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DigiCulture

O1.3 - Guidelines for Digital Competences for Creative Industries v0.2 FINAL

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Executive Summary

This report outlines the theoretical framework that will be used to develop the DigiCulture Course (O3) in the DigiCulture Virtual Learning Hub (VLH) (O2). Based on the data obtained from O1.1 and O1.2, the digital competences most required by the Creative Industries (CI) sector are defined and the skills and tools needed to promote these digital competences among CI employees are identified. These competency requirements and tools are then linked to the syllabus of the DigiCulture MOOC. This document serves as a guide for project partners, outlining the digital competencies and associated tools that should be addressed by the MOOC, according to specific user needs.

Objectives

This report is composed of three main sections: (1) an analysis of the most in demand digital competences in the CI sector according to the results of the literature review (O1.1), interviews and stakeholder questionnaires (O1.2), (2) an analysis of the digital competences and the tools or groups of tools determined to be necessary for the development of specific skills, and (3) an analysis of possible use cases through the use of specific tools / groups of tools for the promotion of specific digital competences. The main aim of this research report is to define guidelines for the design of a MOOC for CI employees, which aims to promote their digital competences and social inclusion. By identifying the technical skills required by CI employees and the tools associated with developing those skills, this report aims to support DigiCulture project partners in the design, realization and implementation of the DigiCulture MOOC. In addition, by entering specific user needs, CI professionals have the opportunity to select the content best tailored to their learning needs and choose the DigiCulture sub-MOOC in which to participate.

Who is this document for?

The document is focused on three main target groups: (1) DigiCulture partners involved in the design and creation of the DigiCulture MOOC, (2) researchers and teachers interested in the promotion of digital skills for professionals, especially in the field of CI, and (3) those in the CI sector who are interested in designing online training courses aimed at training their employees or future professionals in the field of digital skills.

What topics are addressed in this document

The document addresses the following topics:

- Digital competences for Creative industries;
    - Results from O1.1 and O1.2;
- tools and Digital Skills;

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- tools, DigiCulture Syllabus and Use Cases.

Contributors

The University Rome TRE is the author of this document. The document was developed by taking into consideration the research conducted by the project partners in O1.1 and O1.2 activities.

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1   Aims and Scope

The purpose of this document is to present and integrate the results of the research carried out in O1.1 and O1.2 in order to define the *Guidelines for Digital competences for Creative Industries* (O1.3), which will guide the development of the DigiCulture MOOC.

2   Background and Rationale

Following the definition of the *Conceptual Framework of Digital Competences for Culture and Creative Industries* (O1.1) and the *European and National Research on Digital Competence Validation* (O1.2) report, the present document entitled *Guidelines for Digital Competences for Creative Industries* (O1.3) has been realized in order to provide the DigiCulture project with a theoretical foundation from which to develop the DigiCulture Course (O3) in the VLH (O2). A comparison between the *Conceptual Framework of Digital Competences for Culture and Creative Industries* (O1.1) and current practices is undertaken, leading to the identification of gaps to be addressed (O1.2). This comparison takes into consideration the most needed digital skills in the CI sector as identified by national and international stakeholders from the CI sector itself. Moreover, a comparison between tools/groups of tools and the DigiCulture Syllabus was also undertaken, to focus on contents, abilities and use cases for the promotion of Digital competences and abilities in CI employees through the DigiCulture MOOC.

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3   Digital Competences for Creative industries

This section is aimed at summarizing and integrating the results of the of the Conceptual Framework of Digital Competences for Culture and Creative Industries (O1.1) and the European and National Research on Digital Competence Validation document (O1.2).

Starting from the general framework "DigComp 2.1: The Digital Competence Framework for Citizens" (Carretero et al., 2017), the project partners focused their attention on the five digital competency dimensions described in the framework:

1. Information and data literacy

2. Communication and collaboration

3. Digital content creation

4. Safety

5. Problem solving.

Despite the usefulness of the DigiComp 2.1 framework, it does not provide specific directions regarding the role of these skills in the CI sector (which is the focus of the DigiCulture project). For this reason, further research was conducted in order to understand how the five general digital competency dimensions, described in the DigiComp 2.1 framework, could be better contextualized and understood in the CI sector. This research consisted of a systematic literature review (O.1.1), and quantitative surveys (n=148) and interviews (n=21) conducted with a sample of stakeholders from the CI sector (O1.2).

In the following sections, the results of this research are triangulated and interpreted to inform the syllabus of the DigiCulture MOOC (O3).

3.1 Information and data literacy

By combining the insights obtained from the literature review (O1.1) and the perspectives of the CI stakeholders perspective (O1.2), Information and data literacy is identified as a pivotal skill in the context of CI. Information and Data Literacy obtained a score of 79,4 out of 100 in importance according to the stakeholders surveyed (See O1.2 report). In particular, 61% of the survey respondents reported that training in the areas of Managing and Evaluating Data and Information and Digital Content needs to be improved. IT and computer services software and web/mobile development sector (4 respondents out of 6), and in the area of music, performing and visual arts (6 respondents out of 8). The respondents from the Tourism sector seek to be trained in Browsing, searching, filtering data, information and digital content (4 respondents out of 7). Also Protecting personal data and privacy should be improved by 77.8% of survey respondents.

There are no digital tools specifically related to the skill Information and Data Literacy; but, the need to adopt a critical approach to the use of digital technologies in [1] CI professions has been highlighted in some interviews like in the following extract: "Digital skills mean to be aware that the deep knowledge of content is crucial to work with a specific cultural product."

We can conclude that according to the CI stakeholders sampled there are not specific tools related to *Information and Data Literacy*, but these set of skills are transversal in the use of any kind of digital technology and to work with cultural products. In the following extract, the stakeholder interviewed explains that although communicating through the use of social network in a creative way is pivotal, it is not enough if you forget to manage the deep meaning of the cultural product you are working with.

"It is important knowing how to manage online content and communicate it through social networks in an appropriately and creatively way, without eclipsing the cultural value of the product you want to promote".

Since *Information and Digital Literacy* is considered to be a transversal skill that can be applied to a variety of digital tools and practices, all the DigiCulture online courses should adopt pedagogical strategies aimed at developing this skill. Nevertheless, two online courses will be specifically focused on the the development of *Information and Digital Literacy skills*:

1. The Internet, World Wide Web and introduction to the digital world

2. Digital Curation - Digital Libraries and Museums.

In Table 1 the syllabus for each of these courses is presented.

Table 1 Courses aimed at develop Information and Digital Literacy Skills for Cultural Industries employees

Name of the course	Syllabus
1. The Internet, World Wide Web and introduction to the digital world	1. WWW Introduction & Web 2.0. 2. Internet History and Terminology. 3. Introduction to the digital technology. 4. Searching the Web. 5. Digital formats and Terminology. 6. Mobile Web. 7. Free, freemium and premium. 8. Future of the Internet.
2. Digital Curation - Digital Libraries and Museums	1. Digitisation (incl. 3D) 2. What are data models, metadata standards, vocabularies? 3. Collection Management Systems 4. Trusted Repositories (certification, etc) 5. Online collections portals, digitorials, and virtual exhibitions

3.1.1 How to develop information and data literacy skills in educational programs

From the analysis of the 10 papers identified, we found that different pedagogical strategies could be adopted in order to develop information and digital literacy skills (see Table 2). The pedagogical strategies described in Table 2 show a tendency to promote digital skills through coherent educational digital pathways.

Table 2 Pedagogies strategies adopted to develop information and data literacy skills in different Cultural Industry sectors

Cultural Industry sector	Pedagogical strategies adopted (From O1.1 Report)
Transversal to different Creative Industry sectors	- creation or evaluation of digital products; - MOOCs (Massive Open Online Courses) and OERs (Open Educational Resources) production and evaluation; - Discussion activities and critical analysis of the digital products
Product, graphic and fashion design	- visual programming;
Architecture	- 3D design;
Museum, galleries and libraries	- Archiving;

3.2 Digital Communication and collaboration

*Communication and collaboration a*re the skills most frequently recognized by respondents in both the interviews and surveys. The *Digital Communication and Collaboration* dimension of these set of skills obtained the highest number of scores among respondents (85,6%). Breaking this down by working areas, the *Digital Communication and Collaboration* dimension is considered the most important subset of skills by museum, gallery and library employees (35 respondents out of 59) and IT and computer services software and web/mobile development employees (4 out of 6 respondents). When stakeholders were required to predict which digital skills would be most important in the next 10 years, they gave +12% points to the *Digital Communication and Collaboration*. Thus, we can conclude that the *Digital Communication and Collaboration* dimension is considered the most required one in the CI working interviewed context. These results are also reflected in the qualitative data. Looking at one's stakeholder definition[1] of Digital Skills, an overlap can be identified with the sub-skill Di*gital Communication and Collaboration*: "For me digital skills means to be able to use social media platforms to manage work relationships" (See O1.2 Report).

Moreover, 56% of participants thought that an online course devoted to CI employees should include content and activities aimed at promoting *Digital Communication and Collaboration* skills. Despite the importance of these skills, only a few respondents have attended an online course focused on developing *Digital Communication and Collaboration* skills. In addition, more than 80% of respondents were not aware of initiatives or courses specifically designed for their educational needs.

In line with the results of the survey, stakeholders in the interviews mentioned many different kinds of tools that CI employees use within their professional routines (see the Table 3). Digital communication tools are used not only to communicate and collaborate with clients, colleagues or artists, but also with the external public and within marketing programs. Thus, *Digital Communication and Collaboration* ecompasses both internal and external communication in organisations.

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Table 3 Tools for internal and external communication

Type of communication	Group of tools	Tools
Internal communication (e.g. with colleagues and or clients or artists)	Email	MailChimp, Mailing list
	Synchronous communication (e.g. instant messaging; call);	GoToMeeting, WhatsApp, Facetime, and Skype
	Collaboration and communication	Trello, BlueJeans and Slack
External communication (with general public and target)	Social Media	Facebook, Twitter and Instagram

Although respondents reported being familiar with the most popular social media, they think that a better understanding of these tools (Instagram Facebook, Twitter, YouTube) would benefit their professional practice. A word frequency analysis of the interview answers shows that when describing the reasons why one would need training regarding digital tools, the most frequently occuring words are: "promote" (3 out of 8), "audience" (2 out of 8), "develop" (2 out of 8) and "reach" (2out of 8). According to those interviewed, we can conclude[1] that reaching a wider audience through digital online content and being able to promote their work using digital tools is considered to be essential or useful by CI sector employees in order to develop their professional practice and career.

Based on the previous analysis of the stakeholders' needs with respect to *Digital Communication and Collaboration*, three online courses will be developed to support the development of these skills:

1. Digital Audiences, Digital Analytics (Google, Facebook, Twitter, SEO)

2. Social Media for Culture

3. Digital Communication & Presentations

In Table 4 the syllabus for each of these courses is presented.

Table 4 Courses aimed at develop Digital Communication and Collaborative Skills for Cultural Industries employees

Name of the course	Syllabus
1. Digital Audiences, Digital Analytics (Google, Facebook, Twitter, SEO)	1. Know and define Digital Audiences - 2. Audiences and Digital Analytics Facebook Custom Audiences TOOL, 3. Digital Analytics in social media platforms - tools to measure and plan 4. SEO as a means to expand your digital audience and online presence
2. Social Media for Culture	1. What is social media? 2. Social media engagement in the cultural sector 3. Social Media for museums promotion 4. Social Media for Culture education development 5. Media audiences 6. How to evaluate social media impact

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3. Digital Communication & Presentations	1. What is digital communication and presentation?
	2. Digital Strategy
	3. Digital marketing Strategy
	4. Strategic Communication
	5. Management of the website
	6. Digital presentation

3.3 Digital Content Creation

Digital Content Creation is the second most recognised group of skills recognized by the CI stakeholders. In the specific case of this set of skills, a broader clarification has been detected in terms of digital tools, according to the CI sectors. 54% of survey respondents indicated that *Digital Content Creation* was a very important skill in CI. However, stakeholders determine that employees in the CI field need more training in *Developing Digital Content* and *Integrating and Re-elaborating Digital Content* (57.6% and 54.2% of respondents, respectively). Despite the importance of these skills, only a few respondents have participated in online courses aimed at developing these skills. More specifically, 4 respondents reported that they have participated in a MOOC on 3D animation, 10 reported participating in a MOOC on programming and 2 respondents reported that they participated in a MOOC on Digital Storytelling. Half of the stakeholders interviewed considered the ability to create content for a website to be an important skill that could be developed by online courses. According to O1.2 results, the following content should be covered in online courses related to Digital Content Creation: photography, music and social media. It is clear that creating and editing online content is widely considered to be the essential topic that CI employees should learn.

With regard to the specific software and tools associated with digital content creation, 13 out of 21 of the stakeholders interviewed suggest the use of Website builder platform, such as Wordpress and Adobe Dreamweaver. In relation to photo and video skills more specifically, 9 respondents reported on the software (e.g. Adobe Creative Studio) , platforms and PC/mobile apps that they use in their working activities. The following table summarises the specific tools that can be used for *Digital Content Creation*, according to the various industry sub-sectors (Table 5).

Table 5 Tools for Digital Content Creation according to the Cultural Industry Sector

Cultural Industry sector	Tools or types of tools for Digital Content Creation
Transversal to any CI sectors	Office Suite: Word, Excel, Publisher
Music & Sound	GarageBand; Sibelius; BandCamp;
Graphs and Architecture	AutoCad, SketchUp, Cam2, PhotoScan

Based on the analysis of the stakeholders' needs in terms of Digital Content Creation, four online courses will be developed to focus on these skills:

1. Digital Content & Publishing

2. Digital Story-Telling

3. Augmented and Virtual Reality

4. Online and Mobile Digital Media Tools

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In Table 6 the syllabus for each of these courses is presented.

Table 6 Courses aimed at develop Digital Content Creation Skills for Cultural Industries employees

Name of the course	Syllabus
1. Digital Content & Publishing	1. Wikis. 2. Blogs. 3. Newsletters. 4. Various media contents. 5. eBooks. 6. Repositories & online libraries.
2. Digital Storytelling	1. The art of storytelling; 2. Digital and storytelling as learning and teaching methodology; 3. DST to promote 4C skills (Creativity, Communication, Collaboration and Critical Thinking). 4. DST for culture and heritage fruition (museums, archaeological sites, libraries)
3. Augmented and Virtual Reality	1. What is virtual and augmented reality? 2. Real-world applications of Virtual and Augmented Reality 3. Different AR and VR types 4. Creation of virtual reality scenes 5. How to prototype AR and VR applications
4. Online and Mobile Digital Media Tools (audio-video)	1. Different Formats and Terminology. 2. Images/Photos Editing Tools. 3. Video Editing Tools. 4. Audio Editing Tools. 5. Audio & Video Streaming. 6. Online Editing Tools for Social Media.

3.4 Digital Safety

Despite the growing attention *Digital Safety* is receiving in Europe (e.g. GDPR regulation), no scientific references on the topic of *Digital Safety* were identified by the literature review in the specific context of CI (see O1.1 Report). Data obtained from the surveys and interviews also indicate that CI stakeholders only seem to have a general understanding of *Digital Safety* issues and it is not still part of their professional practices.

Of those surveyed, 80% consider *Digital Safety* to be very important in CI training context and almost all the participants who work in the areas of film, TV, video, radio and photography consider *Digital Safety* to be a pivotal skill. When predicting which digital skills would be more important in the next 10 years, stakeholders gave +18% points to *Digital Safety*. According to 77.8% of respondents *Protecting Personal Data and Privacy* should be improved through formal and informal training, while 51% of respondents think that the topic *Data Protection and Open Licenses* should be included in an online course on *Digital*

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Safety; two of the respondents reported that they have previously participated in an online course on this topic . In comparison, an analysis of data obtained from the interviews reveals that stakeholders did not mention 'safety' as a crucial topic. We can assume that, although stakeholders are becoming more and more aware of the importance of *Safety and Data Protection*, related skills and behaviours are still not at the centre of their professional practices. These results highlight the need to strengthen CI employee awareness and develop their foundational skills.

Based on the analysis of the stakeholders' needs in terms of Digital Safety, two online courses will be developed to focus on these skills:

1. Data Protection and Open Licenses;

2. Digital Safety, Security and Ethics

In table 7 the syllabus for each course is presented.

Table 7 Courses aimed at develop Digital Content Creation Skills for Cultural Industries employees

Name of the course	Syllabus
1. Data Protection and Open Licenses	1. IPR and "copyright" 1.01 2. (Open) Licensing 3. Basic principles of Privacy and Data Protection
2. Digital Safety, Security and Ethics	1. Overview of digital SSE 2. Principles of SSE 3. Protecting yourself and your work 4. Ethical practices and tools

3.5 Digital Problem Solving

Digital Problem Solving is one of the most transversal skills identified. *Digital Problem Solving* was considered to be very important by 80% of survey participants

One exception, however, was respondents from the fields of music, and performing and visual arts, who did not assign high scores to the dimensions of *Digital Problem Solving*. *Creatively Using Digital Technologies*, one of the sub-skills of the *Digital Problem Solving* dimension according to the Digicomp framework, is the skill that CI employees needed to develop most according to 59.7% of the survey respondents.

Digital Problem Solving was not directly included as one of the main topics that should be covered in an online course on digital skills. However, a related topic, *Digital Management in Culture*, was considered important in the course by 51% of respondents. Having said that, only one CE stakeholder was previously enrolled or enrolled at time of survey in a *Digital Management in Culture* online course.

The interviewees identified different digital tools related with the sub-skill Creatively Using Digital Technologies. As Figure 1 illustrates, Social Network tools and Adobe Creative Suite are most commonly associated with the skill, followed by Music & Sound and Photo & Video - related tools (software, platforms and PC/mobile apps). Other digital tools identified are Website, Graphs & 3D, Instant Messaging & VoIP and IT-Security have been considered.

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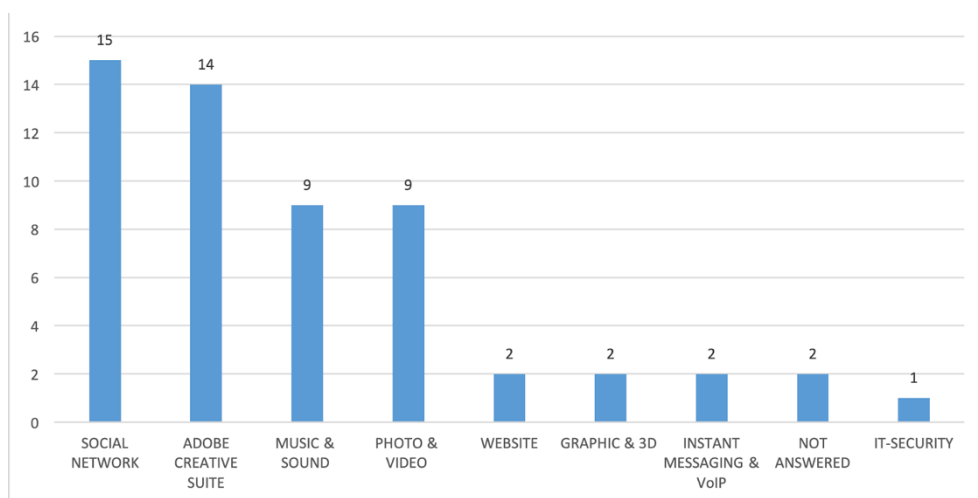Erasmus+ Programme
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Figure 1 - Digital tools related with the sub-skill Creatively using digital technologies - Digital Problem Solving

Based on the analysis of the stakeholders' needs in terms of Digital Problem Solving, two online courses will be developed to focus on these skills:

1. Mobile Apps and Mobile User Experience

2. Digital Management in Culture

In Table 8 the syllabus for each of these courses is presented.

Table 8 Courses aimed at develop Digital Problem Solving Skills for Cultural Industries employees

Name of the course	Syllabus
1. Mobile Apps and Mobile User Experience	1. Introduction to the Smart Phone eco system and app development 2. Native vs not native (browser) apps (responsive design) 3. Mobile Sensors and changing context. 4. Mobile Prototyping tools: Interactive UI Sketching; 5. Purpose of Apps for different contexts: 6. Case studies fx: 7. How to evaluate user experience. Frameworks and design heuristics.
2. Digital Management in Culture	1. Managing and training staff in digital skills 2. Managing external contractors and designers 3. Software deployment and management - licencing, freeware, shareware etc 4. Digital Asset Management (DAM) 5. Website management - SEO, analytics 6. Social Media management 7. Customer Relations Management (CRM) 8. Managing copyright and intellectual property

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4 Tools and Digital Skills for Creative Industries

As presented in the O1.2 research report, research conducted as part of the DigiCulture project has identified the following tools that should be inserted in a MOOC aimed at CI employees CI employees:

● Online and Mobile Digital Media Tools;

● Social Media for Culture and Creative Sector;

● Digital Communication & Presentations Tools;

● Digital Management Tools in Culture.

The groups of tools identified can simultaneously solicit different digital competences and, consequently, support the promotion of transverse competences and social inclusion in CI employees.

Based on the analyses carried out for O1 and the results reported in the *Conceptual Framework of Digital Competences for Culture and Creative Industries* (O1.1) and *the European and National Research on Digital Competence Validation documents* (O1.2), the following table has been created that assigns one or more digital competences to different groups of tools. DigiCulture project partners have agreed to use a specific model for defining and classifying digital skills: DigComp 2.1: *The Digital Competence Framework for Citizens with eight proficiency levels and examples of use.*

Table 9 Digital competences and tools

Digital competences dimensions (from DigComp 2.1)	Group or groups of digital tools (identified by DigiCulture O1.1 and O1.2 research reports results)	Example of tools
1. Information and data literacy	Tools for Visual content management	Adobe Creative Suites, Adobe Photoshop, Adobe Acrobat.
	Tools for Social media monitoring	Brand24, Snaplytics, Sprout Social, Sprinklr.
	Tools for data management	Trello, accounting software, TMS collection Management software.
	Tools for text digital documents management	Microsoft Office (Word, Excel, Publisher), Google Drive, Google Drive.
	Tools for Music & Sound content management	GarageBand, Sibelius, Spotify, BandCamp.
2. Communication and Collaboration	Tools for Digital communication	Instant Messaging & VoIP: Slack, Messenger, GoToMeeting, WhatsApp, Facetime, ProofHub, Skype, Slack, Trello.
	Tools for File sharing and transferring	Google Drive, Dropbox, WeTransfer

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	Email	MailChimp, Mailing list
	Tools for digital interactions	Touchscreen technologies, Gaming, Augmented Reality
3. Digital Content Creation	Tools for Digital content creation through social media	Instagram, Facebook, Twitter, YouTube.
	Tools for Digital content creation through website	Wordpress and Adobe Dreamweaver.
	Tools for Visual content creation	Adobe Photoshop, Smartphone camera, Drones, Promo.com video making tool, iMovie, iPhoto, Canvas, Windows Movie Maker, Final Cut Pro, Clip Studio.
	Tools for Music & Sound content creation	GarageBand, Sibelius, Spotify, BandCamp, Google Suite, Google Analytics.
	Tools for Digital content and document creation	Microsoft Office (Word, Excel, Publisher), Google Drive, Google Drive
	Tools for Graphs and 3D	AutoCad, SketchUp, Cam2, PhotoScan
4. Safety	Tools for devices and personal data protection	Online banking app, DuckDuckGo, ProtonMail, Signal.
5. Problem Solving	Tools for Creative use of digital technologies	BlueJeans, Moovly, Powtoon

The O1.1 and O1.2 results underline the importance of promoting digital competences together with creativity skills, which represent an important domain within the field of work under consideration.

According to the stakeholders interviewed, in the next 10 years, digital skills should be considered to be much more important than now: *Digital Communication and Collaboration, Digital Safety and Digital Content Creation* skills in particular.

As identified in O1.1, the use of Open classroom and Online Chat software or media in e-learning activities is considered effective in terms of knowledge acquisition and digital skills development.

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5 Contents and Use cases for Creative Industries courses

The following table (Table 10) on the DigiCulture MOOC content and technology tool groups was created in order to identify possible use case for CI employees who want to develop their digital skills through online learning courses. The table can be used by CI employees as a tool to identify the most suitable DigiCulture sub-MOOC for the promotion of specific work activities and objectives (e.g. social media promotion of activity/event r the creation of videos through the digital storytelling methodology). By reviewing the use cases presented, an individual can easily identify the groups of technological tools relevant to the objective of his/her company and select the most effective DigiCulture sub-MOOC for accomplishing this objective.

This table is also of use to educators and trainers in the field of adult education. They can use the table to identify the courses that best align with the objectives of businesses, in particular and those in the CI sector. Moreover, educators have at their disposal a set of knowledge, skills and competences to promote and encourage in the adult employees participating in the learning path, thus identifying the learning objectives that are consistent with their educational needs.

The table is composed of three main contents: the groups of technological tools (in the first column) and the contents of the DigiCulture MOOC (or Syllabus, in the first line) generate a series of different Use cases. By identifying a specific group of technological tools, it is possible to know which DigiCulture sub-MOOCs explain how it works and for which business objectives it can be used. Moreover, starting from the identification of a specific User Case, the CI employee can understand which DigiCulture sub-MOOC to attend in order to develop a specific digital competence or skill.

Table 10 Contents and Use cases for Creative Industries courses identified by DigiCulture

Group of tools	Example of tools	Social Media for Culture	Digital Communication & Presentations	The internet, WWW and introduction to the digital world	Data Protection and Open Licenses	Digital Management in Culture	Digital Audiences, Digital Analytics
Tools for Visual content management	Adobe Creative Suites, Adobe Photoshop, Adobe Acrobat.		Users need to create communicatively effective online presentations	Users need to produce a standard pdf document or have to open online documentation			
Tools for Social media monitoring	Brand24,Snaplytics, Sprout Social, Sprinklr.	Users need to know how to manage different social media accounts of their CI.					Users need to monitor their CI's social accounts and define strategies to improve their company's social media reach.
Tools for data management	Trello, accounting software, TMS collection Management software		Users has to present data or a product and need to create a website quickly				
Tools for text digital documents management and creation	Microsoft Office (Word, Excel, Publisher), Google Drive, Google Drive					Users need to share documents or to work simultaneous on the same files	Users store data in shared xls documents

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Tools for Music & Sound content management	**GarageBand, Sibelius, Spotify, BandCamp**					
Tools for Digital communication	**Instant Messaging & VoIP: Slack, Messenger, GoToMeeting, WhatsApp, Facetime, ProofHub, Skype, Slack.**		Users need to organize an online meeting with partners located in different country		Users need to communicate quickly through text massages with colleagues	
Tools for File sharing and transferring	**Google Drive, Dropbox, WeTransfer**			User needs to share large file and his mail client has restrictions	Users need to share reports and datas with other colleagues	
Tools for Digital content creation through social media	**Instagram, Facebook, Twitter**	Users need to promote Cis products and events through social media				Users need to optimise your Facebook/Instagram Page
Tools for Digital content creation through website	**Wordpress and Adobe Dreamweaver**				Users need to share a presentation or report through the website	

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Tools for Visual content creation	Adobe Photoshop, Smartphone camera, Drones, Promo.com video making tool, iMovie, iPhoto, Canvas, Windows Movie Maker, Final Cut Pro, Clip Studio, GAMS, Europeana				Users need to create creative digital content with Creative Commons license		
Tools for Music & Sound content creation	GarageBand, Sibelius, Spotify, BandCamp, Google Suite, Google Analytics				Users need to share creative commons licensed digital content		
Tools for devices and personal data protection	Online banking app, DuckDuckGo, ProtonMail, Signal.				Users need to know the copyright of texts, images and videos online and how to use copyrighted files.		
Tools for Creative use of digital technologies	BlueJeans, Moovly, Powtoon, POP Marvel pixaloop				Users need to share creative commons licensed digital content		

Group of tools	Example of tools	Digital Storytelling	Digital Content & Publishing	Digital Curation - Digital Libraries and Museums	Digital Safety, Security and Ethics	Augmented and Virtual Reality - Immersive experiences	Mobile Apps and Mobile User Experience	Online and Mobile Digital Media Tools (audio-video)
Tools for Visual content management	Adobe Creative Suites, Adobe Photoshop, Adobe Acrobat.	Users need to edit images and sounds to create Digital Storytelling videos	Users need to create or edit photographs, videos, illustrations, presentations and digital images					User need to create a digital video or image
Tools for data management	Trello, accounting software, TMS collection Management software	Users need to create an hub for the presentation of the stories produced						
Tools for text digital documents management and creation	Microsoft Office (Word, Excel, Publisher), Google Drive, Google Drive	Users need to create and edit collaborative texts for Digital Storytelling activities	Users need to create and edit a wiki text document					
Tools for Music & Sound content management	GarageBand, Sibelius, Spotify, BandCamp							Users need to edit an audio file online

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Email	**MailChimp, Mailing list**		Users need to know, create and use newsletters				
Tools for digital interactions	**Touchscreen technologies, Gaming, Augmented Reality**				Users need to create or explore a VR scene and make the VR Scene Interactive		
Tools for Digital content creation through social media	**Instagram, Facebook, Twitter**	Users need to share Digital Storytelling videos through Social Media accounts		Users need know their social media privacy settings	Users need to share VR contents through social media		Users need to create a Facebook live event
Tools for Digital content creation through website	**Wordpress and Adobe Dreamweaver**		Users need to manage their CI's website	Users need to add blocks on website			
Tools for Visual content creation	**Adobe Photoshop, Smartphone camera, Drones, Promo.com video making tool, iMovie, iPhoto, Canvas, Windows Movie Maker, Final Cut Pro, Clip Studio, GAMS, Europeana**	Users need to create a Digital Storytelling video		Users need to create and edit Online collections, digitorials, virtual exhibitions			Users need to create an infographic or a mindmap

Tools for Graphs and 3D	**AutoCad, SketchUp, Cam2, PhotoScan**					Users need to set up and explore AR scene		
Tools for Creative use of digital technologies	**BlueJeans, Moovly, Powtoon, POP Marvel pixaloop**	Users need to create a Digital Storytelling video in a collaborative way				Users need to create and design simple mobile application for Cis		

The complete table is available at the following link:

https://docs.google.com/document/d/1IN4Zo12JI4a-bffLgTM8oLw4Bw_x9G54MDva8eVvWlU/edit#

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6   Results

The document represents the first draft guidelines for the definition of the objectives, contents and technological tools within the DigiCulture MOOC.

7   Conclusions

The present document contains guidelines for the promotion of digital competence in CI professionals. In particular, the results described in the document will be used within the DigiCulture project for the construction, implementation and evaluation of online paths, through the DigiCulture MOOC, aimed at promoting digital skills and competences, transverse competences and social inclusion in CI professionals from 7 different European countries: Romania, Italy, Austria, Lithuania, UK, Ireland and Denmark.

Considering the close connection with the European DigiComp framework (Carretero et al., 2017), the *Guidelines for Digital Competences for Creative Industries* can also be used in wider contexts, at national and international level, for the design of online learning and training paths in CI field. Universities, educators and researcher can define and evaluate online training courses aimed at training CI employees or future professionals in the field of digital skills.

8   References

Carretero, S., Vuorikari, R., Punie, Y. (2017). DigComp 2.1: The Digital Competence Frame-work for Citizens with eight proficiency levels and examples of use, EUR 28558 EN, doi:10.2760/38842.

European Commission (2018). Digital Education Action Plan. Retrived From
https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=COM:2018:22:FIN [accessed 1 August 2019].

DigiCulure O1.2 - European and National research on digital competence validation, Final version..

DigiCulure O1.1 - Conceptual Framework of Digital Competences for Culture and Creative Industries, Final Version.