. Only recently some efforts at European scale were conducted (MOOCKnowledge, IPTS, BizMOOC project and by Jansen&Goes, 2016). These results indicate a distinct European uptake of MOOCs related to different needs.

**MOOC innovation localised and short-term**

Efforts to provide support and innovation to the many organisation that are or want to be involved in MOOCs is partly failing due to lack of scalability and in some regions due to lack of funding. In addition many innovative (EC-funded) projects lack a sustainable perspective, let alone an overall long-term strategy between those projects. Both (research) data and scalable tools from these initiatives need to be made visible and secured for usage in the future.
But mature uptake of MOOCs in Europe

MOOCs are becoming mainstream in Europe. Already four independent European studies show a strong MOOC involvement of higher education institutions (HEIs). At least about 45% of HEIs in Europe are having MOOCs or planning to develop MOOCs soon against 12% in the US (Allen & Seaman, 2016, see figure 1). Strongest involvement is seen in those regions with supportive policies and structures (e.g., Muñoz et al., 2016).

![Figure 1: Institutional profile in their MOOC offering compared between that of US surveys (US 2013, US 2014 and US 2015), the EU surveys (EUA 2013, EU 2014), Muñoz et al. (IPTS 2015) and HOME survey (S 2015)](image)

Difference between European countries

Although some differences are observed between countries, it seems that a strong European involvement is widespread. However, strongest involvement is seen in those regions with supportive policies and structures.

Muñoz et al. (2016) limited their survey to five European countries. In their study the number of HEIs offering or planning to offer MOOCs ranges from 23% in Germany, 32% in Poland, 46% in the UK, 48% in Spain and over 62% in France. Hence, although more involved than US HEIs, Germany and Poland are behind the rest of Europe.

The latest HOME survey end 2015 shows that HEIs in most countries have a MOOC or are planning to have a MOOC (Jansen & Goes-Daniels, 2016). Figure 2 shows the results of the comparison of nine countries (with the largest response) of that survey.

Note that for a long period the main players in the European MOOC game derive from Western Europe (Dillenbourg, 2013), with Eastern European HEIs only just joining in. These recent surveys show that the uptake in Eastern Europe is catching up. I.e., these surveys indicate an expected increased uptake of MOOCs in Poland, the Czech Republic and in Lithuania at levels equal to Western Europe. However, to secure a sustainable, efficient and coherent approach an joint strategic partnership is needed.

Moreover, the initiatives in central and eastern Europe are still in a vulnerable starting phase.
No support from big MOOC platforms

Most Central and Eastern European universities are not accepted by the big MOOC platforms in the US by lacking the reputation (in ranking) and finances to become a partner. HEIs are therefore looking for alternatives by developing their own MOOC platform mainly based on OpenedX and Moodle (e.g., UNED, Fachhochschule Lübeck), using a cloud solution like Canvas (e.g., Derby), starting a regional collaboration (EduOpen in Italy, CADUV in Czech Republic), etc.

Consequently, many HEIs in Central and Eastern Europe that want to be involved in MOOCs cannot connect to big MOOC players and are potentially left behind or need to invest in platform, tools and services themselves. As MOOCs are for massive audiences and relate to scalability – joint strategic partnerships are essential.
Continuation of an increased European collaboration

The benefits of openness may be accrued by educational institutions, by the public(s) and state(s) they serve, and by third parties (commercial enterprises) or a combination of these. Up to now, open education has been driven by competition and demand. The economics of open and online education requires developing and delivering open products and services in partnership with others, regionally and globally. The world of open and online education does change the way we innovate our education system, programmes and courses. Investment in networked models (involving regional, national and corporate entities) is needed to promote open, flexible and online education for all.

Open, online education acts on transnational and global levels. It needs sustained collaborative efforts between educational institutions, civil society organisations, and companies. Co-operation should include diverse stakeholders involved, but present case studies show little involvement of all actors. Governments should support this kind of collaboration for efficiency reasons but also for the benefit of society as a whole.

HEIs, to increase their capacities in developing MOOCs

Several studies in general demonstrate that the uptake of MOOCs in Europe is maturing at a much higher level compared to the US. This is mainly an achievement of the current, partially language-bound platforms. However, many European HEIs that want to develop MOOCs report that (regional) support structures are missing and/or existing structures are unknown to them. The regional differences in languages, cultures and pedagogical approaches hinder the development and uptake of MOOCs in large parts of Europe. Hence, effective collaborations and scalable services for emerging MOOC provisions have to be made available at a European level.

As such there is a strong need for support and scale in Europe by sharing platform for MOOC and building MOOC community, developing supporting tool for MOOC, workshops, seminars about MOOC and toolkit for developing MOOC.

Collaboration on scalable services

The latest MOOC surveys (2015&2016) amongst >100-HEIs demonstrates that many European higher education institutions are willing to collaborate on scalable services in MOOC provision, and that a regional collaboration is much more likely that outsourcing services to commercial parties. It is of interest of Europe and individual countries that HEIs European-wide are stimulated in their motivation to be involved in MOOCs and are assisted in their needs to scalable services by emerging and maturing, possibly language-bound regional platforms.

In output 1 it is generally observed that European HEIS are very much willing to collaborate on services like co-creating MOOCs with other institutions, re-using elements from MOOCs, development of MOOC (materials) and in the design of MOOCs next to a quality assurance framework the use of MOOC platforms, learning analytics and recognition of each other’s MOOCs. The joint development of a European MOOC platform is not very likely as well as services on selling data, translation services and services on follow-up materials.

These results strongly indicates a strong need in Europe to strategically invest in a European partnership and capacity development in order to strengthen the quality of MOOCs for business training and upscaling their use in companies. A pan-European response is crucial if we want MOOCs to advance the many possibilities for a more flexible and modern higher education system, and to fully
open up education to the many that need the skills and knowledge for 21st century jobs (see also Porto Declaration on European MOOCs).

**Important role of policy-makers and governments**

Observed regional differences in the uptake of MOOCs in Europe are correlated to the existing of supportive policies by regional or national authorities. A successful uptake of MOOCs requires that policy and decision makers need to be in a better position to understand the “MOOC phenomenon,” capitalise on the advantages of these large-scale courses and use them as a strategic opportunity to help meet local needs and develop related capacities. In this context, we need especially to address awareness raising amongst policy makers and governments about the potential of this new mode of achieving educational policy objectives in coherence with a broader continuous education/CPD policy. Different (regional) strategies must be highlighted to leverage the full potential of online learning and open education for Europe.

**Need for actions at cross-national scale**

The state of the art is that MOOCs are seen as possible flexible solution to the increasing changes of HE system including reported knowledge and skills mismatch.

Although MOOCs are becoming mainstream, the European efforts are hardly visible and known, even to European organisations themselves. This is partly due to very localised and sometimes short-term innovations. i.e., EU MOOC activities are mainly concentrated in Western and Southern Europe, and are being predominantly driven by individual institutions or small groups based on a limited number of platforms. Moreover, they do not fully reflect the cultural diversity of Europe and serve a limited number of language communities.

**Continuation of SCORE2020 partnership through OpenupEd**

One action urgent needed is an alliance serving a coherent European collaboration. The approach is innovative by embracing diversity acknowledging that different regional strategies are necessary to leverage the full potential of MOOCs for regular education, continuous education and CPD. SCORE2020 partners will continue to strengthen the operations of each partner and beyond as part of OpenupEd. They will promote local initiatives such that all are keeping their own identity and where possible strengthen the uptake of MOOCs at Central and Eastern European level.

As stated above (and in output 1), many HEIs in Europe need to increase their capacities in developing MOOCs. In this context the need for scalable services at an European level is very important. Also of the lack of financial means compared to other HEIs connected to the big platforms. It is observed that European HEIs are very much willing to collaborate on services like co-creating MOOCs with other institutions, re-using elements from MOOCs, development of MOOC (materials) and in the design of MOOCs next to the use of MOOC platforms. The joint development of one European MOOC platform is not very likely as well as services on selling data, translation services and follow-up materials.

These results strongly indicate a strong need in European regions to strategically invest in a European partnership and capacity development in order to strengthen the quality of MOOCs for education and upscaling their use. A coordinated European response is crucial if we want MOOCs to advance the many possibilities for a more flexible and modern higher education system.

The SCORE2020 continuation must offer this support and scale for European HEIs by developing self-
sustainable communities of education experts and MOOC users, and a series of workshops and seminars on the design, delivery and uptake of MOOCs.

Need for a coherent regional action plan in alignment with European strategies

In this context another action needed is to provide a central voice for regional and national policy makers to ensure a sustainable development and use of MOOCs. We must focus on a coherent policy and business plans at national/regional level and stimulate supportive actions and regulations.

Each stakeholder involved in this widespread uptake of MOOCs has different objectives. To effect change in the higher education system, consistent actions at least seven main “levels” are needed (source figure: The changing pedagogical landscape).

If viewed as a hierarchy higher levels should lead to positive actions at lower levels (where positive means aligned with the outcomes intended at the levels above). However, many innovation start from bottom-up and can only become sustainable if supporting policies at higher level are created. MOOCs are no exception as many first MOOC initiatives started at the professor / faculty level.

Recently, an increasing number of supportive policies to stimulate the uptake of MOOCs at various levels are created, including IGOs (e.g. UNESCO, OECD, EADTU), European Commission (for example through programmes of DG EAC and DG Connect), national governments (e.g., France, Netherlands, Slovenia) and private companies (like MOOC platform providers). As such, collaboration between European HEIs, governments and civil societies seems to accelerate the development, delivery as well as the usage of MOOCs.

However, in many European countries the supportive regional and national policies is lacking. This is also the main reason why in some European countries the involvement of HEIs in MOOCs is less (see for example Poland and Germany).

As such a multi-stakeholder approach is needed by developing a regional action plan organising multi-stakeholders round tables in each region, adjusting initial regional action plans based on surveys and MOOC developments and experiences during this project, and experiencing what must be done at a university level, at a local level and what kind of (support) services and regulation can best be done at a national and cross-national level. SCORE2020 partners are already asked to be involved in other regional initiatives like for example in Czech Republic. Based on dissemination activities in May 2016 and the results of a MOOC survey amongst HEIs in Czech Republic resulted in the commitment of the Czech republic in supporting the development of a Czech MOOC platform with various supporting structures. In addition a follow-up project proposal was developed to increase the support to the
MOOC development and the uptake of MOOCs in various Eastern European Countries (proposal IMUSTCEE).

Follow-up in a European MOOCs Consortium (EMC)
Based on above arguments and experiences of the SCORE2020 (and other MOOC) projects, EADTU has contacted the main European MOOC platforms to start a European alliance. This resulted in the start of a cooperation with the big European MOOC platforms (FutureLearn, FUN, Miriada X, EduOpen and OpenupEd) in a European MOOC Consortium. By this European MOOC Consortium (EMC), all platforms involved form a bond of trust. It can extend to new national and regional platform initiatives in order to be the European coverage of MOOCs. By collaboration, each (regional) MOOC platform delivers better services to universities and companies. They exchange, connect, where possible align pedagogies, technologies, organisational and business models with regard to MOOCs.

Partially as a follow-up of endeavours of SCORE2020, EMC further contributes at the regional and national level to awareness raising, the discourse on MOOCs and on continuous education, including recognition issues, influencing national strategies, university-business collaboration, employment policy and the social dialogue. A European portal will be established, universities, connecting (also newly emerging) platforms and facilitating access to universities, companies and learners by specific entries. The EMC will be leading the European conversation on MOOCs and by its authority will be the European voice in the international MOOC debate.

Amongst others, a specific project application under Knowledge Alliances: European MOOC Consortium for Business training (EMC-B) was submitted. This European MOOC Consortium for Business training (EMC-B) project aims:

1. to exchange, connect and align different European MOOC provisions such that platforms, tools and support services are strengthened by collaboration and are better available for universities, businesses and learners in Europe. Innovative technologies, pedagogies and business models will raise the quality of European MOOCs and promote their use in companies. EMC-B will also develop approaches to the co-creation of MOOCs for continuous education/CPD with companies or knowledge transfer centres.

2. ensure an accelerated and sustainable uptake/use of MOOCs for continuing education and for business education and training (CPD, in company training for (new) jobs, flexible skills development, flexible pathways to broader in company training programmes and short learning programmes). This includes awareness raising, and the dissemination and the exchange of MOOCs offers all over Europe for local use by businesses and citizens.

3. to provide a European voice for European and national policy makers to ensure a European coverage for the development and use of MOOCs as a free part of the national higher education systems, leading students to continuous education/CPD and open education provisions. EMC-B will support the organisation of MOOCs and continuous education in European universities as complementary areas to degree education and the creation of interfaces for cooperation with companies and social partners.