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# Learn to Change – Collaborative Digital Storytelling for Sustainable Change

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## OUTPUT 1 REPORT

**A participatory pedagogical framework for collaborative  
digital storytelling for sustainable change**

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## Introduction

This report features the LEARN TO CHANGE (L&C) **Pedagogical Framework on co-creation of digital storytelling** as a **cross-disciplinary approach to practice-based scholarship and pedagogy** (Barber 2016, 2) that gives students and practitioners the opportunity to become active authors and **participants in a media production culture** and foster critical thinking (Anderson and Chua 2010), while simultaneously fostering the development of collaborative and digital competences and networking with international peers and stakeholders.

The aim of this report is to create a pedagogical framework for teachers and students in Higher Education to experiment with **easy-to-use mobile learning modules** to introduce variation and meaning to online learning and build learners' competences in **collaborative digital storytelling**.

**Digital storytelling** may include many forms such as digital essays, interactive storytelling, digital storybooks, digital documentaries, or electronic memoirs. However, when compared to conventional storytelling, digital storytelling audiences are viewed not only as listeners, but also as learners who can interact and shape the story (Sadik 2008). Thus, in the scope of the L&C project, digital storytelling is thought of as a way to empower teachers, students, audiences, and companies to tell and share powerful stories from their own perspectives and in their own words (Fisanick & Stakeley 2021:2) towards sustainable change, while contributing to change how we teach and learn in Higher Education.

**Co-creation** is defined as the act of any collective creativity that is experienced jointly by two or more people, with the intent to create something that is not known in advance (Co-Creative Toolkit - 14IoT p.4). Our societies need game changers that have the competencies to develop emerging business ecosystems. These competencies can be taught through a networked education service process between students, companies of the emerging ecosystem, and university teachers (Smeds, Lavikka, Jaatinen, 2018), which the L&C project seeks to highlight.

Based on internal reports of the five Higher Education partner institutions (HEIs) of the L&C project, which involved desk research, local workshops with potential stakeholders and teachers, the L&C **pedagogical framework on co-creation of digital storytelling** is expected to accommodate **change** and be **applicable across several disciplinary course areas** (foreign languages, marketing, ICT) **and learning and teaching contexts** in European institutions, as well as to support **sustainability goals** in society, while foregrounding **co-creation techniques** and **digital storytelling approaches**.

As a transversal theme for **sustainable change**, the sector of **tourism**, which was particularly hard-hit by the Covid-19 pandemic, is foregrounded in this pedagogical framework and in the L&C activities as one of the academic and economic areas that will particularly profit from co-creation of digital storytelling for sustainable change.

There are several **trends emerging** in the sustainable tourism sector that can be explored from a pedagogical stance across disciplines through the co-creation of digital storytelling, such as those of **creating (or co-creating) content** for: 'responsible travel'; brand storytelling that cultivates a 'sense of care' by partnering brands with NGO's and including guests in local community events and activities; advice to accommodate road-trippers and nature-seekers



through off-the-beaten track experiences and outdoor family fun stops; “playlists of local music to accompany car rides, making the experience more immersive”<sup>1</sup>, among others that Higher Education communities can work on across several disciplines.

As inspirational and concrete as these topics in tourism may be, the L&C challenge is to create a **pedagogical framework** to be used across disciplines and study areas that responds to **identified needs for sustainable change** across several industry, economic and academic sectors, caters for the **development of transversal digital competences** of teachers and students, and involves the latter in **student-centred international cooperative technology-enhanced and meaningful learning**.

## Report structure

The report is structured in the following way:

The **first chapter, Perspectives on Change**, addresses how each HEI that is a partner of L&C explains its need for change within the L&C framework. Only main ideas are presented in the form of an executive summary (detailed descriptions are in **Appendix A**), which highlight needs, challenges and ways forward.

The **second chapter, Key Concepts**, compiles key concepts on digital storytelling and co-creation as researched and practised by the partner HEIs. For each concept, a series of questions are asked and answered as a guide to understanding both digital storytelling in education and the processes of co-creation that can be used to produce it.

The **third chapter, Co-creating digital storytelling** focuses on the co-creation of digital storytelling through examples of pedagogical practice. It further provides a list of useful resources, so that any user can be inspired on how to organise practises of co-creating digital storytelling and customise them for their own needs.

**Chapter four, Co-creation Workshops**, addresses guiding pedagogical principles for co-creation workshops with students, teachers and stakeholders in an international technology-enhanced collaborative environment.

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<sup>1</sup> In European Travel Commission (2021). “Monitoring sentiment for domestic and intra-European Travel.



## Chapter 1: Perspectives on change

This chapter addresses partner HEIs' perspectives on change at several levels, namely their needs in terms of **curricular design, competence development, pedagogical innovation, and involvement of external stakeholders**. It also highlights main challenges that need to be addressed while designing a pedagogical framework for sustainable change.

### PART ONE - NEEDS

#### 1. Curricular design principles

In curricular design, collaborative co-created digital storytelling modules and assignments need to include the following principles:

- **Have a multidisciplinary approach.**
  - It is important to develop a multidisciplinary approach to engage students in intercultural and multidisciplinary co-creation with peers and industry partners with an aim to develop sustainable change in the tourism and services sector.  
**One way to support this need is to design and develop multidisciplinary online/blended courses across national and international borders.**
- **Feature 21<sup>st</sup> century skills development.**
  - Teachers and students need to develop a sustainable mind set across disciplines. **Sustainability competences** (Wiek et al, 2011) can be developed through a specific focus on integrating *systems-thinking, normative and anticipatory competences* with strategic interventions and practical interactions related to *strategic and interpersonal competencies*.
  - The changing global markets and technology call for broader skills than the mastery of scientific technological disciplines. It is imperative to expose students to 21st **century skills** development such as *open-mindedness, intercultural competence, global critical thinking, intercultural experience and team collaboration* but also to raise *awareness of diversity* and consider *local dimensions and values*.  
**One way to develop students' collaborative and intercultural skills is to engage them in solving authentic project challenges in multicultural and multidisciplinary teams in collaboration with companies.**
- **Promote networking.**
  - It is relevant to build **long-term tele-collaborative networks** with partner HEIs within the framework of intercultural competence development for sustainable European collaboration.
  - On the one hand, tele-collaborative teaching/learning is time-consuming, requires a great deal of enthusiasm on the side of teachers, but also space to make decisions concerning course syllabus and outcomes. On the other hand, and in line with the collected students' feedback, it is highly motivating and effective in the area of transversal skills development.

## 1. Technological Pedagogical Competence of Teachers and Students

Emerging needs in terms of technological pedagogical competence development and how ICT can be productively included into curricula includes the following aspects:

- **Training on technological tools and methods.**
  - The implementation of **new educational tools**, such as using new tools and specific software to **produce content, share information or promote new ways of collaboration**, is bound up with the need for training all participants in the process.
- **Training in new teaching and learning methods.**
  - **Teachers** need to be trained to adapt their teaching methodologies, learn to create interactive and digital content, as well as adopt **monitoring and assessment** of students' activities.
  - **Students** need to be challenged in their passive learning habits through **thinking critically** about effective combinations of content and multimedia elements while considering audiences' perspectives.
  - Currently, more than skills-based teaching and learning by doing, it is necessary to use methodologies that **engage** students in concrete real-life learning, using learning environments designed according to students' characteristics, with appropriate resources, as well as using interactive tools and technology in their various dimensions.

## 2. The role of digital storytelling in this process

- Digital storytelling as a collaborative pedagogical approach can be used to increase and develop **interactive teaching and learning practises** between different programmes and campuses. It also helps find synergies in the development of **stakeholder networks** of different programmes and campuses.
- While co-creating content for digital storytelling it is important to create **collaborative partnerships and projects with international stakeholders**.
- **Collaborative and project-based approach** is beneficial to learning not only intercultural skills but also many other 21st century skills (Jaleniauskiene et al 2019).
- **Modifying (and adapting) the elements and latent practises of (digital) storytelling** that already exist in the curriculum of many subjects, and proposing a pedagogically more structured and consistent framework of its application in the curriculum seems to be a good way forward, as numerous elements of digital storytelling have been identified in electives taught in English as a lingua franca and in courses such as Critical Thinking, English for Intercultural Communication, Presentation Skills, Self-branding and Pitching in Networking, Czech and European History & Culture.

## 3. Involvement and needs of stakeholders



According to the interview with the representatives of SMAL - Association of Finnish Travel Industry, there are two aspects that need to be taken into consideration, namely:

- Industry players and higher education institutions benefit from **exchanging knowledge about customer needs and sustainable solutions**.
- Stakeholders need help in **transforming the tourism and services business** and making the image of tourism more sustainable.

## PART TWO - CHALLENGES

Challenges present themselves at several levels when designing a pedagogical framework for the co-creation of digital storytelling. In the table below there are some pedagogical challenges for successful collaborative digital storytelling on the left column, while on the right column, it is shown how they may be overcome.

Table 1.

Challenges	How to overcome them
<p><b>Interactive, personalised, collaborative digital storytelling</b> means natural partnering with <b>digital technologies</b> and developing <b>transversal skills</b> which can enable students to internationalise their educational pathways and succeed in the global job market.</p>	<p>In HE, this requires flexibility in curricula, search for <b>interdisciplinary synergies</b> and willingness to adapt/modify academic goals/outputs.</p>
<p>To bring teachers and students together and involve them in a transformative way of teaching and learning by exploiting their education to <b>make a positive difference in society</b>.</p>	<p>Through building blocks of participatory approach applying <b>transparency, collaboration, and critical thinking</b>, educators and students should focus on tasks that will naturally lead to <b>informed and conscious sustainable decisions</b> in a variety of current social and environmental issues which they can identify with, such as the use of technologies, personal consumption, or management of information.</p>
<p>To plan and maintain a <b>long-term collaboration network</b> with <b>international partners</b> in such a way that students develop their intercultural communicative competence using English as a lingua franca.</p>	<p>The challenge is to plan and establish a system for long-term collaboration with international partners in such a way that students' digital storytelling collaboration is not just a one-off project designed and implemented separately once a year, but</p>





<p><b>Collaborative and project-based learning</b> is time-consuming and the interaction between different stakeholders must be developed further to provide more <b>systematic pedagogical support for students and teachers</b> and to be able to design more efficient and integrated collaboration practises for the universities and partner organisations involved.</p>	<p>evolves into <b>more systematic interaction and sharing of digital content across different cultures and stakeholders.</b></p>
<p>Many teachers miss an overview of more sophisticated but <b>user-friendly digital tools and applications suitable for new media.</b></p>	<p>Re-thinking <b>open-access digital tools and platforms</b> for a wider and more creative usage to create impactful digital content.</p>

## Chapter 2: Key concepts

In this chapter the concepts of **Digital Storytelling (DST)** and **Co-creation** are explained in their multifaceted approaches in education and tourism. Several definitions are collected in order to identify the concept and method to be used by the L&C project. The chapter is organised through questions and answers compiled from the HEIs national Reports and some of the questions are based on current research by [Heinänen \(2021\)](#).

The part on DST is further divided into topics such as **the basics of digital storytelling** and **the pedagogy of storytelling**.

This chapter also includes visual maps of the digital storytelling process and the co-creation process with stakeholders.

### 2.1 Digital Storytelling

#### Part 1: The Basics of Digital Storytelling

##### 1. What are digital stories?

Digital stories are short (2-5 minute) videos that rely on still and moving images, a soundtrack, narration and other components to tell a story (Fisanick & Stakeley 2021:2)<sup>2</sup>. In addition to the seven elements identified by *The Centre for Digital Storytelling*, Paul and Fiebich (2005) describe in detail five elements that are shared by all digital stories:

- The combination of different media used to create them
- the type of action (content and user)
- the open or closed relationship between the user and the digital story
- the limitless context through linking to related, relevant information

<sup>2</sup> See more definitions at [University of Houston Digital Storytelling site](#)



- and the presence of multimodal communication.

## **2. What is digital storytelling (DST)?<sup>3</sup>**

“Digital storytelling is characterised by interactivity, nonlinearity, flexible outcomes, user participation, even co-creation”, all of which “are appealing to those seeking new opportunities for cross-disciplinary, iterative approaches to practice-based scholarship and pedagogy” (Barber 2016, 2). Digital storytelling expands the concept of telling a story by using technology not just to enhance the story, but fundamentally change the process and product. (...) Digital storytelling (...) is about harnessing technology to empower people with limited multimedia skills and resources to tell and share powerful stories from their own perspectives and in their own words (Fisanick & Stakeley 2021:2).

Some authors look at DST as a tool, others as a context (see 3 and 4 below).

## **3. When is digital storytelling a pedagogical tool?**

**As a pedagogical tool**, DST is used for delivering content or developing content skills, raising issues for discussion, reflection and connection making, developing technological skills and multiliteracies skills, or explaining abstract ideas in a novel way. It can also be used to practice skills in language arts (composition, grammar, and spelling) or other disciplines. Anderson and Chua (2010) argue that digital storytelling can also be used to raise familiarity with computers, software programs, or digital media composition.

## **4. When is digital storytelling a context?**

**As a context** for doing certain things with others (Anderson and Chua 2010), digital storytelling gives students and practitioners the opportunity to become active authors and participants in a media production culture and foster critical thinking. However, the most important feature is that creators of digital storytelling become a type of audience-producer in a community of other audience-producers who tell about, problem solve, brainstorm, or just share thoughts about a set of common issues that serve as the topics and contexts for engagement in purposeful learning.

Digital storytelling may also be used to create space for unheard voices and empowerment. In this capacity, digital storytelling can bring impetus to community groups to help identify what they seek to change and it can be effectively implemented in community partnership projects to enable authentic voices to be carried to other stakeholders in society.

## **5. What do we need to know about crafting a story through DST?**

Students and other learners are generally aware of stories and storytelling and have likely told many during their lives. However, most learners are not aware of the neurological factors involved with the act of telling or listening to a story, nor have they given much thought to how stories are used to create meaning. It is important for learners to become aware of how brain activation works and how stories can be structured for maximum

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<sup>3</sup> Digital storytelling is also referred to as digital essays, interactive storytelling, digital storybooks, digital documentaries, electronic memoirs.



emotional impact. Studies<sup>4</sup> highlight some elements of an emotionally impactful story, which are transcribed below:

- **The story arc** “in which a character struggles and eventually finds heretofore unknown abilities and uses these to triumph over adversity”(Zak 2014): hook or dramatic question / rising action /crux or climax/ falling action / conclusion or resolution
- Creating a compelling **human-scale story** that is **memorable**
- **Techniques for audience activation** during presentations
- How to utilise **storytelling techniques of emotional impact** to help make information more memorable for listeners. This is primarily done via choosing the right stories to tell during a presentation and/or how to tailor stories and their respective emotional impact to a specific audience<sup>5</sup>
- **“Changing PRIESTS” technique** (delivery style, provocation, tailoring to your audience, using emotional stories, and simple/vivid language).

## Part 2: The Pedagogy of digital storytelling

In a nutshell, digital storytelling is a participatory media practice (Lambert & Hessler 2020).

### 6. Why do digital storytelling?

Technology is forcing faculty to rethink the curriculum in most academic disciplines in terms of content and teaching, and digital storytelling is one methodological approach that seems to fit these demands when considered as a context.

From a different perspective, digital storytelling is a **flexible and adaptable tool**, which can fit most purposes and can be used in almost all the subjects we teach (Signes 2018). Digital storytelling **fosters reflection** and reflection helps to **enhance learning effectiveness** and **deep learning** by facilitating the convergence of four student-centred learning strategies:

- student engagement
- reflection for deep learning
- project-based learning
- and the effective integration of technology into instruction.

### 7. How does digital storytelling develop skills?

Digital storytelling projects are a way to engage students in **twenty-first century skills learning** in the higher education context. It allows both significant promulgation of digital literacy and development of strategic skills for twenty-first century training, the creation of innovative learning experiences, supported and extended by the application of user contributed content Web 2.0 technologies, empowering teachers’ abilities to communicate and integrate technologies into the curriculum (Banzato 2010, 2014).

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<sup>4</sup> See the Harvard Business Review article [Why Your Brain Loves Good Storytelling](#) by Zak (2014).

<sup>5</sup> See the example of [Obama Campaigns for Clinton in New Hampshire](#)



For students to be effective communicators in the 21st century, they need to be sophisticated in **expressing ideas with multiple communication technologies**, not just the written word. “Digital storytelling allows students to use multimedia tools in a sophisticated fashion while capturing the joy of creating and sharing their stories.” (Coutinho 2010)

With regard to learning, digital stories help students to improve time management, learn about problem solving, develop communication skills as well as interpersonal qualities, such as teamwork, critical thought, information collection and interpretation of data, analysis of texts and images, synthesis and self-evaluation.

- **Engagement**
  - DST projects support **students’ behavioural, emotional, and cognitive engagement** (Lazareva & Cruz-Martinez 2020). In general, students have positive emotional experiences and engage with the projects.
- **Creativity**
  - DST projects boost the **students’ creativity**.
- **Technology**
  - Technology involves comprehending when, how, and what technology to use to articulate the story/message (Barber 2016). . Meaningful technology integration is defined as curricula utilising authentic tasks that intentionally and actively help learners to construct their own meanings from thinking about experiences and that allows for more interdisciplinary project-based instruction. Integration is defined not by the amount or type of technology used, but by how and why it is used.
- **Team work**
  - DST promotes group and team work, and interaction between students. The flow of ideas and thinking aloud encourages students to foster active learning, in which users discover and address gaps in their understanding when explaining concepts to others. (Sadik 2008).
- **Information collection and interpretation of data**
  - Through DST, learners gain valuable insight into the larger framework of storytelling outside of traditional realms (business, marketing/branding, community, politics, etc.). With such knowledge, learners can either better evaluate information they encounter on a daily basis or use these skills themselves to contribute to the meaning-making qualities of business, politics, and community.
- **Critical thinking**
  - Concomitantly, research for stories involves critical thinking, evaluation of sources, and selection of content.
- **Audience analysis**
  - Writing involves development of skills for analysing the audience, determining story purpose, selecting the best tone for delivery, as well as developing and practising language communication skills like drafting, editing, and revising.



## 8. How does digital storytelling promote learning?

Digital storytelling can be a powerful medium for communicating subject matter in teaching as well as in curricular design. Through digital storytelling students develop not only a deeper level of engagement with their subject matter, but also a stronger sense of ownership of their academic work. Teachers will need to do scaffolding exercises to develop students' digital storytelling, as well as design relevant assessment and evaluation methods for digital storytelling (Buturian 2016)<sup>6</sup>. In certain learning and teaching contexts, these may include exercises to

- Cultivating visual literacy in order to foster a culturally inclusive understanding of visual images
- Cultivating visual literacy through reading and creating visual communication of academic knowledge
- Fostering visual literacy through practising a close reading of an image.

## 9. How to do digital storytelling?

- Teachers can use digital stories to introduce a particular topic or to prompt students to carry out research on a particular topic, or "as a way to facilitate discussion about the topic presented in a story and as a way of making abstract or conceptual content more understandable" (Lazareva & Cruz-Martinez 2020)
- It is recommended to use an assignment format or task-based and project-based learning framework, which allows students to express their perspectives more freely and confidently. However, project assignments or tasks should be split up and be monitored through several checkpoints with feedback from the instructor (Lazareva & Cruz-Martinez 2020).
- Digital storytelling projects should also offer guidance on the use of technology and scripting the learning process within the small groups (Lazareva & Cruz-Martinez 2020).

## 10. How can digital storytelling be used to engage students in education and social activities?

Through digital storytelling students are encouraged to think more deeply about the meaning of the topic or story and personalise their experience. They also clarify what they know about the topic before and during the process of developing and communicating their stories (Sadik 2008).

There are many disciplinary areas in which DST can be used and is already being used.

- **In Education: ESP** (English for Specific Purposes) **or LSP** (Language for Specific Purposes)

DST can be used to develop collaboration skills by both engaging learners in collaborative tasks and integrating additional measures to address this skill. Such tasks could contribute to students' overall performance to improve language proficiency because they enhance motivation and engagement. Apart from

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<sup>6</sup> See [The Changing Story by Linda Buturian](#) (2015)

collaboration skills, they contribute to the development of many essential skills vital for engagement in the twenty-first century workplace (Jaleniauskiene et al 2019).

A practical example in steps:

Step 1	Completing a pre-and post-survey on concepts and activities related to DST
Step 2	Learning about digital storytelling;
Step 3	Documenting the story, finding and analysing pertinent information
Step 4	Making decisions about their digital stories (topic, plot, script, software and media)
Step 5	Formulating a point of view and writing a script
Step 6	Learning to critically assess and use a variety of tools (cameras, microphones and multimedia authoring software for audio and video recording and editing;
Step 7	Working collaboratively within a group and determining individual roles for group members
Step 8	Sharing their stories with their classmates through a university learning management system (LMS)
Step 9	Watching their classmates' digital stories
Step 10	Using the forum to write their comments about their digital stories and their classmates'
Step 11	Keeping a log and preparing and presenting their 'making of' in front of the class
Step 12	Assessing both their peers' digital stories and their oral presentations

### **In teacher education**

Digital storytelling is a powerful tool to use in the field of technology and teacher education because it allows teachers to mobilise their multiple knowledge on curricular contents, pedagogy and technology (TPACK) (Coutinho 2010). The TPACK model (Koehler & Misha 2008) considers that a complete and advantageous integration of technologies in the teachers' practises depends on the relation of balance that the teacher is able to establish between the scientific knowledge and the domain of contents in that, more or less, specific area of training (C), the pedagogic knowledge (P) at the level of a competence anchored in learning theories and in techniques and didactic-pedagogic methodologies and the technological

knowledge (T) he possesses, that is, its domain concerning the tools and other, increasingly available, technological artefacts which he uses (Coutinho 2010).

### **The Community Digital Storytelling (CDST) method:**

This method addresses community-of-place issues. There are five stages to this method: **preparation, storytelling, story digitisation, digital story sense-making, and digital story sharing**. Additionally, a **Storytelling Cycle of Trust framework** is proposed. Copeland and Moore (2018) identify four trust dimensions as being imperative foundations in implementing community digital media interventions for the common good: **legitimacy, authenticity, synergy, and commons**.

This framework is concerned with increasing the impact that everyday stories can have on society; it is an engine driving prolonged storytelling. From this perspective, Copeland and Moore (2018) consider the ability to scale up the scope and benefit of stories in civic contexts.

### **11. What are the challenges of using digital storytelling in education?**

Some challenges have been identified to using DST, namely

#### **Time & Access to Equipment**

- Although teachers have recognized the positive value of digital storytelling on the pedagogical and educational levels, there is some resistance to using it at school, not so much due to the lack of technical competence, but for institutional reasons such as time constraints, access to technical equipment and curricular demands.

#### **Teacher education**

- There is a need to encourage teachers to provide students with **more long-term and problem-solving opportunities to spend sufficient time working and thinking together and build their own learning communities** to create and present their digital stories. In addition, the professional development of teachers should provide continuous opportunities for teachers to align technology with the curriculum and collaborate and learn from peers who integrate technology into the teaching of other subjects. Consistent with the **integrated curriculum approach**, the professional development of teachers can benefit from digital storytelling to help teachers make the connection between the subject they teach and other subjects to provide a more meaningful context for learning (Sadik 2008).

### **12. How do you assess digital storytelling?**

A thoughtful benevolent power-sharing in the assessment process can engender in students a deeper level of commitment to the evaluative part of the learning. If students take part in creating the criteria and, depending on the teacher comfort level, the process of evaluation, they will be invested in, and grant consent to, the grading. Ideas of assessment rubrics that apply the building blocks of participatory learning—transparency, collaboration, and critical thinking are available here:

[AAC&U Value Rubrics](#).

A step-by step procedure is described below:

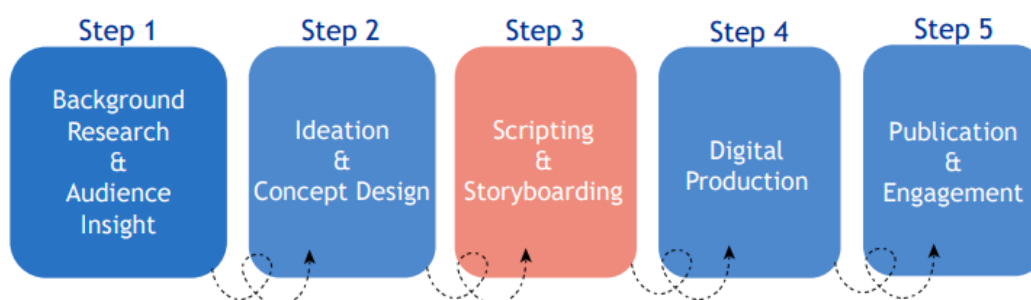


1. Students are involved in the whole class assessment	Teachers model the kind of assessment they wish to achieve by having the whole class watch a digital story and participate in assessing it collectively
2. Students get acquainted with assessment rubrics	Teachers share a few different rubrics and discuss them with students
3 Applying the created assessment rubric	The class watches a digital story made by a student who has taken the class in the past or from a student in a different class The viewing is framed with a discussion of the key criteria in the rubrics.
	Students take notes
4. Discussion	Students are often harder on each other than the teacher and if the environment is conducive
5. Teacher input	Teachers give feedback, or a different kind of feedback meaningful to the student, as well as helpful for the quality of the digital story
6. Peer assessment	Students are involved in assessing particular DST features in small groups: Each group is assigned a particular element of the assessment that they will be focusing on, and responsible for assessing.
	View a second digital story. Allow time for groups to discuss their notes within their group, and then share their results with the rest of the class.

## 2.2 Summary for the L&C project

The digital storytelling process can be divided into five steps as seen below.

### Digital Storytelling Process





## 2.3 Co-creation

### Definitions and Principles of Co-creation

Co-creation is defined as the act of any collective creativity that is experienced jointly by two or more people, with the intent to create something that is not known in advance (IoT 4).

In order to develop new and successful solutions to existing problems, co-creation focuses on the cooperation of transdisciplinary actors who jointly address challenges in a "process of creation" (Dork & Monteye 2011). In this context, practical experience is considered as equally valuable as expertise knowledge and specialised skills (Dubner et al 2018).

Co-creation of new knowledge has the potential to speed up the discovery and application of new knowledge into practice. In this process there are **four collaborative processes**:

- (1) Generating an idea (**co-ideation**);
- (2) Designing the program or policy and the research methods (**co-design**);
- (3) Implementing the program or policy according to the agreed research methods (**co-implementation**), and
- (4) The collection, analysis and interpretation of data (**co-evaluation**)” (Pearce et al 2020).<sup>7</sup>

### 1. Why use co-creation?

Our societies need game changers that have the competencies to develop emerging business ecosystems based on digital data. These competencies can be taught through a networked education service process between students, companies of the emerging ecosystem, and university teachers (Smeds et al 2018). The following examples are from [Ideo Method Cards](#).

- For example, in **guided tours**, where students are taken on a guided tour of the project-relevant spaces and experience activities, making an exploration of objects and actions in situ helps people recall their intentions and values ([www.ideo.com](http://www.ideo.com)).
- If you want to do **historical analysis**, have students compare features of a group, market segment, or practice through various stages of development. This method helps to identify trends and cycles of product use and customer behaviour ([www.ideo.com](http://www.ideo.com)).
- **Long-range forecasts**: students write up prose scenarios that describe how social and/or technological trends might influence people’s behaviour and the use of product, service, or environment. Predicting change can help understand the implications of product or service design.
- **Rapid ethnography**: Spend as much time as you can with people relevant to the design topic. Establish their trust in order to visit and/or participate in their natural habitat and witness specific activities.
- **Unfocus group**: Assemble a diverse group of individuals in a workshop to use a stimulating range of materials and create things that are relevant to the project.

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<sup>7</sup> Co-creation is also a term that has been used to emphasise collaborative learning in design education (Berglund, Bernhard, 2015). In “What is the Co-Creation of New Knowledge? A Content Analysis and Proposed Definition for Health Interventions”, co-creation involves four collaborative processes: **co-ideation, co-design, co-implementation and co-evaluation**.



## 2. How do you use co-creation in an educational environment?

There are many ways of using co-creation in practice. Below are some simple examples that could be carried out in any higher education environment.

- **Community dwelling older adults and academic researchers attend 10 interactive co-creation workshops** together at a university campus and the co-creators complete fieldwork tasks outside the workshops. Key elements of the intervention include (1) education on **sedentary behaviour**, (2) resources to interrupt sedentary behaviour, (3) self-monitoring, (4) action planning and (5) evaluating the benefits of interrupting sedentary behaviour (Leask et al 2017).
- Students are invited to participate in **co-creative and collaborative processes with the teachers and other stakeholders**. Students need to co-create **competences in interaction with external actors** that represent the field of practice (Smeds et al 2018). Facilitated by the students, the company representatives co-create in the workshops a **shared understanding of their collaborative service process** and service model, which trigger real-life innovations.
- Groups of students work on **broadly phrased challenges** derived from an ongoing EU project on **developing societal applications for technology**, choosing one of seven challenges, ranging from changing rain patterns in cities to IoT technologies and data security (Celik et al 2020). Teaching is divided into three interconnected sections on sustainable development, technology and ethics, and collaboration. Each of these sections combines theory with practice through panels with experts from academia and industry and hands-on workshops, encouraging the students to consider multidimensional aspects of their chosen challenge and its consequences for the entire system it links to (Celik et al 2020).
- Using a **series of workshops**: The aim of the first workshop is to create a **common vision** of how education will be developed and renewed. The second workshop concentrates on Laurea UAS' vision and the bigger picture. This workshop produces a new vision for Laurea UAS' health and social services branch, but also four new focus points. The third workshop continues the work with a more practical approach. In the beginning of the workshop the new vision is refined and after that, the group creates an **action matrix for upcoming tasks**. This matrix throws some light on actual tasks which must be done to meet the aim. At the third workshop work continues according to the action matrix. The project group stays responsible for this project and its implementation and results (Lajunen et al 2018).
- Employing **photo voice with the local guides who accompany community health field school students** in Cape Town. Guides take photographs of what students may not see or understand about their community. These are discussed at three workshops and developed into a **photo-documentary for inclusion in the curriculum**. Twenty-one students complete an open-ended questionnaire. This, and student/staff discussions, are thematically analysed. Photo voice can create space for community partner reflection on student learning and the co-creation of effective pedagogical tools valued by students (Wainwright et al 2017).
- Collaborating with **museum professionals** (Hungarian National Museum, Museum of Aquincum) in order to create **reliable storytelling contents in cultural tourism**. Learning the methodology of "Heritage Experience Planner". Planning heritage



interpretation for locals and tourists and content creation in collaboration with students, teachers and archaeologists.

- Creating a **network of storytellers**, embracing the common idea to promote culture and territories through a bottom-up and disseminated process, involving all the “**heritage communities**” - authorities, institutions, associations, schools and universities - to guarantee the common rights to cultural heritage.
- Planning the interpretation of Australian culture for locals and tourists, content creation in collaboration with locals, students, teachers and museum experts: Students learn to **interpret micro-historical contents** with general message and to plan the structure for a short and effective **digital storytelling video**; students cooperate with **local storytellers, students, teachers and museum experts** from several institutions through personal and online meetings and correspondence.

### 3. When to use co-creation?

There are several disciplinary areas that can take advantage of co-creation processes.

- Introducing creative, holistic, problem-solving skills into engineering education in a hands-on manner, for example, creates numerous advantages for supporting the understanding of systemic, innovative solutions that have a societal impact and go beyond solving the technological problem (Celik et al 2020).
- Co-creating public health interventions with end- users has been advocated to provide more effective and sustainable solutions (Leask et al 2017).

### 4. What are common pedagogical approaches to co-creation?

- A variety of **design thinking methods** are introduced for exploring the challenges holistically to define and reframe the problem at hand, identify ethical dilemmas and understand the needs of stakeholders for successful collaboration. (Celik et al 2020)
- **Active learning design** (McQuillan et al 2000)
- The workshop utilises playful artefacts as tools for idea generation and to support embodied and spatial co-creation and presentation. The findings indicate that **playfulness** is useful in teaching an entrepreneurial mind set and attitudes, offering first-hand experiences, invoking emotions, and sharing them with others. (...) In university teaching, playful learning contributes to students’ problem-solving skills, creativity, foresight, as well as their ability to see things that do not yet exist. (Franzén et al 2000)
- The **team mapping method** engages participants in rapid, facilitated co-creation workshops to help groups explore how to work together in a primary care team. It uses patient personas (local evidence-based simulated cases) to explore team structure through paper prototyping circles of care (the persona’s healthcare system). Roles and tasks are collectively defined through the discussion. Team mapping builds on three foundational methods and, through a three-stage process, facilitates the formation and strengthening of new and existing relationships, fostering team development through the process (Price et al 2000).
- **Co-creative learning methods** (Taajamaa et al 2019).
- **Participatory and Appreciative Action and Reflection methodology** (Leask et al 2017).



- **Collaborative Co-creation methods** include storyboards, personas, timelines, scenarios, and problem definition (Margoudi et al 2017).
- **Scrum and Design thinking** (Berglund & Bernhard 2015).
- **Problem-Based Learning (PBL)**.
- **The teachers' approach to design methodology used co-creation cards** (Bertoldi et al 2016).

##### **5. What are the learning outcomes for co-creation?**

The vision, which is created in the workshops, will be a guideline for all decision making. At the end the students present a project proposal of a direction for solving their challenge (Celik et al 2020).



## Chapter 3: Co-creating Digital Storytelling

This chapter presents ideas of tried best practice in co-creating digital storytelling in the partner HEIs or that the latter identified as best practice examples from desk research. Several examples of best practice are presented sequentially through a brief description, how it constitutes a transformative teaching and learning practice and how it uses co-creation. This is just a collection of ideas.

The best practice examples are organised in the following categories:

- 3.1 Examples of Best Practice on Cities
- 3.2 Examples of Best Practice on Events
- 3.3 Examples of Best Practice on Heritage Tourism (e.g. Museums or sites of historical relevance)
- 3.4 Examples of Best Practice on Place Tourism

### 3.1 Examples of Best Practice on Cities

Cities are complex, networked and continuously changing social ecosystems, shaped and transformed through the interaction of different interests and ambitions. They are linked to places, where various aspects of past events are projected and expressed by means of personal memories and narrations (urban memory), representing a promise for future: a vision of freedom, creativity, opportunity and prosperity. At the same time, technology is currently promoting unprecedented changes in urban areas, which are often marked as smart city developments. These examples approach the history of cultural and creative industries, bringing forward the dedicated digital storytelling strategies that promote active audience engagement in urban cultural heritage (Psomadaki et al 2019).

#### HerMálaga online storytelling platform

Detailed Description
<b>HerMálaga online storytelling platform</b>
Link: <a href="#">HerMálaga Stories</a>
The online storytelling platform is one of the elements of the project <b>Flavours of Málaga</b> run by Saxion University of Applied Sciences on behalf of the TUI Care Foundation; it is a project to <b>support female entrepreneurship in tourism</b> . Several (consecutive) individual students as well as student groups develop stories and create a digital platform to communicate these stories. This example highlights the result of a ‘young professional project’ (bachelor graduation assignment): <b>a prototype of a platform that serves as a marketing tool and as an instrument to create local pride and identity</b> . It features stories of female entrepreneurs in Malaga to increase awareness of holidaymakers of backgrounds and businesses of local women and their neighbourhoods, as a contribution to responsible and sustainable tourism.



Digital tool(s) used	WIX.com, iMovie, iTunes.
Transformational teaching practice	Interdisciplinary project-based approach for the Smart Solution Semester, a semester in which students from different educational programs address societal or business challenges including a technological element. A group of <b>Tourism, Creative Media, ICT and Journalism students</b> address the challenge in this example and transform the prototype into an actual platform.
Competency development (learners)	Impacts of Tourism, Destination Management, Creative planning process, collaborative autonomous learning in project teams, collecting stories by means of interviews, writing good stories using the Story Formula, presenting these stories through various media (video/podcast/text), hands-on video and podcast-making, research neighbourhood identity, website building, developing, launching, maintenance and promotion.
Competency development (teachers)	Interdisciplinary team coaching and teaching, feedback on scripting, storyboarding, video production and podcast development, technical and SEO instructions for publishing online.
Co-creation	A group of students from different studies share their expertise and complement each other while they develop and elaborate the prototype of the online storytelling platform into a real, working platform. Different teachers from the various disciplines support them and provide them with feedback and insights. The ideas, progress and elaborations are pitched to the HerMálaga organisation.
Peer learning	In multidisciplinary teams, students combine their strengths and knowledge. If necessary, they support and help each other as a group, thereby raising the final result to a higher level.
Designing own learning experience	Deciding team roles, innovating the digital storytelling topic and structure (Story Formula), enhancing interview and online promotional skills, using scripting and storyboarding tools, platform development builders, video and podcast editing programs, technical platform knowledge.



Co-creating digital storytelling content	Students can make use of a network of stakeholders in the destination, conduct in-depth interviews with the female entrepreneurs, and create inspiring stories according to the Story Formula, taking into account the unique characteristics of the neighbourhoods.
Collaboration with educators, peers, stakeholders	Students elaborate on the project in close contact with teachers and supervisors in the corresponding field. They expand their network and make contacts with important stakeholders in Malaga such as the DMO of Malaga, TUI Care Foundation, Departamento de Turismo de la Ciudad/Provincia de Málaga, Area de Turismo del Ayuntamiento, Malaga City Marketing Department, Promálaga, Amupema and Málaga University. The student group undertakes in-depth interviews with female entrepreneurs (and in case of video stories, films them). A business coach of HerMálaga is available to be reached for support and assistance.
Interaction	Multidisciplinary teamwork in an intercultural context, engagement in a project team consisting of teachers, local stakeholders and students. Conducting in-depth interviews with female entrepreneurs, liaising with various stakeholders, professional instructions and feedback from teachers and supervisors in the corresponding profession, coaching between students and teachers.





## Krea Spring School 2018: Case Helsinki City Bikes

Detailed description	
<b>Krea Spring School 2018: Case Helsinki City Bikes</b>	
<p>Link: Haaga-Helia <a href="#">Creative Agency Krea</a></p> <p>Descriptions of the digital storytelling course projects:</p> <ul style="list-style-type: none"> <li>• <a href="#">Inspirational Storytelling at Krea Spring School</a></li> <li>• <a href="#">Creative Storytelling in Multicultural Teams</a></li> </ul> <p>Example story: <a href="#">Helsinki City Bikes</a></p>	
Multicultural student teams create short digital stories in video format to invite people to use the green option of city bikes for moving around the city of Helsinki.	
Transformational teaching practice	Project-based pedagogical approach to an authentic communication challenge in collaboration with 3 company clients (Outdoor advertising company ClearChannel, Finnish retail brand Alepa, and Helsinki City Bike Service by HSL)
Competency development (learners)	Creative planning process, collaborative autonomous learning in project teams, hands-on video-making, pitching in English, company collaboration
Competency development (teachers)	Team coaching, team teaching, feedback on scripting, storyboarding, and video production, technical and SEO instructions for publishing on YouTube
Co-creation	Discussing the project challenge between company representatives, teachers, and students; feedback on student work from companies and teachers throughout the project, in connection with the pitch presentations to a professional jury consisting of company representatives and teachers, who give feedback to student teams and announce the TOP3 digital stories; professional instructions and feedback given to students by a creative director at a leading Finnish marketing agency; technological video editing training and coaching offered by a video marketing expert



Peer learning	In multicultural and multidisciplinary teams, the students combine their strengths and knowledge and support each other through the ups and downs of the creative process. Students already skilled at video editing help out and support the team members with less experience.
Designing own learning experience	Deciding team roles, innovating the storytelling topic and structure, using scripting and storyboarding tools and the video editing programme for creating their stories from start to finish
Co-creating digital storytelling content	At the beginning of the project, all the company clients visited the class and presented their goals and visions for the project. After that, the students got to innovate their storylines and the companies gave mid-progress feedback. After the pitch presentations, the jury gave feedback on the strengths and development points of the creative solutions and digital stories
Collaboration with educators, peers, stakeholders	Teachers and companies met up three times before the course and created the project brief. Companies and students exchanged their views at the beginning of the project. A professional video marketing expert provided training and hands-on editing help for the student teams. Teachers and client companies discussed the student work and gave feedback as a jury. After the project, a group of students interviewed both company representatives and participating students and created after movies and other communications materials about the project.
Interaction	Multicultural teamwork, dialogue with client companies, professional instructions and feedback from a creative director at a leading Finnish advertising agency and a video marketing expert, continuous coaching dialogue between students and teachers



## Digital storytelling and audience engagement in cultural heritage management

Detailed description
<p><b>Digital storytelling and audience engagement in cultural heritage management: A collaborative model based on the Digital City of Thessaloniki</b></p> <p>Psomadaki, O.I., Dimoulas, C.A., Kalliris, G.M. and Paschalidis, G. (2019), “Digital storytelling and audience engagement in cultural heritage management: A collaborative model based on the Digital City of Thessaloniki”, <i>Journal of Cultural Heritage</i>, Elsevier Masson SAS, Vol. 36, pp. 12–22.</p> <p>The document studies the history of cultural and creative industries, bringing forward the dedicated digital storytelling strategies that promote active audience engagement in <b>urban cultural heritage</b> (CH). A collaborative model is proposed, aiming at providing an integrated manner for heritage documentation, management and dissemination. Research focuses on theoretical and practical aspects for the citizens’ collection and interpretation of “digital heritage” documents (artefacts, places, etc.), resulting in a model that fuels audience engagement and collaboration of cultural organisations, further bringing forward novel technological and methodological guidelines, which could be successfully deployed to create a digital city, or districts with similar cultural, geographical, and technical features.</p> <p><b>Steps to accomplish the targeted results:</b></p> <ul style="list-style-type: none"> <li>• the built model itself</li> <li>• its associated qualitative and quantitative assessment</li> </ul> <p>They include:</p> <ul style="list-style-type: none"> <li>• analysis of state-of-the-art non-linear storytelling applications that are used or can be adapted in the CH domain,</li> <li>• design of a new collaborative model, linking together cultural bodies and individuals, thus offering integrated CH digital management through enhanced semantic interaction and crowd-sourcing services,</li> <li>• evaluation of the proposed strategy/policy-planning as future/standard part of digital-city services, regarding its acceptance/adoption by users.</li> </ul> <p><b>Model framework:</b></p> <ul style="list-style-type: none"> <li>• Citizens are placed at the centre of interest for attending/browsing the associated storytelling and for more actively engaging in user generated content (UGC) contribution, commenting and tagging CH-services. Therefore, cultural content can have the form of multimedia (text, images, audio, video, non-linear narrations, etc.), while related tags induct time, location and context-aware semantic metadata;</li> <li>• With the support of art incubators and technology experts (i.e. dedicated personnel of creative enterprises, governmental bodies and universities) the urban CH-content is properly documented and organised in cloud repositories.</li> </ul>



- The architecture interconnects all the involved parties, providing networked access to the archived CH-assets, thus offering the desired integration (digital creation-distribution, legislative actions, provision of a healthy financial environment, continuous training/supporting activities, etc.).
- A pilot implementation that relied on fast prototyping was conducted taking into consideration different perspectives of four different target groups (art lovers, artists, representatives of art institutions, journalists related to art issues).
- A survey was conducted to assess the wanted features/services that were extracted by the preceding analysis, as well as in a preliminary evaluation of the achieved usability.

**The answers pointed out the needs for:**

- easy navigation;
- information reliability/validity;
- inclusion of personal comments and opinion articles of art representatives;
- use of timely and up-to-date content;
- active participation of art lovers, engaging them to establish asynchronous communications and interactive dialogues with each other

Digital tool(s) used	Text, images, audio, video, non-linear narrations, webpage
Co-creation	Citizens generate content about places that art incubators and technology experts properly document in cloud repositories. Through a survey, the archive users (general population) give feedback on how to improve the system.



### 3.2 Examples of Best Practice on Events

#### Eka keikka “The first gig” influencer marketing campaign

Detailed description	
<p><b>Eka keikka “The first gig” influencer marketing campaign collaboration between <a href="#">a Finnish influencer Hatsolo</a> and Haaga-Helia Creative Agency Krea</b></p> <p><a href="#">Hatsolo Instagram</a> @hatsolo: #ekakeikka and <a href="#">Hatsolo blog</a></p> <p><a href="#">Creative Agency Krea Instagram</a></p> <p><a href="#">Reference story about the collaboration</a> on the Krea website (In Finnish)</p> <p>See Instagram Stories Highlight (“Eka keikka”) on the Krea Instagram @krea_haagahelia and the students’ blog posts in Hatsolo’s blog.</p>	
<p>Krea students and Hatsolo planned and executed a social media campaign Eka keikka (“The first gig”) where Hatsolo offered 5 one-day gigs to young job seekers who can apply for the gigs through Hatsolo’s Instagram. The students planned the campaign concept and the recruitment materials and finally wrote blog stories about the gigs. The materials were published on Hatsolo’s channels and shared on Haaga-Helia channels and Krea channels. Around 100 people applied for the gigs and the Eka keikka campaign continued with more gigs during the rest of the spring term and summer with Hatsolo and new collaboration partners.</p>	
Digital tool(s) used	Adobe design tools (not open-access), Instagram (Story and Feed), Facebook, Twitter, WordPress
Transformational teaching practice	Collaborating with a professional social media influencer to gain more visibility for students’ digital stories
Competency development (learners)	Use of Instagram for professional and commercial purposes; digital content creation; SEO; analytics and algorithms; the need to engage with and share stories on social media systematically to prompt the algorithms and gain visibility
Competency development (teachers)	Influencer marketing as a new form of impactful use of social media and collaboration partnerships in connection with brand building and digital marketing
Co-creation	Campaign planning and content creation in collaboration with students, teachers and the influencer, his PR manager and his influencer marketing agency (Noord Agency)
Peer learning	Students learn to share technical and creative knowledge during the creative planning process



Designing own learning experience	Students gained concept planning expertise by creating the campaign concept and the visual concept
Co-creating digital storytelling content	<b>Working with an influencer</b> was a new experience for both teachers and students. It became clear that despite plans made by students, in the end it is the influencer who gets to decide what is published and in what form. A lot of the content designed and produced by the students was published as planned, but there were also many changes and additions that the influencer decided by himself. Some students found this frustrating, which means that the 'rules' of co-creating content with independent influencers must be carefully explained to the students.
Collaboration with educators, peers, stakeholders	See above.
Interaction	Close cooperation between students, teachers, influencer, PR manager, influencer marketing agency and the 5 gig workers whose gig stories the students created for Hatsolo's blog



### 3.3 Examples of Best Practice on Heritage Tourism

#### TOURIBOOST - Reorienting Tourism Education

Detailed description	
<b>TOURIBOOST - Reorienting Tourism Education</b>	
<a href="#">Touriboost: Reorienting Tourism Education</a> <a href="#">Touriboost Project iBooks</a>	
Reorienting tourism education with digital, social and intercultural competences to support local stakeholders; tackle strategic innovation in heritage tourism. An Erasmus+ Programme with 6 participants from 5 countries. This past Erasmus+ project (in adult education) is crucial to consider in the Hungarian context.	
Digital tool(s) used	Adobe design tools (not open-access)
Transformational teaching practice	<b>Collaborating with museum professionals</b> (Hungarian National Museum, Museum of Aquincum) in order to create reliable storytelling contents in cultural tourism. Learning the methodology of “ <b>Heritage Experience Planner</b> ”
Competency development (learners)	Digital content creation and the need to create stories and gain publicity for well-known and for hidden cultural heritage treasures
Competency development (teachers)	<b>Digital thematic sightseeing</b> as a relatively new form of interpreting “hidden treasures”, collaboration partnerships in connection with creative heritage interpretation, digital marketing
Co-creation	Planning <b>heritage interpretation for locals and tourists</b> and content creation in collaboration with students, teachers and archaeologists
Peer learning	Students learn to create <b>creative interpretational contents</b> and to use effective interpretational methods
Designing own learning experience	Students gain concept planning expertise by creating the iBook content concept
Co-creating digital storytelling content	Getting more acquainted with <b>Budapest’s Roman heritage’s</b> value and its connections to other European heritage sites from the side of students and teachers. Museum and cultural marketing professionals gained expertise in tourism (market segmentation, visitor trends)
Interaction	International cooperation between students, teachers and archaeologists on site and online



## Making History

Detailed description	
<b>Making History</b>	
<a href="#">Making History by Museums Victoria</a>	
<p>Making History is a unique <b>set of resources</b> of Museums Victoria, Australia’s largest public museum organisation, that supports individuals, students and community groups to investigate and create short digital storytelling (up to 3 minutes) in four main topics (<b>Living with natural disasters; World events, local impacts; Cultural identity; Family and community life</b>). Its homepage offers <b>e-learning materials for the DST process</b> and the showcase contains DST videos from three educational levels. The third one is a cooperation with the Monash University in a special Making History course.</p>	
Digital tool(s) used	<p>Creating: iMovie, Final Cut Pro X, Windows Movie Maker, Premier Pro (it depends on for which there is a school access). Sharing: the museums own Vimeo Group</p>
Transformational teaching practice	Getting acquainted with the conceptual framework of oral history and museum andragogy
Competency development (learners)	Learning the process of <b>oral history interviewing</b> , creative planning, collaboration with interviewees and museum experts, social responsibility
Competency development (teachers)	Collaboration partnerships with locals for strengthening collective memory and “lieux de mémoires” through micro historical approach, coaching, feedback on storyboards
Co-creation	Planning the <b>interpretation of Australian culture for locals and tourists</b> , content creation in collaboration with locals, students, teachers and museum experts
Peer learning	Students learn to interpret micro historical contents with general message and to plan the structure for a short and effective DST video
Designing own learning experience	Students gain concept planning expertise by creating the video content concept





Co-creating digital storytelling content	Getting more acquainted with national identity values, their transformations and impacts from the side of students and teachers. Creating a “living museum” through involving visitors as content-creators from museum experts’ aspect
Interaction	Cooperation with local storytellers, students, teachers and museum experts from several institutions through personal and online meetings and correspondence

## Digital Storytelling as Public History

Detailed description	
<b>Digital Storytelling as Public History - A guidebook for educators</b>	
By Fisanick, Christina & Stakeley, Robert O. (2021). Routledge <a href="#">StoryCenter</a> <a href="#">Elements of Digital Storytelling in 4 minutes</a> (YouTube)	
<p><b>DST as public history online.</b> The craft of digital storytelling (DST) involves consuming information and entertainment in short, dense packages (p.1). It entails the following: a creative process and understanding the <b>digital storytelling arc</b> (hook or dramatic question / rising action /crux or climax/ falling action / conclusion or resolution (soundtrack-visual - narration). <b>DST is a model of teaching and learning</b> about history: teaching and learning about history through digital storytelling.</p> <p><b>STEP 1:</b> an exercise in self-expression to understand the steps involved in creating a story from the start to fish: create a personal story - find a topic, write a script, critique the scripts of others, revise a script, record narration, gather and edit still and moving images, choose a soundtrack, use movie-making software, finalise the digital story.</p> <p><b>STEP 2:</b> analyse and teach the genre through Seven Steps of Digital Storytelling: point of view, dramatic question, emotional content, voiceover, soundtrack, economy, and pacing (pp. 9-11) see <a href="#">The 7 elements of digital storytelling</a>.</p> <p>The principles of DST:</p> <ul style="list-style-type: none"> <li>● positive support of peers, instructors and community partners through all the steps needed to go from an idea to the final product</li> <li>● anyone can tell and share powerful stories about themselves, their community, and the world</li> <li>● purpose and content are more important than final products</li> <li>● it is important to learn the highest quality digital story possible for oneself</li> <li>● the added value of DST for education and community partners</li> </ul>	



<p>Digital tool(s) used</p>	<p><a href="#">WeVideo</a> for sharing, reviewing, editing and storing final copies of digital stories; Previously explained concept of <b>storyboarding</b>.  <b>Digital archive or social media video-sharing website</b> for posting digital stories online;  <b>Video conferencing such as Zoom</b> to watch and critique digital stories in groups; as well as for peer reviews synchronously;  <b>Online discussion boards</b> for asynchronous communication to analyse digital stories;  <b>E-mail or text</b> or peer reviews asynchronously;  <b>Google Docs</b> to create rubrics and other course documents.</p>
<p>Transformational teaching practice</p>	<p>Collaborative writing using Zoom and Google Docs - to be able to see and hear each other when working together.  Collaborative writing using Microsoft Word and 'track changes' to record suggested revisions by each writer.  Voice feedback created in Word left throughout the document.</p> <p><b>Forming strategic partnerships and defining their role</b></p> <ul style="list-style-type: none"> <li>• Identification of the strategic partnership's mission statements</li> <li>• Partners should adapt to multiple configurations based on the project needs (p. 29)</li> <li>• They agree to participate in the DST project</li> <li>• They watch several digital stories to gain understanding of the form</li> <li>• They understand the time frame, logistics and scope of project</li> </ul> <p><b>They identify potential subjects and topics for digital stories to be used by students</b></p> <ul style="list-style-type: none"> <li>• Assist in matching DST groups with stories of interest</li> <li>• Plan and facilitate on-site visits and or field trips</li> <li>• Ensure that proper communication channels are open and fluid</li> <li>• Assist in reviewing drafts of digital stories (p. 36)</li> <li>• Review and assess the digital stories</li> </ul>
<p>Competency development (learners)</p>	<ul style="list-style-type: none"> <li>• better writers</li> <li>• critical thinkers</li> <li>• digital architects</li> <li>• community involvement through authentic tasks</li> </ul>



	<ul style="list-style-type: none"> <li>• use of digital stories as part of student job search portfolios</li> </ul>
Competency development (teachers)	<ul style="list-style-type: none"> <li>• Create projects that serve purposes beyond the classroom setting</li> <li>• Engage in multidisciplinary project work</li> </ul>
Co-creation	<ul style="list-style-type: none"> <li>• Groups co-create topics for digital stories</li> <li>• Stakeholders and students are co-learners</li> </ul>
Peer learning	Involves group work and peer critique
Designing own learning experience	Students choose the historical society and the artefact they want to work with
Co-creating digital storytelling content	<p>DST invention activities: Bubbling, clustering, webbing: for writers to think of their ideas by using spatial connections instead of linear ones (p.12)</p> <ul style="list-style-type: none"> <li>• Take out a sheet of paper and pencil. Choose a word, any word, and begin making your own bubbles. Don't stop and think, just keep moving. When you run out of connections, return to the centre bubble and go in a different direction. Stop when you feel that your ideas have been exhausted. See what connections you have made. (...) Choose a few of the ideas and begin brainstorming about your digital story. (p. 13)</li> <li>• Prewriting: freewriting for a certain amount of time; another level of freewriting is looping: Choose one of your favourite personal photos or a random photo on your phone or social media site or in a family album. Instead of writing about what's in the photo, write about what isn't in the photo. What's missing from the image? What can't the rest of us see that you know is there? Write about what is not in the photo for ten minutes and then stop. (p. 13)</li> </ul>
Collaboration with educators, peers, stakeholders	Collaboration at several levels: story circle (small group script critique), whole-class critiques of completed digital stories; discussions of software choices and methods; (p. 6)
Interaction	Digital and personal, synchronous and asynchronous, with peers, historical societies and the public in general (community)



### 3.4 Examples of Best Practice on Place Tourism

#### #iziTRAVELsicilia: a participatory storytelling project

Detailed description	
<b>#iziTRAVELsicilia: a participatory storytelling project</b>	
<a href="#">Sicilian UNESCO sites tour</a> <a href="#">#iziTRAVELsicilia: a participatory storytelling project</a>	
As a facilitator of best practice digital promotion and valorisation through storytelling and crowdsourcing culture, the Sicilian project launched in 2016 has involved thousands of local people, among them students.	
Digital tool(s) used	izi.TRAVEL (the most popular free platform for creating museum audio guides and itineraries in the world based on creativity and storytelling)
Transformational teaching practice	Effective and motivating communication's challenge with students and <b>local heritage</b> stakeholders
Competency development (learners)	Creative planning, creating an audio guide on izi.TRAVEL with the help of CMS (content management system), team work, translating into English, stakeholder (museum, municipalities, tour operators) collaboration
Competency development (teachers)	Team coaching, team teaching, feedback on itinerary ideas, storyboarding, creating an audio guide on izi.TRAVEL the help of CMS (content management system)
Co-creation	A network of storytellers was created, embracing the common idea to promote culture and territories through a bottom-up and disseminated process, involving all the "heritage communities" - authorities, institutions, associations, schools and universities - to guarantee the common rights to cultural heritage
Peer learning	Team learning within and across teams
Designing own learning experience	Based on the itineraries' concept, innovating story topics and creating digital stories



Co-creating digital storytelling content	Strong co-operation in content production between students, teachers and other stakeholders
Interaction	By personal meetings, common field trips and email throughout the project between educators, students and stakeholders

### Storytelling about places: Tourism marketing in the digital age

Detailed description	
<b>Storytelling about places: Tourism marketing in the digital age</b>	
Bassano, C., Barile, S., Piciocchi, P., Spohrer, J.C., Iandolo, F. and Fisk, R. (2019), "Storytelling about places: Tourism marketing in the digital age", Cities, Elsevier, Vol. 87 No. December 2018, pp. 10–20.	
<p>Concept: <b>digital place storytelling</b> is an <b>innovative communication modality about regions through anecdotes, experiences, and stories</b> shared with stakeholders (Hagen, 2008). (p. 11) <b>Place storytelling</b> is part of such new communication modalities and is related to the ability of an integrated territorial system to narratively present itself to the market and achieve distinctive competitive advantage. (p. 11)</p> <p>Storytelling about places is recognized as a tool to enhance the reputation of regions as they compete for tourism and economic development spending in the digital age. Through digital media, people can be encouraged to tell their tourism stories and share their experiences. (p.10)</p> <p>Storytelling may be applied to a region to:</p> <ul style="list-style-type: none"> <li>• share specific place goals;</li> <li>• spread and justify place values;</li> <li>• motivate tourism visitors and local residents to visit a place;</li> <li>• maintain the memory, ensuring a continuity of knowledge and guidance of behaviour;</li> <li>• create trust, confidence, and sense of belonging;</li> <li>• share tacit knowledge;</li> <li>• share norms and values;</li> <li>• reformulate place stories and re-engineer place image narratives;</li> <li>• provide value categories and interpretative patterns.</li> </ul>	



<p><b>Study design (approach):</b></p> <ul style="list-style-type: none"> <li>integrates <a href="#">Service Science, Management, Engineering</a>, plus Design, Arts and Public Policy and <a href="#">Viable Systems Approach</a> perspectives</li> </ul> <p><b>Model Framework</b></p> <p>A member of the place governance group is the decision-maker on corporate strategy and corporate communication activities and, as such, also on place storytelling activities. He manages the process of storytelling through the three stages of creation: building a place story (story building); telling it to place stakeholders (storytelling); and listening to story feedback (story listening).</p> <p><b>1. Preliminary stage of story building is divided into three sub-stages</b></p> <p><b>Autobiographical analysis</b>, which selects the unique aspects that characterise a region (the past actions of its members, place, culture, and values) and important events already memorably associated spontaneously by stakeholders to a region. Place stories should be based on distinctive aspects and critical factors of success to enable the region to differentiate itself from competitors;</p> <p><b>Definition of a plot - narrative structure - to be used (epic drama, melodrama, comedy, evocation, etc.)</b></p> <p><b>Creation of a place story.</b> A place story is a structured textual description (usually between 400 and 600 words), conveying the essence of a place to its stakeholders, to strengthen the ties that bind people to the place, to successfully position a place against competitors;</p> <p><b>2. Selection of communication channels to spread the story effectively.</b></p> <p><b>3. Monitoring the success of the story.</b> This is carried out to check the popularity of the story, which is made even easier by the interactivity of digital media. Furthermore, any misunderstood story can be revised, improved, or removed based on a logic of content co-creation.</p>	
<p>Digital tool(s) used</p>	<ul style="list-style-type: none"> <li><b>Blogs</b> and a virtual sharing platform <a href="#">Umbria on the blog</a>. Ten bloggers wrote their experiences travelling, to describe their authentic experiences and identity. The ten bloggers were taken for a weekend through the streets of the Region to search for stories to tell and to describe the genuine emotions they lived. The main objective was to emotionally capture the good and beautiful aspects of Umbria and rediscover the traditional values of this region. Bloggers lived in picturesque Umbrian villages and landscapes, and experienced contact with the locals for authentic and indigenous storytelling.</li> <li>The opportunity to comment on the story through the feedback tool (e.g. “Do you really think this opinion is useful?”)</li> <li>Various web sites or blogs such as those by <a href="#">Trivago</a>; <a href="#">Zoover</a>; <a href="#">Minube</a></li> </ul>
<p>Transformational teaching practice</p>	<p>Digital storytelling ensures that:</p> <ul style="list-style-type: none"> <li>new stories can be modified continuously;</li> <li>stories are non-linear with a non-chronological process;</li> </ul>



	<ul style="list-style-type: none"> <li>• each user co-creates the story according to their cultural and societal engagement;</li> <li>• the end of the story can be changed according to the different users' expectations.</li> </ul> <p><b>Why do storytelling in tourism?</b> The role of the narrative stimulates desire, turning on the imagination, creating empathy - anticipating and/or prolonging the experience</p> <p><b>Specific roles in each phase of the customer experience:</b></p> <ul style="list-style-type: none"> <li>• Awareness – if we are able to generate a good story: this implies the amplification of identity and reputation;</li> <li>• Valuation and decision making processes: stories help people to tuning and address themselves to the bidding system, more consonant and compatible with personal needs;</li> <li>• Post sell services: the sharing of experiences through digital narrative strengthen customer relationship improving trust degree.</li> </ul>
Co-creation	The value is co-created by local partners, governance mechanisms, and targets. (p. 11) Service-Dominant Logic (S-D Logic) (Vargo & Lusch 2008)
Peer learning	In service systems as well as in service arts values are experiential, contextual, and relational.
Co-creating digital storytelling content	Service-Dominant Logic (S-D Logic) (Vargo & Lusch 2008) - customers are always co-creators of value; a shared understanding of the context is an essential prerequisite for realising synergy of relational vocation and identity (p. 13)
Collaboration with educators, peers, stakeholders	Service systems are customer and stakeholder oriented
Interaction	Create a participatory mapping “sites stories” to visit: this is useful for the sharing information process and the value co-creation for positioning which are two critical ingredients for reinforcing the value proposition and the commercial success.



## Chapter 4: Co-creation Workshops

In this chapter there are examples of co-creation workshops, preceded by some guiding principles. The information is collected from the local (national) workshops undertaken and aims to shed light on how best to train the trainers on co-creating digital storytelling.

At the end the model for co-creation workshops within the L&C project is described.

### 4.1 Guiding Principles for Co-creation workshops

Findings show two relevant phases of digital storytelling.

In the **digital story-writing phase**, students manifest two categories of co-creativity – engaged action and control. Students change different forms of engagement and immersive densities of engaged action through giving, taking, sharing or limiting control in the digital story-writing activities.

In the **digital story-producing phase**, students experience co-creative flow as shared enjoyment and fun that emerges through full immersion in the digital story producing activities, in which control and rationality were absent (Schmoelz 2018).

In Haaga-Helia’s local workshop 1, a 6-phase DST process was co-created during the discussion:

Phase 1	<p><b>Background research and ideation</b> - without proper research, it is impossible to plan and produce an impactful story. Students often feel impatient and frustrated if the research phase takes up a lot of time and energy. How to support them?</p> <ul style="list-style-type: none"> <li>● Explain why background and audience research is important and draw up clear instructions for research assignments</li> <li>● Help students prepare as detailed a timetable as possible for the project</li> <li>● Show an example of a successful DST product right at the beginning to help reduce uncertainty</li> <li>● Emphasise that students should not copy the DST example as such, but to use it as inspiration and general guidance</li> </ul>
Phase 2	<p><b>Target audience research and insight</b></p> <ul style="list-style-type: none"> <li>● Empathy maps and target audience persona templates are considered useful for target audience research and insight</li> <li>● Especially in sustainability projects, it is important to carefully consider the values and emotions of target audiences. Without</li> </ul>





	<p>good insight, your story will not inspire target audiences towards sustainable change.</p>
Phase 3	<p><b>Concept design and storytelling basics</b></p> <ul style="list-style-type: none"> <li>● Do not start planning the story itself before you have planned the concept</li> <li>● Give information about storytelling basics, but emphasise and explain the need to plan the concept first</li> <li>● Concept is difficult to understand for students, as you can really only learn what it means by going through the process of designing one</li> <li>● Simply going through theory materials about concept planning at the beginning of a DST project is not enough, as the theoretical points must be properly digested</li> <li>● Try a problem-based approach to making students understand what a concept is and why concept design is important: students reading theory material according to instructions and with the help of a trigger problem and then discussing their reading as a group</li> <li>● The teacher’s role in problem-based learning is to observe students’ discussion and give feedback to advance their understanding of the topic to help them answer the trigger problem</li> <li>● Throughout the digital storytelling project, encourage students to go back to the key findings of stages 1-3 to keep in mind <b>why</b> they are telling the story (research-based purpose), <b>to whom</b> (target audience), and <b>how</b> (concept)</li> <li>● The creative process usually becomes easier and clearer after the concept has been crystallised</li> <li>● However, it is important to keep strengthening the concept throughout the DST process</li> <li>● If the concept is based on thorough background research and strong target audience insight at the beginning of the creative process, it is easier to be flexible and make changes and adjustments later in the creative process</li> </ul>
Phase 4	<p><b>Scripting and storyboarding</b></p> <ul style="list-style-type: none"> <li>● Give more information on storytelling basics here and encourage all students to try out different scripting and storyboarding techniques and templates</li> </ul>



	<ul style="list-style-type: none"> <li>● Reserve enough time for feedback at this stage</li> </ul>
Phase 5	<p><b>Digital story production</b></p> <ul style="list-style-type: none"> <li>● Proper digital production support is important if the aim is to use professional editing programmes</li> <li>● If using online apps and platforms, production support can be lighter</li> <li>● Make systematic use of peer support: those who are more technically savvy can help others but the process must be properly organised and not just ad hoc</li> <li>● Instagram Story regarded as an easy-to-use platform even when students are not regular Instagram users and publishers</li> <li>● Visiting digital media experts from the industry could be used as professional coaches in DST planning and production</li> </ul>
Phase 6	<p><b>Digital publishing, sharing and analytics</b></p> <ul style="list-style-type: none"> <li>● Make sure your digital story content is timeless/not time-bound in a sense that it can be revisited from different angles for a longer period of time and it is still relevant and relatable to the target audience</li> <li>● For example blog stories can be used more than once by publishing related social media content from different angles and directing audiences to the blog over and over again</li> <li>● Encourage all stakeholders to share your DST products by giving them ideas and help, such as example captions for sharing on social media</li> <li>● Decide the KPIs for your DST right at the beginning and plan how to monitor them with analytics on a weekly basis</li> <li>● Start with just one metric that matters (OMTM), such as the number of engagements (shares and comments) to a social media post</li> <li>● Avoid vanity metrics such as the number of likes (not really informative or indicative of impact)</li> <li>● Track the analytics of your DST on a weekly basis</li> <li>● Make use of the insight you gain from data and experiment with optimising your content and channels</li> <li>● Share your analytics insights with all your stakeholders - and ask them to share their insight in return</li> </ul>



## What to take into account:

General storytelling features (see also Lambert's 7 steps to successful digital storytelling).

### Point of view

Digital storytelling is about the storyteller's point of view. What does a storyteller want to convey with the digital story and what is their perspective in the story?

### Dramatic Question

A dramatic question refers to the element that holds the attention of the viewer. The storyteller can impose a problem or an obstacle that has to be resolved in the story.

### Emotional Content

Digital storytelling should always aim to evoke emotions. Whether it is humour, sadness, fear, anxiety, solitude or any other, the creator should write their story in a way that evokes emotions. This requires the creator to think about the viewer's perspective and how they might perceive the story.

- Pay special attention to emotional content and appeal throughout the DST process
- Emotion is an important component of DST and should be taken into account right at the beginning of the DST planning process
- Use descriptive and emotionally rich language (adjectives, verbs) already in the synopsis writing phase
- Make use of all senses
- Consider emotion when planning the point of view
- Be concise and to the point but do not edit emotion out of the storyline

### The Gift of Your Voice

Using one's own voice is a powerful way to personalize a story. In digital stories, the voice leads the story ahead, but it also presents the storyteller's unique connection to the presented experience. When the voice-over is effortless and seems organic, it will draw the audience deeper in to the story.

### The Power of the Soundtrack

Music and other sound effects can be used to enhance the narrative, but they should be used carefully. The creator must really think whether the music adds anything to the story or takes something away from it.

### Economy



Digital stories are short. Digital stories can be created by people with only a little or no experience with digital tools. With short length, it is easier to capture the audience's attention. This means that the creator has to decide the parts of the story that are absolutely necessary.

### **Pacing**

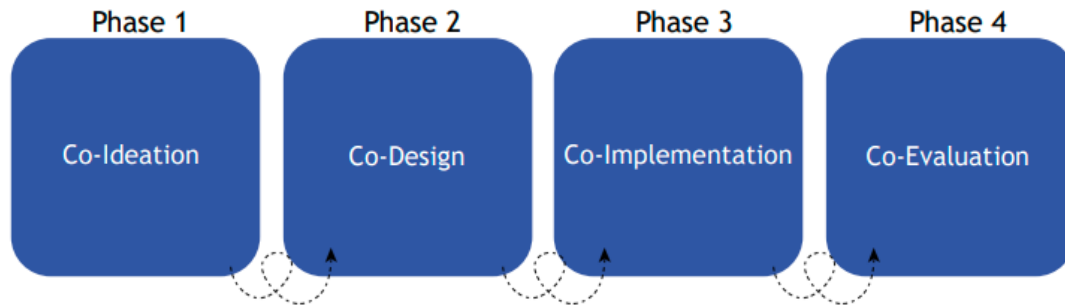
Pacing the story is another element of digital storytelling. Fast pacing can give a sense of urgency or slow pacing can give a serene feel to the story. There should be space for the audience to process the information and experience the story in their own minds.

Some local workshops identified **specific training and equipment needs**, namely:

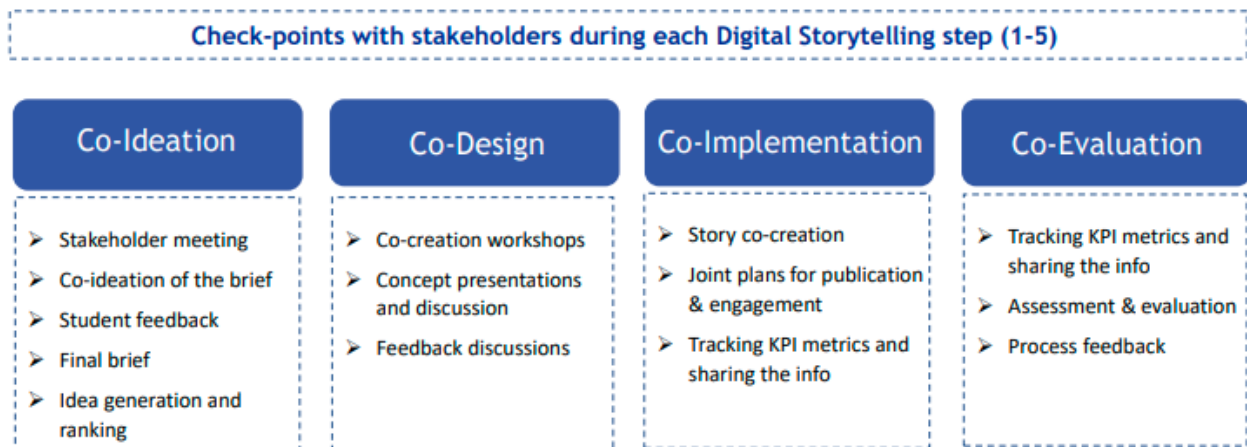
- Staff need training about the construction and structure of digital storytelling (the evolution of the narrative - 'the narrative'). Understanding how the argument and story should evolve.
- Staff and students need training on digital technologies (namely open source) that can be used to produce DST, namely user-friendly digital tools for students from diverse disciplinary fields and not engaged or familiar with video production.
- It is important to identify easy and intuitive ways for students to implement their ideas.
- It is important to make sure that the time used to learn how to use certain digital tools does not surpass time needed to understand content.
- It is important to ensure access to video equipment suitable for high quality video production.

## 4.2 Co-Creation Summary for the L&C project

Co-creation with stakeholders develops in four stages, as in the figure below:



These stages can be further described as check-points with stakeholders during each Digital Storytelling Step (see chapter two):





### 4.3 Examples of Co-creation Workshops

#### Hands-on co-creation with students, teachers, and companies

<b>Hands-on co-creation with students, teachers, and companies: a workshop of 2-3 hours</b>	
Aim	To discuss autonomous learning needs, challenges and solutions in universities and companies and to co-ideate new and inspiring support structures, solutions and tools for autonomous learning
Objectives	<ol style="list-style-type: none"> <li>1. to gather data about needs</li> <li>2. to co-ideate solutions</li> <li>3. to involve and engage all stakeholders in the co-creation process as equal collaborators right from the start</li> </ol>
Steps	<ol style="list-style-type: none"> <li>1. pre-assignment,</li> <li>2. development of pre-assignment themes in the workshop,</li> <li>3. workshop data collection and analysis,</li> <li>4. summarising and visualising key results to be used for further project stages</li> </ol>
Tools	Brainstorming; summaries and thematic grouping with post-its; tool testing; the 5 whys method See more service design and co-creation tools at <a href="#">Haaga-Helia Lab8</a>
Resources	Facilitator, researcher (master thesis author), observer and co-facilitator, workshop participants sharing real-life experiences from different stakeholder perspectives (student, teacher, company representative)
How it supports ideation of collaborative DST for sustainable change	This example provides a basic hands-on workshop model for engagement among students, teachers and industry partners at the very beginning of the co-creation process (needs analysis and co-ideation).



Key features	Engaging students, teachers, and industry partners at the beginning of the co-creation process (exploration and co-ideation), helping to establish shared ownership
Link	<a href="#">Master Thesis on Co-creation</a> by Haaga-Helia student Linda Laasala

### The concept of co-creation and a general structure for the co-creation process

<b>The concept of co-creation and a general structure for the co-creation process</b>	
Aim	To create a general model for the co-creation process as a whole. According to the study by Pearce, Maple, Shakeshaft, Wayland, McKay (2020), the variability of co-creation definitions can be reduced to four collaborative processes: co-ideation, co-design, co-implementation and co-evaluation.
Objectives	To define co-creation and suggest a general co-creation framework and process
Steps	<ol style="list-style-type: none"> <li>1. Going through 42 studies on co-creation</li> <li>2. Reducing co-creation to four stages: co-ideation, co-design, co-implementation, and co-evaluation</li> </ol>
How it supports ideation of collaborative digital storytelling for sustainable change	Having a basic co-creation definition, framework and process for the cases and workshops of the Learn to Change project helps plan, organise and evaluate the co-creation activities.
Key features	A basic co-creation definition and a model for a co-creation process with four steps described based on literature review
Link	Research article by by Pearce, Maple, Shakeshaft, Wayland, McKay: <a href="#">What is the Co-Creation of New Knowledge?</a> (2020)



## Bonnie Koenig: Tools and methods for co-creation in workshops

Aim	collect accessible and practical tools
Steps	<ol style="list-style-type: none"> <li>1. Co-creative design and facilitation</li> <li>2. Interactive participation</li> <li>3. Ongoing discussion after the in-person event</li> </ol>
Tools	<ul style="list-style-type: none"> <li>● Opening Circle – sit in a circle facing each other</li> <li>● Open Space – this allows attendees to help develop the agenda for a given session</li> <li>● World Café – small groups (around four or five people) converse together around tables about a common topic.</li> <li>● Artistic Visualisation – a hands-on art activity that incorporates the themes of the event and helps to illustrate them.</li> <li>● Mapping – this involves collecting information verbally from attendees on a given topic area of interest, and then recording it on a flipchart or some type of ‘map’ that the group can logically follow.</li> <li>● After the event, attendees were encouraged to keep the discussion going via virtual tools</li> </ul>
How it supports ideation of collaborative digital storytelling for sustainable change	The tools will be useful at the co-creation workshop to support the ideation of collaborative digital storytelling for sustainable change.
Link to article	<a href="#">Tools and Methods for Co-Creation in Workshops</a>





Patrizia Bertini: Co-creation: methods & approaches

Aim	Co-creation is a process finalised to produce new ideas capitalising on collective creativity
Objectives	Unleashing individual creativity in a meaning sharing, sense-making, decision-making collective experience
Steps	<p>Butterfly works, a Dutch co-creation studio, has published their co-creation methodology based on 7 steps:</p> <ul style="list-style-type: none"> <li>● Social need: Problem definition and problem owners</li> <li>● Research: User, context, technology and partner research</li> <li>● Ideation (early stage of the co-creation process and it involves users in sharing their initial ideas.)</li> <li>● Co-Creation workshop</li> <li>● Collaborative making</li> <li>● Pilot test</li> <li>● Implementation and scaling-up</li> </ul>
Tools	all participants collaborate and contribute to find and create ways to address the needs through creative, knowledge sharing and constructive activities
Link to article	<a href="#">Co-Creation Methods Approaches</a>



### Adapting Co-creation methods to remote settings

Aim	Practical advice to organise co-creation workshops online
Objectives	A checklist before holding a co-creation workshop
How it supports ideation of collaborative digital storytelling for sustainable change	<p>These pieces of advice can be considered relevant when organising an online co-creation workshop: At the planning stage, a common mistake is:</p> <p><b>Let's invite everyone</b> Remote setup can be seen as an opportunity to welcome everyone with the slightest interest in the project, but that's a mistake. Select only the most relevant stakeholders for your workshop.</p> <p><b>Reduce the number of objectives</b> Time perception during a remote session is not the same as in an in-person meeting; holding attention is more challenging.</p> <p><b>Familiarise participants with the tools</b> Factor in the time needed by participants to get familiar with the digital tools they'll be using. And encourage them to contribute! The team will be more engaged, and it's an excellent opportunity to have some fun.</p> <p>At the implementation stage:</p> <ul style="list-style-type: none"> <li>● State expectations and ground rules at the beginning of the workshop</li> <li>● Add more breaks</li> <li>● Break up long workshops into multiple smaller ones</li> <li>● Keep instructions visible</li> <li>● Be explicit about the time allotted for each activity</li> <li>● Actively ask for participation</li> </ul> <p><a href="#">Engage the less talkative participants</a> to ensure you hear all voices. Make sure you recap what was said before each new topic.</p> <p>Define the collaboration method:</p> <ul style="list-style-type: none"> <li>● Real-time visual note taking: Use a shared board to document discussion as it happens.</li> <li>● Collaborative physical content generation: Sometimes people need moments alone to think with pen and paper. It also engages the participants through active participation.</li> <li>● Collaborative digital content generation: Use a shared board where everyone can add and share content.</li> </ul>
Link to article	<a href="#">How to Design a Remote Co-Creation Workshop</a>



## Design Thinking Workshop

Aim	“The online workshop succeeded in keeping the interactive character that characterises a design thinking approach. The students developed competences, such as improving their capacity to solve complex problems, adaptation to rapidly changing circumstances, critical thinking, and flexibility, learning to learn, teamwork, and creativity. The goal of this workshop was for each team to develop a unique design vision or point-of-view to a complex (wicked) problem, and thus to frame it in an innovative way.”
Objectives	Joint reflection on a complex problem from different perspectives with participants from different backgrounds
Steps	<ul style="list-style-type: none"> <li>● Understand and Observe (together the Empathy phase)</li> <li>● Point of View (Defining)</li> <li>● Ideate</li> <li>● Prototype</li> <li>● Test</li> </ul> <p>“Critical thinking is part of the mind set all the time. The overview shows that in design thinking there is a strong emphasis on the Empathy and Defining phase – that is precisely what distinguishes it from another innovation methodology like Lean Start-up with its aim of building continuous feedback loops with customers during product development cycles. The core of the design work is building a meaningful understanding of what actually is the problem.” (See <a href="#">Design Thinking for Higher Education</a>)</p>
Tools	<p>The workshop used a combination of MIRO+ZOOM</p> <p>Other tools recommended on the project homepage:</p> <ul style="list-style-type: none"> <li>● <a href="#">Metroretro</a> - Collaborative web application created to help teams run productive, engaging and fun retrospectives. It is based on using sticky notes that can be assigned to various categories. It also allows an unlimited number of users to work at the same time, has internal emojis as well as a voting option.</li> <li>● <a href="#">MURAL</a> - The most popular digital workspace for visual collaboration</li> </ul> <p>Other tools used in specified purposes as additional tools to MURAL:</p> <ul style="list-style-type: none"> <li>● <a href="#">Stormboard</a> - for ideation phase of the process, recommended especially for brainwriting</li> <li>● <a href="#">Funretro</a> - fun sprint retrospectives, very similar to Metroretro</li> <li>● <a href="#">Conceptboard</a> – for working on mind maps. Allows to collect ideas, visualise them, attach one to another</li> </ul>



Resources	<a href="#">Dt.Uni Project</a>
How it supports ideation of collaborative DST for sustainable change	I was invited to participate from BBS at an international workshop of the Dt.Uni project. I found it amazing that we worked in international groups, and my group (of 5) was coordinated by one of the students of the local university. The student was facilitating and exercising a lot of empathy so that everybody could contribute to the joint brainstorming the group. This could serve as a model when organising online co-creation workshops.



## Co-Creative Workshop Methodology - Co-Creative Toolkit - 14IoT

Aim	<p>The goal of a Co-Creative Workshop Methodology is to bring together teachers (in our case), multiple stakeholders and end-users (of Tourism) to co-create solutions in a couple of hours.(p. 5)</p> <p>The process enables experts to empathise with the needs of end-users, whilst end-users are enabled to communicate on an expert level. Ideally this increases empathy within them, leading to more meaningful solutions. (p.5)</p> <p>Inviting stakeholders and end-users <b>at the beginning of a project</b> to participate in the co-creation of use cases can provide them with a sense of ownership. (p.6)</p> <p>The insights a workshop provides, help teachers and students to empathise with stakeholders and end-users.</p>
Objectives	<ol style="list-style-type: none"> <li>1. Define the context you want to generate solutions for;</li> <li>2. Defining a clear objective for your workshop helps you to identify the participants you need to select, how much time you will have to allocate for one or more workshops and what materials and equipment you need. (p. 6)</li> <li>3. Participatory design of solutions for ...(user-centred design practises)</li> </ol>
Steps	<p>Consists of guidelines, templates, picture cards, actors, objects and sensors;</p> <p>Describes the guidelines for a co-creative cycle of four phases, the:</p> <p><b>Co-analysis, Co-design, Co-evaluation and Co-implementation phase</b>, together with practical tips on how to facilitate a Co-Creative Workshop.</p> <ul style="list-style-type: none"> <li>● In the first phase, the <b>Co-analysis phase</b>, participants are going to analyse the context to explore possibilities, define use cases and generate solution spaces.</li> <li>● During the second phase, the <b>Co-design phase</b>, participants will give shape to the solution generated in the Co-analysis phase by defining the main functionalities of the solution.</li> <li>● The objective of the third phase, the <b>Co-evaluation phase</b>, is to evaluate the solution generated in the Co-design phase by means of stakeholder values.</li> <li>● In the last phase, the <b>Co-implementation phase</b>, participants are going to define the implementation process, with the aim to identify the factors of influence on a decision to adopt the solution or to reject it. (p. 5)</li> </ul>
Tools	<p><b>From all the tools presented, we selected the following as appropriate for DST:</b></p>



	<p><b>Phase one - 'Picture Cards'</b>. Pictures elicit emotions and memories and carry many different layers of meaning and associations [17]. 'Picture Cards' are therefore ideal to explore possibilities, define use cases and generate solution spaces.</p> <p>Procedure:</p> <ul style="list-style-type: none"> <li>• Ask the participants to each grab five 'Picture Cards'. Help them to associate and to generate an idea for one or several of the cards. The ideas can still be general and can even just be the starting point for a new use case. (Individually)</li> <li>• Share the generated ideas with each other by presenting them one by one, making a complete round, until everyone presents their ideas.</li> <li>• Map the ideas.</li> </ul> <p>There are templates for all phases, which can be adapted.</p>
Resources	<p><b>Human Resources</b></p> <p>It is recommended to allocate a <b>facilitator</b> and a <b>co-facilitator</b> to facilitate a Co-Creative Workshop</p> <p>Three conditions to make a good facilitator:</p> <ol style="list-style-type: none"> <li>1. There is an implicit understanding between the facilitator and the group that has granted the facilitators' role,</li> <li>2. The facilitator is able to oversee the whole process and will leave enough space for creativity whilst keeping an eye on the objective,</li> <li>3. The facilitator should be neutral and free of conflicting interests. (p. 7)</li> </ol> <p>The participants of the workshops are ideally stakeholders and end-users.</p>
Key features	<p>Templates that can be adapted.</p>

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