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BOLOGNA 25-27 OCTOBER

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FOREWORD

It was a pleasure to welcoming the delegates to the 15th edition of ePIC, an event that was designed and organised with the active support of Don Presant (CanCred, Open Badge Passport), Chiara Carlino (Bestr. Cineca), Tania Martinelli (IQC), Nate Otto (badgr.io, Concentric Sky) and Bert Jehoul (Open Knowledge Belgium). And, thanks to the enriching contributions of keynote speakers, presenters and delegates, many discussion threads were opened that will develop over the coming months.

While last year's conference resulted in the publication of the [Bologna Open Recognition Declaration](#), this year we hosted the first international [Open Recognition Day](#) and paved the path for the future with the discussion on the [10 Open Badge Challenges](#).

Our number one *challenge* is the exploration of the potential of Open Recognition Networks as a means to capture, grow and reap the benefits of making informal recognition visible and actionable, an idea at the core of MIRVA, a three year European project that will actively contribute to the goals of the Open Recognition Alliance.

Thanks to Cineca and Gerard Pruijm, the video recordings of the plenary sessions and workshops are accessible at <https://streaming.cineca.it/DefaultPlayer/div.php?evento=epic2017>.

For the ePIC 2017 team,

Serge Ravet

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Workshop – Addressing the Open Badge Challenges (1)

Time: Wednesday, 25/Oct/2017: 9:30am · *Location:* Main Room

Session Chair: Nate Otto

During this series of workshop we will be working in groups to address a selected number among the [10 Open Badge Challenges](#): 1. Open Recognition Networks; 2. Informal Recognition; 3. Open Endorsement; 4. Open Discovery; 5. Advanced Visualisation; 6. Social Capital Representation; 7. Open Pathways; 8. Semantic value; 9. Open Services; 10. Interoperability. During this first session, we will investigate the state of open recognition, examine the different challenges and use each as a window into building Open Recognition Networks. Each team will nominate one chair person who will be leading the work on the challenge and report on the results.

Open Pathways

Nate Otto

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As an example of progress toward true Open Recognition Networks, Nate Otto will present on the Open Pathways challenge as a organizing principal: Move beyond simply issuing badges or sharing badges on social networks and into networks of shared learning. How will the forthcoming Open Pathways system change how learning and recognition are understood to incorporate the learning network?

KEY1.1: Launch of the Open Recognition Day: Italy adopts Open Badges!

Time: Wednesday, 25/Oct/2017: 11:30am · *Location:* Main Room

Session Chair: Tania Martinelli

Session Chair: Chiara Carlino

During this plenary session broadcasted on the web keynotes speakers will explore Open Recognition and how it could change, not just the learning landscape, but the social and employment landscape altogether.

Round table with the participation of:

Davide Conte, Assessor to Budgeting, Finance, Corporate Participation, User Participation in Quality Control of Public Services

Marco Lombardo, Municipal councillor, mayor's delegate to European relations and projects

Alessandra Biancolini, ANPAL - National Agency Active Labour Policies

Marco Mantoan, Chief Executive Officer of ANFIA Service

Marcello Bogetti, Director of LabNET, SAA University of Turin

Towards Transparency 4.0

Andrea Simoncini, Alessandra Biancolini

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Since 2013, Italy introduced, by law, the right to lifelong learning, as a strategic lever for economic growth, social cohesion and quality of education, training and employment services. Under this perspective, validation and certification of competences plays a strategic role for promoting the re-entry of citizens into upskilling pathways and supporting employability, flexicurity, and geographical and professional mobility policies.

Starting from these regulatory and institutional innovations, a "new deal" for education and training systems started in Italy. Changes in progress indeed are wide and open as they affect both technical and cultural issues. As an evidence we are managing the construction of the National Repertory of Qualification, where the definition of quality standards for validation and certification of competences services will be definitely available for the whole country and the whole learning pathways.

This challenging approach is shifting the focus more and more on new strategic dimensions of the learning. As an instance, the work based learning, which for a long time encountered hard cultural resistance, currently has become an important component of both education and training systems, as it is proven by the latest reform of apprenticeship: the school reform law named "La Buona Scuola", where it has been introduced a compulsory path within the training and education cycles.

Given this context, the debate around the services and practices offered by public systems and actors, as well as the standard of services offered here within, is very lively and positive in terms of effectiveness and it clearly leans towards the construction of an integrated unique framework at the national level aimed at assuring to individuals the right to see their skills and competences transparent and permeable within the subsystem, considered both as regional subsystem and as sectoral subsystem.

Though this progress, it will be of a crucial importance defending the delivery under construction either by the risks of sustainability and devaluation or by the rigidities of bureaucracy.

Two important steps will be necessary to put in security the system from the risks above mentioned:

- 1) to diffuse competences recognition as a lifelong and social practice as much as possible, limiting validation and certification services to where they are effectively needed for transitions from school to work or work to work, as stated in the recent document that has updated the "State-Region Agreement about Internship and Traineeship Guidelines";
- 2) to handle and progressively go towards a massive compatibility and permeability between the public system of competence and skills certification and the digital standards for attestation of skills or achievements (such as the Open Badge technology).

Beyond the logic of E-portfolio, also the new Europass decision, that is going to be operative quite soon, adopts this approach in which integrated services issued by national relevant authorities benefiting of interoperability and making use of open technologies will create a valuable ecosystem for establishing a common framework delivering better services for skills and qualifications.

Digital Badges for the Automotive Industries - The ANFIA Service and IQC project

Marco Mantoan

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ANFIA is the Italian National Association of Automotive Industry. It is the biggest association inside Confindustria, the Association representing Italian manufacturing and service companies. With more than three hundred of associated companies, representing small, medium and big enterprise from different commodities ANFIA is the reference for the automotive industry in Italy. ANFIA service is, from 1996, the service company for automotive enterprise belonging to ANFIA. ANFIA is the owner of IATF 16949 Standard (old well known in the automotive SO/TS 16949) and according to this standard all the quality management system of the suppliers of the automotive company (more than 70000 all over the world) are certified. ANFIA Service is, since many years, the point of reference, in Italy, for quality culture in the automotive. In this area of interest, cultural reference means mainly to spread quality culture as interpreted and developed in the automotive world.

The requirements in this market are more and more demanding ; growing qualitative levels and product performances are always more recurring. In the past years, the organizational structure of the companies has become more changing, new technologies, new processes, new professionalism appeared in the company context, one well known evolution in 4.0 industry. And it is here, according to my thought, that we all play an important game: on the new professionalism. The new industrial world, and with it the automotive, is changing very fast , and with it human resources must evolve. It is common to say, but without an adequate update of the existing resources in the companies the challenge of the industrial "modernity" cannot be won. And then here training, very often under evaluate, or neglected, becomes a fundamental point for the industrial development. Companies and plant are not only equipments, technologies, material resources, are first people. People are the centre of gravity, the glue of all the resources put in place by the industry.

We need competent resources, that is: adequate education level, experience, personal skill and training. The level of education, the experience, the personal skill and the level of education are outside the area of competence of company like ANFIA service. Training is not. How can we contribute in facilitate the meeting between the needs of the companies of competent resources and the availability of the existing resources. How to make companies needs and existing resources availability visible. ANFIA Service pinpointed a possible answer in digital badge. With this tool and thanking to both the net and big data, it is possible to built a plot of land that allow meeting between these two requirements. Is it possible to give visibility bot to the demand and to the offering? I would like to contain the subject to the world I better know: quality in the automotive.

Companies, often, are looking for people that are able to develop, implement and maintain a quality system management. Where can they find them? Automotive world, as all other world, has his peculiarity, his needs that, to be satisfied, need people deeply expert of the matter. These people exist, but, sometime, are not visible to the companies (even when they are in the company). In many cases are people with long training and personal experience road. Often, however, demand and offering don't succeed in meeting. The web can help us to facilitate this meeting. Issuing digital badges make visible in the same time the resource's competence and the request of competence. The structure of the digital badge itself allow us to make visible both technical competencies but also "soft skill", the second as important as the first, for organizations. Certainly, we must care about the issuer. There is a great need to qualify the training providers. I'm obviously speaking for the automotive world, but I think that it is the same for other sectors. This sector is constantly looking for "certified" people, particularly internal auditors that must evaluate the evolution of the quality management system, but also people competent in technical methodologies in the automotive field.

To this end ANFIA Service has enthusiastically joined this project, innovative for Italy. It is necessary to define clear and transparent rules in issuing digital badges, specifics for any professional profile that contains certifications of "hard" and "soft skill". This is the challenge and the project of the next months, which ANFIA Service, with the partners of IQC, intends to realize. ANFIA Service is the first business company of an Italian association and, with the IQC partners, is fully involved in the definition of these rules. Particularly, as first goal, we wish to make available for companies the competent resources existing in the automotive world and to create a way to make these competencies visible to both companies and resources. I hope that this work will be followed soon by other actors that understand the importance and the power of this tool.

ORA: Open Recognition Alliance

Time: Wednesday, 25/Oct/2017: 5:00pm · Location: Main Room

Session Chair: Nate Otto

Session Chair: Don Present

An open meeting of the Open Recognition Alliance.

Kick off of MIRVA (Making Informal Recognition Visible and Accessible), a 3 years ERASMUS plus project that will greatly contribute to the implementation of the goals of the Bologna Open Recognition Declaration.

Making Informal Recognition Visible and Actionable

Serge Ravet

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While the recognition of *formal learning* rests on the extensive paraphernalia of grades, exams, diplomas and certificates, are those instruments fit for the recognition, validation and accreditation (RVA) of *informal learning*? Does the *recognition of informal learning* mean *formal recognition of informal learning*, or is there a space for developing something akin to the *informal recognition of informal learning*? What policies, strategies, practices, supporting infrastructures and technologies could make informal recognition possible and valuable? How to best combine the *formal* and *informal* recognition of learning to support lifelong learning?

The contribution of Open Badges to rethinking learning recognition

When addressing the issue of recognition of informal learning, what is generally explored is the *formal recognition of informal learning*: under which conditions official authorities recognise informal learning, so it could be further recognised by other stakeholders like potential employers or clients (for the self-employed). Yet, informal recognition of informal learning exists, for example when a technician is promoted engineer by an employer, but this recognition tends to remain local. Open Badges are changing that by providing the opportunity to make local recognition global.

The contribution of Open Badges to the recognition of learning is the provision of a unified instrument supporting:

The recognition of formal (accreditation) as well as informal learning—using Open Badges in formal learning settings can contribute to increasing its acceptance for informal learning.

Learners taking control over the recognition processes—using Open Badges to grow their identity and social reputation.

Depending on who is at the initiative of the recognition process we can distinguish two main types of badges:

Claims: the process is **controlled by the recipient** who is seeking recognition by peers, members of the community or authorities, e.g. a person creates her own badge describing a personal achievement and asks others to *endorse* it or someone to issue the badge on her behalf.

Credentials: the process is **controlled by the issuing authority** and is delivered upon satisfaction of the criteria. Although badges can be used for *macro-credentials*, like diplomas, this kind of badges is often used to deliver finer grained credentials called *micro-credentials*.

While today Open Badges are mainly used as *micro-credentials* delivered by authorities (schools, universities), there is a huge untapped potentials in using badges to support learner-controlled recognition processes as an alternative and/or support to formal

recognition, validation and accreditation. This could be particularly valuable in countries with poor or inexistent formal systems of recognition.

Open Badges to Open Recognition

As visual symbols, Open Badges are accessible to people within a wide range of literacy levels. Using badges as the milestones of a curriculum or a learning programme is a means to convey their meaning to all prospective learners. As visual symbols are used for all kinds of programmes, from basic literacy to rocket scientist, there would be no stigma attached with Open Badges as something “just for people with low literacy levels.” Moreover, those who have earned a badge would be able to share their achievements with the members of their community, independently of their respective literacy levels.

So we have the following virtuous circle:

Open Badges makes the learning provision visible to people with low literacy levels.

Open Badges makes the learning achievements of people with low literacy levels visible to all.

As learners with low literacy levels can share their achievements within their community, it is an incentive for other members of the community to share their own achievements.

Moreover, Open Badges open the “space of recognition” far beyond formal recognition. While *competency Badges* have the advantage of providing a finer level of granularity to the recognition process, the *recognition process* itself remains in the *conformance* quadrant (formal/traditional): badges tell what the person was able to do in the past, information from which one can infer possible future performance. In the other quadrant, *empowerment* (non-formal/non-traditional), we have *self-issued badges* and *peer-endorsed badges* so someone could for example making a statement by claiming the *Doctor Badge* to then go to the Red Cross and Médecins Sans Frontières to offer their services in their current capacity, get the badge endorsed by their peers and colleagues in these communities then go to the university using that badge in the application form to demonstrate her commitment and personal values.

About the "Plan of Recognition":

The 2 axes defining the Plan of Recognition are:

Formal (institution centred) / Informal (community centred)

Traditional (static, centred on past achievements / Non-Traditional (dynamic focused on the future)

Those 2 axes define 4 quadrants:

Conformance (formal / traditional)

Inclusion (informal / traditional)

Empowerment (informal / non-traditional)

Enabling (formal / non-traditional)

PR21A

Time: Thursday, 26/Oct/2017: 9:00am · Location: Main Room

Session Chair: Don Present

ePortfolio and Open Badges: Lifelong Learning Practices In Siberian Federal University

Olga Smolyaninova, Ekaterina Bezyzvestnykh

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The material was prepared within the framework and sponsorship of the project powered by the Russian Foundation for Basic Research (RFFR) "It is Siberia and the Arctic Ocean that will give the might to the Russian state": "The Development of education and research center in the Krasnoyarsk Region by means of an electronic platform of longlife learning (PL2S) to support the development of human capital of Krasnoyarsk Region" (№ 16-16-24005/17) [1].

One of the goals of the Program for Enhancing the International Competitiveness of the Siberian Federal University (SibFU) is "Development of the open educational system (Citizen University)" [2]. With this in mind openness and transparency in assessing the educational outcomes of university students is a strategic constituent of the program for the development of e-learning and distance education technologies of a modern university.

Over the decade the Institute of Pedagogy, Psychology and Sociology (IPPS, SibFU) has been positively employing the e-portfolio technology in the system of training bachelor- and master-level student in the field of Pedagogy. Open Badges technology is new and is virtually not used in the Russian universities. SFU became one of the first universities to implement this advanced technology into the educational process of the teaching master-level student. An electronic educational course was developed in the MOODLE system based on awarding Open Badges. This course is intended for the master's program "Management of Educational Innovations" in the discipline "E-Portfolio and Open Recognition of Personal and Professional Achievements Throughout Life

In the context of continuous education policy, the introduction of OPEN BADGES technology at the university is regarded a seamless extension for the use of e-portfolio technology in the educational environment of the Siberian region.

One of the mechanisms for supporting the e-portfolio and Open Badges are the scientific and educational resources of the electronic educational platform for continuing education in Siberia [3]. The electronic platform (PL2S) was developed within the framework of the RFBR project implementation and provides dissemination of experience in the following areas of activity:

- the line between non-formal and formal;
- the nature of non-formal learning;
- workplace learning;
- the way that the individual is positioned in the recognition debate;
- levels of learning below upper secondary schooling;
- the distinctions between types of non-formal learning;
- the enhanced potential of informal learning through ICTs.

In view of the novelty of the OPEN BADGE methodology (recognition of educational results) as one of our mainstreams and our mission, we consider the communication and promotion of the OPEN BADGE methodology in the academic and professional pedagogical community. The technology of Open Badges was presented at 2 plenary sessions and master classes of the International conferences "Development Practices: Educational

Initiatives", "Education Throughout Life: Continuing Education for Sustainable Development".

It is the teaching community that is the guide and new ideology people for mainstreamification of Open Badges technology.

We outline the following milestones of the implementation and dissemination of the Open Badges technology of in Russia: the first stage – probematisation, the second stage - the actualisation, the third stage - the personal value-personalizing, the fourth stage – implementation in the practice and adoption.

References:

[1] The project powered by the Russian Foundation for Basic Research (RFFR)." It is Siberia and the Arctic Ocean that will give the might to the Russian state": "The Development of education and research center in the Krasnoyarsk Region by means of an electronic platform of longlife learning (PL2S) to support the development of human capital of Krasnoyarsk Region".

[2] Program to enhance international competitiveness of the Siberian Federal University.
<http://about.sfu-kras.ru/docs/9241/pdf/329134>.

[3] Global Perspectives on Recognising Non-formal and Informal Learning. Why Recognition Matters. UNESCO Institute for Lifelong Learning 2015

Tools of Engagement Project (TOEP): Equipping All Learners with 21st-Century Skills

Roberta {Robin} Sullivan

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The State University of New York Tools of Engagement Project (TOEP) < <http://suny.edu/toep> > is a flipped professional development model that encourages faculty to explore and reflect on innovative and creative uses of emerging technologies through hands-on discovery activities. TOEP promotes lifelong learning in a digital world and provides a focused venue to experiment with the constantly evolving landscape of social-media and the latest web-based technology tools.

TOEP is not traditional professional development but instead provides online access to resources for instructors to explore at their own pace through a set of hands-on, discovery activities. After participants explore a section and complete one of the activities they are prompted to reflect on their learning by posting about their experiences within a connected private social-network community. This avenue for peer support and inter-campus collaboration has resulted in a robust dialog about how the application of new tools can be used to help facilitate communication, collaboration, critical thinking, and creativity. This learning environment empowers faculty to master new technologies and helps them transfer knowledge to their students about how to effectively work with new communication and collaboration technologies.

Digital badges and other professional development award incentives are used to provide motivation for participants and complete the project requirements. Awards are issued through a peer-review process to community members who share the most innovative use of TOEP tools and who provide optimal levels of peer support within the online social network community. Results from recent analysis of the online community postings has shown that many participants report vicarious learning through the experiences of others in the community.

This cross-campus collaborative project has just completed its fifth year as faculty professional development. New grant funding has just been awarded to transform this successful system into a MOOC based on the TOEP model which will be targeted to all

learners. The future of this innovative professional development model will target the needs of faculty, students, and professionals alike to provide 21st-century skills which are necessary for today's society. This session will provide an overview of the project's history and a look into how future iterations of this project will take shape.

Digital Badges for Workforce Development

Kathleen Radionoff

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Digital Badges for Workforce Development

Madison College has one of the oldest badging program in the United States. Launched in 2012, the college's School of Professional and Continuing Education has awarded over 3000 badges to both credit and noncredit students. This presentation will have examples of badges developed and awarded to young students preparing for a career in healthcare, incumbent working adults who seek out noncredit training opportunities for the purpose of upskilling, and customized training provided to employers and their workforce.

Practical tips on how to launch a successful badging program will be shared as well as issues that occurred that were not anticipated. In addition to the sharing of best practices, new research will be shared on the use of badges.

Student Transformative Learning Record

Brenton Rylan Wimmer

Credentialing for Transformative Success: The Student Transformative Learning Record (STLR); bwimmer@uco.edu

The University of Central Oklahoma (UCO) is a four-year public metropolitan university located in Edmond, Oklahoma. In 2006, UCO adopted transformative learning into its mission statement and began to envision new possibilities for student learning, but did not yet have a way to award badge level achievements to students. Based on the work of Jack Mezirow (1978; 2000) and others such as Stephen Brookfield (2005), UCO defined transformative learning as a holistic process that places students at the center of their own active and reflective learning experiences. By emphasizing the development of beyond-disciplinary skills and expanding students' perspectives of self, community, and environment, the institution began planning ways to integrate transformative learning experiences into courses and co-curricular activities across the campus. Initial efforts to implement the initiative on campus were supported by all levels of university administration (including the President and Provost) and a collaborative project team including members from academic affairs, student affairs, and information technology, was formed.

Soon a campus-wide plan, known as the Student Transformative Learning Record (STLR), was launched with the help of a \$7.8 million-dollar Title III grant from the United States Department of Education in an effort to support, assess, and track student progress across six core tenet areas based upon the American Association of College and Universities' High-Impact Practices: 1) Discipline Knowledge, 2) Global & Cultural Competencies, 3) Health & Wellness, 4) Leadership, 5) Research, Creative, and Scholarly Activities, and 6) Service Learning & Civic Engagement. Rubrics were developed for each of these core tenet areas by modifying existing AAC&U-VALUE Rubrics. These rubrics were highly vetted and adapted among our faculty – who were actively involved in the collaborative process of their development.

Currently, the institution has (through a grass-roots movement):

1) Implemented STLR in over 225 courses across diverse disciplines.

2) Funded 380 unique student/faculty-proposed paid projects and internships situated around at least one core tenet-area rooted in High-Impact Practices (including the Black Male Initiative, the Hispanic Success Initiative, a Native American Success Initiative, an Oklahoma History Project where students uncovered history on the Tulsa Race Riots, a mobile clinic for nursing students to treat the homeless, a project where students are researching squash proteins to help treat cancer, and a Living-Learning Garden where students grow food on campus for the Central Pantry – to name a few.)

3) UCO has also supported 25 co-curricular student groups and has hosted some 165 campus events aimed at increasing student engagement outside of the classroom.

4) Trained over 40% of our faculty and staff who have voluntarily integrated our program into their courses and activities across the campus.

So, what? Although we are still in the process of gathering data, our results suggest that the Student Transformative Learning Record has been highly successful. For instance, retention rates for our priority (low-income, first generation, and non-majority students) cohort of first-time freshmen students from Fall 2015 to Fall 2016 has increased significantly from 54% (Non-STLR involved students) to as much as 73% (STLR involved students). For students who are part of our non-priority population, retention rates have increased from 49% (Non-STLR involved students) to 75% (STLR involved students).

By attending this session, participants will have the opportunity to learn more about the structure of our unique program, the ways we have operationalized transformative learning theory for student success, and how we track and assess student learning through our three unique achievement badge levels: exposure, integration, and transformation. In addition, participants will also have the opportunity to hear about how our students are using ePortfolios to showcase their skills to prospective employers and how we plan to turn our highest badge level, Transformation, into a portable micro-credential that can be used outside of just the university setting.

References

Brookfield, S. (2005). *The power of critical theory: Liberating adult learning and teaching*. San Francisco, CA: Jossey-Bass.

Mezirow, J. (1978). Perspective Transformation. *Adult Education Quarterly*, 28(2), 100-110.

Mezirow, J. & Associates. (2000). *Learning as transformation: Critical perspectives on a theory in progress*. San Francisco, CA: Jossey-Bass.

PR21B

Time: Thursday, 26/Oct/2017: 9:00am · *Location:* Breakout Session Room

Session Chair: Serge Ravet

GROWBIT - the zero blockchain interface

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The aim of the project is to give all students the unique opportunity to enhance and make transparent and accessible to the global society their lifelong and lifewide learning achievements.

In order to achieve this goal the project needs to primarily educate students on to the use of blockchain which has been identified as qualifying technology to certify student acquisition of specific learning skills and also to simplify and strengthen the trust of academic and business entities towards students.

The project leverages cutting-edge technologies like blockchain to propose an innovative approach for credential "self-check" while also enriching and enhancing the existing ecosystem of digital certifications. Indeed, existing entities in rapid growth like BADG, .BESTR, IQC and Mozilla Open Badge are already supporting primary academic institutions in providing digital certifications to their students.

The aim of the project is to transform a student private digital certification, for example a certification received by an academic institution, into a "self-checkable" information which can be publicly accessed by third parties thanks to the unchangeable evidence written on the public blockchain.

One of the key features is that evidence written into the blockchain does not violate student's privacy, while at the same time leaving to anyone the ability to access metadata associated to certifications, in opposition of what nowadays we should need to expose if it was a public and centralized service. In our platform students can choose which information are public (and of course which are not), so they can be reached by academic institutions or companies while keeping a custom level of privacy.

The project works as an intermediary between students and badge issuers by creating an immediate access to blockchains for them, proposing an open architecture to guarantee the data continuity of Lifelong & LifeWide learning achievements.

Trustability and immutability of informations made availables by the platform (through the blockchain technology) does not favour academic world exclusively: without the need of a central authority, students can use public metadata to identify similar profile, facilitating the generation of new models of social connections and entrepreneurship.

The project is a unique opportunity not only for students to certify their learning path and core skills but also for the whole society to support both meritocracy and collective growth. The result is a social enrichment of the citizenship facilitated by creating awareness of its value for the citizen and from qualified support to institutions and businesses.

There is a monetary cost related to writing on blockchain: we doesn't allow the students nor the issuers to pay these costs. We are going to create capital through crowdfunding, investors, sponsors and philanthropists, which guarantee this proposition.

Enabling students by now to use blockchains and allowing them to use it for self-notarising the owned OpenBadges, we are laying the foundations for a paradigm shift in metadata management not only on a technological level but above all on the social layer and entrepreneurial environment by providing future avant-garde skills to the next generation citizens.

Considering that the next few years will be decisive in developing solutions that allow you to write metadata on blockchains, the strategic importance of a project like this lies in creating an independent and non-profit service for the notarization of Lifelong & LifeWide learning achievements on blockchain.

ePIC is a platform that a project like this needs to validate the assumptions taken, enrich the own vision with feedbacks and share the development path thus defining a new long term vision for develop solutions in the “Alternative Credentials - Credentialing Alternatives” environment.

Using an ePortfolio tool to underpin an institutional employability award at Durham University

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In January this year, Durham University launched a new 3 tier employability award to over 9000 students. From October, this will be introduced to an additional 3,500 incoming students. The Durham Award has three stages that encompass the whole student lifecycle from the transition into an academic department, the journey through university life and the transition into work or further study. This work was instigated to address one main issue – students not recognising the skills they are developing during their time at university or the value of their experience and activities.

The Durham Award is delivered using Pebblepad – an ePortfolio tool. PebblePad was purchased to facilitate the efficient deployment and management of the award at scale. The software provides students with a private reflective space for recording, tracking and maintaining their personal development activities and three structured workbooks to complete the Durham Award. The first element of the Award asks students to reflect on their discipline specific skills within their department. The second stage requires students to keep track and evidence their extracurricular activities, work experience and volunteering experience. The final part of the Award requires students to develop a showcase portfolio.

Using an online eportfolio tool has also helped us to engage with multiple stakeholders through the university. We are working with 26 departments and 16 colleges to help deliver the Durham Award to all undergraduate students at Durham. Relevant staff across the University including Academic Advisors, College tutors and mentors, and Careers Centre staff are able to provide feedback on completed sections of the workbook.

We will be discussing the journey that we have been on to get to this stage, and what still lies ahead. We have discovered what PebblePad can and cannot do and identified how we can make the product work for us and what we want to achieve. We have learnt some valuable lessons relating to how we can efficiently manage an extremely large number of users across a large number workspace and groups within the software.

We will also share what we have encountered in terms of supporting users of Pebblepad, both staff and students, and what we can learn from how they have engaged with the product. We are working with a huge diverse range of staff across the University to help run and validate the different components of the award and are relying on their input. We will discuss how we are managing this process and how we are ensuring consistency whilst providing a certain amount of flexibility to satisfy the diverse needs of the different stakeholders.

Finally, we will be looking to the future and how this project might look in a years' time and what opportunities and challenges we still face. Metrics, impact and learning gain are all increasing in prominence across the Higher Education sector in the UK and departments are looking at ways of understanding how their students are progressing through their time at university. We are just beginning on a journey of using an ePortfolio tool at Durham to underpin students' extracurricular activities, volunteering, and work experience, but we are looking forward to see what other opportunities might present themselves.

Soft Skills in the Management world -The role of Digital Badges

Marcello Bogetti

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What we are witnessing are a series of phenomena that are deeply changing the labour market and the educational and training systems.

A gradual weakening of the ability of Educational system and the potential crisis of credentials. An increasing importance of the informal dimension of learning, in particular linked to:

The role of so-called soft skills, in other words social behaviours, habits and ways of being

The role of non-formal learning opportunities, both within the formal training structures and in the unintended learning contents, that contribute to learn and acquire of skills, soft in particular, but also practical (hard).

The centrality of the theme of competencies, as concrete "knowing how-to-do something" or "knowing how to show a certain behavior". As a consequence, the growing importance of evidence of such capabilities, explicit, observable, evaluable and therefore improvable, within paths not necessarily formal and institutional.

The decisive role of relational systems and thus of social capital into the recruitment processes, in terms of:

Importance of the referral system, that rely on the referrer capability to replace somehow the role of formal certification of the competencies the referee owns, especially the soft ones, or to be more reliable and credible.

The importance of endorsements and the reliability of their process, the crucial role that play social networks and the "*strength of weak ties*" within them, the role of trust.

At the same time on the labour market, the traditional separation between primary market, made up of stable jobs, job positions, professional profiles - and secondary, precarious and occasional market, is losing significance and impermeability.

Likewise, immense social challenges, such as the issue of migration and mobility of millions of people, point out dramatic effect on educational and training systems. The need is to identify their level of knowledge and the types of skills that can be useful to the success of the integration process, both social and professional, formal and indeed informal. Migrants also need to become aware of their potential in relation to the new labour market they have to approach.

Digital Open Badges are the current trending proposal as "common currency" to define skills, competencies and achievements. They are usually issued against an evidence. Emerging technology like blockchain allows to create a decentralized digital "Competence Ledger", where transactions are referred to by the recordings of skills acquired.

All these facts have led us to decide on how to initiate concrete experiments with Open Badges and Blockchain applied to the recognition of skills, especially informal ones.

The strategic goal is to try to create processes, methodologies and IT tools able to combine rigorous process of skills assessment, informal recognition, social network based reputation systems, to go beyond the value of formal recognition of educational and educational systems. The aim is to contribute to create a "Decentralized Competence Assessment Ecosystem" distributed, sharing same rules about the assessment and accreditation process, as well as the tools and the methodologies applied. Minimum criteria - without which the badges would have no value in the job market - must be defined.

To do this we started a pilot project in which we have developed process, methodology and evaluation tools that we have applied experimentally to some of the soft skills that are objective of specific activities inside of our undergraduate course in management,

dedicated to learn these competencies and realized by a team of coaches. We have tested a method of assessment based on evidences on the basis of which results a badge of different level is issued, according to the degree of evidence of the behaviors that demonstrate the acquisition of these skills. Next steps will be to extend the experiment to other competencies, both soft and hard, but of meta-level. At the same time, we conducted a social network analysis on all of our students to understand how the informal peer mechanisms recognizes the degree of leadership. The aim is to try to understand how formal and reputational assessment could work together and ow to balance them. We want to avoid the risk of simply reproduce the current formal approach in a different way, but at the same time to avoid to lose rigor and trustworthiness, without which the Badges may be marginalized and overwhelmed by the consolidated mainstream.

In the next months, we are launching similar experiments applied to the field of recognition of past competencies of asylum seekers, where we are going to explore how to apply blockchain technology in order to create a portable "Competence ledger"; to the skills acquired in volunteering activities of young people seeking job, issuing a Badge.

With IQC and other stakeholders, we are defining a generalizable method in order to produce guidelines for the Badges that we'll create so to share a commune ground of information for our communities of practice.

KEY2.1: Keynote Session

Time: Thursday, 26/Oct/2017: 11:00am · *Location:* Main Room

Session Chair: Chiara Carlino

Open Badges for Global Workforce Development at IBM

Marjolein van Eck

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How IBM embraces digital credentials to address the dynamic talent market and enable the shifts in expertise of their workforce;

IBM has made digital credentials essential to their employees' growth & success. They use badges to provide IBM'ers with a flexible, contemporary skill roadmap and signal the key growth skills. The integration between certification and badges provides an holistic approach towards career development across all major professions. Additionally, IBM has developed a suite of resources to make it easy for badge issuers, earners and consumers to gain significant value from the program.

Opening up Education - A Support Framework for Higher Education Institutions

Andreia Inamorato dos Santos, Yves Punie

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Presentation of a report which is the final outcome of the OpenEdu Project, which aimed to support the Communication 'Opening up Education: Innovative Teaching and Learning for All through New Technologies and Open Educational Resources' (DG EAC, 2013). It presents open education as an umbrella term under which different understandings of open education can be accommodated, such as open educational resources and MOOCs. The report also presents the main outcome of the OpenEdu project, the OpenEdu Framework for higher education institutions.

This Framework identifies 10 dimensions of open education, giving a rationale and descriptors for each. The goal is to promote transparency for collaboration and exchange of practices among higher education institutions. Without a framework, stakeholders could overlook important questions and could put effort into matters that need little further investment. It is a tool to be used mainly by higher education institutions, but it is also very relevant for EU policy makers and other types of educational institutions.

The Time for Self-Sovereign Identity is Now: Case Studies in Open Standards for Decentralized Identity and Verifiable Claims

Natalie Smolenski, Kim Duffy

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In 2016, Learning Machine collaborated with the MIT Media Lab to develop Blockcerts, an open standard for issuing and verifying credentials on the blockchain. The aim behind Blockcerts is to give recipients ownership of their official records so that they are freed from ongoing dependency on issuing institutions--or any centralized authority--to verify their own credentials and achievements. This not only affords recipients a maximally portable, private portfolio of their own records, but simultaneously helps issuing institutions prevent fraud and misrepresentation of official documents that they issue while allowing independent

parties to instantly verify the authenticity and validity of records and credentials presented to them.

The Blockcerts standard was made open-source in 2016 so that any institution, vendor, or researcher can use it to build their own applications for issuing and verifying claims on the blockchain. The intent behind open-sourcing Blockcerts was twofold: 1) avoiding a standards war and 2) ensuring maximum portability of records by recipients and issuers (helping to avoid vendor or issuer lock-in). Since 2016, dozens of organizations and individuals around the world have begun building on the Blockcerts standard; Learning Machine has also developed enterprise software that is fully Blockcerts-compliant. During the summer of 2017, the first organizations issued blockchain credentials using the Learning Machine solution.

Blockcerts was designed to be identity-agnostic; that is, to take a claims-based approach to identity, which allows organizations and recipients to employ their preferred methods for identity management. However, the possibilities afforded by blockchain infrastructure for the development of identities that are truly self-sovereign cannot be ignored. Especially worrying in the current historical moment is the unstoppable intensification in data collection and transferability made possible by nation-states, industry leaders, and software providers. Regulating this momentum from a policy standpoint will have at best limited effects so long as the incentives for powerful actors are aligned toward maximum one-way transparency into the lives of citizens, employees, customers, and learners.

Any long-term solution to protect individual privacy and social agency must be technological and infrastructural, and that is precisely the opportunity now provided by the blockchain. Accordingly, Learning Machine has been actively contributing to technology standards organizations that are at the forefront of the movement toward self-sovereign identity—the Open Badges Initiative, the Web-of-Trust, and the W3C’s Credentials Community Group—to help define next-generation open standards for user-owned identity and claims.

This paper first outlines what has already been achieved in the path toward user-owned identity and claims and then looks toward the path ahead. We begin by describing the development of Blockcerts and its synchronization with the OBI standard; we then present case studies of some of the first Blockcerts-compliant blockchain credential issuance events. Next, we chart the initiatives that are still underway: the progress toward a truly decentralized identity management structure and the obstacles it faces, primarily from actors intent on capitalizing on the centralized control of identity. We discuss how the security imperatives of governments and other institutions can be fulfilled without compromising individual control of their own data. We discuss the amenability of Blockcerts toward self-sovereign identity solutions.

Finally, we conclude by stressing the urgency of digital self-sovereignty. Inasmuch as the blockchain affords, for the first time in history, the possibility of true individual ownership of their own data, it is a double-edged sword: it also opens the door for powerful actors to monitor and control the actions of human beings with unprecedented precision, at an unprecedented scale. If we want to avoid a future in which individuals are enslaved by smart contracts and decentralized autonomous organizations, we must build alternative possibilities now. Conservatism and inaction, including relying on legacy policy-based approaches to regulate technological development, are not options; the momentum is already in place, and innovation will respond to the incentives that are already at work.

The time for self-sovereign identity is now. This paper is a call for good-faith actors across the world to join in this initiative.

Workshop - Semantic value and Discovery - OB Challenges (3)

Time: Thursday, 26/Oct/2017: 3:30pm · *Location:* Main Room

Session Chair: Bert Jehoul

4. Open Discovery

Key challenge: How to discover people, competencies, resources, service providers, etc. based on the data generated through Open Recognition while preserving the anonymity?

Statement: Search of talents is mainly confined within silos where participants are not in control of their data. Open Discovery means that it is possible to expose one's data publicly and anonymously, independently from service providers, so that a variety of services, including services unknown to the data owner, can search the data to provide services.

8. Semantic value

Key challenge: How can we write criteria that contain semantic information, so they can be processed by computers to provide meaningful information to humans?

Statement: Today, the criteria field in Open Badges is simple text and is created by the issuer. The semantic value is nil.

Linking Open Badges with ESCO: an Auto Badge Designer built during #oSoc17

Bert Jehoul¹, Vincent Van Malderen², Agis Papantoniou³, Christine Copers⁵, Bart Hanssens⁵, Johan Potums⁴, Pierre-Alexandre Blanc⁴, Niels Dewelde⁴, Eva Jacobs⁴, Pol Labaut⁴, Eveline Vlassenroot⁴

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For the Summer of Code event (<http://2017.summerofcode.be/>) we have developed an interface to link Open Badges to ESCO (<https://ec.europa.eu/esco/portal/news/4c7a4fea-5dc7-46f0-9bda-0cfdcf345c74>).

THE PROJECT

Giving non IT people a user-friendly tool to create and issue visually attractive, ready to use badges while exploring the possible ways to link them with the ESCO taxonomy and, in doing that, testing the potential of ESCO; that is the scope of the Be Badges project.

Our team of students developed and came up, as they would in a professional labour context, with solutions to create digital badges i.e. an auto badge designer to be used in Belgium i.e. Be Badges but also, in the future, use that experience as a first step to promote the concept of digital badges as a beneficial tool to further enhance mobility in the European labour market.

They tackled several aspects in developing the Be Badges such as the issuing of the badges (via blockchain or other means), the representation of the skills and how they are related to occupations, the preservation of the badges or the aspect of trustworthiness and recognition of the badges.

During their work, they were able to rely on the experience of Cognizone and its partners (see below) in the different IT domains that digital badges involve.

THE PARTNERS

This year, Cognizone was partnering with:

Be Badges – an Open Badges inspired platform powered by

Bosa DG R&O (former SELOR) – the Belgian Federal Government institution responsible for screening, recruiting, training & career guidance of Federal civil servants;

Bosa DG DT (former Fedict) , the Belgian Federal Government institution for Digital Transformation with a strong expertise on Open Data, and

Jobpunt Vlaanderen, the HR partner of governmental organisations in Flanders and a leading organisation in bringing the innovation of Open Badges to the labour market,

To assist and sponsor a team of 5 students on the very exciting Be Badges project and bring them our expertise and knowledge on linked open data, data management and on the soon to be published ESCO classification.

For more information on the Open Summer of Code 2017 please follow this link and Be Badges on Twitter.

PR22: Projects presentation

Time: Thursday, 26/Oct/2017: 4:30pm · Location: Main Room

Badging formal degrees: we need critical mass

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According to the First EUA Learning&Teaching Forum (Paris 28-29 September 2017), European Universities growingly acknowledge the usefulness of badging strategies for motivating students to engage in extracurricular activities and to acquire generic skills and competences. Beyond that, at the University of Milano Bicocca we are also badging formal graduation degrees. Graduation Badges (GB) are official certifications, easily portable and sharable, and less cumbersome than official diploma supplements/tracks of records. They synthetically report what a student learned in a degree, how he/she performed, and the jobs/professions relevant for that degree. GBs are aimed at improving the circulation/shared knowledge of the actual contents and learning achievements implied by acquiring a degree, for the sake of global employers. In time, endorsements (or lack of endorsements) by different employers will testify the high (or low) value of a specific degree issued by a specific university for employment in the global market. However, GBs will attain their goals only when many different universities will issue them, and as a consequence employers, graduated students, and job-oriented social forums will ask for them in electronic CVs as a substitute for the degree owner's self-declaration (typical of traditional CVs).

Life-long, life-wide and life-deep professional learning: what do open badging and eportfolios have to offer?

Mandia Mentis, Alison Kearney, Wendy Holley-Boen

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The landscape of ongoing professional learning is changing. 'Becoming' and 'belonging' are important aspects of developing a professional identity, and involve life-long, life-wide and life-deep learning. Ongoing life-long learning beyond formal study, life-wide learning across different contexts and disciplines, and life-deep learning of embedding values and identity within practice are relevant shifts in thinking about professional development. The challenge lies in credentialing this authentic learning that occurs over time, across boundaries and is shaped by personal values and identity development. The 'work in progress' presented in this abstract questions whether open badging and eportfolios can offer some solutions to this challenge.

The case study presented here involves an initiative, funded by the Ministry of Education in New Zealand, of creating networked professional learning opportunities for learning support teachers - SENCOs (Special Educational Needs Coordinators). The role of the SENCO is to facilitate equitable and inclusive education systems in schools. This role is not formalised in New Zealand and typically these teachers are based in individual schools, and are relatively unsupported with no professional learning pathway. In 2016, the authors were involved in providing a blended (online and face-to-face) non-formal learning 'course', in which 75 SENCOs across New Zealand participated. Findings from this project revealed that despite being time-poor and under-resourced, SENCOs actively sought and valued opportunities for team-work and collaboration. In addition, the participants indicated high levels of flexibility, autonomy, and job satisfaction. Given these findings, a case was made to continue to support the autonomy and flexibility within the SENCO role, and then provide improved structures for ongoing professional learning, collaboration and sharing of practice. Our approach aimed to address SENCOs' needs for professional learning and collaboration, extend their opportunities to build capability and leadership within schools, but also avoid standardising and prescribing their role.

We thus developed a new 'network of expertise' model to provide opportunities for flexible life-long learning. This is designed to overcome the isolation in individual schools, promote authentic and contextualised life-wide learning with and from each other, and personalise life-deep learning that promotes professional identity development. Valuing this alternative learning through alternative forms of credentialing will enhance the status and professionalism of the role.

The SENCO network will provide a range of modalities for SENCOs to connect, communicate and collaborate with each other across four blended (online and face to face) hubs. Hub 1 is an open and free network where SENCOs can share resources, debate and co-construct knowledge around evidence-based practices. Hub 2 involves paying a subscription to a more extended members' network that includes opportunities to attend regional and national face-to-face workshops, virtual webinars, collaborative research and inquiry into practice, participation in journal clubs, access to resources and updates on events etc. Hub 3 is a professional learning network where authentic learning within practice can be used as evidence to meet competencies of SENCO practice. These artefacts and evidence of learning can be added to an ePortfolio and these can be digitally badged and used as an alternative form of credentialing learning in practice. This learning is thus individualised, contextualised and authentic, and contributes to the SENCOs ongoing life-long, life-wide and life-deep identity development. Hub 4 is a formal learning network where these alternatively credentialled credits can potentially be bundled together and cross-credited as modules towards a university qualification in Learning Support (LS). This level proves still be a challenge within existing university structures.

Digital badging and ePortfolios offer a fluid and flexible way for professionals to learn in different contexts and be recognised for the knowledge and skills acquired in these alternative environments. They challenge traditional approaches of teaching and learning and offer innovative alternatives to credit skills and knowledge outside the formal curriculum. These emerging tools also offer the possibility of displaying (ePortfolios) and verifying (digital badging) an achievement, ability or skill. They then become a means of transition from the informal (hubs 1 & 2) to the more formal learning (hubs 3 & 4) context.

Badging and ePortfolios can transform conceptions of learning and provide ways of recognising more diverse learning pathways and opportunities for learners, that can then transition into formal qualifications. Our 'network of expertise' approach demonstrates the affordances of open badging and eportfolios as alternative credentials for informal and formal types of learning for SENCOs. We look forward to sharing our ideas, connecting with other similar approaches and addressing the challenges we and others face in credentialling alternatives.

Designing Badges for student and faculty development

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What do you learn at university? You learn what is set out in the course programme, of course. You learn to study. You often learn a language. Sometimes you learn something that, at first sight, may seem unrelated, but that makes us better members of society, like Basic Life Support. The lecturers learn to better themselves and innovate, day by day, year by year. They put cross-cutting competencies into practice, which will be useful at work and in life.

The University of Padua, with more than 60,000 students and almost 800 years of history behind it, has decided to turn the spotlight on to all these opportunities for learning, which make the university a place for all-round growth. The objects chosen to turn on this light are the Open Badges.

Linguistic eligibility: Open Badges and recognition of study credits

The first experiment involving the students concerns the activities of the University Language Centre: for the TAL (Test of Linguistic Ability) in English Level B1 and B2, which is held in the Language Centre, in computerised form (listening and writing), or in person with a mother tongue teacher (for oral expression), students who pass the test in the University Language Centre receive an Open Badge issued by Bestr, as evidence of the exam passed.

Integration with ESSE3 also enables the student office to recognise the credits automatically, where applicable, and thus save on bureaucratic procedures for the students and the operators.

The awarding of the Open Badges for the language tests has proved reasonably successful, with a percentage of students collecting their Badge equivalent to the average registered in general on the Bestr platform, a fact which is especially relevant, seeing that the students are not obliged to take this step in order to have their credits recognised. Therefore, the students perceive the value of the Badge and the competency it represents, irrespective of the administrative usefulness within the study course.

Teaching4Learning: training of teachers

From the students to the teachers, in-service training is a lifelong process and doubly important when it is a question of educating for educating, sharing good practices of teaching, experimenting with didactic strategies and making lessons more and more engaging and actively attended.

The University working to improve itself is enhanced with these Badges, issued to those teachers who want to take part in the virtuous circle.

Basic Life Support: sensitisation and active civic duty

The University is the place for a person to grow and a citizen to be trained: with a show of great sensitivity, the Paduan University collaborates with the association "Padova fa battere il cuore" (Padua makes the heart beat) in providing its students with a Basic Life Support course, which makes them aware of how each of us, if we are prepared and suitably trained, can really make the difference.

This is a Badge expressing a highly concrete competency, but also the willingness to put oneself to the test, to be active towards the world and the person standing next to us.

Starting on a pathway

The University of Padua has reached the Open Badges "starting from the need to find useful tools to certify the soft skills of the students through cross-cutting activities": those mentioned are the first Badges, which already map out three clearly distinct paths.

These paths may be extended, developed, expanded step by step, as the experimentation goes on, identifying the activities within the University that may benefit from an innovative certification and stimulating their creation, starting from the opportunity for formal recognition and moving on to involve businesses, as well, which can make their own endorsement of the University Badges that they consider to be representative of useful values in an employment context.

For Bestr and Cineca, this has been an opportunity to develop and refine the way in which the Badges can be integrated into university systems and add value to the Universities and the people who are their heart

Visualising Teamwork Credentials in the Medical Sciences using ePortfolios and Badges as Symbols of Achievement and Skills Recognition

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How are graduate capabilities such as teamwork visualised and recognised within an undergraduate medical science degree program? This is a question that our team of medical research scientists who are discipline specific higher education teachers at UNSW Sydney collaboratively asked when we embarked on a project to capture and make sense of how our students develop this highly sought after professional skill. Development of informal, co-curricular professional skills and capabilities by undergraduates that are linked to formal academic learning is difficult to capture at the program level within higher education institutions. Feedback from employers, educators and students suggests that the teamwork graduate capability is a key competency, but it is hard for students to prove mastery and equally hard for us as teachers to warrant how that mastery is attained a part of an undergraduate learning experience. In the Bachelor of Medical Science (BMedSci) program at UNSW Sydney, a program-wide Comprehensive Teamwork Learning and Assessment (CTLA) model was initiated by aligning assessment tasks longitudinally across the program and transversely across discipline, with particular focus on building teamwork capabilities. This was addressed by combining formal curricular assessment of these tasks by academics and student peers, coupled with co-curricular assessment using self and peer evaluation of teamwork skills awareness and development by students, ePortfolio implementation for reflective practice and a teamwork student satisfaction survey. These CTLA model elements support student reflective practice and awareness of teamwork skills attainment as well as supporting their emerging identity as *scientists-in-the-making*. In particular, our CTLA model involved tracking, mapping and aligning assessment tasks that built relevant, authentic skills for teamwork and incorporated standards-based criteria that directly addressed teamwork skills development using an adapted Association of American Colleges & Universities (AAC&U) VALUE rubric for teamwork; the *UNSW Teamwork Skills Development Framework*. This process integrated content knowledge and technical skills that articulated with professional skills development across all the medical sciences disciplines. We implemented this system using Workshop UNSW in Moodle for teachers to monitor and students to evaluate teamwork skills progression for themselves and their peers. ePortfolio/reflective blogging using WordPress to document and reflect on their personal-professional development of teamwork skills was implemented as a key part of this approach for raising awareness of attaining the teamwork skill. Student satisfaction was surveyed at the completion of the teamwork assessment tasks across the program. Study outcomes demonstrated the innovative CTLA model and assessment approaches improved teamwork skills awareness and attainment in the medical science program at UNSW. A cross-disciplinary *skills awareness and development capture* strategy developed as part of a UNSW Innovation Research Project will be presented. The integration of ePortfolio/reflective blogging coupled to the *Teamwork Skills Development Framework*, for use in the medical science program to evaluate teamwork skills as well as application of the Reflective Rubric UNSW will be discussed. There is scope to implement this mechanism for extracting data across any ePortfolio platform and from a learning management system such as Moodle for application as metadata that sits behind badges as symbols of achievement and recognition of professional skills attainment. A pilot system of badging these teamwork credentials using the Cengage platform will also be discussed. Our approach for measuring informal co-curricular skills attainment when coupled to authentic assessment tasks will be useful across the sciences and indeed other disciplines at higher education institutions.

Digging into Open Badges through a Province-wide Sandbox

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Creating

Support for the growth and expansion of online learning and teaching is central to the mandate of eCampusOntario and its members. In June 2017, eCampusOntario announced an Expression of Interest (EOI) inviting its 45 member post-secondary institutions to participate in an EdTech Sandbox. The aim of the Sandbox is to provide institutions with an opportunity to explore a new set of tools to support technology-enabled learning in a risk-free environment. One of the areas of exploration was around Open Badging through provision of a limited number of institutionally-branded CanCred Factory environments and the new eCampusOntario Passport. CanCred is a Canadian cloud-based open badge management platform for creating, issuing and managing meaningful digital credential systems.

The eCampusOntario Open Badging Sandbox is meant to give Institutions access to explore how, through CanCred Factory and the new eCampusOntario Passport, open badges can be created and employed as recognitions of learning in order to support and extend technology-enabled teaching and learning, particularly in the areas of:

- Alternative recognition of learning
- Recognition of prior learning
- Informal co-curricular learning
- Skills and knowledge required for transition to work

The overall goal of these action-based pilot explorations is to generate a diverse collection of case studies based on hands-on experience in designing and using open badge systems. These case studies will be used to inform future decision-making around potential shared services around open badging that will benefit Ontario's Post-Secondary Environment.

Implementing

Applicants interested in participating in the Open Badges Sandbox were required to submit an Expression of Interest, detailing the following:

- a description of their proposed Open Badging project, including details on the system goals, the type of learner, the learning environment, and the relevant activities or competencies.
- their vision for the concept proposed and success indicators
- a description of who is involved in the badging project and how they propose to communicate and collaborate with learners, colleagues, employers and other stakeholders
- a plan for evaluating data and communicating value and opportunities for enhancing value of their open badging project.

Of the ## applications received through the EOI process, eight participating institutions were identified: Durham College; Fanshawe College; Georgian College; Loyalist College; Ryerson University, University of Waterloo; Western University and York University.

Through a series of webinars, orientation packages and one-on-one support from eCampusOntario and the CanCred implementation team, each are now developing, issuing and managing their own Institutionally branded badges. All badge data is securely stored on Canadian servers that are compliant with the Mozilla Open Badge standard. A dedicated eCampusOntario Passport was also set up as the common storage and display platform for Open Badges issued by the Factory environments. Badge earners are able to curate their badges in the Passport with other evidence, such as documents, text and embedded media using Pages which can function as micro-portfolios.

Evaluating

Although it is early days, initial feedback on this evaluation has been positive. We anticipate gathering and sharing results as they are accumulated through the following required reporting process:

Project Status Report

Project Interim Report

Final Report

This session will provide attendees with an overview of how you can work to engage your partners in an evaluation project around open badging systems. The Expression of Interest, implementation and support and evaluation and reporting processes will be highlighted. It is our intention that this could be used a model for others in their exploration of open badges with their target groups.

PR31: Presentation of projects

Time: Friday, 27/Oct/2017: 9:30am · Location: Main Room

Preparing Career Aware Graduates by applying an ISA Model and Integrative Career Development Learning in Science Courses at UNSW Sydney

Jia-Lin Yang¹, Patsie Polly², Thomas Fath², Nicole Jones², John Power²

¹Prince of Wales Clinical School, UNSW Sydney; ²School of Medical Sciences, UUNSW Sydney; j.yang@unsw.edu.au

The success of student employability post-graduation is not solely determined by obtaining an academic qualification. Other qualities are also important including: graduate attributes, professional skills and the ability for students to properly package and present their credentials and capabilities. The ISA - Image of potential own career, **S**elf-directed life-long and life-wide learning as well as **A**ssessment and adjustment model was implemented in senior third year science courses at UNSW using ePortfolio pedagogy to raise awareness and develop career relevant skills for undergraduates. The idea was to engage students recognizing their emerging identity and their images of own potential career, carry out a self-directed learning journey to understand and pursue their career goals, and take assessment and adjustment of their studies and get the most from them. We were the first to deliver integrated career development learning (ICDL) in a learner centred ePortfolio (a teaching ePortfolio in Moodle plus student ePortfolios in Mahara) utilising emerging technologies. We have used the internationally recognized assessment tool: Career Decision-Making Self-Efficacy (CDMSE) Scale, which seeks to measure the confidence of a student in pursuing their career goals and assess the longitudinal impact of interventions in career development education. We have proposed an ISA model to deliver integrative career development learning (ICDL) in our teaching and research project approaches. The pilot application of ICDL in a cancer sciences course showed that students became significantly more confident in career associated self-efficacy, which formed the basis of the present study which delivered ICDL to students in four 3rd year senior science courses versus a control class across disciplines within the School of Medical Sciences, UNSW Sydney. The goal of our study was to evaluate effects of the ICDL on career associated self-efficacy of students from career-intervention classes that raise student awareness of potential career paths available to them, as well as whether there were observable effects between female and male students in each course, using an international standard career decision making and self-efficacy (CDMSE) score. Study outcomes indicated a significant improvement in the CDMSE scales pre- and post-course within four courses that received ICDL intervention individually or as an intervention group, but not in the control course. The improvement was noticed in either females or males pre- and post-ICDL intervention when analysed in single gender. Males showed slightly better improvement than females at the end of the ICDL intervention. The introduction of this pedagogy and model has proven to be successful in evidencing graduate learning outcomes for improving student confidence in CDMSE. Reflective practice that was integrated with career learning was a key aspect to this approach and facilitated student awareness of their emerging identities as scientists-in-the-making. Implementation of ePortfolios to build student identity in the sciences supports them in developing reflective practice, metacognition, digital literacy, career awareness, knowledge of graduate employability and professional identity. Importantly, ePortfolios assist students in higher education to ultimately develop evaluative thinking allowing them to make sense of their learning. Students can then become owners of their professional identity and navigate their way towards future employment.

OpenAgri: New Skills for new Jobs in Peri-urban Agriculture: Using Open Badges for Urban Innovation

Chiara Carlino¹, Rossana Torri²

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In the public agenda, food is no more considered just as a commodity or as a nutritional necessity; it is an emerging multidimensional policy challenge, which crosses ecological, social, economic and spatial dimensions. A sustainable and integrated urban approach is needed to deal with the main issues that must be addressed: an inclusive, coherent and reflexive urban-rural food governance system; a more solid social and physical infrastructure to reduce the distance between producers and consumers, and to promote circular economy; reliable markets for quality food producers, resulting in new opportunities for SMEs development; the need for experimenting new forms of entrepreneurship in the agricultural sector, and for creating new jobs and skills.

OpenAgri is an EU-funded project under the Urban Initiative Actions umbrella, lead by the City of Milan and gathering over 16 partners, from start-up incubators to social enterprises, from agriculture and food innovation experts to universities and technology providers.

At the core of the project there is an “Open Innovation Hub on Peri-Urban Agriculture”. The Hub will be a physical place, *Cascina Nosedo*, at the southern border of the city of Milan: with its buildings to be restored and opened to the public, and some acres available for cultivations projects and the like. But the Hub is also an integrated strategy to deliver innovation in existing and newly created nodes of the agri-food value chain, focusing on new skills, training, pilot projects for SMEs and startups ideas.

The project aims at improving interactions between traditional knowledge holders and other more innovative actors, between local and city-wide realities engaged in product, services or process innovation. It is also expected to foster cross-sector linkages and hybridization between different fields (agriculture, food industry, culture, education...) and actors (SMEs, NGO, PA) with the ultimate aim of testing an innovation-driven inclusive growth model.

How shall we highlight all the knowledge, skills, competencies that already are within the local territory and its actors, and those who will be created through the virtuous interactions activated by the Innovation Hub? How do we map all this value and make it readable as OpenAgri's value while giving proper credit to the multiple actors who are cultivating, assessing and endorsing skills? How do we provide lifelong learners who will be engaged in the Hub's activities with something tangible as a result of their path, of their willingness to get involved and share?

These needs lead to the engagement in the project of Cineca and its Open Badge platform Bestr. For OpenAgri the Open Badges features on Bestr will be expanded to include Learning Pathways: a learning pathway can be made up of many Badges by different issuers and may or may not lead to a macro-Badge identifying a professional profile or a specialization related to urban and peri-urban agriculture and the agri-food sector in general. The various skills and competencies growing in and around Cascina Nosedo will be mapped, as will be the different – possibly alternative to each other – ways to develop and assess them.

In this way the different training opportunities, that will arise in OpenAgri, will be matched to Badges and interconnected to form learning pathways that the learners involved in the project will experience, demonstrate and share.

The main challenge will be the mapping itself: we will deal with competencies varying from soft skills to entrepreneurial skills to very specific domain skills; competencies for which the partners are Learning Providers or Assessment Providers, and competencies still unknown to the partners, which will be brought to the table by the candidates for new projects to be realized at the Hub and for which Learning and Assessment opportunities will have to be found or created.

We will need a way to master the complexity while letting it express its potential. We'll need to set boundaries related to the granularity level to which Badges may be meaningful (not too detailed, but not too broad nonetheless), and we need to define processes to let all

actors interact fruitfully while maintaining a clear readable and valuable result in the eyes of learners and of the general public.

The presentation will detail the broader purpose of the project, the challenges expected in the implementation of the project's competency system through Open Badges and the value that we expect this system will bring to the overall project and the territory.

Analysis of proposed expansion of TESOL Arabia's open badge system from simple recognition of participation at face-to-face events to online evidence-based recognition of activities and artefacts that demonstrate application of professional practice

James Buckingham

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Introduction to general context

The "open badge" project to be presented is in the context of supporting the mission of the Non profit organisation (NPO) - TESOL Arabia (TA) and addressing recent challenges that impact on TA's programming efforts. TA is an organisation whose mission is to address the professional development (PD) needs of its members, namely EFL teachers, most of whom are based in the UAE but who are also growing numbers in other parts of the Arab Gulf region. It is run by volunteers elected from its membership and is financed by both membership subscriptions and proceeds from its annual international conference and exhibition .

Impact of change

TA is facing at least two major challenges - a change in membership profile, and a change in UAE Ministry of Education policy. Both have significant implications for TA programming and by extension, the organization's badge ecosystem. Membership statistics over recent years reveal a decline in its traditional membership base, UAE teachers, while membership from outside the UAE is trending upwards. The result is that membership growth has plateaued. Yet the bulk of the Organization's programming efforts - face to face events - remain largely focused on serving the needs of only UAE teachers and participation rates at these events are on the decline, with only one exception - the annual TESOL Arabia conference - where members throughout the Gulf region bolster numbers. Part of the reason for this decline appears to lie in policy changes at the Ministries of Education level in the UAE and other countries in the Gulf region. Up until recently, Ministries of Education had a largely decentralized approach to promoting teacher PD. TA programming helped address much of what was then UAE teacher driven demand for PD programming, and UAE Ministries at least, formally expressed their support for such programming by promoting teacher attendance at TA events and taking a highly visible sponsorship role at the annual conference. At the advice of international organizations, such Ministries are now focusing on improving graduate education results. As a result, Ministries are now taking a more centralized approach to promoting teacher PD which has led to more funding being directed at organizing such PD with higher quality and in-house. These changes have precipitated a rethink of TA's programming efforts. It is now apparent that they not only meet the PD needs of UAE based TA members but also those in other parts of the Arab Gulf. They also need to be more closely aligned with the new centralized PD programming efforts at the ministry level if TA wishes to garner the same or even greater Ministry of Education support.

Response to change

Online instruction strategies are now being pursued by TA as a means of addressing these challenges and "open digital badges" are seen as playing an important role in supporting this initiative. Since their introduction in 2014, "open digital badges" have been used by TA

to recognize volunteer participation in TA events, especially the annual TESOL Arabia Conference. Proposed now is expansion of the existing badge ecosystem to include “evidence” based badges that recognize membership engagement in activities that demonstrate application of professional practice. This is more closely aligned with both TA’s fundamental mission and the Ministry of Education policy push to promote higher quality PD. Currently being entertained is the use by members of a basic professional practices framework to document and share their engagement in PD as criteria for earning such badges.

Challenges in design

A number of key challenges to realizing this initiative have been identified. Foremost is how to increase the likelihood of its successful implementation. The presentation seeks to evaluate the current plan in terms of recognising/ characteristics common to successful badge programs elsewhere ; reviewing how many of these already exist within TA’s current badge ecosystem; and identifying which characteristics if any should be included in the proposed plan. Equally important is conducting careful review of whether badge criteria should be compliance based (addressing a checklist of preconditions) or competency based (meeting clearly defined standards) or a combination of both. Identified here is a tension between realizing practical badge administration and realizing possible badge endorsement from Ministries of Education in the region.

Promoting inclusion in the design process

The presentation also proposes the use of “design thinking” practices as another means to increasing the likelihood of the successful adoption and sustainment of the plan. Such practise invites input from members during the design and implementation stages. This is done with the intent of not only improving the quality of the design, but increasing its ownership and subsequent dissemination.

Presentation will offer detail on the rationale for the current badge system changes and will welcome discussion on the planned badge initiative, its challenges, and its methods for promoting greater membership inclusion.

Open Badges in the Higher Education student lifecycle

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Open Badges represent the competencies and results achieved by a person, but their nature of digital objects conforming to a standard and objects that can travel over internet makes them not only a “message” but also an “instrument”.

They are, in reality, an easily adopted instrument, one that is simple and reliable and enables interoperability and integration between platforms and therefore between organisations and heterogeneous contexts.

Open Badges represent the standard for Open Recognition of learning achievements, enabling the creation of an Open Recognition ecosystem.

Cineca supports the Italian universities in digitalising their processes and is providing technological solutions to manage the organisation overall, from internal administrative processes to those of management of Research and Teaching, as well as all the processes regarding the student. Cineca is, therefore, one of the stakeholders who are called upon “*to establish a trustworthy system of human and machine verifiable learning credentials and to adopt open standards facilitating the comparability and transferability of learning credentials*” (Open Recognition Declaration, second action).

In 2015 Cineca set up Bestr, the first Italian digital platform to exploit Open Badges for enhancing lifelong and lifewide learning. Over the two years since then, Cineca has published more than 450 Badge Classes from more than 70 organisations and set up

various scenarios and use cases typical of the university world. These use cases have led to an organic view of the Bestr platform and the Open Badges relative to university processes and their implementation has been based on the integration of different systems (LMS, SIS and others) through the use of open standards for the exchange of events and data.

In 2018 Cineca and the Universities in a consortium decided to focus development of the Bestr platform on the life cycle of the university student and identify the six core stages that make it up: Orientation, Admission and enrolment, Exams, Acquisition and recognition of study credits, Conferral of the degree, Alumni.

This operation will have two aims. The first concerns the students directly and is that of exploiting Open Badges at every single step in the life of the university student, to increase the value of the competencies and results achieved. The second concerns the University and is that of exploiting Open Badges to digitalise or improve internal processes.

The first use case allowing us to focus on the student life cycle concerned the stage of acquisition and recognition of study credits. Since the end of 2016 Bestr allows the consortium universities to exploit Open Badges as an instrument for recognising competencies and results achieved by students in formal credits: extracurricular activities, language certificates, periods of external mobility, activities carried out with companies and external organisations or on-line activities supplied by other organisations can be automatically converted - "monetarised" by a University, making use of endorsing and the capability of the Student Information System to handle Open Badges and attribute a value to each Open Badge in terms of formal credits.

In 2017, the University of Milan Bicocca proposed a second use case connected with the process of "Degree Conferral". In this case the Open Badges have been exploited to represent and certify automatically (thanks to integration with SIS) Open Badges representing a university study certificate. In this accomplishment, as well as the Open Badge standard, the xAPI standard was also exploited, to enable the SIS to transmit to Bestr the event of conferral of the degree and a set of outcomes (for example, grades, date) and evidence (for example, title of thesis, abstract of thesis) that give better communication of the value of the Open Badge conferred.

To deal with new use cases regarding the other stages of the student life cycle, Cineca has defined a series of further new scenarios and identified actors, aims solutions that look on Open Badges as a key instrument for digitalisation or improvement of university processes and for implementing new forms of Open Recognition.

These scenarios have been shared with the Universities in the consortium, so that they can use them as a tool for exploring and understanding the specific real needs of each University and then pass on to an implementation stage.

The paper will describe the scenarios already implemented and those proposed by the Italian universities, providing an example of a possible application for these.

Workshop - Open Recognition Network and Social Capital Representation - OB Challenges (5)

Time: Friday, 27/Oct/2017: 9:30am · *Location:* Breakout Session Room

During this session we will look at two particular challenges: Open Recognition Networks and Social Capital Representation. This will be introduced by a presentation of a regional initiative, Badgeons la Normandie, which is confronted to those issues.

3. Open Recognition Networks

Key challenge: how to make learners, individuals and citizens the builders of Open Recognition Networks?

Statement: Current recognition networks are dominated by institutions of formal education. Already in the first version of the Open Badge infrastructure it was implicit that only institutions had the right to recognise learning while learners only had the right to be recognised by institutional authorities. Elementary informal recognition statements, Open Endorsements, can be combined with Open Badges and other verifiable claims to elicit recognition networks.

6. Social Capital Representation

Key challenge: how to provide individuals, communities and organisation with dynamic representations of the assets composing their social capital?

Statement: the assets of a person is represented by the things they own and have produced, the trust they have endorsed and given. Open Badges and Open Endorsements are a means to provide a tangible representation of those assets that make it possible to provide some kind of tangible measurement of the social capital of person or a group.

"Badgeons la Normandie" – Using Open Badges to develop a Learning Region

Philippe Petitqueux

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April, 6th 2017, the actors of agricultural education and the farming profession of the Normandie region called for a regional partnership to explore the potential of Open Badges to build a learning territory. They made a launch statement presenting their common goals : - Facilitating the recognition and valorisation of skills and learning, formal and informal; - Preparing learners for lifelong learning; - Identifying emerging skills, connecting them with the job market; - Implementing digital tools to foster the learner's ability to act autonomously. After a few months of hard work and a lot of communication, they want to present their first results. Their presentation will focus on the strategy they decided to enforce to bring together individuals, institutions, associations and organisations working in education and training, employment and social integration in Normandy. A focus will also be made on the functions of Open badges they want to use : - badges as connectors - badges for making visible informal recognition - badges to valorize individuals or communities of practice and the services and digital tools they wish to develop to foster the adoption of Open badges. You can read their launch of statement and call for interest here : Badgeons la Normandie [http://www.badgeonslanormandie.fr/?page_id=230]

KEY3.1: Keynote Session

Time: Friday, 27/Oct/2017: 11:30am

Progress in Canada: Toward an 'Internet of Skills'

Jeff Griffiths

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Canada has a workforce development problem.

While we have one of the best credentialed adult populations on planet, we still have significant mismatches in the economy, resulting in “people without jobs, and jobs without people”. Recognizing learning that takes place outside of formal educational structures is virtually non-existent. For an individual, tracing a learning pathway from their current skills and competencies to economic opportunities (ie, jobs) is difficult if not impossible. While our country encourages immigration (targeted immigration levels are being raised to around 300,000 per year) – and yet we have over half a million immigrants in Canada who cannot work in their field because their credentials are not recognized.

The Open Recognition declaration and open badges are useful tools for workforce development, but in Canada there are noticeable and significant limitations. While there are currently over 10 million digital/open badges in existence around the world, but they are not linked to each other or to the economy in a cohesive and coherent manner, and as such recognition is haphazard, and they aren't able to fulfill the promise of providing a passport to greater economic mobility for individuals, nor are they helping to streamline the recruiting and employee development practices for employers or guide curriculum development activities of educators and training providers.

The piece that seems to be missing, at least here in Canada, is a robust and comprehensive national skills/competency/qualification framework that would provide a mechanism for linking badges to the economy, as well as guiding the development of new badges and micro-credentialing. We believe there's a real need to put the “voice of the customer” into the badging discussion by engaging industry/employers in creating the competency definitions that will guide development of badges in future.

Three research papers were published by the Canada West Foundation to explore these concepts: Competence is the Best Credential (April 2015) explored the need for Canada to do a better job of recognizing the things people can actually do rather than using formal education as a proxy for capability. Building Blocks (December 2015) explored the concept of modular, stackable, competency-based credentials for skilled trades, arguing that it had the potential to accelerate learning and provide greater worker mobility in a rapidly changing economy. Finally, Matchup (February 2017) presented a case for creating a comprehensive national competency framework for Canada.

Since then, the movement has built momentum, and efforts are underway to create the protocols that will govern the framework, with the belief that these protocols could be followed in an open source approach that would ultimately lead to an organic, self-populating, global, “internet of skills”. This presentation focuses on recent activities on the initiative, and invites a dialogue around these concepts.

Through an interactive process with delegates, we want to look at a number of questions:

1. Is there value in creating a global protocol for the frameworks that need to inform the competencies represented by badging?
2. Is there already work underway elsewhere that the Canadian initiative can link to?
3. How are other jurisdictions getting the “voice of the economy” into the development of open badging, open credentialing and alternative credentialing practices?
4. What are the advantages? Pitfalls? Roadblocks? Is there a “best place” (ie, industry, level, sector, type of competency, etc) to start the initiative?

The presentation will reveal the current state of developments in Canada, with specific details, recommendations and action plans that were developed during a number of forums, workshops and meetings held throughout 2017.

Study to support the revision of the Diploma Supplement and analyse the feasibility of its digitalisation at European level

Justina Vaikutyte-Paskauske, Simone Ravaioli, Rimantas Dumčius, Karolis Saduikis, Darius Buinauskas, Donatas Pocius

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The Study to support the revision of the Diploma Supplement and analyse the feasibility of its digitalisation at European level looks at the Diploma Supplement in an abstract sense, and elaborates on what it would mean to digitalise it. This custom-format study includes elements of status-quo mapping, an evaluative view on usefulness, and a feasibility analysis of future options for digitalisation of the DS at European level.

The report defines and describes four technical options for the digital development of the digital Diploma Supplement which could help solve the current implementation issues across the EHEA.

Since the focus of the study is the Diploma Supplement as a document or service issued together with a higher education diploma, we present the basic set of requirements for making a Diploma Supplement digital (Option 0). We then present a set of intermediary digitalisation approaches, which outline not only potential formats of the digital DS, but also student data exchange and interoperability solutions. Option 0 discusses the need for structured, machine readable data formats for compiling the Diploma Supplement and the meaningful exchange of student data. Options 1-3 discuss data output formats, and how to expand data exchange.

In this report we present Open Badges as one of the feasible Diploma Supplement digitalisation options that could be used to augment conventional education credentials. We conclude that even though the Open Badge option may not be readily transferable across the EHEA, it could be explored as a prospective solution in the context of emerging technology.

The open badge experiment in Dutch HE. Building a proof of concept for an open badge infrastructure.

Frans Ward, Ronald Ham

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The open badge experiment in Dutch HE.

Building a proof of concept for an open badge infrastructure.

SURFnet, the National Research & Education Network (NREN) organization in The Netherlands, is building a pilot micro-credentialing system using the open source project Badgr, to allow institutions to experiment with creating and awarding open badges.

There is not much practical experience with open badges for micro-credentials in Dutch education. This is why experiments are indispensable. In 2017, we are creating a proof of concept for an open badge infrastructure, as well as investigating which technologies and standards are needed to be able to assign open badges. Additionally, we organise support for implementing micro-credentialing in higher education in the Netherlands.

Different scenarios

Higher education can become more experienced in dealing with the issues raised in the whitepaper[1] that SURFnet has written in 2016, through well-coordinated experiments.

The paper suggests three different scenarios for the use of badges in Dutch HE:

1. Micro-credentials (accredited education, externally visible)
2. Badges for extra-curricular (further) training
3. Badges as a game element

These different scenarios provide different use cases for the use of open badges and the way in which they are accepted within the HE community. Currently most of the institutes are looking into open badges as an extra service on top of the current certificates or as an extra for proof of informal or exceptional learning within HE institutions.

The overall aim of the experiment

Together with 8 HE institutions we are looking into the added value of open badges for Dutch HE. This is done through experiments and workshops that are conducted on a centralized badging system which is developed and refactored based on the experiences and needs of these 8 institutions.

We seek to find answers at a practical and semantical level:

At a practical level: How can an institute or a teacher assert a badge? What is needed to implement a badge infrastructure for a HE institution or at a central NREN? What are best practices for asserting badges? At what level within the institution can badges be asserted? Can signing of badges add value to a badge and if so would this best be done by a NREN?

At a semantical level: Are badges course based or competency based or is there a better alternative? How can we make sure that badges within the HE sector are comparable and stackable, given the discussion between course or competency based badges? If badges are interoperable can students exchange an institute A econ101 badge for an institute B econ101 badge? How can badges best be displayed for minor exchanges? How can students create their own stack of badges and have them assessed as a whole study?

Our experiments are aimed to gain more insight into the process of using open badges within HE, the interoperability of badges within and between institutions for study programmes of students. In the workshops the institutes also work on finding the semantics for these badges by coupling the badges with earlier defined competency frameworks as well as predefined accreditation standards within Dutch HE. The frameworks and the data with regards to the values or scores on these frameworks is than mapped on the open badges specification. At the moment, there are not many available solutions that have alignments or other methods for linking badges with external validation methodologies available. Open source development and collaboration with suppliers is therefore needed.

We see promise in the use of open badges for Dutch Higher Education to enable micro credentialing and more flexibility and choice for students as well as better adapted education to meet the needs of employers who would like their staff to be certified.

[1] <https://www.surf.nl/en/knowledge-base/2016/white-paper-on-open-badges-and-micro-credentials.html>

10 Open Badge Challenges

Link to working document: <http://bit.ly/OBChallenges>

Introduction

Following an [ORA call](#) earlier this year, a number of challenges have been identified to achieve the goals of an Open Recognition Architecture, such as called for in the [Bologna Open Recognition Declaration](#).

Ten of those challenges have been selected to be addressed by Open Badge community during ePIC 2017. They are:

1. Open Recognition Networks
2. Informal Recognition
3. Open Endorsement
4. Open Discovery
5. Advanced Visualisation
6. Social Capital Representation
7. Open Pathways
8. Semantic value
9. Open Services
10. Interoperability

How to address the challenges?

Join ePIC 2017 workshops to work with us on the different challenges. Have a look at the programme!

The 10 Open Badge Challenges

1. Open Recognition Networks

Key challenge: how to make learners, individuals and citizens the builders of Open Recognition Networks?

Statement: Current recognition systems are structured around the individual. In contrast, Open Recognition Networks are structured around a shared community space and common context of goals and badges, where social understanding can develop and grow. Open Recognition Networks can be a place where badges and endorsements are created and understood. They can serve as an interface between a community and web services that server that community.

Questions: How do people construct their identity in relation to others in a community? How can we build meaningful visual representations from Open Badges, Open Endorsements and other verifiable claims that are more meaningful because they exist in a community? How can these representations enable reflection and action? How do they contribute to one's identity construction? How do they facilitate the emergence of bottom-up recognition systems? What is the architecture of the web services that offer Open Recognition Network functionality?

Use cases:

- Community of practice: visualising the status of members (expert, apprentice, etc.)
- Reputation-based recruitment services
- Recognition of prior learning

Related challenges:

- [Informal Recognition](#)
- [Open Endorsements](#)
- [Open Discovery](#)
- [Open services](#)
 - Communication
 - Employment connections
 - Mapping
 - History/timeline
 - Statistics: density, rate of endorsements, growth in badges, etc.
 - Events

2. Informal Recognition

Key Challenge: How to make informal recognition visible and valuable?

Statement: Open Badges have been mainly successful in supporting the *formal* recognition of informal learning. They are not practical, in their current form, to support *informal recognition*.

Questions: What are the means required to extend the recognition of informal learning beyond *formal recognition* to include *informal recognition*? How can we provide everyone with the means to *recognise* others? How can we assess the reputation of the entity recognising another entity?

Use cases:

- Recognition of a peer / client / provider...
- Quick creation of an ad-hoc badgeclass to describe an achievement right at award time. (BadgeClass identified with urn:uuid IRI)

Related challenges:

- [Open Endorsements](#)
- [Open Recognition Networks](#)

3. Open Endorsement

Key Challenge: How to make endorsements easy to perform and valuable?

Statement: Open Badges are one specific form of *endorsement* (the endorsement of the *earner* by the *issuer* of a badge). There are other possible forms of endorsements that do not require a badge, like signing a document or a contract.

Questions: How can we extend the possibility of endorsement beyond that of Open Badges (classes and instances)? What are the means required to make endorsement an experience at least as easy as signing a paper document with a pen? How to make endorsement as easy as a “like” yet more valuable than LinkedIn ones?

Use cases:

- Endorse pieces of evidence used by a peer/colleague to get a badge
- Endorse a person/organisation using the URL of her Twitter/LinkedIn/blog account
- Endorse a badge class or badge instance

Related challenges:

- [Informal Recognition](#)
- [Open Recognition Networks](#)

4. Open Discovery

Key challenge: How to discover people, competencies, resources, service providers, etc. based on the data generated through Open Recognition while preserving the anonymity?

Statement: Search of talents is mainly confined within silos where participants are not in control of their data. Open Discovery means that it is possible to expose one's data publicly and anonymously, independently from service providers, so that a variety of services, including services unknown to the data owner, can search the data to provide services.

Questions: how do we manage identifiers to facilitate discovery while maintaining anonymity and ensuring the authenticity of the issuer/earner identifier?

Use cases:

- Search for a profile based on a combination of attributes: Formulate a query; get number of matching targets; refine query then notify targets that they have been discovered; targets decide to respond or not, anonymously or not.

Related challenges:

-

5. Advanced Visualisation

Key challenge: How can we create meaningful visual representations of large collections of Badges?

Statement: As the number of badges and endorsements increase, traditional means of visualisation become difficult to manage or simply irrelevant.

Questions: How to add value to badges by displaying them in context?

Use cases:

- Use augmented reality to visualise badges in context — on people, products, services, buildings
- Display social networks around: individuals, competencies, ideas; values, locations, etc.
- Generate on the fly documents such as résumés (the Europass CV!) using innovative formats and providing a seamless navigation in its different dimensions (augmented reality?)

Related challenges:

- [Social Capital Representation](#)

6. Social Capital Representation

Key challenge: how to provide individuals, communities and organisation with dynamic representations of the assets composing their social capital?

Statement: the assets of a person is represented by the things they own and have produced, the trust they have endorsed and given. Open Badges and Open Endorsements are a means to provide a tangible representation of those assets that make it possible to provide some kind of tangible measurement of the social capital of person or a group.

Questions: how can we make the process of trust relationships elicitation, though badges, endorsements and other means visible and measurable? Can we provide a tangible and meaningful representation of social capital? How could a representation of social capital affect the growth of social capital?

Use cases:

- Equip individuals with “personal ledgers¹” (not related to blockchains!) to collect and share data relative to their social capital
- Understand social capital within a common network

Related challenges:

- [Informal Recognition](#)
- [Open Recognition Networks](#)
- [Open Endorsements](#)
- [Advanced Visualisation](#)

7. Open Pathways

Key challenge: How can we elicit what is possible to do once a badge is acquired: new practice, new learning, new job, new activities, etc.?

Statement: when an Open Badge is delivered today, it contains evidence of what the person has achieved — in the past, to inform the future. How about providing badge earners with information that they could use immediately after receiving them: what are the next things I can do with what I have achieved with this badge? Read, practice, learn, contribute etc.

Questions: How can we make badges a springboard for future action initiated by the earner that is more than the next course to follow in the curriculum!)? If the badge is related to competencies, how can we connect those competencies to activities that are relevant to the badge earner?

Use cases:

-

Related challenges:

- [Open Services](#)

8. Semantic value

Key challenge: How can we write criteria and alignment that contain semantic information, so they can be processed by computers at scale to provide meaningful information to humans?

Statement: Today, the *criteria* field in Open Badges is simple text and is created by the issuer. The semantic value is nil.

¹ “Personal Ledger” doesn’t imply that blockchains are needed...

Questions: How can we connect Open Badges and Endorsements to existing frameworks and ontologies?

Use cases:

- When writing the criteria for a competency badge, the badge editor automatically make suggestions using online references to frameworks. The URIs of the definitions are then embedded into the badge that can be searched using URIs in addition to keywords.

Related challenges:

- [Open Services](#)

9. Open Services

Key challenge: How can we provide services (and access control to them) based on the metadata contained in Open Badges and Open Endorsements?

Statement: Until now, the only service provided to Open Badge earners is the ability to display them on a page of a specialised software (Open Badge Passport, Badgr, Credly, Backpack, etc.). These services (verification, display of metadata) could be done using browser plugins, hence providing more flexibility to badge earners to manipulate their badges with existing services instead of specialised ones.

Questions: How can Open Badges trigger external services? How can we make sure that the access to services is independent from where badges are being stored?

Use cases:

- Career and HR Management
- Recruitment
- Learning Planning and Review
- Mapping talents
- Self-employment
- Résumé builder: submit a collection of badges and in return receive a CV (e.g. Europass CV). Add more badges to the collection and get an updated CV.

Related challenges:

- [Open Discovery](#)
- [Open Recognition Networks](#)

10. Interoperability

Key challenge: How can we ensure that badges (instances and classes) travel well across platforms and systems.

Statement: As badge issuing platforms become more sophisticated, they might also provide different features and services that could lock-in their users.

Questions: When a badge (class) is designed on one platform, how well does it travel to another platform that will be used to issue it? Is it important that badge classes travel well, or should we accept that different issuing platforms will provide different methods that can't be all defined in the Open Badges specifications? Can we discriminate between the services that could/should stay within an issuing/storage platform and those that should be externalised to third parties?

Use cases:

- Scenarios demonstrating how badges (instances and classes) travel well across platforms and systems.
- Export ESCObadges out of a Europass CV.
- Use blockchains to lessen reliance on HTTP-hosted verification systems and mediate the construction of identities that may be employed as issuer and recipient of Open Badges.

Related challenges:

- [Open Services](#)

Notes

Ideas to be included in the response to current challenges or to create another one...

Blockchains to improve Open Badges use of identifiers.

One of the shortcomings of the way we have addressed reputation is to look at it from an individualistic point of view: what is the reputation of that person in relation to other entities. But a reputation is also connected to the group the person belongs to / is excluded from. Edward Snowden lost his American passport, but the reasons why it was withdrawn make him someone of high reputation to a number of people (it's a "badge of honour") — and just the opposite to a number of other people!

By registering a public key within a community (or more than one) the registrant benefits from the community reputation. And conversely. So, when someone wants to access a service, i.e. comment a blog post or a YouTube movie, the host can check whether the identifier is connected or not to a group with a certain reputation. If the policy of a service is to disallow racist comments, and the person is connected to a racist group, the comment won't be published. On the other hand, if someone uses the reputation of a non-racist group as a means to grant comments rights, the group could be threatened to be blacklisted if the public key is still part of the community record.

This could be achieved using "micro-blockchains" created at local level, within a community to store the public keys of their members.:

- To have one's public key included in the blockchain, a person needs to be *co-opted* by a community manager and sign the record with her private key. The community might know who the real person is but nobody outside of the community does. The reputation of the group is granted to the new member.

We then have blockchains of blockchains (eg. neighbourhood / district / city / regional / national; faculty / university / academic consortium; etc.). The reputation of an ID/public key is connected to the reputation of the group that has registered it (it is a form of endorsement).

- There are strong incentives for a community to police its membership as bad reputation has an effect on all the public keys stored by that group;
- The same public key can be stored in many different places, so if someone is excluded from a community for wrong reasons, she can join another group;
- To avoid the risk of having one's public key on a blockchain without consent (e.g. alt-right community), the record must be signed by the private key of the holder of the public key. Without such a signature, the meaning is that the identifier has been used without the consent of its owner.

References

<http://etherpad.openrecognition.org/p/ORA2017-April-12>

<http://www.openrecognition.org/wp-content/uploads/2017/04/10-ePortfolio-challenges.pdf>

<http://www.openepic.eu>

<http://www.openrecognition.org>

CONFERENCE AGENDA

Date: Wednesday, 25/Oct/2017	
8:30am	Welcome and registration
Hallway	
9:30am	Workshop — Addressing the Open Badge Challenges (1)
Main Room	<p>Session Chair: Nate Otto</p> <p>During this series of workshop we will be working in groups to address a selected number among the 10 Open Badge Challenges: 1. Open Recognition Networks; 2. Informal Recognition; 3. Open Endorsement; 4. Open Discovery; 5. Advanced Visualisation; 6. Social Capital Representation; 7. Open Pathways; 8. Semantic value; 9. Open Services; 10. Interoperability. During this first session, we will investigate the state of open recognition, examine the different challenges and use each as a window into building Open Recognition Networks. Each team will nominate one chair person who will be leading the work on the challenge and report on the results.</p>
9:30am	Workshop — Open Badges 101: Create your own badge
Breakout Session Room	<p>Session Chair: Tania Martinelli</p> <p>This session is designed for the Open Badge beginners. You will learn:</p> <ul style="list-style-type: none"> What are Open Badges? How to create your own badge? How to endorse a badge?
11:00am	Coffee Break
Hallway	
11:30am	KEY1.1: Launch of the Open Recognition Day: Italy adopts Open Badges!
Main Room	<p>Session Chair: Tania Martinelli</p> <p>Session Chair: Chiara Carlino</p> <p>During this plenary session broadcasted on the web keynotes speakers will explore Open Recognition and how it could change, not just the learning landscape, but the social and employment landscape altogether.</p> <p>Round table with the participation of:</p> <ul style="list-style-type: none"> Davide Conte, Assessor to Budgeting, Finance, Corporate Participation, User Participation in Quality Control of Public Services Marco Lombardo, Municipal councillor, mayor's delegate to European relations and projects Alessandra Biancolini, ANPAL - National Agency Active Labour Policies Marco Mantoan, Chief Executive Officer of ANFIA Service Marcello Bogetti, Director of LabNET, SAA University of Turin
1:30pm	Lunch Break
Hallway	
2:30pm	Workshop — Addressing the Open Badge Challenges (2)
Main Room	<p>Session Chair: Don Present</p> <p>Session Chair: Chiara Carlino</p> <p>During this second session, group will deepen their understanding of the challenges chosen and work towards possible solutions. Participants are free to move from one group to the next. Observers are welcome to lurk on the work being done.</p>
2:30pm	Workshop - Open Badges 102: Create your badge ecosystem (1)
Breakout Session Room	<p>During this second session, teams will be built to start working on the design to inform the development of mockups to demonstrate the potential capabilities of Open Badge applications. If you think that we should create a competitor to LinkedIn, don't be shy, use the collective intelligence of the participants and your design could become the next big thing!</p>

4:30pm	Coffee break
Hallway	
5:00pm	ORA: Open Recognition Alliance
	Session Chair: Nate Otto
	Session Chair: Don Presant
Main Room	An open meeting of the Open Recognition Alliance. Kick off of MIRVA (Making Informal Recognition Visible and Accessible), a 3 years ERASMUS plus project that will greatly contribute to the implementation of the goals of the Bologna Open Recognition Declaration.
6:30pm	Cocktail
Breakout Session Room	
Date: Thursday, 26/Oct/2017	
8:30am	Welcome and registration
9:00am	PR21A
Main Room	Session Chair: Don Presant
9:00am	PR21B
Breakout Session Room	Session Chair: Serge Ravet
10:30am	Coffee Break
Hallway	
11:00am	KEY2.1: Keynote Session
Main Room	Session Chair: Chiara Carlino
12:45pm	Lunch Break
1:45pm	KEY2.2: Panel: Humanitarian Passport Initiative
	Session Chair: Don Presant
Main Room	A diverse panel of humanitarians will provide an update of current developments and exciting next steps for the Humanitarian Passport, an emerging Open Recognition service for the sector. Don Presant , Humanitarian Leadership Academy consultant Petra Pojerová , Humanitarian Leadership Academy Roisin Cassidy , Save the Children Jose Manuel Lorente , Médicos Sin Fronteras Victoria Fontan , Collaboration Centre for Quality Learning in Humanitarian Action
3:00pm	Coffee Break
3:30pm	Workshop - Semantic value and Discovery - OB Challenges (3)

<p>Main Room</p>	<p>Session Chair: Bert Jehoul</p> <p>4. Open Discovery Key challenge: How to discover people, competencies, resources, service providers, etc. based on the data generated through Open Recognition while preserving the anonymity? Statement: Search of talents is mainly confined within silos where participants are not in control of their data. Open Discovery means that it is possible to expose one's data publicly and anonymously, independently from service providers, so that a variety of services, including services unknown to the data owner, can search the data to provide services.</p> <p>8. Semantic value Key challenge: How can we write criteria that contain semantic information, so they can be processed by computers to provide meaningful information to humans? Statement: Today, the criteria field in Open Badges is simple text and is created by the issuer. The semantic value is nil.</p>
<p>4:30pm</p>	<p>PR22: Projects presentation</p>
<p>Main Room</p>	
<p>4:30pm</p>	<p>Open Recognition Networks — OB Challenges (4)</p>
<p>Breakout Session Room</p>	<p>Key challenge: how to make learners, individuals and citizens the builders of Open Recognition Networks? Statement: Current recognition systems are structured around the individual. In contrast, Open Recognition Networks are structured around a shared community space and common context of goals and badges, where social understanding can develop and grow. Open Recognition Networks can be a place where badges and endorsements are created and understood. They can serve as an interface between a community and web services that server that community. Questions: How do people construct their identity in relation to others in a community? How can we build meaningful visual representations from Open Badges, Open Endorsements and other verifiable claims that are more meaningful because they exist in a community? How can these representations enable reflection and action? How do they contribute to one's identity construction? How do they facilitate the emergence of bottom-up recognition systems? Use cases: Community of practice: visualising the status of members (expert, apprentice, etc.) Reputation-based recruitment services Recognition of prior learning Related challenges: Informal Recognition Open Endorsements Open Discovery Open services Communication Employment connections Mapping History/timeline Statistics: density, rate of endorsements, growth in badges, etc. Events More details here</p>
<p>6:30pm</p>	<p>End of day 2</p>
<p>8:30pm - 11:30pm</p>	<p>Social Dinner</p>
<p>Date: Friday, 27/Oct/2017</p>	
<p>8:30am</p>	<p>Welcome and registration</p>
<p>9:30am</p>	<p>PR31: Presentation of projects</p>

Main Room	
9:30am	Workshop - Open Recognition Network and Social Capital Representation - OB Challenges (5)
Breakout Session Room	<p>During this session we will look at two particular challenges: Open Recognition Networks and Social Capital Representation. This will be introduced by a presentation of a regional initiative, Badgeons la Normandie, which is confronted to those issues.</p> <p>3. Open Recognition Networks Key challenge: how to make learners, individuals and citizens the builders of Open Recognition Networks? Statement: Current recognition networks are dominated by institutions of formal education. Already in the first version of the Open Badge infrastructure it was implicit that only institutions had the right to recognise learning while learners only had the right to be recognised by institutional authorities. Elementary informal recognition statements, Open Endorsements, can be combined with Open Badges and other verifiable claims to elicit recognition networks.</p> <p>6. Social Capital Representation Key challenge: how to provide individuals, communities and organisation with dynamic representations of the assets composing their social capital? Statement: the assets of a person is represented by the things they own and have produced, the trust they have endorsed and given. Open Badges and Open Endorsements are a means to provide a tangible representation of those assets that make it possible to provide some kind of tangible measurement of the social capital of person or a group.</p>
11:00am	Coffee Break
11:30am	KEY3.1: Keynote Session
1:00pm	Lunch Break
2:00pm	<p>KEY3.2: Round Table: the Open Badges / Open Recognition Challenges Roadmap - OB Challenges (6)</p> <p>Session Chair: Serge Ravet</p> <p>During three days, we will have had the opportunity to explore the different challenges (may be identify more) and it is time to establish a roadmap for the future of Open Recognition. The moderators of the different <i>challenges</i> will provide a brief report and a discussion will be opened with the participants.</p>
4:00pm	End conference