



STAY+

I01 - Digital Badges

State of the Art Report

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1. Badges and Digital Badges

Traditional physical badges have been used for centuries as recognition of belonging to a group and/or a category, possession of given skills.

Badges have also been used to set objectives, motivate behaviors, represent achievements.

Currently, traditional physical badges are still used as a way of identification, for example, of a professional role or institutional membership.

In recent years Open Digital Badges (ODB) have become very popular. They are digital badges consisting of:

- a graphic part
- a content part constituted by metadata, reporting the acquired competences, the methodology used to verify them, the issuing institution/organization and the identity of the holder

Searching for a presentation to explain in an easy way what digital badge are? Look at the video “A Short Story About Open Badges” available on YouTube:

<https://www.youtube.com/watch?v=Xc4xDgNbl6Y>

Digital badges are easily exportable on websites and social media (Facebook, LinkedIn, etc.), allowing the holder to make transparent and visible his competences.¹

They made their first appearance in videogames, where they were used to motivate players to earn badges representing levels of ability in a specific games, especially if played in online communities².

¹ <https://dol.unitn.it/open-digital-badge>

² Halavais, A. M. C. (2012). A genealogy of badges. *Information, Communication & Society*, 15(3), 354-373. doi:10.1080/1369118X.2011.641992



At a later time, in 2011, The Mozilla Foundation announced its plan to develop an open technical standard called Open Badges to create and build a common system for the issuance, collection, and display of digital badges on multiple instructional sites.³ To launch the Open Badges project, Mozilla and MacArthur engaged with over 300 nonprofit organizations, government agencies and others about informal learning, breaking down education monopolies and fueling individual motivation.

Much of this work was guided by "Open Badges for Lifelong Learning", an early working paper created by Mozilla and the MacArthur Foundation.⁴

2. The framework for badges: “Badge Ecosystem”

To work, digital badges need a logical supporting structure.

This framework is defined by a Mozilla Foundation a “**Badge Ecosystem**”⁵, made up of three elements, as follows:

BADGE ECOSYSTEM	
BADGES	Icons/images that are associable to skills, competences, interests, status, achievements, gained through a formal, non-formal or informal learning path.
ASSESSMENT	evaluation of the skills, determining who should get a badge and mapping badges to solid evidence of learning and skill development
INFRASTRUCTURE	supporting the earning of badges across various experiences, moving badges around, extending the value of each individual badge

³ https://en.wikipedia.org/wiki/Mozilla_Open_Badges

⁴ https://wiki.mozilla.org/images/5/59/OpenBadges-Working-Paper_012312.pdf

⁵ The Mozilla Foundation, 2012, page 6



3. Digital Badges and assessment

Nowadays, learning is different than in the past, since:

- it is not limited to traditional learning spaces and environments, but it extends to many contexts, experiences and interactions
- it is no more just individual but inclusive and social ⁶

Thus, assessment in VET as well as in lifelong learning in general, should guarantee the value of competences acquired in many different learning environments and situations, from the formal to the informal and even the non-formal ones. ⁷

Consequently, evaluation systems, even if they are institutional, should recognize the value of a wide range of training experiences acquired throughout the personal and professional life span of individuals. ⁸

In this sense, digital badges can constitute a valuable tool for assessment at different levels⁹:

LEVEL	ADVANTAGE
Individual	Possibility to show competencies and abilities acquired in different learning environments (formal, informal, non-formal ones) that are verifiable online, in order to make it easier to obtain a recognition.
Institutional	Possibility to recognize the competencies acquired through training activities done in the framework of structured paths
Inter-institutional	Possibility to verify in an easier and quicker way the level of competences

⁶ Ibidem

⁷ Ajello, A. M. (2004). Documentare l'apprendimento informale mediante il portfolio. Università E Scuola, IX(1), 22-27

⁸ Raffaghelli, J.E. (2014). Open Digital Badges: tecnologie a supporto della valutazione per il Lifelong Learning. TD Tecnologie Didattiche, 22(2), 119-123.

⁹ Gibson, D., Ostaszewski, N., Flintoff, K., Grant, S., & Knight, E. (2013). Digital badges in education. Education and Information Technologies. doi:10.1007/s10639-013-9291-7



When we speak about “assessment”, badges can refer to different scenarios :

- successful conclusion of short tranches of training paths. For example, a badge issued at the end of a training module of a structured course, mainly to motivate the learner
- successful conclusion of a whole training path. In this case, the badges can assess different levels and kind of both of hard and soft skills
- very high and complex competences acquired after having participated to different learning experiences recognized by an issuing organization. This kind of badges are defined as “meta-badges”

The two models used for assessment through badges are:

- **merit badges:** recognition of given knowledge, competences and skills in informal learning environments
- **gaming achievements:** recognition of learning achievements obtained through pursuit of other learning outcomes¹⁰

The adoption of an hybrid assessment model is commonly employed in educational environments where badges are utilized to acknowledge formal and informal learning, and increase the motivation of learners through with game-like incentives.

Badge systems can differ in their structure, a learner may need to complete a set of tasks/exercises to earn a badge, or a unique badge can represent each achievement.

Furthermore, the learning path can be already defined and must be respected or learners can be totally free in the choice of the instructional sequence.

¹⁰ Abramovich, S., Higashi, R., Hunkele, T., Schunn, C., & Shoop, R. (2011). An achievement system to increase achievement motivation



4. Digital badges and motivation

The impact of the use of digital badges on learners' achievements and on their intrinsic motivation is still being studied.

Regarding motivation, previous research on badge-based learning environments is scarce, but suggests that the effect on motivation depends on the learner's background as well as the type of achievement the badge verifies (Abramovich et al., 2013)¹¹.

This correlation could be partly based on consideration of how motivation in educational settings is influenced by extrinsic motivators. Some studies have shown that extrinsic rewards negatively affect study performance and subsequent intrinsic motivation, becoming extrinsic to learning motivation (Covington 2000; Deci et al. 2001); others claim that extrinsic rewards have great benefits for learning (Lei 2010 ; Lowman 1990).

5. Info Cards of “Good practices” related with Digital Badges

In the last years, the use of digital badges became very popular and many educational organizations started implementing projects to develop their own systems to reward learners, track and make visible the learning outcomes and competences achieved.

The STAY+ partnership has identified n. 3 projects on the topic that:

- were financed in the framework of the Key Action 2 of the Erasmus+ Programme 2014-2020
- were labeled by the financing National Agency as “Good Practices”
- cover, respectively, the three sectors: Vocational Education and Training, Youth and Adult Education.

An Informative Card for each of the selected initiatives follows.

¹¹ Abramovich, S., Higashi, R., Schunn, C (2013) Are badges useful in education?: it depends upon the type of badge and expertise of learner

GOOD PRACTICE no. 1	
Project Title	Healthy food choices for a sustainable future
Project Identifier	2016-1-FI01-KA202-022712
Key Action and Action Type	Key Action 2: Cooperation for innovation and the exchange of good practices Action Type: Strategic Partnerships for vocational education and training
Period of Implementation	Start date: 01-09-2016 / End date 31-10-2018
Partnership	<u>Coordinator</u> : Espoon Seudun Koulutuskuntayhtymä Omnia (Finland) <u>Partners</u> : Centar za odgoj i obrazovanje Slava Raskaj Zagreb (Croatia) Galileo.it S.r.l. (Italy) Hotelijersko-turisticka i ugostiteljska skola (Croatia) Kotkan-Haminan seudun koulutuskuntayhtymä (Finland)
Summary	The project “Healthy Food Choices for a Sustainable Future” was focused on healthy food choices, climate change and vegetable enhanced diet and on networking between vocational schools and enterprises from the Hotel, Restaurant and Catering industry in different European countries. The project promoted new innovative ways to use digital tools to enable the learning also for those who don’t have a chance to or can’t for some reason study in a classroom. Among the products developed through the project, 38+4 digital badges for competences related to healthy food choices and sustainability have been created. They are currently available at the following link: https://cookingforthefuture.net/open-badges-english/ The digital open badge are useful to complement gamification of learning, to contribute to increase motivation of learners and improve inclusion.
Website	healthyfutureproject.eu
Further project info	https://erasmus-plus.ec.europa.eu/projects/search/details/2016-1-FI01-KA202-022712

GOOD PRACTICE no. 2	
Project Title	Badges4good
Project Identifier	2019-2-LT02-KA205-006443
Key Action and Action Type	Key Action 2: Cooperation for innovation and the exchange of good practices Action Type: Strategic Partnerships for youth
Period of Implementation	Start date: 01-09-2019 / End date 30-09-2021
Partnership	<u>Coordinator</u> : Lietuvos Neformaliojo Ugdymo Asociacija (Lithuania) <u>Partners</u> : Asociacion Cazalla-Intercultural (Spain) Opintotoiminnan Keskusliitto ry (Finland) Sosialinnovatørene (Norway) UNISER Soc. Coop. Onlus (Italy) Viesoji Istaiga Creativitas (Lithuania)
Summary	The project “Badges4good” was aimed at: identifying, exchanging and diffusing existing good practices on the use of Digital Open Badges in the education, training, youth sector; train staff members to enable them to promote the creation, adoption and evaluation of badge- based recognition systems; sustain the use and adaptation of Digital Open Badges for the benefit of learners and organizations. The project produced the following results: <ol style="list-style-type: none"> 1. a publication of “12 good practices of using Open badges” in youth work and education 2. an Open Online Course "Recognition with Open Badges" 3. a Playlist “Badges4Good”, videos about Open Badges The links to the results are provided in the following section
Website	The project hasn't its own website, however the results produced are accessible through the following links: <ul style="list-style-type: none"> - “12 good practices of using Open badges” Publication: https://issuu.com/creativitas-eu/docs/badges4good - Open Online Course "Recognition with Open Badges": https://canvas.instructure.com/enroll/3NCDNF - Playlist “Badges4Good” videos: https://youtube.com/playlist?list=PLBzrTQClQ3Tddo6VEPf4IQitglU9UBOX6
Further project info	https://erasmus-plus.ec.europa.eu/projects/search/details/2019-2-LT02-KA205-006443

GOOD PRACTICE no. 3	
Project Title	SHARE the Badge
Project Identifier	2019-1-NL01-KA204-060481
Key Action and Action Type	Key Action 2: Cooperation for innovation and the exchange of good practices Action Type: Strategic Partnerships for adult education
Period of Implementation	Start date: 01-09-2019 / End date 31-12-2021
Partnership	<u>Coordinator:</u> Stichting Bloom (The Netherlands) <u>Partners:</u> Bit Schulungscenter GmbH (Austria) Työväen Akatemia (Finland) AC Amics de la Biblioteca de la Fonteta (Spain) Volkshochschule Im Landkreis Cham Ev (Germany) In Progress (Italy) Sud Concept (France)
Summary	<p>The goal of the “SHARE the badge” project was to promote open education and recognition of competences gained in formal, non-formal and informal learning environments using digital Open Badges to increase job opportunities for all, including individuals without diplomas or certificates. The project focused especially on organizations working with migrants and unemployed with a distance to the labour market. Through the project were created different Intellectual Outputs, as follows:</p> <ol style="list-style-type: none"> 1) Offline games to make competences visual and 'badge-able' 2) A Manual for organizations to make learning paths with 'badge-moments'. 3) The “SHARE” Badges 4) An online training course (MOOC) for organizations about Open Badges, the SHARE method, learning pathways and how to use them 5) Online materials for users to know better badges and their advantages <p>All materials are translated in 7 languages and can be found at www.sharethebadge.eu and are stored in Dropbox: https://www.dropbox.com/sh/jxnuuzw7qy1g1ew/AADNbTLhzUBqn5x44uY9TSSNa?dl=0</p>
Website	http://www.sharebadges.eu
Further project info	https://erasmus-plus.ec.europa.eu/projects/search/details/2019-1-NL01-KA204-060481



6. European policies and future developments

In December 2020, the European Commission established a special Micro-credential Consultation Group, that published its Report “European Approach to Micro-credentials”, with the following definition:

“A micro-credential is a proof of the learning outcomes that a learner has acquired following a short learning experience. These learning outcomes have been assessed against transparent standards.”¹²

Micro-credential allow the certification of small and/or short learning experiences and support a personalized and flexible acquisition of knowledge, competences and skills.

The European Commission, to build trust and encourage the use of micro-credentials and promote their use at their full potential, considered necessary and urgent to give guidance and directions to assure their quality, transparency, comparability at European level, recognition and portability.

For these reasons, the European Commission published on 10 December 2021 a Council Recommendation proposal for a European approach to micro-credentials¹³, and another proposal for Individual Learning Accounts (also adopted by the EPSCO Council on 16 June). Both proposals are part of the Twelve Flagship Actions announced in the European Skills Agenda (July 2020). Micro-credentials and Individual Learning Accounts are also included in the European Action Plan for the Social Rights Pillar (March 2021). Member States were invited to inform the Committee by December 2023 of the measures taken to support the objectives of the Recommendation, while the European Commission will report to the Council on progress made within five years of its adoption.

In order to strengthen lifelong learning, the Council suggested that Member States must adopt European micro-credentials approach, especially assuring an EU definition, EU standards and main principles for designing and issuing micro-credentials. The objective is to create a common, homogeneous and coherent setting for the creation and use of micro-credentials by the Member States, educational organizations/institutions and other stakeholders.

The suggestion from the EU Commission also includes the following points:

- Standards elements to describe micro-credentials, such as: learning outcomes, workload to achieve them, the kind of evaluation
- Support in creating the ecosystem for micro-credentials, for example: by encouraging the development of micro-credentials created with the support of employers and representative of workers, by applying quality assurance measures

¹² <https://education.ec.europa.eu/sites/default/files/document-library-docs/european-approach-micro-credentials-higher-education-consultation-group-output-final-report.pdf> , 2020, European Commission

¹³ <https://data.consilium.europa.eu/doc/document/ST-9237-2022-INIT/en/pdf>



Another aspect of micro-credentials that European Union wishes to reinforce is their portability making possible:

- micro-credentials' owners to store them in a system and share the credentials with others worldwide
- all parties involved to have details on the contents of micro-credentials, as well as verifying their authenticity

This would allow the portability between and within education and training sectors, in the labour market and across Countries