READER

IMPLEMENTATION OF THE CONCEPT OF OPEN BADGES IN ADULT EDUCATION

EU-OBP

open badges platform

Erasmus+

CONTENTS

INTRODUCTION

Essential for the today's rapidly changing economy and technological development is the ability to valorize the wide range of transferable skills, allowing employers to better match people to jobs, skills such as organizational and time management, conflict resolution, interpersonal and intercultural awareness. They may be acquired not just in a traditional learning environment, but also in informal and non-formal educational settings and online through open educational resources especially in the adult education sector.

The recognition of knowledge, skills and competences acquired outside the formal education is comprehensively specified in the European Council Recommendation on validation of non-formal and informal learning (2012/C 398/01) and in the Communication from the Commission Opening up Education: Innovative teaching and learning for all through new Technologies and Open Educational resources (SWD(2013) 341 final).

Open digital badges are tools that have the potential to communicate achievements, abilities, strengths, qualities of learners. In the past several years, badges have been attracting the attention among educational reformers, since badges can be used in the school system at various levels as a complement to the standardized certificates or grades. In higher education, students have to complete courses in virtual learning environments, or in adult education institutions outside the formal schooling, e.g. non-formal education centers, which do not assess competencies and skills in a standardized way. Badges support particularly the socio-economically disadvantaged groups (NEETs, dropouts, asylum seekers) who lack certificates and diplomas and often find themselves unemployed or working in unskilled jobs.[1] Digital Badges can be part of vocational rehabilitation and help demonstrate learners' abilities to outsiders, increase their economic worth in community and encourage life-long learning especially in adult education.

"European Open Badges Platform" (EU-OBP) promotes a common European platform for digital badges, allowing adult education organizations and trainers, educators to integrate an open badges validation system into their "assessment" in order to make the accomplishments, abilities and skills of their learners visible to a wider audience.

The main aim of the project is to upgrade the innovative tools and methods for recognition of non-formal and informal learning in adult educational settings and focuses on the relationship of educational organizations towards open education, distant and blended learning and – above all – the implementation of open badges on different levels and across different organizations.

This Reader is the result of research on recent studies and best practices dedicated to the institutional and technical requirements, challenges, liabilities and opportunities of digital badges. It provides guidelines and recommendations for design and implementation of open badges on organizational and national level and is meant to be used as a training material for the staff in adult educational settings and policy-makers concerning implementation of open badges in Europe.

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[1] https://iite.unesco.org/highlights/open-badges-new-opportunities-to-recognize-and-validate-achievements-digitally/

The document facilitates the understanding of the key concepts behind open badges and the key actors involved. It represents a lesson shared on how the open-badges-concept might influence learning, assessment and opportunities for lifelong learning and gives insights into their advantages in adult education. The reader discusses opportunities for using badge in adult education, and addresses some best practices from formal and non-formal adult education. The last section underlines some strategies for exploitation of open badges in educational organizations across Europe and addresses issues related to policy and practice.

OPEN BADGES: CONCEPT AND KEY ACTORS INVOLVED

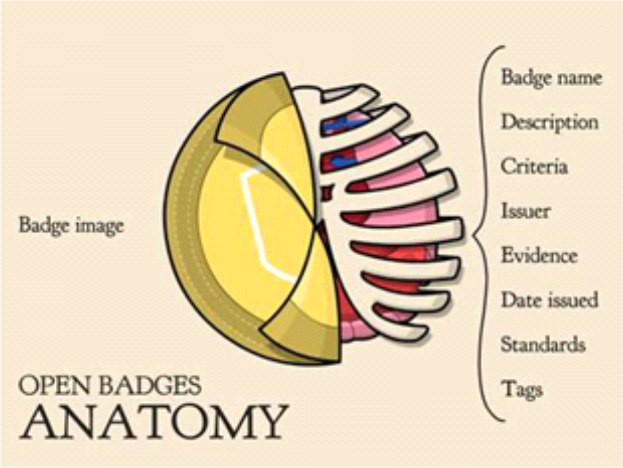
Badges are not new, but an evolving concept. This section reviews the characteristics of badges as well as highlights the key actors involved.

For those who are still unfamiliar with the concept the next few sentences should set a basis for the idea behind digital badges.

The badge serves as a visual representation of accomplishments, achievements, skills, which can be easily presented on the Internet and verified as well as validated by external actors through the metadata hidden within each badge.

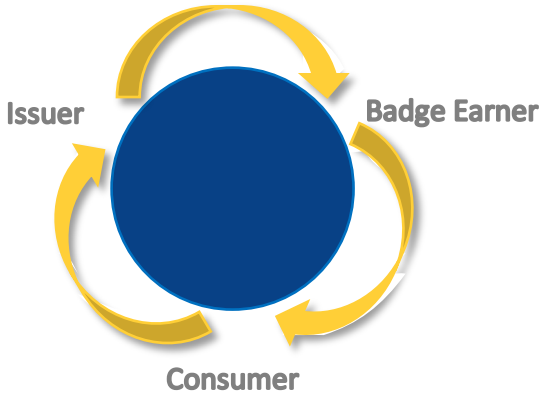
A badge contains metadata about the badge description, a list of criteria to earn the badge, the issuing organization, the issue date and possibly the expiration date and eventually the web address linked to evidence in order to verify it. Employers, educational institutions or associations can access the metadata saved within each digital image and check online what the badge earner had to do in order to obtain it.

Doug Belshaw/ Badge anatomy



There are three major actors in the digital badge process:

1) Issuer
2) Badge Earner
3) Consumer.



The following section will address the roles of each of the above in adult education as well as their standpoint to badges.

1) The Issuer is the educational institution, (sometimes a company) responsible for the graphic design, determination of the metadata of a badge, the choice of the web platform supporting the issuing process and dissemination of open badges. Additionally, it decides who from the educational staff is entitled to award badges.

   The Issuer awards badges when learners have met criteria or reached benchmarks in their learning experiences. The badges represent different skills, achievements, often aligned to certain competency frameworks, like *European Framework of Reference for Languages*, or the *European Framework for Key Competences for Lifelong Learning*. They can also represent an evidence of behaviors, interests or completion of separate educational units, such as modules in a language or ICT course, or participation in a workshop. The Issuers can valorize skills and abilities highly demanded by the labor market.

   Ideally, the Issuer wants their badges recognized as a trusted document and have a high worth to outside associations, institutions or labor market. Since the Issuer is responsible for the authenticity and quality of the badges, they oversee and validate that the learner has properly attained the badge. The badges are also seen as a form of marketing since outsiders will see what skills or learning outcomes are obtainable within an educational setting.

   The badge Issuer is keen on a simple and easily accessible way for badge holders and third parties (consumers) to access the badges and be able to check the metadata saved within the badge itself. They aim to create a link between each badge and their institution, which proves that it is authentic and fulfills the criteria. Not only do they want to disperse badges, but they may also want to retract badges are not rightfully distributed or due to fraud. The badge-issuing program should be compatible with other well-known platforms, which makes their badges user-friendly for both the badge earner and consumers to extract details and meaning.
2) The badge Earner is the learner, also referred to as user or badge holder, who receives a badge as evidence of learning achievements and progress, participation at different events/courses, or even qualities and soft skills. A single badge can be part of a larger

constellation of badges and serve as an educational milestone within a learning path. Therefore, it should motivate the learner to determine the learning steps and work towards acquisition of new badges.

The relationship between the Issuer and badge Earner is verifiable. On the adult education level the Earner may be young adults working towards obtaining general school-leaving qualifications, lifelong learners, learners in vocational training courses, or even trainers etc.

Once the badge has been earned, the Earners are interested in storing and managing their own badges, protecting their own personal information, combining and classifying badges under specific topics and purposes, and addressed to different consumers (relevant audience like the Consumer, i.e. stakeholders, employers). A personal virtual backpack provides the badge holder all these functions. From the backpack, one can incorporate badges in virtual CVs, blogs, or them via e-portfolios or social media channels such as Facebook, LinkedIn and Twitter.

The badge Earners are also supposed to be keen on benchmarking their achievements and working towards obtaining new badges which are in line with their learning and professional goals.

3) The third key actor involved is the Consumer, who may be an employer, an educational institution, and association of some type, other stakeholders and generally the community in the virtual world. They will check the badges and the metadata embedded in it. They want to see badges, which are of value, transparent, authentic and easily verifiable. Based on the metadata and badges they will be able to assess the badge holder.

   The consumer is interested in a simple access to the badge holder's digital badges and validating the digital authenticity, which means that the badge is not just made up. They may be interested in filtering for specific details according to a specific skill or the period in which a badge was acquired. Ultimately, they want to use the badges in order to make a knowledgeable decision on the Earner based on the metadata, which is saved within each badge. Therefore, it can be said that the real proof and "validation" of the badge come with the recognition by consumers.

ADVANTAGES IN ADULT EDUCATION AND INNOVATIVE TOOLS FOR RECOGNITION OF SKILLS

Badges serve as more than just a benchmark in a learning adventure, there are an array of advantages why they should be used for adult learners, and for example, they motivate learners and hold them accountable. Not only are the users benefiting by being awarded badges, but also the Issuers and Consumers. The digital icons complement other forms of alternative assessment (e.g. certificates) in the non-formal learning.

To begin this section on advantages take into consideration the Earners. They receive a badge that facilitates the development of their meta-cognitive skills, which reinforce and enhance learning and boost overall motivation. Earners could validate prior learning, for example digital skills like using Microsoft Office. The learner's awareness of tasks or even aims for the future are more apparent. They track their progress along the way to see how close they are in attaining the final goal. Each Earner can develop and maintain individual digital portfolios, i.e. backpacks, where earned digital badges along with work samples and learning resources, or other certificates are stored. This allows them to evidence their accomplishments and focus on their own achievements rather than comparing their accomplishments to others in the classroom.

Alongside the learner, the Issuers of educational badges an educator, trainer or educational organization, can use badges as a motivational tool to acknowledge learning performances or a completed task in the classroom. Teaching staff involved in the process of awarding badges reported that many learners seemed very enthusiastic and gave additional effort to earn badges. However, the increase of learning motivation was not applicable for all learners, it depends to a great extent on the type and the "popularity" of the badge. Therefore, it can be concluded badges have the potential to increase learning engagement and serve as a good motivational mechanism.[2]

Another advantage for the Issuer, adult education institution, is the possibility to monitor a learning path. On one hand the learner get a clear sense of their learning progress and on the other hand - the Issuer can easily chart learning progress of the learners and support the learning process.

Badges add an element of fun to the classroom, as they are well-known as rewards in video-games. It helps to build a good atmosphere of healthy competition in a non-threatening way and inspire learners to overcome learning challenges.

Another advantage for the non-formal learning institutions by issuing badges, is the increase of the school reputation. The badges the learners are awarded promote the learning opportunities available at said institution. This is a source of marketing done at a low to no cost and generate in the digital environment brand vitality. This is in many aspects a novel approach of both marketing, assessment and scaffolding a Earner-Issuer relationship.

The implementation of badges in adult education institution can help to build networks and link organisations. It enables the sharing of information and fostering of innovation in the

2 https://docs.google.com/document/d/1mHRK-J8kOx6AsTpPfkEJBAKXCc3XW29g8jfeCoMzTTk/edit

educational field. The networking will increase the transparency of competences and the educational mobility.[3]

Consumers, i.e. stakeholders, also have many advantages some of which are specific to the sector. Generally, they gain insight on the quality of the education and the process. By visiting the profiles of the future employees or students they can get an inside peek at which skills they have acquired as well as to what kind of institutions have issued the badges. For example, it may be interesting to find out if the Earner has obtained badges from specialty schools or if they have recently obtained certificates or diplomas.

The functionality is simple and is associated to an assessment, completion of a task or even skills' certification.[4] This demonstrates advantages for Issuers, Earners and Consumers. Not only has this method proven to be advantageous in the formal classrooms, but also in the non-formal classroom with adult learners. Badges are earned not only for current learning activities, but also may be awarded based on experiences and extra-curricular activities. The Consumers are able to access the data related to the skills of the Earners as well as the validity and accuracy of institutions, i.e. Issuers who are issuing the badges. This strengthens and supports the networking and relationships between all three parties.

[3] http://www.edukacjaustawicznadoroslych.eu/download/2016/edu_3_2016.pdf#page=92

4 https://www.researchgate.net/publication/318116742_Digital_badges_on_education_past_present_and_future

REALISATION OF BADGES IN AND OUT ADULT EDUCATION CLASSROOMS

As mentioned in the prior chapter, the Badge concept aims not only to motivate the learners, but also has the goal to build an internal trust network between issuer and end consumers – relevant stakeholders. The realization of badges in adult education communicates the badge value a future employee is expected to bring to a future occupational position in a company.

The implementation of badges comes of course also with its struggles that should be considered when implementing a badge awarding system in the classroom. Self-reflection plays an important role of the effect badges have on the learning experience. Adult learners have lesser of a problem since they are directed more towards being capable of steering their own learning experience.

Prior to getting started using badges as an institution, i.e. Issuer, one must reflect on:

- ✓ *How and why you want to use Badges?*
- ✓ *Which courses or learning units have the right content and structure for badging?*
- ✓ *How much involvement from the educational staff and technical department will need to be considered?*
- ✓ *What is the timeframe for the implementation?*
- ✓ *What are the costs of the issuing process? Will badges have the potential to be used by other educational institutions?*

In order to further realize the badging system, it is vital to select the appropriate learning badging platform, which makes the creation, displaying, sorting and saving of badges an easy task.

Adult education centers, as Issuers, find it difficult to persuade teachers in using such methodology since at first this may be an administrative or a technical burden for teachers who are already putting in countless hours. In order to counter act to this mentality it is important to keep teachers and administrative staff up-to-date on technical skills. This means they should be familiar with badge designing, editing tools, determination of criteria and content embedded infrastructure of an issuing platforms. They should converse on the principles of awarding, displaying and sharing of badges. Communication is key in ensuring a high standard of badge issuing within an institution. Workshops and round tables with educational staff should be organized to go through the steps for implementation of the badges for educational purposes.

The issuing institutions should increase also its external communication. Local events with relevant stakeholders and employers will raise the awareness on the use of badges as trustworthy credentials. For employers the first glimpse of badges may appear playful, but upon checking badges reliability and authenticity, any skepticism or hesitation will be written off.

BEST PRACTICES

This chapter is dedicated to best practices, i.e. methods and techniques which have generally had successful or profitable results. They may be interpreted as a standard way of doing things or as evidence for the benefits of using badges in the non-formal learning setting. The following examples have been collected and reviewed by the consortium and shall serve as a source of inspiration.

The research resulted that the use of open badges are less known in non-formal adult educational institutions. The following best practices take into account the non-formal learning setting, but also the formal setting with one being the target group students and the other teachers. In this setting the source underpins the motivating factor of badges for students between their 7th and 9th year.

Moreover, the following encompasses ideas for students at the University level in order to promote autonomous learning, recognition of soft-skills as well as those teachers to award and promote their ICT and management skills. An additional project takes a closer look at the use of Badges in the youth field work sector and the correlation to recognizing skills and competences essential in the labor market.

Although the Open Badges project does not take into special consideration students in the formal education, none-the-less the project outcomes can take into consideration the experiences in all education paths. These experiences can be interpreted and adapted to the adult non-formal learning setting in order to learn from past experiences.

The following is a brief summary of each of the Best Practices along with a link where, as a Reader, you can find additional information.

- **The "open badges" conquer the universities: from Milan to Bari the first steps to certify your skills**[5]

The article presents the opportunities offered to the Italian students in acquiring certification for the soft skills gained in curricular and extra-curricular activities, offered by the OBI (Open Badges Infrastructure).

In the Italian academic environment, the innovative system of Open Badges was first introduced by the main Italian inter-university consortium Cineca. Its Education Department created the platform “Bestr” which provided Open Badges. The main aim of the platform was to be a meeting point for enterprises, training institutions and learners to develop a relationship between the educational offer in Italy and the needs of the market.

The first university that used the Open Badges system was the University Bicocca in Milan, in the project “Bbetween”, in which “the student must be at the centre of all the activities proposed”. Not only do the students get Open Badges to certify that they acquire skills in different activities, but they also include them in their Diploma Supplement or in their CVs.

[5] http://scuola24.ilsole24ore.com/art/universita-e-ricerca/2016-03-11/gli-open-badges-conquistano-atenei-milano-bari-primi-passi-certificare-e-condividere-competenze-192333.php?uuid=ACCFjjmC&refresh_ce=1

Another example of using Open Badges at an academic level is offered by the University of Turin where, by using the Bestr platform, the university staff are given badges that certify mainly digital skills for the management of the Internet portal of the university.

Other Italian universities that use the Open Badge System are the University of Macerata, where the badges certify the training of the teachers, the University of Genoa, where Open Badges were used to attest the attendance to an International Conference and the universities of Insubria and Bari, where this new standard of certification is used.

Another project, "EduOpen", funded by the Ministry of Education, involves several Italian universities and aims to offer lessons in an automated manner (so-called MOOCs) for diverse specializations.

The conclusion of the article is that Open Badges seem to have a lot of popularity among students who find online courses extremely useful.

- **primeTECH - promoting Technology Enhanced Teaching in PRIMARY SCHOOLS** [6]

This is project aimed at meeting the needs of the EU policies regarding the raising of the educational level and capacities of teachers in what concerns the use of ICT in teaching. Within the project, Open Badges were used in assessment, evaluation, and validation of the digital skills that could be acquired by teachers. The use of the Open Badges system was a procedure meant to motivate and provide incentives for the teachers to continue their training.

The Open Badges were created online through an open-platform on which teachers had to train in five areas and training modules: Information and Data Literacy, Communication and Collaboration, Digital Content Creation, Internet Safety and Security and Problem Solving in Pedagogy. During the process of completing the five modules, the users earned separate badges for each level of each module. The badges were Bronze, Silver, and Gold. Once the learners earned the five Gold badges for the five modules, they could obtain the overall Diamond badge that proved their top-level skills in using ICT in the primary school environment.

The project was widely disseminated across the partner countries so that it could reach the largest number of learners who could benefit from the training modules. They could start studying online and earn badges, which enabled them to validate the ICT skills they acquired

- **Valorising skills acquired through volunteer engagement – State of art and analysis of existing tools**[7]

This document explains the existing possibilities for the validation of non-formal learning in Belgium. Starting from the example of Belgium, with Project Kots, it stresses the real need to implement such validation. Kots that are community housing for students and Project Kots gather about ten or so students who also implement together a project for the wellbeing of other students or for the wellbeing of the neighborhood. Sometimes it is difficult for them to cope with their academic engagement and with their volunteer engagement.

[6] http://www.primetech-edu.eu/
[7] https://requapass.eu/_docs/Fichier/2019/11-190709030343.pdf

Then it gives examples of reference framework for competences that can be acquired out of formal educational environment: the common base of knowledge, skills and culture of the French National Education system, The European Council Recommendation from the 22nd of May 2018 on key competences for lifelong learning, the OECD skills for XXI century.

Then it provides an analysis of tools that can be used to valorise competences acquired through volunteering.

- **Attityder till Digital Badges i undervisningen på högstadiet. (Attitudes to Digital badges in secondary school teaching).**[8]

This article was issued by two staff members from Uppsala Universitet Viktor Sucksdorff and Ivan Larsson Riviera. The paper focuses on students in 7th to 9th grade, but the results and conclusions can be applied with learners of any age.

"Students motivation is a problem for a lot of Swedish elementary school students today and it affects results negatively. In this paper we try to identify students attitude towards Digital Badges, a concept used for increasing motivation in video games, and what teachers think about the concept. We also find out how to design Digital Badges in education for elementary school. Based on current research about gamification and motivational theories we create a digital exam for students to try. After that we conducted focus groups with the students in which we discussed their perception and what their attitudes towards Digital Badges was. We also conducted interviews with teachers and, combined with the results from the focus groups, the results of the interview were analyzed for our conclusion. The results of this paper are that Swedish elementary school students attitude towards Digital Badges in education are overall good. We also created a requirements specification regarding how to design Digital Badges for education at elementary school."

- **Strategic partnership project "Trusted badge systems"** [9]

This article was issued by the Lithuanian Confederation of Industrialists. The project "Trusted Badge Systems" fosters the use of 'Open Badges' in European youth work in cooperation with the employment market.

Cross-sectoral consortium of partners from Lithuania, Netherlands, Spain and Germany integrate technological innovation of Open Badges in order to increase the quality of youth work by creating unique, digital, non-formal learning, recognition systems. The badge systems are created and endorsed by representatives from the employment sector in each country.

Specific objectives:

- ✓ To build/review comprehensive competence framework for the non-formal education programs provided by partner organizations in cooperation with the representatives from the employment sector.
- ✓ To design and test Open Badge systems, allowing to recognize young people's non-formal learning results.

[8] https://www.diva-portal.org/smash/get/diva2:1111968/FULLTEXT01.pdf
[9] http://www.lpk.lt/en/projects/trusted-badge-systems

- ✓ To achieve endorsement of employers for the created badge systems and increase social recognition of non-formal learning in this way.
- ✓ To create seamless experience for young people to manage their own non-formal learning evidence by creating online systems of Education Quests and mobile application, allowing to issue, earn and manage Open Badges instantly and via mobile devices.
- ✓ To disseminate project results and build the base for the wider use of created and employers' endorsed Open Badge systems across Europe and across various fields of education.

Trusted Badge Systems consists of an online system of Educational Quests as well as a mobile application developed for two major platforms Android and Apple iOS. It enables young people to access their online profile of achievements; to review existing projects they are in and quests to be accomplished.

- **Digital Badges as accreditation of competencies at University**[10]

This article has a dual purpose: on the one hand, to obtain a state of the art of digital badges as a new form of credential (and especifically its application in the field of the University) and on the other hand, to offer a series of tools and solutions for implementing the use of these elements through a pedagogical design proposal reinforced with examples.

The emergence of new forms of education beyond educational institutions, spaces or situations associated with »formal learning«, the growth of new technologies which are constantly changing, making it necessary to continue learning in a process of lifelong learning and the fact that companies require constantly updated staff and a rapid progress in the learning pace, based on shorter courses (in many cases in the workplace or at the specific time when a specific knowledge or skill is required) accelerate the appearance of new forms of accreditation of competences, in many cases online, but also for formal education.

Digital badges have become alternatives which offer possibilities adapted to new ways of showing evidence and digital environments, replacing traditional certificates with solutions that allow greater portability and visibility of the achievements.

The articles highlight from a psychological and gamification point of view, that badges could motivate a person to perform some kind of action or lead them towards desired behaviors. They will serve also for evidence participation, membership, values, beliefs, skills, loyalty, etc and encourage students towards positive learning behaviors.

As examples, the author indicates the application cases of Microsoft, Siemens Education, Beuth University, University of California, Monterrey Institute of Technology and Higher Education, CISCO, Pennsylvania State Library and different MOOCs, among others.

The main drawback they present is the lack of knowledge and dissemination of this type of credential, which in some cases can lead to a lack of responsibility and effective use of badges, for example by issuing them without adequate support or with inaccurate or incorrect

10 https://www.researchgate.net/publication/319623570_Insignias_digitales_como_acreditacion_de_competencias_en_la_Universidad

information on their metadata. Because of these, it will be necessary to ensure validity processes of both the recipient and the issuing entity and the process of creating and issuing the badge, to provide the maximum possible information to the badge, to follow some kind of official and international standard and to offer training to all the roles involved in these tools and initiatives.

As ideas and future lines to give more weight to badges and their issuers, the author proposes:

- ✓ To give weight to the figure of the evaluator.
- ✓ To seek solutions such as the Blockchain system that open doors to new ways of validating and give greater reliability to the evidence provided to this type of credential.

- **Cities for Learning – *Gentlestudent*, The City as a Medium for Acquiring 21st Century Skills**[11]

Gentlestudent is an initiative implemented by Artevelde University College in order to connect the learning of students and the city of Ghent, to make what they call a City for learning.

An online platform has been elaborated and but at the disposal of citizens, organizations to give them a space to post ideas and concrete needs that are then translated into learning opportunities for students.

Artevelde University College has defined five strategic Artevelde-wide learning outcomes (Demedts &Van Puyenbroeck, 2016): digital literacy, sustainability, global citizenship, entrepreneurship and research skills for which open badges are awarded.

These learning outcomes are linked to 21st-century skills, that every professional will need in the future. Moreover, Gentlestudent works according to the principles of gamification, using game design elements in a non-game context. Open badges function as micro-credentials, that confirm the acquisition of a specific skill.

These learning outcomes can be acquired in formal settings: the educational context. For example a student in the teacher training program who develop an internship assignment with sustainable materials will not only develop his didactic competences, but also a competence on sustainable development that will lead the University to award him the corresponding badge. But learning outcomes can also be acquired in an informal setting: the city of Ghent.

The city can be considered as an environment where formal and informal learning can contribute to the further development of the city.

The citizens and associations feedback is transmitted via a platform to the students through beacons that are located in various accessible places of the city. Bluetooth beacons are hardware transmitters that broadcast their identifier to nearby portable electronic devices. The technology enables smartphones, tablets and other devices to perform actions when in close proximity to a beacon. In this case, a notification is sent to the student's mobile device when he is in the neighborhood of the beacon. Students have developed the application, the website and the badges.

Through this research, the University studies:

[11] http://ocs.editorial.upv.es/index.php/HEAD/HEAD18/paper/viewFile/8038/3734

- ✓ how digital technology connects the talent, ideas and knowledge of students with the needs of the community without intervention of educational institution;
- ✓ how student can be encouraged to work more autonomously, starting from their own learning questions;
- ✓ how the experiences from the informal curriculum can be valorised in the formal one by using micro-credentials in the form of open badges.

CONCLUSIONS AND STRATEGIES FOR ADULT EDUCATION.

In this section the Consortium has addressed the following issues and considered the future of Open Badges now and for in the future:

1. **EU OBP deals with methodologies and tools that organisations need to create, issue and manage open badges with a repository, as well as a community space where badge earners can receive and share their badges and connect using them.**

Looking at Open Badges overall in Europe it is a common theme that their usage has come to a stand still. A few years ago, the concept promoted by the initiative boosted by the Mozilla Foundation began to develop, it began to talk about its use in education as a motivational tool for learning, but unfortunately, there is a slowing down of the debate on the use of the concept of Open Badges.

They seem to have a lot of popularity among students who find online courses extremely useful. In many countries the use is more of a motivational tool than a tool for recognition of knowledge or skill, e.g. you earn badges from completing a training or a course at school. You know why you got the badge, the issuer knows it too, but almost nobody “on the outside“ knows what they are for. There is no proof what effect Open Badges actually have on the student, how much the Consumers (e.g. employers) trust them but above all, we think that currently they are still not well understood in our environments and even those responsible do not yet sufficiently know their potential.

There is no space for learners to share their expectations and experience with badges, for example, what do they think about them? How do they use them? What would they like about badges? It would be an interesting idea to provide an open space where they can connect and exchange. It could allow organizations to improve their messages and their practice with badges. Most of badges are delivered automatically by online learning platforms as milestones to confirm the acquisition of skills, knowledge with regular evaluations. Learners have their own individual repository for their personal badges, but no place where they can talk about badges and share their experience. Moreover, to our knowledge there is no association of open badge holders meant to support their interests in terms of recognition of the credits open badges stand for. Creating an association would not only raise the awareness, but they would be able to support between organisations to ensure fruitful outcomes.

Study conducted by organisations in the field of adult education declare the benefits of badges but we have not identified any survey that would indicate, for example, that they do not have a negative effect on the motivation of learners. A survey based on semi-structured interviews of adult learners would be useful to enquire the consequences of awarding badges and prove that, if they do not have a positive impact, at least, they do not have a negative impact on motivation.

2. **Are open badges the right answer to recognize knowledge? Or is there a positive development of open badges implementation?**

With the unprecedented development of technology, when more and more people are in need of fast and effective training, open badges are likely to become reliable indicators of accomplishment or skills acquired online.

The great obstacle for the correct implementation of the open badges in adult education is the lack of unanimity and "credibility" that certain social or economic agents have when legitimizing the acquired competences and are represented by the badges given to the students. There are initiatives here and there, but most of them do not become mainstream as they born with the support of European funds like Erasmus. Open badges will only exist with a sustainable approach if they can fill a gap in the existing offer of certification and recognition. We believe that, in the adult education sector, they are the right answer to valorize actions and behaviors of learners.

We deeply believe that Open Badges are the right answer to recognition of knowledge in adult education, especially those obtained through non-formal and/or informal means. Of course knowledge and skills acquired through formal way at school are the foundation of any education but not sufficient for a successful entry into the labor market and/or quality of life. Thus the importance of non-formal learning which is logical since we are talking about the principle of lifelong learning.

3. **There are many organizations either using open badges or are in the process of implementing them into their Curricula.**

It is difficult to determine how many organisations / associations are actually issuing badges or currently implementing the process of issuing within their schools. Most are formal educational institutions and organizations: schools or universities. Who have a keen interest in upgrading their employees' and/or students' skills and implement the open badges according to their own needs. Particularly in adult education the number of organizations issuing badges is even smaller. Thus, the proposal to create an open badge association would prove to beneficial in order to estimate the amount of institutions working with Open Badges.

The following points were taken into consideration when analyzing the idea that Open Badges are still an emerging concept with a small impact on the way we recognize learning today.

a) Open badges are a disruptive concept and a transformation tool challenging and questioning the way we recognise learning.

Visually, open badges probably cannot be considered as disruptive as they are based on the very ancient and traditional pattern of images that were awarded by teachers in primary schools and prizes such as books that were awarded during the learning path of pupils in secondary and high schools.
Overall they are not a disruptive concept, but just the opposite: it is very welcome integration of already existing ways of recognition and recognizing knowledge and skills. In particular, this applies to informally acquired knowledge where it is practically the only concept. The challenge may be that for many people it is difficult to understand that a person's knowledge can be validated through the acquisition of badges that recognize competences, both key and transversal. For them, a degree is what shows the educational level of an individual and not the diversity of skills that they may be able to demonstrate and acquire throughout their lives.

b) Trust is still a challenging question in contexts where recognition of learning is the monopole of official bodies.

Since Open Badges are still a very unknown tool there is not much trust in them. In order to gain trust and build a reputation it is vital to get information out to teachers, employers, schools

and organizations, but of course this will take some time. Perhaps this is only a question of generations since younger ones are more used to badges from games and in some cases in formal school they have already instilled trust in Open Badges.

The credibility of badges is the same as any system providing recognition of learning. It is not the credibility of badges that has to be questioned, it is the credibility of the organizations providing badges. If the Ministry of education deliver badges, there is no reason for these badges to be less credible than the diplomas and certificates it can produce.

If a badge were to be issued then it would be impossible for someone to display another person's badge or claim to have obtained one from an institution that did not issue it. The intrinsic protection mechanism is simple and very effective. If it is difficult for an employer to check the validity of a diploma in paper form, but checking the integrity and validity of a badge takes only a few seconds.

It is certainly difficult to demonstrate the credibility of badges, beyond the reputation of the entity issuing badges. Some are therefore the opinion that the future challenge of badges is to achieve a standard recognition for all issued badges. This credibility cannot rely only on the reputation of an individual organization.

c) Developing a meaningful badge ecosystem requires collaboration and it can be challenging.

Building off the prior topic one of the challenges for the future development of badges as a true useful tool for validating competencies is to create a collaborative ecosystem. This should allow for the creation of common development spaces that help boost the credibility of the badges awarded. When we create the badge there are many things which need to be considered which will play a role in determining how meaningful the badge ecosystem e.g.

- Naming and criteria: What language do we use? What level of language do we choose? To whom do they address? To the learner? In that case do we need to take into account the age and social environment of the learner? To the society? To a potential employer? The formal language used to describe skills and competences in a normative or official competence reference framework?
- Badge design: visual coherence of the badges, making sure that new badges can be incorporated in the various families, answers to the questions of including a reminder of the delivering organisation, of the competence reference framework used, use of different ranges of colors or different ranges of shapes depending on the families of badges.
- Creating and issuing: Who decides to create a badge ecosystem? Who decides to create a badge? Who decides of the feel and design of badges? Who decides the tone and level of language used to name, describe a badge with the criteria? Who decides that the criteria are fulfilled and the badge is earned? Who decides if there are several levels which need to be obtained before issuing the badge? Who decides to expand the eco-system of badges?

This very important topic must be further researched through an in-depth analysis of the needs of the labor market. By doing such, both employers and associations would be involved and this in fold would also raise the awareness.

Without a doubt Open Badges must to be in constant development to keep up with trends and what might be coming.

d) Organisation and creator centric approach and development.

The focus should be on the educational needs of the students and the skills that will be needed in the labor markets in the future. This will allow collaborative approaches and an ecosystem that was previously mentioned. Badges are created in order to support existing reference frameworks for skills or to valorize learning opportunities created by a learning path.

It may be good for some association to collect, direct and watch over development, approaches, methodology, aims, etc., but not in terms of some complete centralization. After all, our partnership forms a consortium too. It must be flexible, user-friendly and also take into account the educational needs of the students and the skills that will be needed in the labour market.

e) Badge earners are often placed in a role of passive recipients.

If this were to be true then in order to make the learners active, they must request the badges when they think they earned. It is a way to make them proactive in the learning path. It is also a way to empower them regarding the concept of competences as well as recognise the milestones in their learning pathway.

f) The badges we create and issue meet the expectation or at least needs of the badge earners.

The future of open badges depends on adapting to the training needs of students and the demand for skills in the labor market, and this is always in permanent change. Therefore, it will always be necessary to review the expectations and needs of badge earners.

At the moment, all partners can say currently this is not the case. There is still much work to be done in order to say the all badges created and issued meet the expectations of the earners. This partnership with attempt to improve the situation with the project outcomes. This will very much depend on the trust and credibility of the earners and stakeholders.

g) What is needed in order for Open Badges to really take off?

The development of standardized recognition processes for awarded badges can help promote the confidence in the use of open badges in other spaces, which must adapt to the changes that are taking place in our society. Badges are still at the beginning although they are simply digital versions of paper credentials showing proof of qualification, skills, etc. There are organizations and institutions which find this system risky primarily in terms of trust but this quite often the case for the entire digital world. Findings show a relation between recognition of OBs and the digital environment of the enterprise. Paper-based certificates are perceived as more reliable than their digital versions.

Our society has changed dramatically influencing learning and assessment: OBs align with the changes but challenge the traditional system in terms of reliability and credibility. Findings show that OBs are easily recognized when they support, supplement or add something new to the curriculum that is when they meet existing needs. Moreover, they are successful when

they are designed by the very organization that implements them. OBs that replace existing sections raise questions about their accreditation. Open badges should meet learners' needs and expectations as learners get them at the end of an online course they choose.

Some are the opinion that the key to success is the involvement of the labor market. Not enough recruiters/employers know about it, ask for it or take OB seriously. A demand for open badges needs to be created by the labor market to get them circulating.

Open Badges will fly when they meet the existing needs of the organization and thus enter the mainstream. This means recognized by the public i.e. adult education institutions, policy makers, employers, federal labor offices. The issuers must be trusted and credible which include a formal evaluation and recognition as part of external and additional Curricula and the Open badges need to be accepted at a national and European level.

The following section takes into consideration the needs towards successful badge strategies:

a) Understand the needs (better understanding of your context and community)

Of course, the future of a successful badge strategy is to adapt to the changing needs of society, not only of students, but also the needs of labor markets. There has to be constant research of trends and be current. The recent COVID-19 crisis has pointed out the necessity to develop new methods for distance learning, especially for recognition and evaluation of knowledge and here badges could be made useful.

b) We should think badges as an "integrated solution" (as a service) to support and improve processes (HR, employability, staff engagement, etc.)

It should be considered, but changing the mindset of employers when it comes to recognizing badges as validators of competencies is a very difficult task. It will depend on the future success of the use of badges. Collaboration with social work and employment centres should raise the possibility of official recognition of open badges. Exploitation of badges and the idea of distant evaluation should be pushed forward as innovation in adult education.

c) Engage and collaborate (co-creation of badges, badges as connectors, etc.)

The badges must be created in realization to pre-existing ones, as is the case with university degrees. The greater cooperation in the development and use of badges, the greater the success of a strategy that seeks to promote the implementation of badges as a tool for validating competencies.

Learners should have a greater role in the development of badges, which will, hopefully, bring greater success and credibility. Involvement of wide group of issuers in national context will raise the chances of official recognition.

d) Recognition and trust (endorsement, peer assessment, etc.)

Trust is one of the bases of recognition and by that peer assessment can be helpful and fun gadget. We think that whole concept of open badges stands on these two points: recognition

and trust. Because badges are still a new concept, we believe only with intense promotion, dissemination and exploitation of open badges as useful indicators of acquired skills, especially useful for recognition of soft skills and key competences, the gap between digital educational solutions and traditional methods could be bridged.

The great debate must be made at this point, we personally believe that this is the great dilemma that exists around the concept of open badges and the future decisions on the use of badges will depend on the majority decisions taken in this regard.

e) Understand ecosystems (interaction logic between stakeholders)

All partners agree that only a cooperation between all involved parties will bring success.

The success of Open Badges depends on a collaboration, communication and shared views among all stakeholders. There is a need of standardized formats of Open Badges since research shows no evidence. To be recognized and enter mainstream they should comply with certain rules and follow a certain required format. The criteria for earning a badge should rely on commonly agreed-upon standards. It is also likely that links to credible universities and organization will add to its value. Since they create and implement the Open Badge program for their students helping them to acquire the necessary skills outside classes. They know earning a badge is based on hard work and the badge earners are not passive recipients.

In addition, the success of badges depends on the promotion and support of consumers. Badge users must find their voice and contribute to their own development and recognition.

The aim of the EU-OBP project is to provide a space for learners to connect and exchange their experience and expectations regarding badges as a good strategy. As a continuation, peer-assessment is a powerful tool to stimulate learning.

More and more educational institutions, training agencies involved not just in formal, but also in non-formal education reward learners for their learning success with badges. This trend is in line with the lifelong learning policy and support the connection of learning environments. This Reader promotes the thought of a common EU platform for digital badges, targeted at adult education organizations, adult educators and adult learners. It is with hope that this Reader has underlined the needs of adult education organizations and educators and has proposed an easy to use, digital, motivating solution for identifying and documenting results of non-formal, informal and formal learning.

GLOSSARY

Badge is a digital representation of a skill, learning achievement, competence or experience

Backpack is the virtual place in which one can store, group, classify the badges received

Consumer someone who can access the information embedded in a badge. Badge consumers could be colleagues, potential employers, training providers and in general the wide audience

Displayer the online context in which a badges is displayed and the badge metadata can be accessed

Issuer an organization or a person that creates and awards badges for specific accomplishments

Metadata provides detailed information embedded in a badge, like the issuer of the badges, the recipient of the badges, description of requirements that someone has to meet in order to receive a badge; possibly evidences of fulfillment of these requirements, date of issue and - if necessary – an expiry date.

Badge earner a person who has met the requirements to receive a badge

LIST OF REFERENCES

- Ludovica Ciriello: The "open badges" conquer the universities: from Milan to Bari the first steps to certify your skills, 2016. Online available: http://scuola24.ilsole24ore.com/art/universita-e-ricerca/2016-03-11/gli-open-badges-conquistano-atenei-milano-bari-primi-passi-certificare-e-condividere-competenze-192333.php?uuid=ACCFjjmC&refresh_ce=1
- Milena M. Giorgieva: E-learning systems and tools, 2019. Online available: https://www.e-acadjournal.org/pdf/article-19-4-2.pdf
- DIGICULTURE: Digital Culture – Improving the digital competences and social inclusion of adults in creative industries, 2020. Online available: https://digiculture.eu/ro
- Leibniz Universität Hannover (Germany), EuroEd (Romania), Demokritos (Greece), education (UK), Eurofortis (Latvia), Emphasys (Cyprus): primeTECH - promoting Technology Enhanced Teaching in PRIMARY SCHOOLS, 2019. Online available: http://www.primetech-edu.eu/
- Vladan Devedz˘ic, Jelena Jovanovic: Developing Open Badges: A comprehensive approach, 2015. Online available: https://link.springer.com/article/10.1007/s11423-015-9388-3
- Daniel L. Randall, J. Buckley Harrison, and Richard E. West: Giving Credit Where Credit Is Due:
- Designing Open Badges for aTechnology Integration Course,2013. Online available: https://www.researchgate.net/publication/258166732_Giving_Credit_Where_Credit_Is_Due_Desi gning_Open_Badges_for_a_Technology_Integration_Course
- Zui Cheng, Sunnie Lee Watson, Timothy James Newby: Goal Setting and Open Digital Badges in Higher Education, 2018. Online available: https://link.springer.com/article/10.1007%2Fs11528-018-0249-x
- Ivan Larsson Riviera, Uppsala Universitet, Viktor Sucksdorff, Uppsala Universitet: Attityder till Digital Badges i undervisningen på högstadiet. *(Attitudes to Digital badges in secondary school teaching)*, 2017. Online available: https://www.diva-portal.org/smash/get/diva2:1111968/FULLTEXT01.pdf
- Erik Dahlström, Kungliga Tekniska Högskolan, Dan Cariño, Kungliga Tekniska Högskolan: Mozilla Open Badges för motivering av lärandet på miljöområdet (Mozilla Open Badges for Motivation of Learning on the Environmental Field), 2014. Online available: http://kth.diva-portal.org/smash/get/diva2:726945/FULLTEXT01.pdf
- Lithuanian Confederation of Industrialists: Strategic partnership project “Trusted Badges Systems”, 2018. Online available: http://www.lpk.lt/en/projects/trusted-badge-systems/
- Laimonas Ragauskas, Nerijus Kriauciunas: Unique learning Badges to recognise non-formal learning, 2015. Online available: http://educationaltoolsportal.eu/tools-for-learning/unique-learning-badges-recognise-non-formal-learning
- SURFnet / Bart Kerver & Daphne Riksen: Whitepaper on Open Badges and Micro-credentials, 2019. Online available: https://www.surf.nl/files/2019-04/Lessons%20learned%20edubadges%20proof%20of%20concept.pdf
- Uwe Elsholz / Sebastian Vogt: Open Badges zur Anerkennung informell erworbener Kompetenz – ein Ansatz auch für Deutschland, 2016. Onlie available:

https://www.researchgate.net/publication/264418489_Open_Badges_zur_Anerkennung_informell_erworbener_Kompetenz_-_ein_Ansatz_auch_fur_Deutschland

- Alexander Blanc, Jenny de Werk, Marjolein van Trigt: Lessons learned from the edubadges proof of concept,2019. Online available: https://www.surf.nl/files/2019-04/Lessons%20learned%20edubadges%20proof%20of%20concept.pdf
- Ireneusz WOŹNIAK, Michał NOWAKOWSKI, Institute for Sustainable Technologies – National Research Institute in Radom: Open Badges – an innovative tool for validation of competences in organizations,2017. Online available: http://www.edukacjaustawicznadoroslych.eu/download/2016/edu_3_2016.pdf#page=92
- Oriol Borrás Gené, Tele-education Cabinet (Polytechnic University of Madrid): Digital Badges as accreditation of competencies at University, 2017. Online available: https://www.researchgate.net/publication/319623570_Insignias_digitales_como_acreditacion_de_competencias_en_la_Universidad
- Ines Araujo et al. (University of Aveiro): Digital badges on education: past, present and future, 2017. Online available: https://www.researchgate.net/publication/318116742_Digital_badges_on_education_past_present_and_future
- Justin Mason: A thought concerning MIRVA and Open Badges 2.0, 2019. Online available: https://stinjitsu.wordpress.com/2018/01/30/a-thought-concerning-mirva-and-open-badges-2-0/
- Tharindu R. Liyanagunawardena, Sandra Scalzavara, Shirley Ann Williams: Open Badges: A Systematic Review of Peer-Reviewed Published Literature (2011-2015), 2017. Online available: https://www.researchgate.net/publication/319547488_Open_Badges_A_Systematic_Review_of_Peer-Reviewed_Published_Literature_2011-2015
- Salopek Čubrić, Ivana & Čubrić, Goran: ICT Tools in Education: Innovative Pedagogy and Assessment Methods for Grading Soft Skills, 2017. Online available: https://docs.google.com/document/d/1mHRK-J8kOx6AsTpPfkEJBAKXCc3XW29g8jfeCoMzTTk/edit
- Vanacker, Dries; Demedts, Lore and Van Puyenbroeck, Hilde: Cities for Learning – Gentlestudent, The City as a Medium for Acquiring 21st Century Skills, 2018. Online available: http://ocs.editorial.upv.es/index.php/HEAD/HEAD18/paper/viewFile/8038/3734
- Association INTERPHAZ in collaboration with Maison Des Associations de Tourcoing, Maison Pour Associations de Charleroi, Maison Des Associations de Roubaix: Valorising skills acquired through volunteer engagement – State of art and analysis of existing tools,2019. Online available: https://requapass.eu/_docs/Fichier/2019/11-190709030343.pdf
- Serge Ravet: Reflections on the genesis of Open Badges. From the valorisation of informal learning to that of informal recognition – a practitioner's point of view, 2017. Online available: https://journals.openedition.org/dms/2043

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