FLIP-IDEAL
FLIPPED LEARNING IN ADULT EDUCATION

Guidelines for the use and transferability of the Open Badges

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SUMMARY

This publication is one of the results of the Erasmus+ KA2 strategic partnership project in adult education FLIP-IDEAL – Flipped Learning in Adult Education http://www.flipideal.org.

The project provides open learning material for adult educators on the flipped learning approach, particularly tailored to basic skills learning and for teaching adults who may have few digital skills. By developing these materials, the FLIP-IDEAL project aims to provide adult educators with tools and innovative approaches for use in their daily teaching.

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1. Aim of this document

The present document is intended as an operational guide for all those education providers who are planning to implement an Open Digital Badge System in their institutions, training centers or schools, with the aim of acknowledging educators' and students' know-how on flipped learning for adult education, but also more general know-how in adult education.

As Brauer (2019) points out, "in the digital era, institutions of vocational education and training (VET) have emerged as transformational and flexible environments; consequently, in order to achieve and support the versatile competences required in vocational teachers' demanding careers, it is important to develop new digital professional learning opportunities for vocational teachers." (p.7), and, we shall add, to build coherent evaluation systems for the entire learning community (i.e., to apply similar processes for teachers' and students' competence assessment and credentials ascription). Furthermore, life-long learning and continuous development are fundamental concerns of our contemporary society, where adults are unceasingly required to upskill, reskill and enrich their personal and professional expertise and dispositions.

Under this respect, badge-driven learning processes are particularly appropriated with concern to teaching adults through flipped learning. In recent years, flipped learning has attracted much attention in the domain of adult education. This instructional approach is appealing for several reasons: it allows learners to learn at their pace and place; it encourages increased interaction between teacher and learners; and, it can free up class time for cooperative learning and higher cognitive tasks as students become acquainted with the subject of the lesson before the lesson is actually carried (i.e., at home, through videos, questionnaires, and other didactic resources). However, when implementing flipped learning with adult classes, a teacher can face several difficulties. Among these, there are student's disengagement and lack of activities completion. The use of open badges allows teachers to overcome such difficulties by setting short-term goals in learning, thus encouraging students to follow the learning

plan and accomplish their objectives. As we will argument in the next chapters, open badges can be used as motivational, pedagogical and reward tools. In fact, open badges represent a sort of mastery license, proofing that a learner has learnt or done something to obtain it.

Nonetheless, much has to be done in order to strengthen the value of open badges in our society: despite a badge is supposed to accredit specific knowledge, competences or skills, the way for official and widespread recognition is still a long one. This encourages, on the one side, to undertake action-research projects with a focus on those conditions under which employers or institutions would formally recognize the value of a badge - in order for a badge earner to benefit of social and economic returns; on the other side, this also encourages to work for the improvement of the badges quality with the aim of making them more reliable and valuable.

The idea of these guidelines is thus to point out those crucial elements and processes that we should take into consideration when implementing an Open Badge system for adult education, and all those aspects that can be decisive for a continuous improvement and development of such system within a coherent frame.

All the information contained in this document are the result of the training actions carried during the Erasmus+ KA2 project FLIP-IDEAL[1] - Flipped Learning in Adult Education - whose main objective was to support adult educators to use the flipped learning approach with their learners. The FLIP-IDEAL project is the 2018-2020 extension of the IDEAL project (Integrating Digital Education in Adult Literacy). This project was completed in June 2017 and had the goal of improving digital skills of adult education teachers and trainers who work with disadvantaged groups and adult learners with basic education needs[2].

[1] https://it.flipideal.org/

[2] More information about the IDEAL project is available at https://www.erasmusideal.com/. The IDEAL project was implemented by the following partners: Arendal Voksenopplæring/Arendal Adult Education Centre (Norvegia); Luksia, Municipal Education and Training Consortium in Western Uusimaa – Finland; Kildare and Wicklow Education and Training Board (KWETB) – Ireland; CVO Antwerpen – Belgium; Fondazione Mondo Digitale – Italy; ROC West-Brabant, the Netherlands.

The focus of the FLIP-IDEAL project is to build on knowledge gained during the previous project to develop adult educators' competences on using the flipped classroom methodology and ICT when teaching adults who are developing basic skills. The FLIP-IDEAL project have been designed and implemented by six European partners:

- Luksia, Municipal Education and Training Consortium in Western Uusimaa – Finland
- Kildare and Wicklow Education and Training Board (KWETB) – Ireland
- CVO Antwerpen – Belgium
- CURIO, the Netherlands
- Ljudska Univerza Velenje (LUV), Slovenia
- Fondazione Mondo Digitale - Italy

The document will tackle methodological and practical issues that have emerged during the FLIP-IDEAL project. In section 2 we will outline the use of Open Badges when adult education is implemented through Flipped Learning. To this aim we will examine the nature of open badges as learning "triggers"; we will also analyze the concept of "openness" that intrinsically characterizes digital badges; finally, we will list the main advantages of open badges and sum up the main challenges linked to their economic and social return. In section 3 we will explain how to set up a system for Open Digital Badges for an adult education provider in order to assess and accredit the skills gained through training of educators, with the possibility of extending the system to accredit learners' skills later on.

2. Open Badges and their use in adult education within the flipped learning approach

Open badges are born as means to testify acquisition of specific knowledge and competences in the field of informal and non-formal education (i.e. to acknowledge workshop attendance, participation to an event, or engagement in a given community); however, today open badges are also used in formal education: several universities attribute open badges to identify competences linked to the degree.

The concept itself of open badges is the mixed and developed result of diverse acknowledgement practices applied in different fields, such as universities' badges or scouts' badges or military shields.

Badges make a learning experience distinctive for a learner. They contain important meta-data, which clearly describe what the badge is about.

According to the scientific literature, the term "open badges" have three main semantic uses in education: 1) badges as a motivator of behaviour, (2) badges as a pedagogical tool, and (3) badges as a signifier or credential, linking to economic and social opportunity (Ahn, Pellicone and Butler, 2014). Concerning the first use, open badges can be considered as rewards for learners' commitment; in this sense, the possibility to gain a badge works as an extrinsic motivation to accomplish a short-term formative experience. With regards to the second use, badges are useful "markers", since they scaffold learning by structuring subsequent "chunks" of a learning path; they thus help learners to situate themselves in a learning process. The third use is more related to the fact that, for an individual, owning a badge means to possess a "readable" know-how, that is a set of knowledge and competences that are recognizable by educational institutions or employers.

An important characteristic of badges in education is their "openness". The emergence of open badges is in fact related to recent movements promoting openness as a value in educational and professional context. The possibility to freely access, share and modify an artifact (whether this artifact being a set of coding instructions for a software, or a research paper, or a computer graphics, etc.) has become an important

right of Internet users. In the field of education, we can mention for example the open education resources (OERs) or the massive open access course (MOOC). The main assumption here is that education is a basic human right, and as such, should be accessible for everyone. Therefore, one should not be constrained to apply for a prestigious expensive university in order to build own expertise in a particular domain: as badge systems grow further, an increasing number and variety of domains of knowledge and competences will be covered, just as it happens in a university system. Furthermore, the title of a degree does not provide an employer with information about the skills of the graduated person who has applied for a job interview; on the contrary an open badge contains, beyond its title, also important information about what the person has done to gain it.

Hence, if we have to identify the main advantages of Open badges for adult education, we can shortlist them as it follows:

- Open badges can acknowledge formal as well as informal and non-formal learning
- Open badges allow to describe fine-grained competences and skills
- Open badges are transparent (i.e., they provide evidence about what a person knows or is able to do)
- Open badges can be considered as digital "micro-credentials", and used as "curriculum booster" in professional contexts or other personally-relevant contexts
- Open badges encourage to find out persons with similar interests or specialization, in order to exchange best practices and up to date information
- Open badges support self-directed learning, by pinpointing learners' progress and allowing to create a personal portfolio for continuous learning

With relation to this last point, there are several concerns about the fact that not all the learners are capable of self-directing their learning. This is perhaps true, above all when we are new to a given field of studies. However, for learning to be effective, it is of outmost importance that contents, methods and approaches are very well tailored to each person's background, beliefs and objectives.

Personalized learning is one of the educational challenges of the 21st century. Decades of massive standardized education has in fact led to the conclusion that, despite the importance for everybody to acquire basic literacy and logic skills (alphabetization, knowledge of numbers, etc.), education should develop and value the unique profile of each learner, by strategies of pedagogical differentiation. Under this respect, open badges are conceived to enhance learners' self-reflective practices about their educational path and encourage them to be learning designers of their formative career.

Of course there are complex connections between learners' prior experience, knowledge level, personal goals, and the type of pursued badge. This makes open badges particularly relevant with specific profiles of learners, such as drop-outs, migrants, or persons who simply need to update or upgrade their competences. Vocational schools, centers for the employment, institutions for professional reintegration and non-profit associations are fundamental players in our societies, and need suitable instrumentation to valorize their teachers' and students' profiles. In fact, open badges support competence-based professional development and criteria-based assessment of competences in digital environments.

Let's now outline the different procedural aspects and key-features of an open badge system for those organizations who intend to adopt ICT and flipped learning approach in adults' training.

3. How to set up an Open Digital Badges system for an adult education provider who seeks for new digital enhanced approaches in teaching

There is an increasing investment in using open badges to award qualifications for adults' learning experiences across a variety of fields. As the IACET (International Accreditors for Continuing Education and Training) emphasizes, "micro-credentialing through open digital badging has the potential to change education, workforce

development, regulatory requirements for learners, education providers, employers and governments."[3]

This of course is possible only if an issuer can guarantee the quality of the badge itself. A valid badge is one that has been designed: i) for a specific earners target, ii) to recognize a well-defined accomplishment, and iii) to be used in particular professional, educational, or other personally relevant contexts.

3.1. Preliminary steps: identifying type of badge and existing standards

How should a badge issuer prepare to the design of a quality open digital badge? There are two important preliminary steps that needs to be achieved.

The first step consists in identifying the type of badge we intend to build. We have already mentioned that the function of a badge is generally to attest acquisition of specific knowledge and competences, or participation to a formative event, or engagement in a given community. The IACET has proposed to develop and detail these functions by structuring a taxonomy that classifies six types of badges: participation badge, contribution/recognition badge, grade-based badge, level/program badge, performance badge, and certification/license badge. The first two types of badges belong to the style "association", the third and the fourth to the style "learning", while the fifth and the sixth to the style "competences with validation". Each type of badge requires specific evidence in order to be issued (Table 1).

[3] For further information on IACET work about digital open badges: https://www.iacet.org/standards/guidelines-for-open-digital-badging/

Table 1. IACET Taxonomy for Open Digital Badges[4]

IACET Badging Taxonomy						
Style	**Association**		**Learning**		**Competence with validation**	
Type	**Participation Badge**	**Contribution/ Recognition Badge**	**Grade-Based Badge**	**Level/Program Badge**	**Performance Badge**	**Certification/License Badge**
Description	Badge earner participates in an event (i.e. professional development, classroom or online learning, etc.) but has not taken an assessment.	Badge earner has made a non-trivial contribution as part of a team project. Can serve as a recognition of an accomplishment, i.e. an award.	Badge earner has earned recognition for successfully completing a learning event. Examples of formal recognition might include college credit, CEUs or other measures for non-collegiate credit learning.	Badge earner has earned formal credit for one or all event(s) in a series of learning gains (i.e. levels of learning). Can serve as badge for encouragement and progress to larger learning goal. Badge should indicate how it fits within a progression or pathway to other badges or as a result of previous accomplishment.	Badge earner has demonstrated skills in high-stakes environment. Badge earner successfully demonstrates claims to performance. Proctored assessment.	Badge earner has demonstrated competence in a substantial domain of knowledge. Proctored assessment and other documentation satisfying certification/ licensure requirements (i.e. work experience, education background, etc. should be included).
Example of evidence (not exhaustive)	Statement describing attendance, activity, or participation; link to event.	Statement of contribution; artifact or link to artifact of contribution. Statement of accomplishment or award; supplementary link to justification or recognition.	Statement of learning gain, type of assessment and score with cut score indicated. Link to artifact of learning. If cut score is inappropriate or unavailable, additional	Statement indicating structure/style of levels; context given to explain how badge fits into larger picture of curriculum. Statement of learning gain, type of assessment, and score with cut score indicated. Link to artifact	Statement of learning gains and performance demonstration, type of assessment and score with cut score indicated. Link to artifact of learning. Description, artifact or other data needed to	Statement of context for professional certification or licensure with links to descriptions or awarding body. Type of assessment is indicated, along with score and cut score.

[4] Available at: https://www.iacet.org/default/assets/File/OpenDigitalBadging/Taxonomy%20for%20IACET%20Badges.pdf

			description of the assessment and outcome are needed.	of learning. If used as encouragement, contains evidence of learning gains and details of progression to other badges.	justify claims of successful performance.	

For the FLIP-IDEAL project, the European partners agreed to adopt the types "participation badge" and "grade-based badge" (Table 2). This choice reflects the structure of the project itself, which included three different learning events about flipped learning for adults' education (training week, local training activities, dissemination seminar) along with an online course for acquiring the basic knowledge on flipped learning classroom methodology.

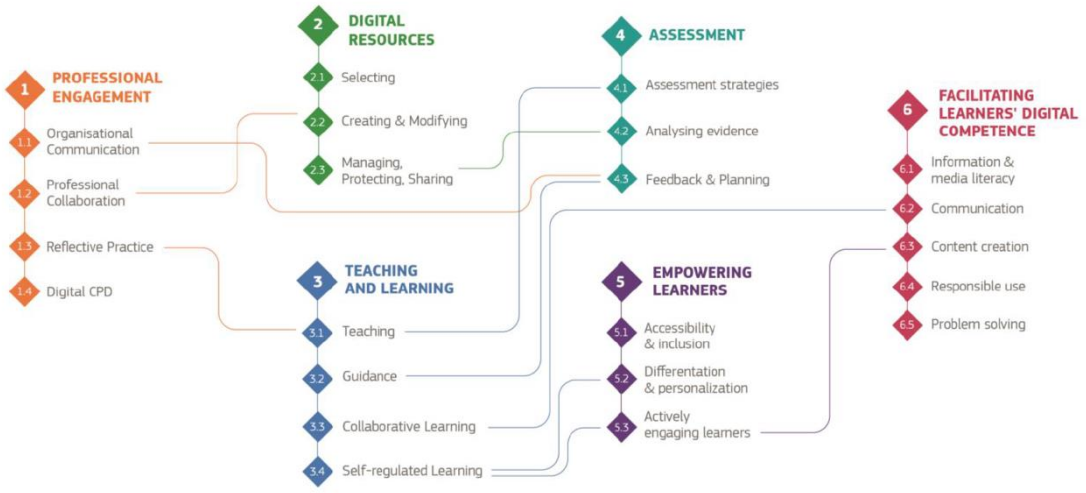
Table 2. Definition of badges for the Flip-Ideal project: style, type, description and evidence

Project	**Flip-Ideal (Erasmus+, KA2)**			
Style	*Learning*			
Type	*Participation badge/Grade-based badge*			
Title	**FLIPping the adult classroom - Explorer**	**FLIPping the adult classroom - Pioneer**	**FLIPping the adult classroom - Practitioner**	**FLIPping the adult classroom - Ambassador**
Description	**Dissemination seminar:** This badge testifies the engagement of participants in a flipped learning dissemination seminar which encompasses both theoretical knowledge and practical examples The seminar was held in …. (date and place) – *information*	**Online course:** This badge testifies the active participation of adults' educators in a flipped learning online course which encompasses both theoretical knowledge and practical examples, with real case studies and useful tools.	**Local training activities:** The badge is granted for the participants to local training activities based on the flipped classroom in adult education. The earners of the badge know the basics of flipped learning and can apply it to their teaching work.	**Training week:** This badge testifies the participation of an international group of adults' educators in a 4-day flipped learning event which encompasses both theoretical knowledge and practical examples. The seminar was held in Kellebeek College, Netherlands, 14-17 May 2019.

	depending on the country.			
Evidence	- Participants' list - Self-assessment report - Filled in questionnaires - Lesson plan (optional)	- Participant has watched all the videos and consulted all the instructional material - The final questionnaire has been passed	- Participation in local training sessions - Filled in questionnaires - Lesson plan or presentation of example lesson according to a given format	- Participants' list - Presentations and materials of the lesson/workshop led by each trained participant - Evaluation form

The project thus recognizes four different levels: explorer, as a first level for educators who wish to discover a new techno-pedagogical approach; pioneer, as a second level for educators who intend to experiment ICT and flipped learning in their lessons; practitioner, as a third level for educators who investigate new digital strategies to enhance their didactics; ambassador, as a fourth level for those educators who are confident with new digitally enhanced methodologies, particularly on flipped learning, and are able to train adults on the basis of these methodologies.

The second step consists in identifying existing standards related to the badge learning objectives. Alignment to standards can help potential users to get a general idea of what the badge is about, and decide if the badge fits in his/her educational path or career. With regards to the FLIP-IDEAL project, the main objective is to develop adult educators' competences on using the flipped classroom methodology and ICT when teaching adults developing basic skills. Therefore, the fundamental standard identified by the partners of the project is the DigCompEdu (Redecker, 2017). The DigCompEdu is a framework that describes educator-specific digital competences (i.e., 22 different competences organized into six areas – Picture 1). This framework addresses all levels of education, included higher and adult education as well as vocational and non-formal training.



Picture 1. Overview of the DigCompEdu framework: areas and competences[5]

The framework also identifies six proficiency levels:

1. *Newcomers (A1)* have had very little contact with digital tools and need guidance to expand their repertoire.
2. *Explorers (A2)* have started using digital tools without, however, following a comprehensive or consistent approach. Explorers need insight and inspiration to expand their competences.
3. *Integrators (B1)* use and experiment with digital tools for a range of purposes, trying to understand which digital strategies work best in which contexts.
4. *Experts (B2)* use a range of digital tools confidently, creatively and critically to enhance their professional activities. They continuously expand their repertoire of practices.
5. *Leaders (C1)* rely on a broad repertoire of flexible, comprehensive and effective digital strategies. They are a source of inspiration for others.

[5] Available at: https://ec.europa.eu/jrc/digcompedu

6. *Pioneers (C2)* question the adequacy of contemporary digital and pedagogical practices, of which they themselves are experts. They lead innovation and are a role model for younger teachers.[6]

With regard to the DigiCompEdu framework, FLIP-IDEAL project has a particular focus on area 2, 3 and 5 and on proficiency levels A2, B1 and B2.

Table 3. Standards of the FLIP-IDEAL project in terms of digital competences and proficiency levels, with reference to the DigCompEdu framework

Area	**Competences**		
Digital resources	Selecting	Creating and modifying	Managing and sharing
Teaching and learning	Teaching	Guidance	Self-regulated learning
Empowering learners	Accessibility & inclusion	Differentiation & personalization	Actively engaging learners
Proficiency levels			
Explorers (A2)	*Integrators (B1)*		*Experts (B2)*
Have started using digital tools without, however, following a comprehensive or consistent approach. Explorers need insight and inspiration to expand their competences.	Use and experiment with digital tools and flipped classroom for a range of purposes, trying to understand which digital strategies work best in which contexts.		Use a range of digital tools confidently, creatively and critically to implement flipped classroom and enhance their professional activities. They continuously expand their repertoire of practices.

Concerning flipped learning methodology, as there are no official standards with relation to this specific digitally-enhanced approach, the partners of the FLIP-IDEAL project have carried an extensive review of the literature based on dissemination papers, pilot studies, experimental studies, manuals, reports books' chapters, web-

[6] *Ibidem*

sites and communities on flipped learning. This review points out that there is very little published evidence suggesting that the Flipped Classroom approach is being widely used in the area of Adult Basic Education today. Therefore, much work has still to be done in order to collect further evidences and thus strengthen the flipped classroom approach legitimacy.

3.2 Design of the badge

Having identified the type of badge (i.e. what the badge is awarded for) and the related standards, we can move now to the design of the badge. A quality design has to be user-centered. A deep understanding of the potential user profile allows to conceive a relevant value proposition and to accordingly define learning objectives. An open badge can be a stand-alone credential, or it can be part of a wider learning pathway, with specific proficiency levels. Furthermore, users must be provided with exhaustive information about learning outcomes, earning criteria, assessment methods, necessary resources and awarding institution.

3.2.1. Identification of the earner profile

In order to ideate a meaningful and valuable badge, it is important to have in mind who your badge is for. To this aim, it is indispensable to examine earners' professional situation, needs and possibilities of career development. The 2015 annual report European Centre for the Development of Vocational Training (CEDEFOP) declares that an important skill mismatch affects most of the workforce, not only those looking for a job. For the FLIP-IDEAL project in particular, a preparatory survey (carried in 2018 in Finland, Netherlands, Belgium, Ireland, Italy and Slovenia) showed that although 75% of the respondents were familiar with the concept of flipped classroom, only 20% of them were implementing it in their teaching. This survey has thus highlighted a significant competence gap, that the project has intended to bridge through online courses and training seminars on flipped learning methodology.

3.2.2. Value proposition

Reflecting about the value proposition means to clarify why it is important to earn the badge and which kind of opportunities it unlocks. The Open Badge Network (2017) defines digital open badges as "learning currency that may help creating pathways for transition into employment, into or onward from formal education, and professional development pathways across the spectrum of social and economic activities"[7]. Therefore, as a currency, an open badge has to be actually expendable. Under this respect, we can observe that there exists a widespread debate about the need for official recognition in the field of non-formal and informal learning. According to the EU Council decision (2012)[8], non-formal and informal learning methodologies/technologies should:

- support individuals that need to redirect their careers
- combating youth unemployment
- offer crucial support to the unemployed or those at risk of losing their jobs
- support identification, documentation, assessment and certification of adults' previous learning experiences

An important principle to be kept in mind, is that "open badge is designed not to compete or replace a certificate, but to complement it. It is used to highlight specific abilities and qualities that may not appear in traditional certificates and are not represented by a course outcome. Additionally, it provides a unique way to issue a digital credential, which can be instantly shared across the web" (Open badges for adult education. Guide for educators, 2016, p.4). For example, "badges can also valorize practical activities that have been achieved during the training periods such as a contest, the organization of an event, the participation to an external conference, a volunteer action." (Open badges for adult education. Guide for educators, 2016, p.8).

[7] Open Badge Quality Management Guidelines (2017). Open Badge Network. Available at: http://www.openbadgenetwork.com/outputs/quality/

[8] https://www.cedefop.europa.eu/files/Council_Recommendation_on_the_validation_20_December_2012.pdf

In the case of the FLIP-IDEAL project, the main value proposition consists in providing theoretical, methodological and practical knowledge about a specific techno-pedagogical approach which is particularly suitable for adults' education. Since adult learners' basic skills and work-life differ greatly, flipped learning offers them the possibility to learn what they want and when they can. Consequently, it is crucial for adult educators to get acquainted with flipped learning practices through the FLIP-IDEAL badges, in order to reach their targeted audience.

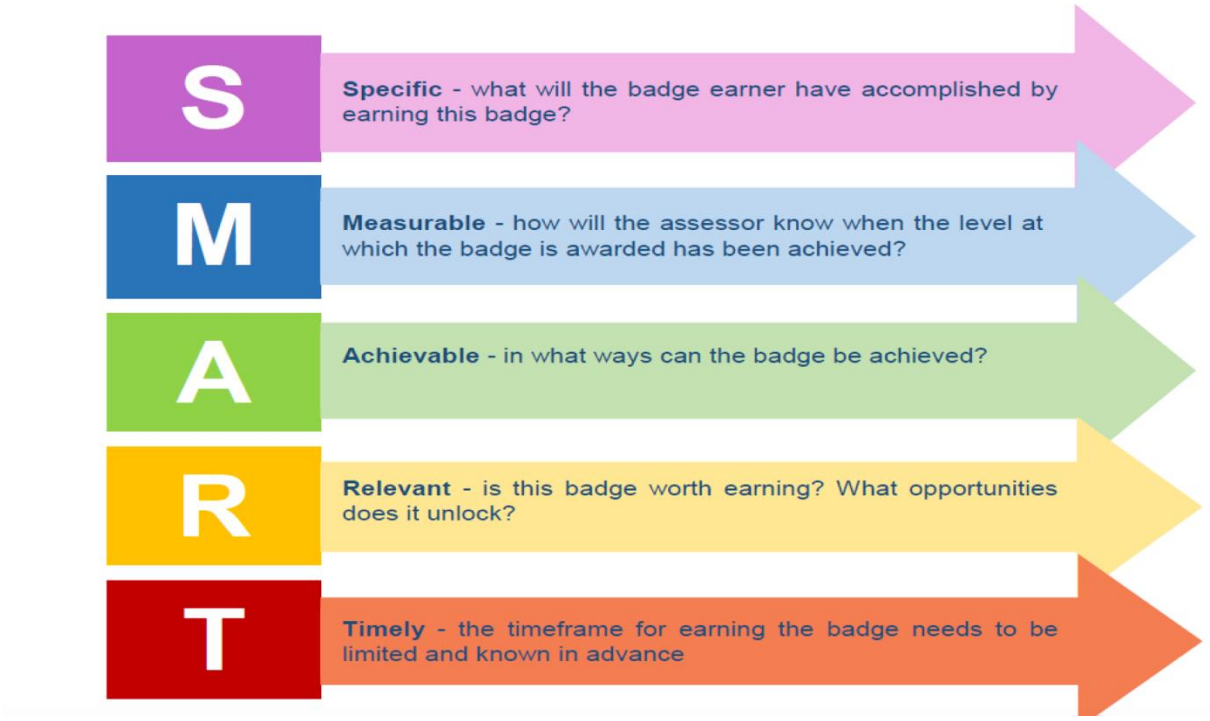
3.2.3. Definition of learning outcomes

Education and work are characterized by a continuous shift from "learning zone" to "performance zone". "Performance zone" is where people execute tasks and need to do it right: here, errors are not permitted. On the contrary, "learning zone" is where mistakes are an inherent part of the learning process (Briceño, 2017).[9] These two zones are always completing one another. Therefore, when defining learning objectives of a badge, it is important to consider that earners have to correctly accomplish tasks, but they also need to practice, make mistakes and exchange with peers. Furthermore, when the badge is addressed to teachers, we have to keep in mind that educators do possess meta-knowledge and awareness about, for example, implicit and explicit knowledge, or the difference between "competence", "competency" and "skills". It is thus critical to be as accurate as possible in the description of the learning outcomes. As an example, the aim of the FLIP-IDEAL project is to raise awareness and convey significant know-how about flipped classroom and effective use of ICT in teaching of literacy, numeracy and basic skills. Such know-how includes knowledge, competences, skills and attitudes about the role of the teachers, how to create lessons, how to use ICT to differentiate flipped learning, how to make videos, how to organize learning content, how to set up self-assessment.

[9] For more information, watch the TED video on:
https://www.ted.com/talks/eduardo_briceno_how_to_get_better_at_the_things_you_care_about

3.2.4. Construction of the earning criteria

Earning criteria must indicate what a learner has to do in order to earn the badge. According to the Guide for educators "Open badges for adult education" (2016), a useful approach to write badge criteria is the "SMART" method. Such method points out five relevant questions that we have to take into account when constructing earning criteria. These questions address helpful fundamental principles, i.e.: specificity, measurability, achievability, relevancy, and time (Picture 2).



Picture 2. The SMART method according the Guide for educators "Open badges for adult education" (2016).

In the FLIP-IDEAL project specific digital badges are awarded to earners who have participated to project-related training or dissemination events and to the online courses on flipped learning methodology. It is important to recall that Open Badges are verifiable digital devices with embedded metadata about a person achievements. Hence, earning criteria have a strong connection with assessment.

3.2.5. Assessment

Three aspects are essential for the assessment of competences, knowledge and skills within an open digital badge system:

- *type of evidence*: what the earners have to send or demonstrate to the issuer to prove they have actually acquired a new know-how. Type of evidence can vary according to the experiences carried by earners. For example, in the FLIP-IDEAL project, there are four types of evidence: i) for the online course, in order to demonstrate that they have watched the videos and read the inherent materials, participants has to tick a square for each video and complete a questionnaire at the end of the course; ii) for the local training events, participants have to register for participation, fill the specific questionnaires, and create a lesson plan or present an example lesson according to a given format; iii) for the transnational event, participation list is an evidence, together with presentations and materials of the lesson/workshop led by each trained participant; iv) for the dissemination seminars, participant list is again an evidence, as well as self-assessment report and filled in questionnaires.
- *Tools for assessment*: there are several tools that can be chosen to attest participants' efforts, and they can be web-based or not. Questionnaires are an example of web-based tools for quantitative assessment, with closed-ended questions and automatized attribution of scores; but assessment can also be qualitative, for example by oral exchanges, written texts, or project portfolios.
- *Assessment criteria*: whether qualitative or quantitative, assessment criteria must be explicitly stated as earners need to know on which basis their work is evaluated.

3.2.6. Awarding institution

Part of the value of the badge is given by the reputation of the issuer. Indeed, when entering the open badge world, one has to know that the perceived validity of the badges is straightforwardly linked to the reliability of the organization that delivers

such badge, that is, on the capacity of this organization to define high quality standards for learning contents, teaching practices and assessment methods. This means that reliability, validity and credibility are fundamental intertwined aspects of open badges (Open Badge Network, 2017). It is thus capital to insert in the badge description some information about the trusted institution or enterprise who issues the badge. If the badge concerns a specific project, as in the case of FLIP-IDEAL, the issuer can be a single project partner or the whole project consortium. Moreover, if the project can be replicated or scaled up, it is crucial that the badge design can be as much clear and precise as possible, in order for other future issuers to be able to carry a similar project even in different contexts.

3.2.7. Resources and sustainability

A badge can award participation to free courses or courses for a fee; it can also award commitment and volunteering in specific events or organizations. Furthermore, in order to carry his or her experience, an earner could be required to use digital devices (computers, tablets, smartphone etc.) or other specific tools and kits. Hence, issuer has to specify the kind of resources users need to access the badge.

3.2.8. Learning pathways

A badge can be issued for a single experience, or be part of a larger ecosystem. Learning pathways are composed by multiple badges, where each badge represents a different level or proficiency of the same competence, knowledge and skill, or different types of knowledge, competences and skills. Pathways can motivate to progress and accomplish complex learning tasks by breaking these in several steps.

3.2.9. Definition of open badge use

When designing a badge, we should always consider who cares about it (employers, associations, local communities etc.). Badges differ greatly in terms of effort, professionality, learning content, issuers etc. So, earners needs' analysis should of

course include perspectives or scenarios of badge use, in order to help earners projecting future application of the know-how gained to obtain the badge. In the FLIP-IDEAL project for example, as the targeted badges are meant to demonstrate that a teacher has acquired knowledge, competences and skills about flipped learning, they are expected to be employed for a professional use.

4. Implementation

4.1. Build-up of templates

We have enumerated eleven criteria for a quality design of the badge: type of badge, alignment to existing standards, identification of the earner profile, value proposition, definition of learning outcomes, construction of earning criteria, assessment, resources and sustainability, learning pathways, awarding institution, definition of badge use. In order to gather all these criteria while elaborating the badge, it is useful to use a badge template. The template works as a meta-descriptor of the badge. For the FLIP-IDEAL project, Fondazione Mondo Digitale has built a specific template for each training and dissemination event and for the online course. The template includes the following fields to be filled according the the particular type of badge:

- Name
- Purpose
- Description
- Earning criteria
- Knowledge/skills/competences
- Evidence
- Assessment
- Requirements and levels
- Earner profile
- Opportunity
- Issuer
- Endorser

- Alignment
- Channels
- Displayers
- Time

An example of the template can be consulted in the Annexes. Once the template is ready, the issuer has a clear vision of what this badge represents, how it works, why earners can be interested to receive it, and how it can be valued.

4.2. The making of the badge

Before the delivery of the badge, a last step is required: the definition of the visual aspect of the badge (shape, color, text and symbols)[10] and the insertion of meta-data. There are many inspiring examples that can be consulted on open badge guidelines or on open badge platforms. Furthermore, there exist several software for badge design[11], which have in-built components that can be easily combined to create a badge. With regards to learning pathways for example, it can be very useful to establish a color code or a shape code to indicate the progression of the badges. Finally, badges also need digital signature and meta-data such as: name, short description, recipient, URL of the related project and of evidence, criteria, alignment, tags, date and place of the course or the event, issuer, issue date, expiration date.

5. Issuing

5.1. Choice of the platform

We can choose amongst a wide range of platform for badge issuing.[12] Each platform has specific features: for example, it can support multiple languages, quest-based criteria, portfolios, statistics, integration with third party platforms, etc. The choice of the platform thus depends on the issuer proposal and on the target audience. For the FLIP-

[10] The layout of the FLIP-IDEAL badges can be consulted in the Annexes
[11] For example, https://badge.design/
11 For a complete list of the existing badge platform, see: https://badge.wiki/wiki/Badge_platforms

IDEAL project, the partners selected Badgr[13] as a suitable platform. Badgr allows to issue unlimited badges for free and to join a specific community. It is a user-friendly platform that permits to backpack the obtained badges.

5.2. Delivery, reception and sharing of open badges

Concerning the delivery and reception of earning badges, some important elements are:

- Issuer and earner verification
- Enabling earners to search for and find badges
- Enabling earners to view badge evidence of others
- Providing earners with information about how to set the visibility of their badges and share them to social media and professional profiles

The issuer can i) deliver badges by email and ii) make them available on the platform.

With concern to the Badgr, in the first case, once received the e-mail, earners can :
- click on the image embedded in the e-mail text: in this way, they will access the platform web page containing a full description of the badge
- click on the download button contained in the e-mail: this will allow them to download the badge as a png. image
- click on the social networks button (Linkedin, Facebook, Twitter, etc.)
contained in the e-mail: this will enable them to publish the badge on their feed

In the second case, earners can consult their badges in the backpack of their account and, for example, share the link contained in the backpack through the « certification and license » dialogue box of their profile on Linkedin. This allows to permanently associate a badge with a professional profile instead of having it temporarily in the feed.

[13] https://info.badgr.com/

6. Conclusion

In the last decade, a great deal of studies have focused on the potential value and impact of Open Digital Badges, and on the usefulness and usability of the Open Badge Systems.

On learners' side, badges have been defined as tools that optimize the reward pathway of the brain (Flinkestein et al. 2013), motivate and individualize learning (Cucchiarra et al., 2014; Ahn et al., 2014), recognize skills at a granular level (Gamrat et al. 2014), create a« visual narrative » of achievements (e.g., Dyjur and Lindstrom, 2017).

On institutions' side, open badges system technology has been claimed to be simple and accessible (any institution can identify a suitable platform and issue badges); furthermore, badges are useful to reach new audiences, and this is of fundamental importance for an organization that intends to develop new programs and identify suitable targets of public. The FLIP-IDEAL project endorses the above mentioned advantages and standpoints about Open Badges and it provides an example on how to apply it in the domain of adult education through blended learning, with particular reference to flipped learning. The outcomes of the project confirm the statement that open badges are effective tools for lifelong learning and for matchmaking as they connect people with appropriate jobs and projects (Flikestein, 2013) under the condition that the badge system reflects a project (or program vision) and that a quality design of the badge is guaranteed. A final consideration and recommandation is, as Janzow (2014) points out, that it is important that a badge system can be configured as versatile so that it can evolve on the bases of users and issuer needs.

7. Annexes

I. The FLIP-IDEAL Open Badge Template
II. The visual identity of the Flip Ideal badges

7.1 The FLIP-IDEAL Open Badge Template

This is the template we used to design and implement the four open badges of the FLIP-IDEAL project. You can use it and/or adapt it to design your own open badges!

Badge name *(Consider both your badge earner as well as the badge consuming public).* 	
Purpose *(What is your badge seeking to acknowledge or address? Briefly describe the purpose of the badge).* 	
Description *(How can the badge be explained in a simple, clear way? Consider writing a tweet-length or slightly longer description).* 	
Earning criteria *(What does someone need to do in order to earn this badge? What are the required steps? In your description, indicate how this is meaningful to your organization and to the earner. Pay special attention to this content: it's what a badge consumer and the badge earner will see when they click on the badge).* 	

Knowledge/skill/competence *(What the open badge will validate? A specific skill/competence/knowledge, a specific experience...)* 	
Evidence *(Is your badge artifact driven? If so, what is the evidence required by the criteria and where will the evidence reside? What artefact will show the criteria has been met?)* 	
Assessment *(How will the work be assessed? Are there associated rubrics?)* 	
Requirements and levels *(Are there minimum requirements for the badge? Do prerequisites exist? Does this badge have levels?)* 	
Earner *(Who will receive the badge? Please describe the target who is awarded by the open badge).* 	

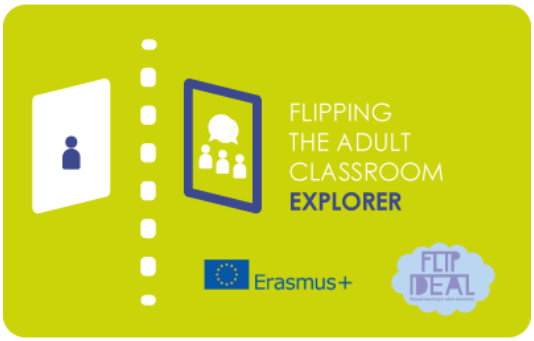
Opportunities *(How the open badge will enable opportunities for target audience according to the badge final goals?)* 	
Issuer *(Who will issue the badge?)* 	
Consumers/Endorsers *(Which individuals or organizations will recognise the badge?)* 	
Alignment *(Does the badge align with any standards? i.e. competency frameworks by reliable authorities or organisations).* *NOTE: An open badge can optionally align to an educational standard or a competence framework, in which case the badge metadata will include the name, a URL and a description representing the standard. The alignment information may be relevant to people viewing an earner's awarded badges, or to a potential earner deciding whether to apply for the badge.* 	

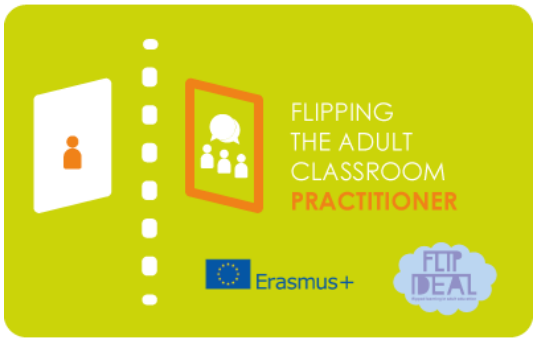
Channels *(Where does a user find out about your badge?)* 	
Displayer *(Where will earners display the badge?)* 	
Time *(How long will it take someone to earn this badge? Has the badge an expiration date?)* 	

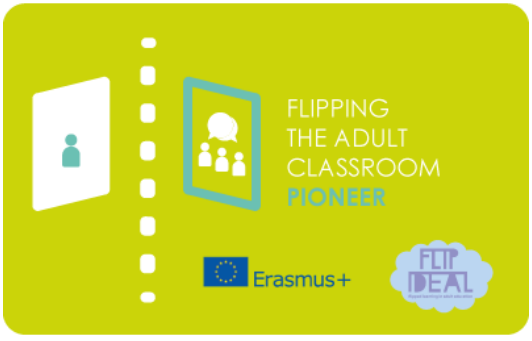
7.2 The visual identity of the Flip-Ideal badges

This is the visual identity of the four open badges of the FLIP-IDEAL project :

- Flipping the adult classroom - Explorer
- Flipping the adult classroom - Practitioner
- Flipping the adult classroom - Pioneer
- Flipping the adult classroom - Ambassador







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9. Online resources

- Briceño, E. (2017) TED talk available at: https://www.ted.com/talks/eduardo_briceno_how_to_get_better_at_the_things_you_care_about

- CEDEFOP annual report: https://www.cedefop.europa.eu/files/Council_Recommendation_on_the_validation_20_December_2012.pdf

- DigComp Edu: https://ec.europa.eu/jrc/digcompedu

- FLIP-IDEAL website: https://it.flipideal.org/

- IACET taxonomy of open digital badges: https://www.iacet.org/default/assets/File/OpenDigitalBadging/Taxonomy%20for%20IACET%20Badges.pdf

- IACET guidelines: https://www.iacet.org/standards/guidelines-for-open-digital-badging/

- List of the existing badge platforms: https://badge.wiki/wiki/Badge_platforms

- Open Badges design website: https://badge.design/

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- Open Badge Quality Management Guidelines (2017). Open Badge Network. Available at: http://www.openbadgenetwork.com/outputs/quality/

- Open badge platform employed for the FLIP-IDEAL project: https://info.badgr.com/

- IDEAL project website: https://www.erasmusideal.com/