

# DigiCulture

## 04.2 - Design and integration of Open Badges - FINAL

Outcome 04 Activity 2 Design and integration of Open Badges	
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## Executive Summary

This report shows the work done for the O4.2 Design and integration of Open Badges. It covers the work performed from October 2019 to August 2021 on badges for the DigiCulture MOOC (Massive Open Online Courses). In the initial phase, the DigiCulture project defined how badges should be issued, what badges should represent and how the badges should relate to digital skill. A set of initial design proposals have been developed using Badge Design Canvas and Visual Design templates. In the later stage, the team shifts into development mode for implementation and integration of Open Badges into the DigiCulture MOOC. The final badges are presented in this document together with their badge descriptions, which were adapted for all courses.

The document aims to 1) document the process for designing badges, 2) show the implementation process for developing the 15 badges and 3) elaborate on how user testing was done as part of the design process. It is divided into three sections: 1) a background that elaborates the rationale behind the badge, 2) methodology section which describes the badge design process and 3) results which illustrates how the badges were visualized and how they looked like after implementation in the DigiCulture MOOC.

## Objectives of this document

This document is divided into three sections. First, it defines what badges are and what they aim to do in the context of the MOOC (*Background and Rationale*). Second, the methods used are documented for starting the design process (*Methodology*) and initial iterations of Open Badges design are shown (*Results*). Third, the document covers lessons learned and the plan for the future (*Discussion*).

## Who is this document for?

This document is intended for the DigiCulture partners who will have designs and definitions available of how Open Badges will work in the DigiCulture MOOC. Secondly, researchers who work in the field of gamification and education, can make use of this document to understand the scientific underpinnings of badges. Finally, actors from the creative industry sector who wish to create online training platforms can benefit from this document through an understanding of how open badges and stickers can be used to gamify course content.

## What topics are addressed in this document

The document addresses the following topics:

- Definition of Open Badges
- What does Open Badges represent when rewarded to adult learners
- Differentiating Open Badges from Stickers
- Methodological Approach to designing Open Badges
- Integration and development of Open Badges

## Contributors

This document was developed collaboratively by AAU (leading O4) with input from all partners.

## Acknowledgements

Aalborg University is the author of this document. The DigiCulture project partners provided valuable feedback to the process through the transnational meetings and have carried out interviews with learners across the partner countries.

Parts of this report were included in the following publications:

- Diana Andone, Andrei Ternaucic, Vlad Mihaescu, Hendrik Knoche, Bastian Ilsø Hougaard, Ingeborg Goll Rossau, and Radu Vasii. "Course Certification and Open Badges for Digital Culture Education." 13th annual International Conference on Education and New Learning Technologies (EDULEARN21), pp. 11929-11938. International Association of Technology, Education and Development (IATED), 2021.
- Hougaard B.I., Knoche H. (2020) Stars, Crests and Medals: Visual Badge Design Framework to Gamify and Certify Online Learning. In: Brooks A., Brooks E. (eds) Interactivity, Game Creation, Design, Learning, and Innovation. ArtsIT 2019, DLI 2019. Lecture Notes of the Institute for Computer Sciences, Social Informatics and Telecommunications Engineering, vol 328. Springer, Cham. [https://doi.org/10.1007/978-3-030-53294-9\\_29](https://doi.org/10.1007/978-3-030-53294-9_29)

## 1 Aims and Scope

AAU is leading the design of DigiCulture's open badges (O4.2) and the technical implementation was done jointly with Politehnica University of Timisoara. The aim of this report is to present the digital culture issue arising from this study, specifically define badges and test the badges with cultural stakeholders, as part of testing the e-assessment tool (O4.1). Additionally, we wanted to test whether the proposed course certificate (external badges) seem trustworthy to potential employers and adult learners in the creative industry. Furthermore, the badges had to be integrated into the DigiCulture MOOC and a release mechanism had to be designed for learners to acquire their badges.

## 2 Background and rationale

Open Badges specify an establishing infrastructure for digital badges which can represent skills and accomplishments in learning contexts (Tharindu R. Liyanagunawardena, 2017). Badges are one of the key mechanics identified as central for gamification, which can be used to increase user engagement (Helmefalk, 2019). The Virtual Learning Hub uses Moodle as a platform, which is a learning management system capable of using Open Badges. As of Moodle v. 3.7, it is possible to connect Moodle student accounts to Badgr, which is a digital badge ecosystem providing students with a *backpack* from where they can share their badges via the badges digital secure code.

For learning management systems, badges are conceptually dual-purpose - they serve users as rewards and simultaneously will be displayed to potential employers. We therefore distinguish between gamification badges (which are "stickers" for internal use) and certificate badges (the actual open badges, which are for

external use) (Hougaard & Knoche, 2020). The remainder of this document will use this terminology, to describe the design process of open badges.

Based on the conceptual guidelines from O1, the structural framework of the 21 digital competencies as defined in DigComp 2.0, Open Badges were designed via the design thinking approach which was used to consider issues and resolve current problems around creating credentials for digital skills in the specific target group of the cultural and heritage sector. A number of design tools such as Badge Design Canvas were used to support the design process. Open Badges were integrated into the VLH and the resulting Open Badges included a digital secure code which could be linked and included in existing online professional networks or into the stakeholders' organisation or personal site or blog.

## Open badges (for certification)

Open badges work similar to “certificates” which are awarded upon completion of a course. The open badges prove that the student has acquired the skills introduced by the course. The open badge consists of an image, a title, a description and date acquired.

### Goals

- Open badges should accurately indicate the course they represent.
- Open badges should be presentable to potential employers.
- Open badges should be verifiable.

### Constraints

- We need to maintain a consistent visual design across open badges, so they clearly seem to stem from the same platform (origin).
- The certifying entity should be clearly indicated on the badge (DigiCulture) and in the badge description.
- Each open badge should clearly communicate the course they are from, so as to be distinguishable from other achieved open badges.
- Badge text and visuals should be readable from the size the VLH displays it in (see Badge Visibility section below).

## When to issue badges

During the Graz Meeting there was a long discussion of the behaviour of badges in the DigiCulture MOOCs. It was agreed that badges are not issued *directly* per competence and cannot represent specific competences as defined by DigComp 2.0, because doing so would go beyond the scope of what is possible in the frame of the courses. Instead, it was agreed that badges should be issued per course, as an indication that the adult learner has completed the course's material. The badges are only issued for courses, if the learner passes a course examination (further details can be found in the *O4.1 Digital Skills E-Assessment Tool Interim Report*). Open badges are not issued for individual course activities – but courses may internally make use of stickers, which are only visible internally in the DigiCulture MOOC to provide gamification.

The open badges will reflect that they indicate completion of a digiculture course through their image and their badge description. The badge description will furthermore describe the contents of the courses, which were designed based on the digital competences.

## Badges Visibility

Once the Adult learner has received an open badge, the badge will be displayed in Moodle on users' profiles and on the Badgr badge management platform. The final open badge visual design should respect the size requirements of the different platforms which the badges will be visible on, described below.

### Moodle

Open badges will be visible on the user's Moodle profile and should be readable at 100x100 pixels (the dark grey square indicates badge size).

### Badgr

Open badges will be visible on the user's Badgr profile and should be readable at 80x80 pixels (backpack) and 192x192 pixels (single badge).

### Sharing on Social Media

When sharing on Social media, the open badges will have thumbnails with varying sizes: 80x80, 138x72 (cropped, only middle visible) and 158x158px respectively.

## 3 Methodology, tools and research

The descriptions of the methods, tools and research used here are partially adapted from the publication *Course Certification and Open Badges for Digital Culture Education* (Andone et al., 2021). The adaptation and citation from here is made with permission from the authors.

The visual designs of open badges were undertaken, using critical and creative investigations similar to those undertaken by visual artists (see *Art Practice as Research* (Sullivan, 2010)) and from the conceptual guidelines from O1. Apart from the concrete badge design, this investigation also resulted in a visual overview of how open badges typically are represented (see (Hougaard & Knoche, 2019)).

After the visual designs of open badges had been established, two *visual design templates* were formed to make sure there was a visual distinction between stickers and open badges. Using the Badge Design Canvas by DigitalMe (See Figure 1) (Digitalme, 2018), AAU and partners then proceeded to create badges for the respective courses.



**Badge Name:** \_\_\_\_\_

<b>CRITERIA</b> What do you need to do to earn the badge? Does it expire?	<b>SKILLS + KNOWLEDGE</b> What skills does the badge represent?	<b>VALUE PROPOSITION</b> Why bother earning the badge? What opportunities does it unlock? Earner: _____ Issuer: _____ Audience: _____ Displayer: _____	<b>ENDORSEES</b> Who supports and recognises your badge?	<b>USERS</b> Who is your badge for? Earner: _____ Issuer: _____ Audience: _____ Displayer: _____
	<b>BEHAVIOURS</b> What behaviour does the badge encourage?		<b>CHANNELS</b> Where does a user find out about your badge?	
	<b>EVIDENCE</b> What artefact will show the criteria has been met?		<b>AWARDED</b> Who awards your badge and how?	
<b>LEARNING PATHWAYS</b> What other badges exist in your eco system? Are there different levels?		<b>RESOURCES + SUSTAINABILITY</b> What resources are needed for your badge to work? Eg. technology, expertise, money?		

**BADGE NAME:** \_\_\_\_\_

**BADGE DESIGN**

**BADGE CRITERIA**

**BADGE TAGS**  
How will people search for your badge?  
Eg.  
Communication  
Coding  
Presenting

**DIGITAL culture**  
5 ECTS  
CERTIFICATION

DigitalMe Open Badge Framework is licensed under a Creative Commons Attribution-NonCommercial-ShareAlike 4.0 International License

Figure 1. Badge Design Canvas by DigitalMe, adapted for DigiCulture. (Digitalme, 2018)

Online research was performed to collect various types of badges and to create a digital *collage* of inspiration. The end result was a large digital canvas. Using the assets collected in this collage, it was possible to extract how other projects had chosen to visually map information.

The proposed visual design templates were then to be tested with cultural stakeholders (potential employers and adult learners). In particular we wanted to:

1. Verify whether the distinct visual difference in gamification and certification badges are clear to stakeholders.
2. Verify whether certification badges are perceived as trustworthy certificates representing skill.
3. Let cultural stakeholders indicate their preference amongst the proposed visual badge designs.

## Evaluation with stakeholders

We conducted semi-structured interviews with three cultural stakeholders from three different countries to further investigate the badge design. We wanted to:

- Receive feedback on the badge design
- understand the badge design trustworthiness and representation of skills
- Investigate what made participants think badges as valuables in the context of CV, offline and online.

First, the stakeholders were introduced to the DigiCulture project aims and how the courses work. Then we presented them with different badge designs for them to compare and provide feedback (See Figure 2 below).



Fig 2. Evaluated designs (left) and contextual display of badges in a CV (right).

After the stakeholder investigation, the team shifted into development mode, and implemented the Open Badges into the DigiCulture MOOC for all partner courses. Partners were asked to adapt the final badge design templates to partner courses, based on the existing provided examples.

## 4 Results

The results found below were also covered in the publication *Course Certification and Open Badges for Digital Culture Education* (Andone et al., 2021). Some of the text provided in this document is cited from the publication with permission from the authors.

### First Open Badge Design iteration and research

Based on the exploration of older iterations, a final design was created from lessons learned:

- Use a Badge Shape which is either square or circular, so we make optimal use of the square space.
- Make use of the identified blue/white main colors of the DigiCulture logo, to align the badges visually with DigiCulture branding.
- Use the rounded geometric shapes from the DigiCulture font to inspire the badge style.
- Include the DigiCulture logo, and use the Roboto font for any text, which needs to be readable.
- Be readable from 80x80 and up to 192x192 pixel sizes.

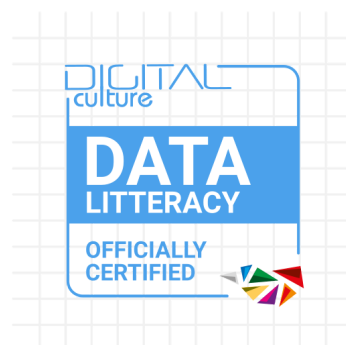
Open badges are awarded upon successful course completion. The open badge is a certification which is displayed to verifying authorities and potential employers.

Some of the design options which were evaluated are being shown below in Figure 3:

ALTERNATE VERSION A



ALTERNATE VERSION B



ALTERNATE VERSION C

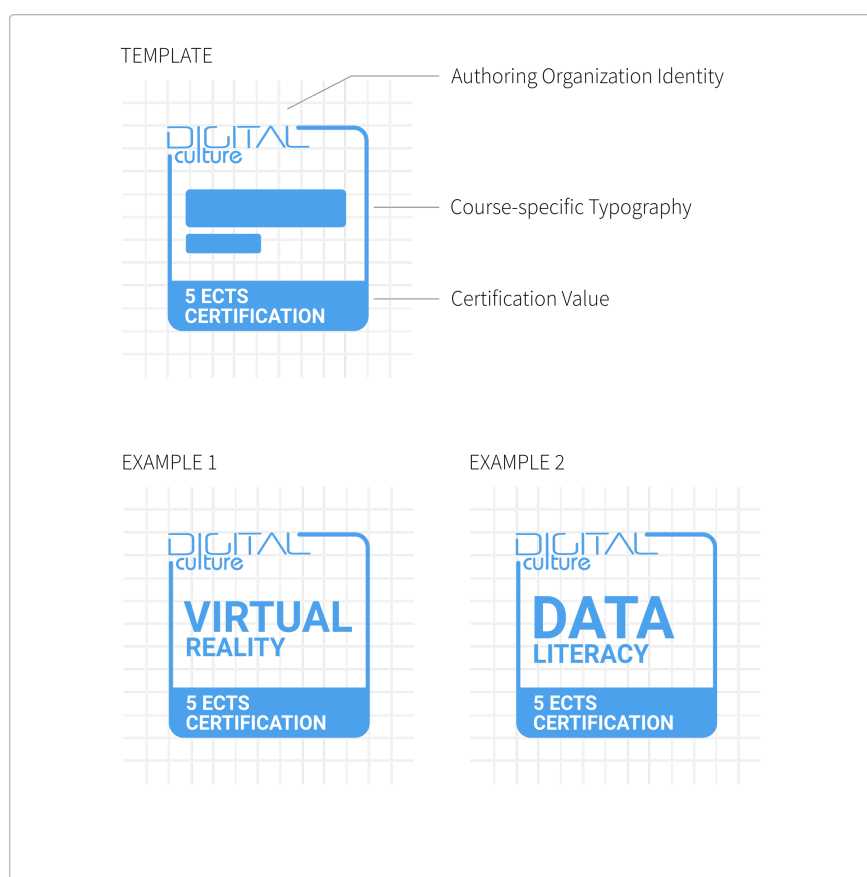


Fig 3. First iteration badges for DigiCulture.

## Evaluation with stakeholders

The participants highlighted that the third badge shown among the other badges in Figure 3 were professional and trustworthy looking, due to its simple design. Participants liked badge 2 and 5 as well

because they had an indication of the issuer and the word 'proficient'. Other badges were too *cartoonish* (badges 1, 4, 5 and 6). The participants would also like to have the specific digital competence expressed upon the badge, so it is clear what the badge represents.

The participants could see how the badges might be valuable in an offline CV or using it in a social media context like LinkedIn. However, they would also expect to find work that demonstrated this skill in a portfolio, in addition. The results for each participant is shown in Table 1 below.

Participant 1 Italy	<p><b>Certificate Designs</b></p> <ul style="list-style-type: none"> <li>- The participant thought the <i>ECTS</i> indication on the badge, made them trustworthy and gave them value.</li> <li>- The participant added that most of the badges were less trustworthy (except the DigiCulture ones), because it was unclear where they were from. [this might create a bias, so maybe we want to remove those indications so the conversation becomes more about visuals.]</li> <li>- The participant thought the <i>EU Digital Competency</i> badge also seemed trustworthy, except it was unclear what it represented and it seemed <i>easy to copy</i>.</li> <li>- The medal, the silhouette (grey) shapes and the <i>VR Star</i> badge was the least trustworthy to him.</li> <li>- He commented that he didn't trust the watermark with signature because it didn't seem related to the DigiCulture project, but commented that the visual features (ie. having a signature) made it seem professional.</li> </ul> <p><b>Certificates in CVs / LinkedIn</b></p> <ul style="list-style-type: none"> <li>- The participant commented that he saw it useful to use a certificate badge in a CV, as a quick representation of an acquired skill. The participant had himself completed courses in Adobe Photoshop and Adobe Illustrator, which also rewarded him with a certificate.</li> <li>- The participant stated, however, that if he were to employ a co-worker with such a certificate (fx in VR) in his CV, he would expect to find work which demonstrated such skill in the co-workers portfolio.</li> <li>- The participant also stated that he could see how this could be added to his LinkedIn profile, or kept in his online CV.</li> </ul>
Participant 2 Ireland	<p><b>Badges</b></p> <ul style="list-style-type: none"> <li>- The participant thought that the badge with the <i>ECTS</i> text looked most professional</li> <li>- This was due to the simplicity and clarity of the design</li> <li>- The participant commented that some of the other badges looked too 'cartoonish' as if they were part of a game (in reference to multi-coloured and grey silhouette version). This reduced their reputability in his opinion.</li> <li>- The participant mentioned that he had previously taken online courses related to his work. The course was assessed with a quiz but he did not get certification on completion</li> </ul> <p><b>Certificates in CVs / LinkedIn</b></p> <ul style="list-style-type: none"> <li>- The participant said that if he was to earn a badge like this he would put it on LinkedIn or other relevant social media sites.</li> <li>- He said it would be unlikely that he would put it on his CV or mention it in an interview.</li> </ul>
Participant 3 Denmark	<p><b>Certificate Designs</b></p> <ul style="list-style-type: none"> <li>- The participant thought the <i>ECTS</i> indication on the badge, made them trustworthy and gave them value.</li> <li>- The participant added that most of the badges were less trustworthy (except the DigiCulture ones), because it was unclear where they were from. [this might create a bias, so maybe we want to remove those indications so the conversation becomes more about visuals.]</li> <li>- The participant thought the <i>EU Digital Competency</i> badge also seemed trustworthy, except it was unclear what it represented and it seemed <i>easy to copy</i>.</li> <li>- The medal, the silhouette (grey) shapes and the <i>VR Star</i> badge was the least trustworthy to him.</li> <li>- He commented that he didn't trust the watermark with signature because it didn't seem related to the DigiCulture project, but commented that the visual features (ie. having a signature) made it seem professional.</li> </ul>

	<p><b>Certificates in CVs / LinkedIn</b></p> <ul style="list-style-type: none"> <li>- The participant commented that he saw it useful to use a certificate badge in a CV, as a quick representation of an acquired skill. The participant had himself completed courses in Adobe Photoshop and Adobe Illustrator, which also rewarded him with a certificate.</li> <li>- The participant stated, however, that if he were to employ a co-worker with such a certificate (fx in VR) in his CV, he would expect to find work which demonstrated such skill in the co-workers portfolio.</li> <li>- The participant also stated that he could see how this could be added to his LinkedIn profile, or kept in his online CV.</li> </ul>
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*Table 1. First iteration badges for DigiCulture.*

Based on this input we used the Badges Design Canvas by DigitalMe [6] to create the badges for all courses.

## Final Design

Based on what was learned from the first badge prototypes and the interviews, a final design was created. The final design mainly focused on showing the name, authoring organization and training level (difficulty). This allowed us to show all the important information very visibly, even at small sizes.

The interviews showed that the cultural stakeholders were interested in the guarantee which ECTS brings to the badges. Unfortunately, we could not provide ECTS in an online MOOC context where grading is automated. Therefore, the ECTS notation was replaced with training level instead for the final badge design, see Figure 4.



*Fig 4. Final DSC Badge Design for the DigiCulture courses.*

The badges were created as templates so that the same visual design is used across all courses. In addition to the visual template, a textual template was created which describes the course, who created the online course and what learning outcomes the badge represents in detail. The textual template together with the

final badge can be seen in Figure 5. An example of the textual template can be read in Table 2. All badges can be seen in Figure 6.



Fig 5. Preview image of where the badge description will be shown in Badgr.

Course Name	Example Badge Description
Virtual Reality and Augmented Reality	This badge certifies that the owner has completed the Augmented and Virtual Reality online course, created by Aalborg University, Denmark as part of the DigiCulture Project. The course teaches learners to apply theory through practical assignments with the following learning outcomes: 1) Designing Virtual Reality setups for exhibitions and home use. 2) Creating Virtual Reality prototypes with Cospaces. 3) Creating Augmented Reality prototypes with Cospaces. The badge certifies basic level training in digital content creation for virtual reality and augmented reality according to European DigComp 2.1: The Digital Competence Framework for Citizens with eight proficiency levels and examples of use. The DigiCulture Project is funded by the ERASMUS+ grant program of the European Union. For more information about DigiCulture and its online courses, see: <a href="http://digiCulture.eu/">http://digiCulture.eu/</a>

Table 2. Example of the Textual Badge Template.



Figure 6. All DigiCulture badges are integrated into the DigiCulture MOOC.

The list of badges (and their respective descriptions) that can be earned by completing the DigiCulture courses is available here: <https://digidculture.eu/courses/badges/>, as well as in each of the courses on the Virtual Learning Hub.

### Special Award Badges

In addition to the badges designed for the DigiCulture courses, badges were designed to award contributions and creators of course content in DigiCulture. The badges can be seen in Figure 7 below.



Figure 7. The special award DigiCulture badges.

### Integration of badges and certificates in UniCampus

In the DigiCulture MOOC, the badges were awarded through automatic grading. This means that course creators had to decide what activities students needed to finish and design an exam which releases a badge representing the completion of the course (see Figure 8).

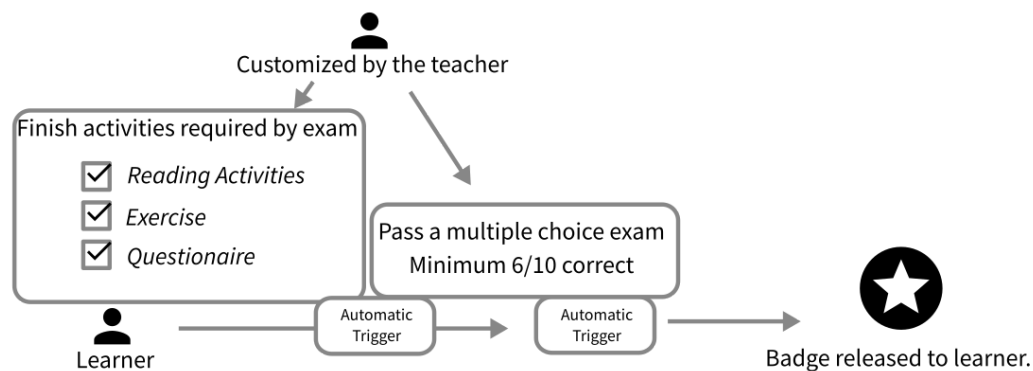


Figure 8. Conceptual idea of how learners receive badges.

Digital badges and electronic certificates are usually different in scope as well as form. What we commonly describe as badges (or Open Badges) are graphical representations as well as the associated metadata (usually for validation purposes) of micro-credentials, a form of recognition for a limited set of acquired skills and abilities, or for accomplishments such as the completion of a course module or participation at an event. Meanwhile, certificates are accredited documents that prove the completion of more complex tasks, following one or more official evaluations and are usually provided by recognized institutions (Leaser, 2016). Badges are meant to be integrated into a digital backpack, or displayed on a social media personal page or portfolio, while certificates are documents meant to be filed or printed and used as such (Dyjur, 2017).

For the DigiCulture project we decided to provide both of these methods of recognition, thus enhancing the perceived usefulness and increasing the motivation of the course participants to complete the necessary activities.

The framework necessary in order to issue and validate badges from within Moodle has been around since version 2.5, which appeared in May 2013. This allowed course developers to create the badges and establish the rules by which they could be awarded to users. Most of the elements inside a course, mainly activities and resources, can be configured with completion rules, events which are triggered once the appropriate actions have taken place. A forum can be completed once a course participant posts some news, a quiz can be completed once a user takes the quiz and obtains a passing grade, and a file can be completed once the user clicks on the link for opening or downloading it. All of these completion rules can be established by the course creators and combined in complex ways in order to define a learning path that once finalized, allows course participants to officially complete the course (See Figure 9).

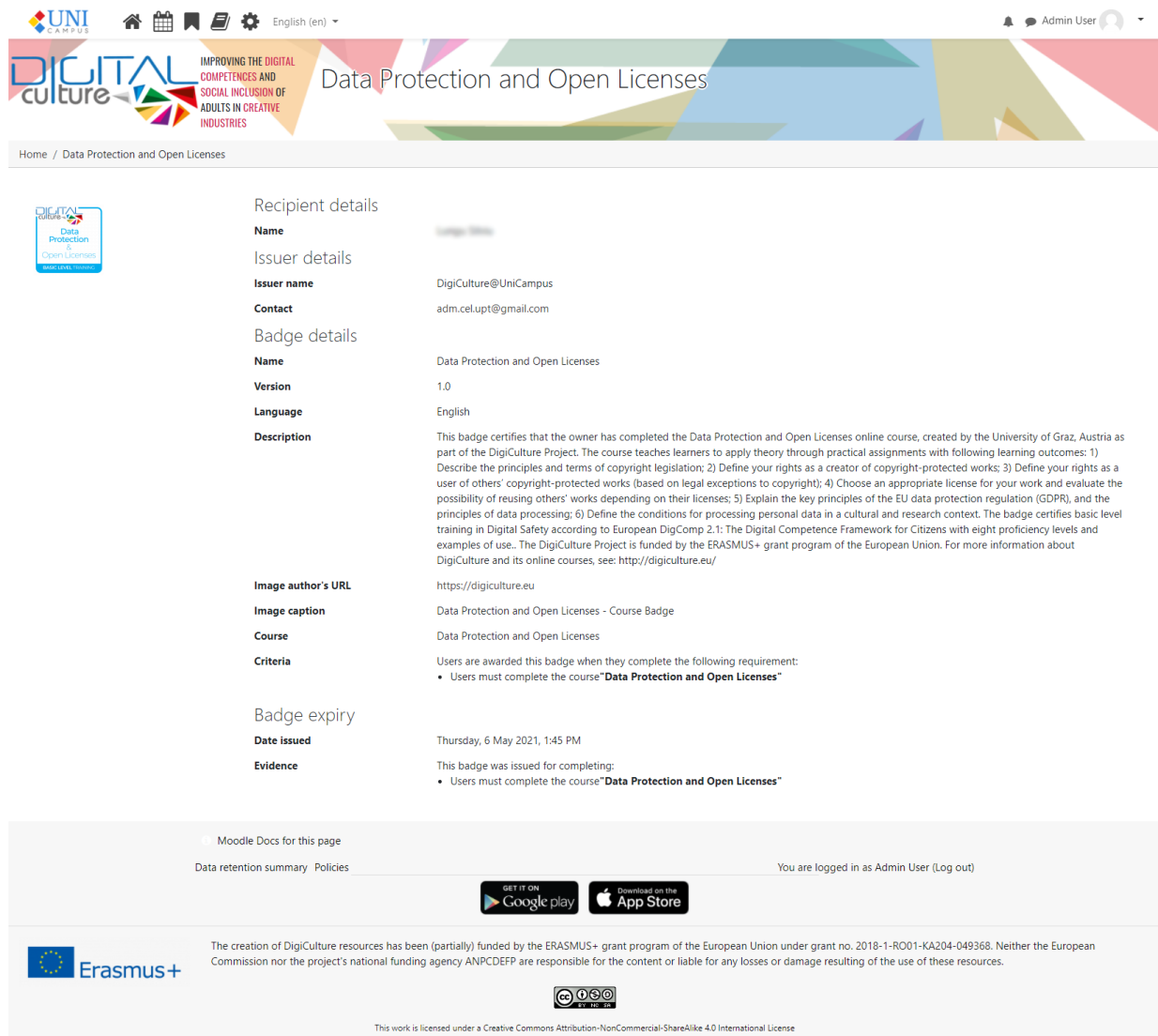
Criteria group	Dependencies	Activities	Course
Aggregation method	All	All	All
Criteria	Welcome to DigiCulture Check in assessment Storytelling and the ... An engaging story What is storytelling? Storytelling: introduce and ... What is Digital Storytelling? Different types of ... Digital and storytelling in ... Find a storytelling on the ... 4 C skills How does Digital ... Digital Storytelling ... Writing and editing a script Creating and editing the ... Creating / learning images ... Select a picture and write ... Storyboard creation Video editing Sharing your Story My Digital Storytelling video! DDT for Culture and ... Case studies The museum in digital ... Digital Storytelling Quiz Check out assessment	Welcome to DigiCulture Check in assessment Storytelling and the ... An engaging story What is storytelling? Storytelling: introduce and ... What is Digital Storytelling? Different types of ... Digital and storytelling in ... Find a storytelling on the ... 4 C skills How does Digital ... Digital Storytelling ... Writing and editing a script Creating and editing the ... Creating / learning images ... Select a picture and write ... Storyboard creation Video editing Sharing your Story My Digital Storytelling video! DDT for Culture and ... Case studies The museum in digital ... Digital Storytelling Quiz Check out assessment	All
First name / surname			

Fig. 9: The course completion report



Once the course is marked as completed by a user, the course badge which has been previously configured with the appropriate rules will be automatically issued and an email notification will be sent shortly with instructions to access, validate and use said badge.

Course moderators can keep track of badges already issued, and if the need arises, revoke them, thus deactivating the validation mechanism intrinsic to any Open Badge. Badges and how their description looks like, once a user has been awarded one, can be seen in Figure 10.




**UNI CAMPUS** English (en) Admin User

**DIGITAL culture** IMPROVING THE DIGITAL COMPETENCES AND SOCIAL INCLUSION OF ADULTS IN CREATIVE INDUSTRIES

## Data Protection and Open Licenses

Home / Data Protection and Open Licenses



**Recipient details**

**Name** [Redacted]

**Issuer details**

**Issuer name** DigiCulture@UniCampus

**Contact** adm.celupt@gmail.com

**Badge details**

**Name** Data Protection and Open Licenses

**Version** 1.0

**Language** English

**Description** This badge certifies that the owner has completed the Data Protection and Open Licenses online course, created by the University of Graz, Austria as part of the DigiCulture Project. The course teaches learners to apply theory through practical assignments with following learning outcomes: 1) Describe the principles and terms of copyright legislation; 2) Define your rights as a creator of copyright-protected works; 3) Define your rights as a user of others' copyright-protected works (based on legal exceptions to copyright); 4) Choose an appropriate license for your work and evaluate the possibility of reusing others' works depending on their licenses; 5) Explain the key principles of the EU data protection regulation (GDPR), and the principles of data processing; 6) Define the conditions for processing personal data in a cultural and research context. The badge certifies basic level training in Digital Safety according to European DigComp 2.1: The Digital Competence Framework for Citizens with eight proficiency levels and examples of use.. The DigiCulture Project is funded by the ERASMUS+ grant program of the European Union. For more information about DigiCulture and its online courses, see: <http://digidigculture.eu/>

**Image author's URL** <https://digidigculture.eu>

**Image caption** Data Protection and Open Licenses - Course Badge

**Course** Data Protection and Open Licenses

**Criteria** Users are awarded this badge when they complete the following requirement:

- Users must complete the course "Data Protection and Open Licenses"

**Badge expiry**

**Date issued** Thursday, 6 May 2021, 1:45 PM

**Evidence** This badge was issued for completing:


- Users must complete the course "Data Protection and Open Licenses"

Moodle Docs for this page

Data retention summary Policies

You are logged in as Admin User (Log out)

GET IT ON Google play Download on the App Store

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Fig. 10: Example of course badge issued to a participant

Although integrated with the corporate version of Moodle - Moodle Workplace (<https://moodle.com/workplace/features/>), the functionality of creating, managing and issuing certificates can be added to any Moodle platform by using the appropriate plugins. Once installed, they permit creating custom certificates and awarding them to users either manually, or automatically according to completion or access rules, similarly to the badge issuing mechanisms.

For the DigiCulture courses, Certificate of Attendance templates were created, thus allowing any course participant who completes a course to receive this certificate, alongside the Course Badge, as a recognition of the accomplishment.

The interface for editing the template is very intuitive, allowing the creation of text and graphical elements which can be then repositioned via drag and drop (Fig. 11).



Fig. 11: The interface for creating Certificate templates

The template contains dynamic elements (such as the name of the recipient, or the name of the course which is currently issuing it - thus permitting the use of this certificate in multiple courses), as well as the validation URL, in clear text as well as QR-encoded form, since each certificate awarded must be uniquely linked to each user who receives it. The possibility of digitally signing the resulting documents was investigated, however due to technical issues it was abandoned in favor of adding the Project Coordinator's handwritten signature.

### Adapting the certificates to many languages

As DigiCulture provides its courses in 7 different languages (English, Romanian, Italian, Danish, German, Lithuanian and Irish), the certificates had to be adapted for these other versions for each of the 13 courses on the platform, resulting in 91 unique certificates. This functionality was implemented in the VLH, such that templates could automatically be generated across all languages (Fig. 12). The total number of certificates issued is described in output O4.3.



Fig. 12: Example of Certificate template translated in the German language

## 5 Conclusions

The report O4.2 Design and Integrations covered the design and integration of open badges. The project partners used the badge designs to create their own badges, adapted for their respective courses. AAU and UPT developed the technical implementation of the badges into all courses in the DigiCulture MOOC.

## 6 References

- Andone, D., Ternauciuc, A., Mihaescu, V., Koche, H., Hougaard, B., Rossau, I., & Vasiiu, R. (2021). COURSE CERTIFICATION AND OPEN BADGES FOR DIGITAL CULTURE EDUCATION. EDULEARN21 Proceedings, 11929–11938.
- Digitalme. (2018). *Badge Design Canvas - Digital Me*. Retrieved from [www.digitalme.co.uk/assets/pdf/DigitalMe-Badge-Design-Canvas.pdf](http://www.digitalme.co.uk/assets/pdf/DigitalMe-Badge-Design-Canvas.pdf)
- Dyjur, P., Lindstrom, G., 'Perceptions and Uses of Digital Badges for Professional Learning Development in Higher Education'. TechTrends 61, 386–392 (2017). <https://doi.org/10.1007/s11528-017-0168-2>
- Helmefalk, M. (2019). An interdisciplinary perspective on gamification: Mechanics, psychological mediators and outcomes. *International Journal of Serious Games* 6, 3–26.
- Hougaard, B. I., & Knoche, H. (2020). Stars, Crests and Medals: Visual Badge Design Framework to Gamify and Certify Online Learning. In A. Brooks & E. I. Brooks (Eds.), *Interactivity, Game Creation, Design, Learning, and Innovation* (pp. 406–414). Springer International Publishing.

- 
- D. Leaser, 'Open Badges vs. Certifications: Is there a battle brewing in the IT credential market?', 6 May 2016, <https://www.ibm.com/blogs/ibm-training/open-badges-vs-certifications-is-there-a-battle-brewing-in-the-it-credential-market/> (accessed 12.05.2021)
- Norman, D. A. (2004). *Emotional design : why we love (or hate) everyday things*. New York: BasicBooks.
- Sullivan, G. (2010). *Art practice as research : inquiry in visual arts*. Thousand Oaks, Calif.: Sage Publications.
- Tharindu R. Liyanagunawardena, S. S. (2017). Open Badges: A Systematic Review of Peer-Reviewed Published Literature (2011-2015). *European Journal of Open, Distance and E-Learning* 20, 1–16.