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Anthony Camilleri , Ulf-Daniel Ehlers, Raimund Hudak, Henri Pirkkalainen , Matteo Uggeri, EDEN Conference, Genoa, June 2018

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SUPPORT LEARNING THROUGH MICROCREDENTIALLING – THE CASE OF THE MICROHE INITIATIVE

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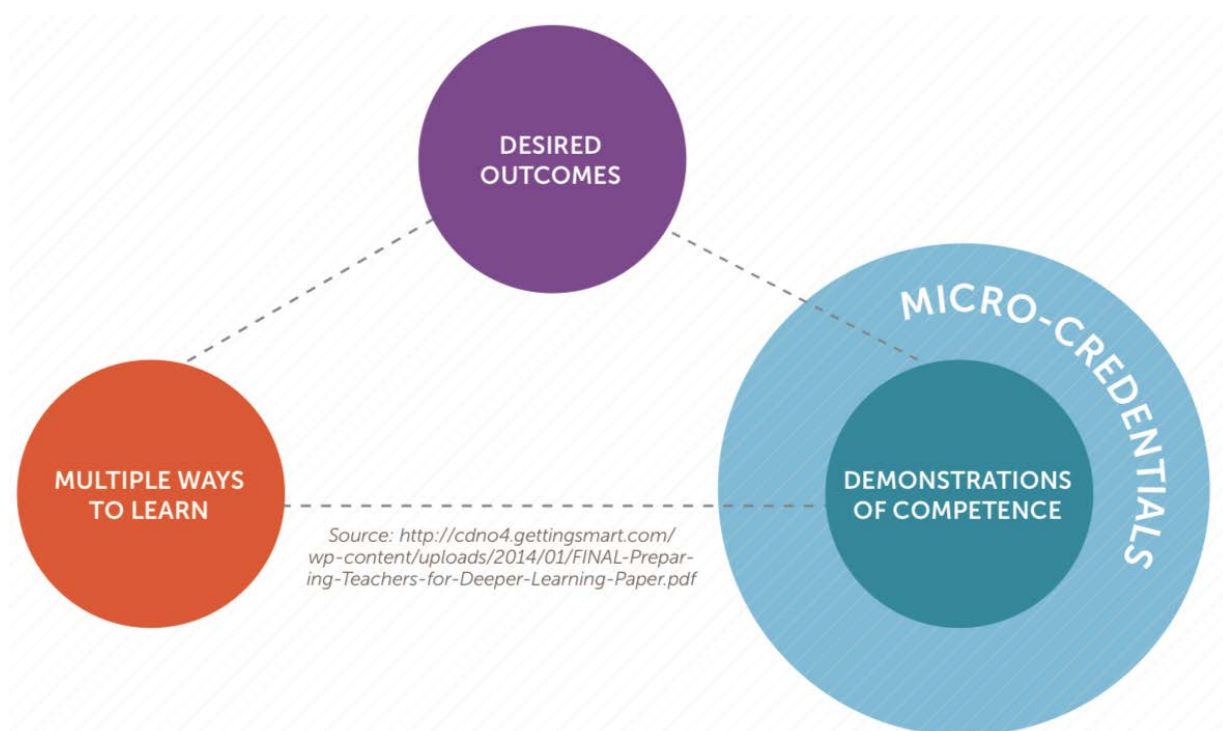
Summary

The MicroHE initiative is aiming to examine the scope for and impact of micro-credentials – a form of short-cycle tertiary qualification - in Higher Education. Currently, despite being primarily forms of formal education, micro-credentials such as micro-masters from EdX or nanodegrees from Coursera, are considered to be non-formal education. MicroHE intends to enhance the recognition of such non-formal educational opportunities by bringing them within the framework of existing recognition and transparency instruments for formal education. The project enhances skills-assessment due to the fact, that many micro-credentials are specifically designed to teach particular and narrow sets of transversal competences.

1. Introduction: The need for a next step in recognition

This paper deals with the emerging problem of a more and more diversifying learning pathway which can be seen in individual biographies of (European) citizens which challenges the standard systems of certification in our (European) higher education systems. In simple terms the emerging variety of certificates a learner can accumulate in their lives need a new way of managing, recognizing and transferring it. The established European Credit Transfer System (ECTS) seem not to be the fitting any longer.

Lifelong Learners earn credentials at the beginning of their careers, but they learn new skills every day. While they are recognized for the time they spend in formal professional development settings, they often don't have the opportunity to demonstrate the full breadth of what they have learned, including in informal contexts. To address this, the (European) initiative MicoHE is building a system of micro-credentials to provide professional educators a new way to identify competencies they are developing and gain recognition for the skills they learn throughout their careers. Universities are recognizing that learning doesn't always have to be packaged into multi-year chunks. It can also be broken up into less than 30-hour pieces, priced and awarded accordingly.



Picture 1: Microcredential Structure

This is when micro-credentials come into the picture: short, low-cost online courses that result in digital badges when learners complete one of them and certificates when they complete a series. HEIs globally more and more are taking advantage of a business opportunity and an education need as they experiment with new learning concepts that help today's workforce (Olneck 2012). While micro-credentials have become more popular, they still have some issues that universities need to work through. For example, who decides what skills and knowledge students will gain in micro-credentials, and how can they be compared across institutions? That is a question which is at the heart and stat of the European MicroHE initiative which has started in early 2018 and will look into providing detailed analysis and tools to better make use of the concept of micro credentials in HE in Europe.

2. The MicroHE Rational and Background

Digital technologies open many opportunities to learning - entry to education is the most important factor for economic success, with access increasingly promoted to those wishing access to furthering their skills. As new technologies and traditional education paradigms have collided, credentialing paradigms have also needed review (Abramovich 2013). Traditionally, academic credentials and professional certifications were awarded as students emerged from education and vocational/ technical programs. By 2015, global higher education institutions were considering validation of knowledge from online learning coursework in one single common, broad-based credentialing platform, and signed the Groningen Declaration to help forward this agenda.

Accreditation for online learning or Massive Open Online Coursework provides challenges for universities to accept and acknowledge learning as credited coursework. Awarding credit for different types of educational coursework disrupts higher education's traditional, formal educational

processes for financial and educational accountability. The challenge for post-secondary institutions is to look at online learning opportunities through a lens of reform and innovation and equally, as an opportunity to increase higher education participation (Lemoine and Richardson, 2015). The Malta EU Presidency Conference on “The State of Digital Education – Engaging with Connected, Blended and Open Learning” concluded that “Unbundling is Unstoppable”, but competition is fierce to lead the micro-credentials revolution. Digital Education is increasingly breaking traditional programs, into smaller, shorter online courses.

This trend is set to continue and expand dramatically. The discussion in the next few years will center on whether universities will adapt to offer large-scale micro-credentials, whether VET institutions will take up the mantle, or whether it will increasingly become the domain of start-ups and corporations. Credentialing in the form of digital badges, nano-degrees, and micro-credentialing is a new concept in HE advocated for use in the acknowledgement of coursework taken online; badges provide a method of accrediting content knowledge rather than course credit for specific knowledge (Rath, 2013; Reid, 2011). Digital badges are now being examined and accepted for wider applications in HE. However, the precise form of these badges is still very much up for debate, with one approach proposing fully-open credentials which are transparent, and issuable by anyone, while another model proposes verified credentials which are issued by trusted institutions.

The MicroHe initiative aims to bring ground into this debate and clarify the existing positions currently under discussion. It will also look into the policies behind it, and provide a comprehensive policy analysis of the impact of modularisation, unbundling and micro-credentialing on Higher Education in Europe yet conducted. In particular the following areas will have to be focused on if credentialing is to be taken a step further.

- Analysing and categorizing the state of the art in micro-credentialing in European Higher Education today, with the aim of understanding the current level of provision, the types of micro-credentials offered and future trends in provision of micro-credentials
- Creating different scenarios for the impacts of continued modularisation of Higher Education on HEIs
- Examining the adequacy of European recognition instruments for micro-credentials in particular ECTS, the diploma supplement and qualification frameworks
- Developing a ‘credit supplement’ to give detailed information about micro-credentials in a way compatible with ECTS, the diploma supplement and qualification frameworks
- Proposing a meta-data standard and developing an online clearinghouse to facilitate recognition, transfer and portability of micro-credentials in Europe

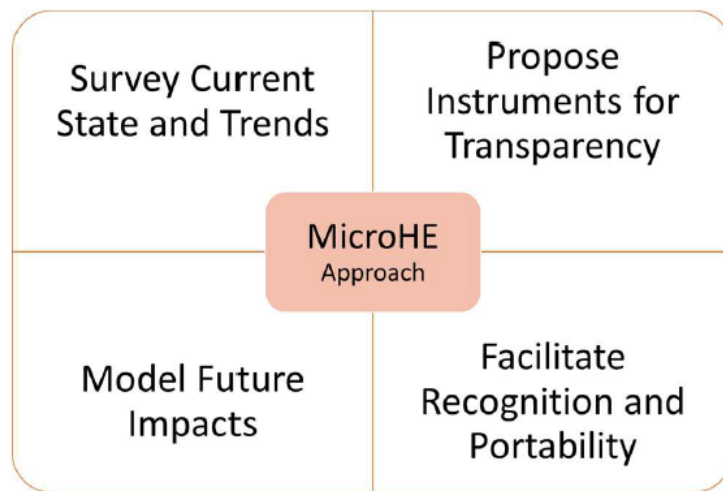
Through these activities, the initiative will:

- promote increased choice for students and lifelong learners by increasing the range of educational opportunities offered to them;
- equip universities (esp. public universities) to adequately adapt to the changes brought about by modularisation of education;
- improve the recognition and transfer of learning between different educational organizations as well as the world of work, including transnationally;
- while maintaining the European tradition of high quality education and high-levels of student-protection, provided through systems of accreditation and quality assurance.

3. Tools and Concepts for Recognition and Improved Portability

The world of work increasingly demands a quick response from the education system to provide people with the desired qualifications. In response, MOOCs have tried to make their content as digestible and flexible as possible. Degrees are broken into modules; modules into courses; courses into short segments. The MOOCs test for optimal length to ensure people complete the course; six minutes are thought to be the sweet spot for online video and four weeks for a course.

Universities are responding to this trend by becoming more modular, too. EdX has a “micromaster” in supply-chain management, that can either be taken on its own or count towards a full masters at MIT (Education Writers Association 2015). Coursera now offers everything from full-degrees to single courses – with content offered for free and learners paying for assessment and accreditation at the end of the course. However, while traditional students could depend on recognition of widely understood signals of experience and expertise such as university degrees, the same cannot be said for the creatures of MOOCs such as ‘nanodegrees’ and ‘specializations’. The private sector is proposing a host of solutions to recognize learning in smaller segments, from the aforementioned nanodegrees, to centralized skill-banks verified by standardized testing to online systems of recommendation similar to those to peer-reviewed literature (The Economist, Lifelong Learning Supplement, 2017). The MicroHE Approach is based on four pillars:



Picture 2: MicroHE Approach

a. Measure Current State and Trends

While the term micro-credentials is widely used to describe any sub-degree learning experience, whether formal, non-formal or informal, the initiative aims at looking a credentialing within Higher Education. Thus, we focus on credentials which confer a minimum of 5 ECTS credits from accredited and/or recognized institutions (i.e. which are at a L4 level of recognition-formality, as proposed by the OpenCred Study commissioned by the Institute for Prospective Technological Studies within the Joint Research Centre of the European Commission). The measurement of current trends and the state of the art will comprise surveying European higher education practices, to better understand

(a) the scope of microcredential provision within the context of their overall activities, (b) the drivers behind the increase in microcredential provision, (c) changes in the HEIs to enable provision of micro-credentials, and (d) future plans for further provision.

b. Model Future Impacts

While there is a clear increase in the number of MOOCs and other forms of micro-credentials, the impacts of such radical unbundling in Higher Education are far from clear. Micro-credentials change everything from the structure of qualifications, to pedagogy, modes of provision, types of assessment, economic models and every other aspect of Higher Education. As such, simple trend-forecasting offers little insight into future models, or in how Higher Education Institutions may adapt and prepare for these futures. To this end, the initiative will create scenarios for the use of microcredentials in higher education in the future, as well as the effect on Higher education policies and activities.

c. Instruments for Transparency

The OpenCred Study proposed that the highest level of transparency for credentials involves ones which: formally and clearly state on whose authority it was issued from, provides information on the content, level and study load, states that the holder has achieved the desired learning objectives, provides information on the testing methods employed and lists the credits obtained, according to a standard international system or in some other acceptable format, are demonstrably and clearly based on authentication [i.e. student's identity is verified] and state that the examinations have been administered under supervision and specifies the nature of this supervision.

The 'State of Digital Education Conference' concluded that there is scope for a distinctly European solution to the following issues: The educational reforms in Europe arising out of the Bologna Process were designed to enable portability and transfer of qualifications, as well as to create trust between different educational institutions. These same methodologies apply excellently to digital education, with little change... all that remains is for governments to deploy the policies necessary to bring digital education within existing quality and recognition frameworks. To this end, the MicroHE initiative intends to:

- propose a standardised 'credit supplement' modelled on the European Diploma supplement, which can be used to document learning achievement for sub-degree qualifications
- clarify how the European Qualifications Framework can provide a recognition and translation framework for
- all types of documented achievements, in particular, including micro-credentials, without the need to create
- parallel systems of accreditation such as 'badge' systems

Finally, the described concepts push to give recognition for e-learning and thus provide competition for degree granting global higher education. Digital credentialing systems, have been proposed to assess, recognize, and communicate knowledge acquisition. Establishing a system of digital credentials allows recognition of learning no longer bound by time or location, interest-driven, or, increasingly, by cost. The Groningen Declaration recognizes that digital student data portability will contribute to the

free movement of students and skilled workers on a global scale in the years to come. Issuing of digital educations need to solve issues of ownership of the credential (by owner and issuer), revocation, tracking and stackability. To build trust in the same credentials, issues of privacy, identity, validation and measures of competence need to be solved. Several countries including France and Estonia have addressed these issues by creating their own national systems for issuing and verifying credentials – however, differing national standards hinder the creation of a free market for services, one of the fundamental freedoms of the EU. To solve this issue, the MicroHE initiative will propose a prototype for a European credential repository, which can accept both full degrees and micro-credentials, based on already accepted standards in European Education, namely the diploma supplement, ECTS, the European Qualifications Framework and accreditation of Institutions according to the European Standards and Guidelines for Quality Assurance in Higher Education.

4. Summary

More and more educational institutions, training agencies and ICT companies are awarding digital badges to course participants worldwide. This development is an expression of increased relevance of lifelong learning and more flexible education. Learners have already acquired competencies and knowledge relevant to their studies before they enter HE or in parallel to their studies. The challenge is to find a way to provide recognition of these learning achievements within their study programs. Digital badges are possible tools to meet this need, as well are open badges. Based on the input of the higher education institutions, the MicroHE initiative will develop usable scenarios and models for HEIs to facilitate the uptake of micro credentials. Agreements and alliances between HEI are important as well, particularly for mutual recognition of credits.

Digital badges based on an open standard can be used as tools in support of a more flexible education system. Badges are not a goal as such in this respect (Hickey et al 2015). They are a means to make education more flexible, and thus to meet the needs of the students, educational institutions and employers. The introduction of badges also raises ethical and technical questions: trust, archiving and privacy. The MicroHE initiative aims to include these aspects into the discussion and contribute to building a badges ecosystem.

References

1. Abramovich, Samuel, Schunn, Christian, and Mitsuo Higashi, Ross (2013): Are Badges Useful in Education? It Depends upon the Type of Badge and Expertise of Learner. In: *Educational Technology Research and Development* 61 (2013): 217–232.
2. Daniel T. Hickey, James E. Willis III, and Joshua D. Quick (2015): "Where Badges Work Better". In: ELI brief (EDUCAUSE: Louisville, CO: June 2015): 2.
3. Education Writers Association (2015): "The Microdegree: The First Open and Stackable Professional Credential," April 9, 2015 Online: <https://www.ewa.org/press-release/microdegree-first-open-and-stackable-professional-credential>
4. Fagan, Taran (2015): "A Contemporary Way of Contributing to a Professional Portfolio That Is More Reflective of Learning in Today's World," Core Education (blog), May 21, 2015. Online: <http://blog.core-ed.org/blog/2015/05/open-digital-badges.html>
5. Lemoine and Richardson (2015): 'Micro-Credentials, Nano Degrees, and Digital Badges' In: *International Journal of Technology and Educational Marketing (IJTEM)* 5(1): 14

6. Olneck, Michael, R. (2012): "Insurgent Credentials: A Challenge to Established Institutions of Higher Education". Paper presented at the exploratory seminar Education in a New Society: The Growing Interpenetration of Education in Modern Life, Radcliffe Institute for Advanced Study, Harvard University, Cambridge, Massachusetts, April 26–27, 2012.
7. Olneck, Michael, R. (2018): "Digital Badges and Higher Education in a New Society: A Bernsteinian Analysis". In: Davies, Scott and Mehta, Jal (2018): *Education in a New Society: Renewing the Sociology of Education*. University Press. Chicago
8. The Economist (2017): Lifelong Learning Supplement, 2017