Story Changers: Enhancing Pupils' Social Skills and Enriching Teaching Methods Through Storytelling and Virtual Reality

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1. Introduction

1.1 Project background

In its opinion of October 10th, 2018, the Committee on Industry, Research and Energy of the European Parliament underlined that "in a context of rapid digital and societal transformation, the education system should support, from an early age and throughout life, a balanced set of skills and competences boosting individuals' resilience, critical thinking, well-being, and innovation potential". Similarly, the Committee recognized that "a synergy between relevant digital skills and life skills, as well as key competences […] needs to be sought urgently".

Story Changers, an Erasmus+ project founded in 2020, aims at addressing this very challenge, that is, to enhance young pupils' social skills by "building a bridge" between storytelling and virtual reality, and by integrating such notions into a curriculum adapted to the primary education system. Storytelling, on the one hand, is in fact seen as a compelling tool to enable young students to develop a set of skills that will support and enrich their way towards adolescence and adulthood. In particular, this refers to life skills such as empathy, creativity, critical thinking, problem solving, acceptance of diversity, and self-consciousness among others. On the other hand, the introduction to new and innovative technology, which is rarely and, often, just partially offered in national education frameworks, intends to allow pupils to gain knowledge of the technological evolution, to upgrade their digital/ICT skills and, finally, to change stances as they have the opportunity to re-prioritize their needs towards the future.

1.2 The first step: a research of good and best practices

To achieve such goals, Story Changers set out, in March 2021, with desk research which aimed at identifying representative examples of good and best practices in three fields of interest: storytelling (ST), virtual reality (VR) and/or other technology for the development of social skills, and the combination of the two. More specifically, the consortium explored their various applications by focusing on their actual or potential impact in terms of enhanced teaching methods contributing to the development of pupils' basic social skills. But why focusing on good and best practices? One of the key factors which stands behind the idea of good and best practices, their development, implementation and sharing, is that they provide a path (or criteria) through which actions can achieve added value. By featuring positive change and innovation with evidence-based effectiveness and efficiency, they allow in fact stakeholders to test, adapt,

and implement new practices without, for instance, undertaking time-consuming "trial and error" phases. In this sense, the overall goal of this compilation is to provide the reader with the pool of resources that has guided Story Changers in its first steps towards the achievement of added value. Yet, despite the purely descriptive nature of this report, the study has addressed two main research questions:

- To what extent do storytelling, virtual reality, and the combination of the two contribute to the development of pupils' basic social skills – especially in primary education?
- What are the criteria that make each of these an enriching teaching method?

As mentioned, however, these questions represented a general starting point, a compass to guide the consortium in the first steps of the investigation and, therefore, were not considered as binding for the implementation of the research.

With regard to the geographical context of the research, this was not limited to practices which were implemented in the European Union (EU) solely; instead, to ensure comprehensiveness, the investigation was carried out by considering projects coming from all over the world. Similarly, in terms of the educational framework, the study did not simply account for projects which were developed in formal settings. In fact, storytelling and virtual reality both carry an important trait of innovation and creativity which, arguably, is likely to be better adapted in informal and non-formal settings. As far as the methodology is concerned, the study was largely based on literature review, documentary sources and quantitative data.

1.3 Project keywords

Storytelling
Virtual reality
Technology
Primary education
Social/soft skills
Non-formal education
Innovative teaching methods

Table 1: Story Changers' keywords

1.4 A working definition of "best practice" and a set of core criteria

The first challenge which faced the consortium was to identify a comprehensive working definition of a good/best practice so as to align understandings and ensure coherency throughout the research. Such a definition sought to reflect precise quality criteria in order to ensure an effective and critical evaluation of the various practices. In this sense, the consortium adopted a broad definition which combined and adapted two working definitions provided, respectively, by (1) a group of experts who worked on best practice collection and selection and which, upon a call by the EUDG for Health and Food Safety, adapted it to practices related to health promotion;[1] and (2) by the Public Policy and Management Institute which monitored, in 2015, a number of best practices in employment, social affairs and inclusion.[2]

Working definition of "best practice"

A best practice is a relevant policy or intervention implemented in a real life setting which meets a set of core criteria such as: effectiveness, transferability, sustainability, innovativeness and impact/added value, as well as the horizontal criteria of gender equality, non-discrimination, and inclusion of vulnerable groups.

1.5 Reporting of good and best practices

The desk research allowed the consortium to collect 28 examples of good and best practices which were developed and implemented by different entities – associations, research centers, schools, universities etc. – coming from all over the world (Australia, Canada, Colombia, Finland, France, Germany, Greece, the Netherlands, Norway, South Africa, South Korea, Spain, Sweden, US, Wales). In particular, 8 of them concern storytelling, 5 virtual reality, and 15 the combination of the two. Findings were reported in a table (see Annex) in a structured and easy-to-read way so as to address the following key points:

- Developer and participating organisations/partners involved in the development of the good/best practice

[1] European Commission Directorate-General for Health and Food Safety, *Criteria to Select Best Practices in Health Promotion and Disease Prevention and Management in Europe*, [https://ec.europa.eu/health/sites/health/files/major_chronic_diseases/docs/sgpp_bestpracticescriteria_en.pdf]

[2] Viltė Banelytė, Dalibor Sternadel, Haroldas Brožaitis [Directorate-General for Employment, Social Affairs and Inclusion], *Monitoring Good Practices in the Areas of Employment, Social Affairs and Inclusion: Report on examples of projects funded by DG EMPL in 2012-2015*, 2016. [https://ec.europa.eu/social/BlobServlet?docId=15424&langId=en]

- Main actors involved in the implementation of the good/best practice (stakeholders, policy makers etc.)
- Date of first implementation
- Duration of the best practice
- Field of the good/best practice (storytelling, virtual reality, combination of the two)
- Direct/ultimate target group
- Type of education related to the good/best practice (formal, informal, non-formal)
- Aim and objective
- Short description of the good/best practice
- Resources
- Impact
- Strengths and weaknesses
- Sources

1.6 Aim and structure of the Guide

As mentioned above, the overall aim of the present Guide is to provide the reader with the pool of resources which constitutes the first building-block of Story Changers. In this sense, this work puts together an aggregate report of each partner's research findings, so as to lay solid and theoretically-sound foundations to the integration of storytelling and virtual reality into a primary education curriculum.

To this end, in what follows, six good/best practices, two per field of interest, selected in light of their relevance with regard to the two research questions, are presented in more detail. In order to present an accurate and structured overview of these practices' development and implementation, each practice is broken down so as to evidence its objectives, target groups, a brief description of the content, the impact and some further highlights. Finally, the remaining 22 practices are available in the Annex for further consultation.

2. Good and Best Practices in the Field of Storytelling

2.1 Designing a creative storytelling workshop to build self-confidence and trust among adolescents

This creative storytelling workshop was created, in 2017, by the organization "Imagineo" in Lyon, France. The workshop was based on pedagogical mechanisms aiming at building self-confidence and trust in a non-clinical adolescent population. In this sense, participants were given the opportunity to invent stories based on their self-reflection and self-expression, to audio-record them and to create a finalized podcast. Besides creativity and storytelling, relevant elements of the workshop were a framework of positive psychology, the cooperative experience of small successes towards a shared goal, experiential learning, a balance between task types including movement, the creation of a safe and immersive space and an encouraging posture of the facilitators. As it concerns its implementation, the creative storytelling workshop was carried out in a format of three sessions, lasting three hours each. Its structure featured an alternation of plenary sessions and small group work. During the former, group dynamics could be initiated and positive interactions among participants could be experienced. Subsequent phases of creation in small teams allowed the participants to reproduce the dynamics they had experienced in the plenary sessions, while creating their stories in a more intimate and more autonomous setting. This structure aimed at giving the participants the opportunity to gradually open up to themselves and others, experience interactions with fellow participants in more or less controlled settings, while enjoying to co-create the stories. The creative process integrated a strong component of self-reflection and self-expression, facilitated through a storytelling approach. Participants gathered in groups of three based on a signature strength they had in common, and they assigned it to the hero of their story. They created a scenario where the hero put his/her strength into action, and a second one where the hero used it to help out a hero from a fellow group. This procedure was designed to give participants the opportunity to become aware of their own possibilities through the experience of an imagined character. They got their inspiration for their fictional stories from a reflection on their own strengths and weaknesses and on the values they stand for. Self-reflection and self-expression were facilitated through back and forth moves between reality and fiction during the course of the workshop. A series of exercises led participants from becoming aware of themselves and acknowledging their strengths and weaknesses, to progressive self-disclosure in front of the group. The creative storytelling workshop gave the participants the opportunity to express what made sense to them and to actively listen to fellow participants, under the pretext of

fueling their stories. The groups shared their creations at several stages of the workshop, leading them to get used to speak to an audience and to take creative risks.

Practice highlights

The feedback of the participants suggests that the workshop increased their self-confidence, especially in terms of communication, technical and creative skills. Indeed, they declared they overcome "the fear of talking to people", their "shyness", and the challenge of "speaking in front of everyone", and they felt gifted "in the use of the software", "in recording", "as an actress" and "creatively". Furthermore, participants acknowledged that the workshop led them to collaborate with others: they met the challenge of the group work and they overcame the "reluctance to trust people". They also reported having "met new people" and "made friends" during the workshop. Finally, the participants had fun participating in the workshop: they declared having "good times" and left "in a good mood", with "good memories" and with "happiness". The results show that the experience provided to the participants during the workshop positively impacts several of the measured components of self-confidence and trust. Indeed, the above-mentioned quantitative results reveal a statistically significant improvement at the end of the workshop for the self-confidence items relating to confidence in learning (growth mindset) and speaking, as well as the trust items referring to the willingness to rely on others in challenging situations. The concepts of self-confidence and trust were specifically mentioned by teenagers although the objectives of the workshop had not been revealed to them. In terms of their perceived achievements during the workshop, they did not only refer to their tangible results (e.g. production of stories) but underlined the effect of the experience on their personal growth (e.g. overcome their shyness).

2.2 Silence speaks

"Silence Speaks" (1999) is a meaningful and touching initiative launched by the organization "Story Center", Berkeley, California, USA, which has promoted and developed contents from all over the world as part of a global storytelling movement. Story Center collaborates with a wide range of actors which are active in the fields of health, human rights, social justice, arts, culture and history, education and civic engagement. In particular, Silence Speaks "surfaces first-persons narratives of struggles, courage and transformation" so as to ensure that these stories play an instrumental role in the promotion of gender equality, human rights, and health. In this sense, the productions of the project aim at supporting the healing and witnessing of stories which often remain unheard and unspoken. In the framework of the

initiative, this is done through intensive, hands-on participatory media workshops which facilitate the creation of videos, radio pieces, and photo essays. Workshops are run following a concrete combination of oral history, creative writing, art therapy, leadership development, and participatory media practices. A typical session brings together a group of eight to ten people who are guided through a process of:

- sharing personal experiences from their own lives and offering feedback to one another during a carefully facilitated "Story Circle";
- recording individual voiceover narration;
- gathering and/or creating still images and video clips (through on-site or location photography and videography and/or drawing and painting activities);
- learning via hands-on computer tutorials to edit these materials into completed videos.

Each workshop ends with a story screening, appropriate closure activities, and time for storytellers to celebrate their accomplishments.

Project outputs can therefore include:

- web and social media-ready videos
- customized web presentations of stories
- radio or podcast productions integrating stories
- print publications or billboards featuring story content
- story-based discussion guides and curricular materials
- story collections on playable DVD

Practice highlights

Silence Speaks has led more than 25 storytelling and participatory media projects in locations around the world, including Australia, Belize, Brazil, Canada, Ethiopia, Ghana, Guatemala, Kenya, Mexico, Nepal, Papua New Guinea, Republic of Congo (Congo-Brazzaville), South Africa, Tajikistan, and Uganda. Its teaching methods are grounded in the popular education technique of "starting from where people are". The Story Circle, in addition, supports participants in reflecting on their own memories and life circumstances as well as on those shared by others in the group, thus building connections and solidarity. Careful one-on-one work with participants focuses not only on technical concerns but also on embodied and emotional experience, and on teasing out the relationship between personal and historical and

political contexts. Relevant additional educational, leadership development, or other skill building activities are often provided in the framework of such workshops. Furthermore, Silence speaks pays particular attention to diversity within the group of participants and often considers, for instance, bringing in local co-trainers to provide language interpretation/translation support and other assistance. The participants, in fact, are encouraged to have a sense of agency and control in the telling of stories.

3. Good and Best Practices in the Field of Virtual Reality

3.1 Charisma

"Charisma" (2019) is a virtual simulation platform which is combined with a cognitive training program. Developed by the Brain Performance Institute at the Center for Brain Health of the University of Texas in Dallas, USA, with the involvement of cognitive neuroscientists, clinicians, and game developers, the program aims to help users increase their social adeptness. The direct target group is represented by youth from eight years old and adults who:

- withdraw or become isolated in social settings
- combat fear in starting or maintaining a conversation
- struggle with working in groups and negotiating with peers
- have trouble expressing positive emotions to others
- experience difficulty connecting to others related to a diagnosed neurodevelopmental difference such as ADD/ADHD, Autism Spectrum Disorder, Social Anxiety and other social, emotional or behavioural challenges

In more detail, through the clinicians' guidance in engaging in complex social situations in the safe environment of the virtual world, participants develop confidence and adopt behavioural changes that have shown to translate into real-word interactions. The main objectives are for participants to improve their ability to:

- initiate and maintain conversations
- navigate peer relationships
- identify emotions and intentions

- manage confrontation and peer pressure
- integrate social skills into daily life

To achieve these objectives, Charisma entails a game-based, virtual training which allows practice with real-time simulation of social interactions at varying levels of complexity. Participants, in fact, receive live, interactive coaching from licensed clinicians. The training starts with a complimentary consultation with participants. During the sessions, a Charisma clinician guides the participating child/adult through real-world scenarios in a virtual world setting. The user interacts with others, receives clinician advice and strategies, then applies that coaching in real time. Trainers, in this sense, teach science-based strategies that boost social brain health and performance. Relevant, customised feedback in real time is provided by a live "Charisma Coach", which includes a personalised summary of social strengths, weaknesses, and progress. After the completion of the 10-hour training, booster sessions can be offered.

Practice highlights

Out of 120 youth ages 8-16 who completed the Charisma for Youth training, 86% were able to better understand others' points of view; 71% improved their ability to start a conversation; 100% demonstrated improvements in maintaining conversations; 90% were able to better recognize emotions; 86% reported having stronger relationship-building skills after completing the training. Overall, the program benefitted users facing self-assertion challenges (e.g. bullying situations) and other social learning deficits (i.e. not recognizing social cues, difficulty working in groups, extreme shyness). As it concerns its strengths, Charisma is remotely accessible from home, school, or the organization's computer. It is an innovative approach that uses research-proven strategy-based learning, while the combination of the virtual platform, cognitive strategies and customised coaching allows the personalization of each session. In addition, learners experience social interactions in a safe environment. Finally, unlike other virtual simulation programs, Charisma users always interact with a live, licensed clinician.

3.2 The 360 Workshops: virtual reality to help teens with social and emotional learning

The project "360 workshop" (2018), was developed by the Jasmin Roy Foundation, Quebec, Canada, in collaboration with the Institut Pacifique of the Sherbrooke University, to support high school teachers addressing issues such as violence and bullying. More precisely, through a series of 75-minute-long

workshops, the program aims at using virtual reality to foster empathy and consideration for others in conflict, violent and bullying situations in order to achieve meaningful, integrated and sustainable learning. The objectives of 360 Workshops are:

- To create a forum for discussion with students on social and emotional learning (SEL)
- To stimulate reflection and discussion on creating conditions that promote social and emotional learning (SEL) in schools
- To promote the adoption of healthy emotional and social lifestyles among students
- To document the effects and feasibility of the large-scale use of virtual reality technology with high school students

The 360 Workshops activity consists of three virtual reality videos presented to students. Each video addresses a specific set of skills. By using the facilitators guide, an external facilitator, who is familiar with virtual reality technology and social and emotional learning (SEL), leads the video viewing and ensuing discussion on various skills related to the prevention of violence and bullying. Questions to be asked after the viewing of the videos are included in 360 Workshops Booklet 4 "Practical Application to Everyday Life", as well as examples of everyday situations where students may apply what they have learnt.

Practice highlights

The practice evidences how VR environments and characters can cultivate empathy and perspective, social attitudes and behaviors, and wide range of emotions, as VR can depict everyday situations in a quite reliable and accurate way.

4. Good and Best Practices in the Combined Fields of Storytelling and Virtual Reality

4.1 Interactive storytelling in a mixed reality environment: The effects of interactivity on user experiences

"Interactive storytelling in a mixed reality environment" is the title of a paper describing an experimental study that was performed in the fully realised interactive story ''Eat me, drink me" which was inspired by one of the chapters from the narrative *Alice's Adventures in Wonderland* as part of the interactive mixed reality ALICE installation. This was developed in the mid-2010s' by the Department of Industrial Design of the Eindhoven University, The Netherlands, and saw the participation of forty-one university students from 18 to 33 years old. The study aimed at investigating the user interaction and measure the overall experience in three conditions:

- with a fully interactive environment (IE),
- in a non-interactive, but dynamic setting (NIE), and
- in a non-interactive setting with minimal stimuli.

The experiment is based on the original narrative of *Alice's Adventures in Wonderland*: Alice enters a room with doors all around that differ in size. She finds a key that unlocks one small door, but she is too big to fit through it. After she drinks and eats, she undergoes several changes, she grows and shrinks. Eventually she has the right size and the key from the small door. The participants find themselves trapped in a cubical room and in order to continue in the installation (and narrative), they need to find the right relationship between their size and the room, and need to acquire the key to "open" the exit door. The participants were invited to take part to the "Alice's Adventures in Wonderland" and they were led into the room with the instruction to "have fun". It was not mentioned to the participants that it is an interactive environment, or how and when they should find the way out from the VR room. As mentioned above, they experienced one of the following interaction modes:

- Interactive environment (IE): the environment used all the available interaction features. The interactive setting was designed to give a range of feedback and feedforward messages from the story characters. The feedback was implicit and depended on the actions of the user in the physical environment (walking, standing, drinking, taking cookie). For example, the steps of the

participants were coupled with sound design simulating a wooden floor; a narrator voice gave feedback on the behavior of the participant over longer time (by observing if he walks or stands in the environment). Explicit feedback was given by a doorknob: if the participant does not find the exit, after ten minutes, the doorknob points out which actions can be taken in order to finish the intended story plot.

- Non-interactive environment (NIE): a pre-programmed scenario of the story plot was played without taking in consideration the behavior of the user.
- Non-interactive with minimum stimuli (NIMS): A preprogrammed scenario of the narrative that involves minimum stimuli was played.

Practice highlights

The experiment measured the participants' experiences through self-reports given in different questionnaires, and the participants' behavior through recording and observation, in matters of presence, agency satisfaction, and behavioral measures. The results showed that the different treatments, i.e., interaction types, did not influence the feeling of presence and the satisfaction visitors gained from the experience. Through observation of the actions of the users and by quantifying the number of actions clear differences appear in the users' behavior. The participants that were immersed in a non-interactive environment (NIE) were more active and tried out more interaction possibilities (touch, walk, look around). The participants who experienced minimum stimuli in a non-interactive environment (NIMS) did not perform as many actions, instead they would rather stand and look around. The participants in the non-interactive environment (NIE) more often showed confusion and frustration, while the participants in the interactive environment (IE) seemed satisfied every time they discovered an interaction asset. The stimuli provided by the environment evoke different behaviors and with that also a different personal user experience. In the interactive setting (IE) everyone had slightly different experience depending on the triggered stimuli and the actual context. Not everyone would reveal all of the events from the narrative, e.g. the virtual garden was visible only if the participant approached the small VR door and had the key. The findings show that immersiveness does not necessarily depend on the modality of the stimuli, but instead on their time density. The study thereby contributes to our knowledge about the design of interactive and mixed reality spaces, and how the responsiveness and the amount of stimuli induce or bias behavior and experiences.

4.2 Props: 3D-game-like mediator for improvisational storytelling

This program was developed by the Urban Computing and Cultures Group of the Department of Computer Science and Engineering of the University of Oulu, Finland. In more detail, Props is a 3D-game-like system for mediating collaborative and improvisational storytelling which target various audiences from different age groups who used Props and, in particular, children participating in the 2013 Oulu Improvisational Theatre Festival. The latter used Props to explore the narrative potential of Props and, in particular, three field trials involving eight separate storytelling events were conducted where Props was played by audiences from different age groups. As it concerns its implementation, Props combines a virtual 3D stage and the surrounding physical world into a hybrid space for storytelling. In detail, as a platform for storytelling, Props first creates a virtual 3D scene depicting a performance stage that is modeled in detail after a real-world performance stage at downtown Oulu, Finland. The virtual stage is presented to the audience in a suitable manner, for example on a laptop screen, as a large-scale projection or in a computer assisted virtual environment (CAVE). Together with the surrounding real world, the virtual stage establishes a hybrid space for collaborative storytelling. A prop master sets the stage for a story with a computer, by selecting from an inventory of virtual 3D assets a background, a scene and various objects and effects, i.e. virtual props placed on the virtual stage. The props serve as cues to a narrator who narrates the story by speaking or acting. The interactive and collaborative process of staging, narrating and acting goes on until the players agree that the story has been told. In its simplest form, Props can be played by two people, a prop master and a narrator, with a laptop. However, Props has been targeted to larger audiences so that the virtual 3D stage is projected onto a large flat surface or on the multiple walls of a CAVE, and the members of the audience dynamically take different roles during storytelling.

Practice highlights

The study proved that immersive settings, guidance and the available inventory of visual elements, have significance to the narrative potential and the enjoyment of participants in storytelling events mediated by a hybrid storytelling system. The younger participants seemed to prefer easier choices and fast shifts in the resulting narrative. Yet, the same storytelling system was able to cater for also older participants in an enjoyable manner that resulted in a meaningful narrative.

5. Conclusions

Through the overview of these six good/best practices, it is safe to say that, due to their very nature, storytelling and virtual reality can be applied in multiple fields: education, communication and self-expression, trauma recovery, community or social relationship-building etc. Whether their implementation being for educational, therapeutical, clinical, or simply recreational purposes, in fact, ST and VR can be found where the need or intention to create arises. In this sense, it can be argued that the two methods are "open enough" to allow their application to achieve a large number of goals and, especially, to awaken the imagination of people and foster emotional, psychological and skills development. The findings, in fact, show how ST and VR represent compelling means to boost and cultivate empathy, problem-solving skills, team-work, self-reflection and expression, as well as to face self-assertion challenges and learning difficulties. For example, one of the reasons which stands behind this last point can be traced back to the assessment of the "360 Workshops", which highlighted how VR environments and characters are able to capture a large range of attitudes, behaviours, and emotions in light of their ability to depict everyday situations in a filtered, and yet reliable and accurate way.

As far as the effects are concerned, the study shows that these are not independent from the composition of the target group, the aim, and the framework of the practice. In the case of "Props", for instance, it is well established that immersive settings, guidance, and the available inventory of visual elements, had particular significance to the narrative potential and the enjoyment of younger participants. Nonetheless, "Interactive storytelling in a mixed reality environment" invites all practitioners to bear in mind that the responsiveness and the number of stimuli provided by a VR environment can and do induce or bias behaviour and experiences, regardless of the age-range of the participants. Although apparently trivial, this suggests that the adaptation of the settings to the learning situation and the target group is paramount. Similarly, two preliminary questions seem to be essential when considering the application of storytelling in the educational field: will storytellers – students - create individual and real stories – as in the case of "Silence Speaks" - or rather common and fictitious ones - as in the case of the "Creative storytelling workshop"? The answers, once again, are likely to depend on the target that the educator wants to reach, and the foreseen learning outcomes. The examples that were chosen for the purpose of this guide seem to suggest that, in the case of younger age groups, it may be more appropriate to consider the use of fictitious stories and tales created together. In conclusion, both storytelling and virtual reality represent ways of conveying a message with a combination of speech, sounds, visuals, movements and

imagination. Together they bring to the same table one of the oldest inclinations of human beings – creating and telling stories – and one of the newest technologies available – that of creating virtual and interactive environments. As pointed out by Joe Lambert, founder of Story Center, this is an overwhelming feature of the 21st century, where we deal with such rapid change, while the changes inside us are slow and almost "evolutionary". It is, in a way, for this very reason that educators need to promote and find innovative ways to support the parallel development of pupils' digital and life skills and, as it has been argued, ST and VR can and do play an important role in this sense.

ANNEX: Best Practices in the Fields of Story Telling and Virtual Reality in Primary Education

Best Practice 1: Cairns

TITLE OF BEST PRACTICE	**CAIRNS**
Identified by (partner)	EUROCIRCLE (France)
Developer and participating organisations/partners in development of best practice (name and country)	**Developer:** Studio Bruyant, France
	Participating organisations/partners: La Gaîté Lyrique (France -main partner), KIKK (Belgium), Cinekid (Netherlands), Woelab (Togo)
Main actors involved in implementation of best practice (stakeholders, policy makers etc.)	Not specified
Date of first implementation of best practice	2018
Duration of best practice	1 year
Field of best practice	☐ Storytelling (ST) ☒ Virtual reality/technology (VR) ☐ Combination of ST and VR
	Direct TG: not clearly defined (+8)

Direct/ultimate target groups (TG)[3] of best practice	**Ultimate TG:** not clearly defined (+8)
Type of education related to best practice	☐ Formal ☒ Informal ☐ Non-formal
Aim and objectives of best practice (min. 150 words max. 250 words)	The ultimate aim of the game can be summed up in the intention of raising awareness on the importance of mutual aid and constant exchange between the players. The game, in fact, proposes a double collaboration, a physical experience based on the body, the space and the trust in one's teammates; but also an "invisible" mutual aid based on the constant exchange between the two teams. The interactions of the two teams is, in this sense, the main objective of the game.
Short description of best practice – context and notable aspects (min. 250 words max. 500 words)	Cairns was created as part of a European cooperation project, "Les voyages de Capitaine future". As stated in the website, the latter approaches society from three different angles: it considers as an audience in their own right, digital technology as a cultural discipline, and art as a laboratory for the future. The game, in particular, was created for the exhibition *Capitaine Futur et la Supernature,* 2018*,* in Paris. Cairns is a two-teams collaborative installation/game. Each team controls a creature by moving around the floor. With the mode "multi-players", the team members will have to be careful to stay in sync. They have to avoid obstacles and collect as many stones as possible scattered on the ground. These stones symbolise the cooperation between the two "creatures". When one of them comes across a cairn, it must send it to the other. The game thus proposes a double collaboration, a physical experience based on the body, space and consciousness of one's

[3] In the Story Changers project, for example, the distinction between direct and ultimate target group refers, respectively, to the teachers who will benefit from the innovate teaching methods, and the pupils who will then acquire basic social skills.

	teammates; but also an invisible mutual aid based on the constant exchange between the two teams. It is a graphic experience, a dive into a cosmic, fantastic and psychedelic universe, where the actions and interactions of the players will make the universe evolve, incident on the fauna and flora, until finding this primary harmony. Capitaine futur et la supernature: https://gaite-lyrique.net/evenement/capitaine-futur-et-la-supernature
Resources (human, material, equipment, infrastructure etc.) for application of best practice	Not clearly identified Not available
Impact of best practice (min. 250 words max. 500 words)	I couldn't find the number of people who participated at the event "Capitaine futur et la supernature".
Strengths and weaknesses of best practice (min. 250 words max. 500 words)	**Strengths:** the game seems particularly intriguing and catchy. The story and the objectives are simple and easy to get but, from what is shown in the videos provided in the website, the game proposes a very immersive, active and interactive experience. A part from eventual specifics of the game, the main strategy for players to succeed is collaboration and sharing.
	Weaknesses (please include also any suggestions for improving the practice): The game was developed in the framework of a European project which could count on a very solid partnership with specific, well defined medium-long term learning objectives for the target group (children, +8). In this sense, Cairns represents just a small part of a wider programme which, from what can be seen in the website of the project Capitaine futur, is made of complementary activities. In other words, Cairns may lose some of its appeal and significance if taken out of the project's context.

Additional information about best practice	N/A
Source of information of best practice	Cairns: https://www.studiobruyant.com/fr/portfolio/cairns/ Les voyages de Capitaine futur: https://capitainefutur.voyage/en/le-projet/quoi

Table 2: BP 1 - Cairns (Eurocircle)

Best Practice 2: Silence Speaks

TITLE OF BEST PRACTICE	**Silence Speaks**
Identified by (partner)	EUROCIRCLE (France)
Developer and participating organisations/partners in development of best practice (name and country)	**Developer:** StoryCenter, California, US
	Participating organisations/partners: Silence Speaks has promoted and developed contents from all over the world (see list of partners below)
Main actors involved in implementation of best practice (stakeholders, policy makers etc.)	As part of a sort of a global storytelling movement, Story Center collaborates with a wide range of actors which are active in the fields of health, human rights, social justice, arts, culture and history, education and civic engagement. List of partners: https://www.storycenter.org/clients
Date of first implementation of best practice	1999
Duration of best practice	On going
Field of best practice	☒ Storytelling (ST)

	☐ Virtual reality/technology (VR) ☐ Combination of ST and VR
Direct/ultimate target groups (TG)[4] of best practice	**Direct TG:** Local communities
	Ultimate TG: young people, elders, educators, activists, museums
Type of education related to best practice	☐ Formal ☒ Informal ☐ Non-formal
Aim and objectives of best practice (min. 150 words max. 250 words)	Silence Speaks surfaces first-persons narratives of struggles, courage and transformation and works to ensure that these stories play an instrumental role in promoting gender equality, human rights, and health. The productions of the project aim at supporting the healing and witnessing of stories which often remain unheard and unspoken. Through intensive, hands-on participatory media workshops, SilenceSpeaks supports people in sharing first-person stories from their own lives, in the form of videos, radio pieces, and photo essays. In this sense, the objective is to carry out thoughtful and impactful approaches to story distribution. This has shown, according to StoryCenter, that stories by individuals can bring attention to the structural roots of poverty, gender oppression, and violence, in ways that demand accountability and change at community, institutional, and government levels.
Short description of best practice – context and notable aspects (min. 250 words max. 500 words)	Since 1999, StoryCenter's Silence Speaks initiative has fostered healing for individuals, solidarity building within communities, and training and advocacy for public health and human rights promotion. Workshops are run following a concrete combination of oral history, creative writing, art therapy, leadership development, and

[4] In the Story Changers project, for example, the distinction between direct and ultimate target group refers, respectively, to the teachers who will benefit from the innovate teaching methods, and the pupils who will then acquire basic social skills.

	participatory media practices. A typical session brings together a group of eight to ten people who are guided through a process of: • sharing personal experiences from their own lives and offering feedback to one another during a carefully facilitated "Story Circle,"; • recording individual voiceover narration; • gathering and/or creating still images and video clips (through on-site or location • photography and videography and/or drawing and painting activities); • learning via hands-on computer tutorials to edit these materials into completed videos. Each workshop ends with a story screening, appropriate closure activities, and time for storytellers to celebrate their accomplishments. Project outputs can include: • web and social media-ready videos • customized web presentations of stories • radio or podcast productions integrating stories • print publications or billboards featuring story content • story-based discussion guides and curricular materials • story collections on playable DVD
Resources (human, material, equipment, infrastructure etc.) for application of best practice	N/A
Impact of best practice (min. 250 words max. 500 words)	Since its first implementation, Silence Speaks has led more than 25 storytelling and participatory media initiatives in locations around the world, including Australia, Belize, Brazil, Canada, Ethiopia, Ghana, Guatemala, Kenya, Mexico, Nepal, Papua New Guinea, Republic of Congo (Congo-Brazzaville), South Africa, Tajikistan, and Uganda.

	https://static1.squarespace.com/static/55368c08e4b0d419e1c011f7/t/5ac44dc9575d1fea45244baf/1522814410439/Impacts_Rev_3-2018..pdf
Strengths and weaknesses of best practice (min. 250 words max. 500 words)	**Strengths:** the productions of the project – videos, podcasts etc. – seem at the same time easy to implement and very powerful. The division into subjects/contents offers an easy and accessible navigation experience through the website. The individual stories which are told are extremely powerful and listeners can relate to them – which makes them an incredibly effective tool for empowerment. Stories are often short (scripts often range between 150 and 500 words) and the videos do not always contain a lot of imagines. The structure of the stories is always effective providing, for example, a "hook" in the beginning and a "payoff" in the end.
	Weaknesses (please include also any suggestions for improving the practice): Videos can result a bit repetitive at a certain point.
Additional information about best practice	N/A
Source of information of best practice	https://www.storycenter.org/ss-about

Table 3: BP 2 – Silence speaks (Eurocircle)

Best Practice 3: KidPad

TITLE OF BEST PRACTICE	**KidPad**
Identified by (partner)	EUROCIRCLE (France)
	Developer: University of Maryland

Developer and participating organisations/partners in development of best practice (name and country)	**Participating organisations/partners:** University of Nottingham (UK), Royal Institute of Technology (Sweden), Swedish Institute of Computer Science (Sweden) – project "KidStory" (https://www.ri.se/sv)
Main actors involved in implementation of best practice (stakeholders, policy makers etc.)	Human computer interaction lab – University of Maryland A team made of seven children, age 7 to 11, and a team of researchers of computer science, art, education, robotics.
Date of first implementation of best practice	1995
Duration of best practice	Still going
Field of best practice	☐ Storytelling (ST) ☐ Virtual reality/technology (VR) ☒ Combination of ST and VR
Direct/ultimate target groups (TG)[5] of best practice	**Direct TG:** Children
	Ultimate TG: Children
Type of education related to best practice	☐Formal ☒ Informal ☒ Non-formal

[5] In the Story Changers project, for example, the distinction between direct and ultimate target group refers, respectively, to the teachers who will benefit from the innovate teaching methods, and the pupils who will then acquire basic social skills.

Aim and objectives of best practice (min. 150 words max. 250 words)	To enable children to create non-linear stories to express their thoughts visually. It further supports collaboration between children. Specific goals: • To develop tools that support visual and verbal literacy • To support collaborative learning experiences for children • To provide expressive storytelling tools for children
Short description of best practice – context and notable aspects (min. 250 words max. 500 words)	KidPad research began in 1995 at the University of New Mexico. There children played with Pad++ a zoomable computer environment created for adults by researchers at New York University and the University of New Mexico. Although Pad++ was not designed for children, they were immediately excited by the visual zooming environment. Data was collected from notes made by children and adults and video recordings of the children playing with Pad++. Based on this data, "local tools" were developed for children. Children used these tools and then brainstormed new ideas for KidPad using participatory design techniques. KidPad is a collaborative story authoring tool for children. It provides basic drawing functionality on a zooming canvas enabled by Jazz. The narrative structure of a story is defined by creating spatial hyperlinks between objects on the canvas. Instead of using a standard WIMP (Windows, Icons, Menus, Pointer) user interface, KidPad uses local tools that can be picked up, used and dropped anywhere on the drawing surface. The local tools interface and MID, a Java library developed at the University of Maryland, allows KidPad to support shoulder-to-shoulder collaboration. If multiple USB mice are connected to the computer each mouse will control a tool in KidPad, making it possible to let several children simultaneously create a story together.
Resources (human, material, equipment, infrastructure etc.) for application of best practice	N/A

Impact of best practice (min. 250 words max. 500 words)	Over 100 children in Sweden and England have influenced the development of KidPad. In primary school classrooms children and adults have used cooperative inquiry techniques to develop new tools and interfaces.
Strengths and weaknesses of best practice (min. 250 words max. 500 words)	**Strengths:** N/A
	Weaknesses (please include also any suggestions for improving the practice): N/A
Additional information about best practice	N/A
Source of information of best practice	http://www.cs.umd.edu/hcil/kiddesign/kidpad.shtml

Table 4: BP 3 - KidPad (Eurocircle)

Best Practice 4: Capture Wales, UK

TITLE OF BEST PRACTICE	**Capture Wales, UK**
Identified by (partner)	EUROCIRCLE (France)
Developer and participating organisations/partners in development of best practice (name and country)	**Developer:** BBC Wales
	Participating organisations/partners: Cardiff University
Main actors involved in implementation of best practice (stakeholders, policy makers etc.)	Researchers, journalists, local communities

Date of first implementation of best practice	2001
Duration of best practice	2001 - 2008
Field of best practice	☒ Storytelling (ST) ☐ Virtual reality/technology (VR) ☐ Combination of ST and VR
Direct/ultimate target groups (TG)[6] of best practice	**Direct TG:** local communities in Wales
	Ultimate TG: BBC viewers/users
Type of education related to best practice	☒ Formal ☒ Informal ☐ Non-formal
Aim and objectives of best practice (min. 150 words max. 250 words)	As stated in the research that followed the implementation and tried to analyse the results of the project, Capture Wales aimed at making an original and sustainable contribution to community self-expression. The main objective of the project was to enable individuals of any age to make and edit short videos of quality concerning their personal stories and their community. This implied a double intention: firstly, to allow participants to develop a range of digital skills -and therefore to foster so-called "digital inclusion"- and to enhance the sense of community itself.
Short description of best practice – context and	Capture Wales is a BBC's award-winning Digital Storytelling project. It ran monthly workshops between 2001 and 2008 facilitating people in the making of their digital stories. In particular, workshops were

[6] In the Story Changers project, for example, the distinction between direct and ultimate target group refers, respectively, to the teachers who will benefit from the innovate teaching methods, and the pupils who will then acquire basic social skills.

notable aspects (min. 250 words max. 500 words)	coordinated by skilled facilitators and allowed participants to create multimedia narratives, short videos telling personal stories of challenge, family, community and passion, all in first person. The structure of the contents produced is, to use the words of one of the developers, "tight as that one of a sonnet": script of approximately 120 words, a dozen pictures, and a duration of about 2 minutes.
Resources (human, material, equipment, infrastructure etc.) for application of best practice	N/A
Impact of best practice (min. 250 words max. 500 words)	According to the above-mentioned research, Capture Wales produced more than 800 stories and its workshops were seen as an "overwhelmingly positive experience": teamwork seems to have had a supportive, therapeutic or counselling role, and more than 50 per cent of the participants confirmed an advancement in terms of digital skills.
Strengths and weaknesses of best practice (min. 250 words max. 500 words)	**Strengths:** as for the project Silence Speaks, Capture Wales combines an easy digital storytelling structure/tools with powerful contents. The result is powerful and often touching. Beside the crucial importance of the contribution of the facilitators in the workshops, this kind of "frame" to storytelling seems easy to reproduce.
	Weaknesses (please include also any suggestions for improving the practice): implemented for the first time 2 decades ago, the tools used in the project may result a bit outdated.
Additional information about best practice	N/A
Source of information of best practice	http://www.photobus.co.uk/digital-storytelling/#cymru http://www.bbc.co.uk/wales/arts/yourvideo/queries/capturewales.shtml

	The research: https://core.ac.uk/download/pdf/19397578.pdf

Table 5: BP 4 – Capture Wales (Eurocircle)

Best Practice 5: Designing art with thinglink

TITLE OF BEST PRACTICE	**Designing art with thinglink**
Identified by (partner)	AGUILERA (Spain)
Developer and participating organisations/partners in development of best practice (name and country)	**Developer:** Daniel López Ramírez and Meritxell Picón
	Participating organisations/partners: Escola Sant Josep (Terrassa, Barcelona)
Main actors involved in implementation of best practice (stakeholders, policy makers etc.)	At Sant Josep's School an internal project about creative writing has been carried out this school year in the 5th grade class. It was seen that boys and girls had a hard time making written expressions because they did not find a source of motivation, and, therefore, they took it as an obligation. From this point forward we decided to create a project entitled CREAWRITE, in which the written expression classes would have an innovative character in terms of the use of new technologies or activities that promote writing for pleasure. Therefore, and being a primary school, we have believed convenient to attach many of the activities that we have done ourselves in relation to storytelling. We believe that the intrinsic motivation of the students to do the different activities proposed is key to promote a meaningful learning.
Date of first implementation of best practice	This activity was carried out for the first time on March 15th, 2021.

Duration of best practice	The activity lasted a week. Several hours were spent explaining the Thinglink application, choosing the picture they wanted to comment and doing a subsequent discussion to draw conclusions and be able to read the compositions of the other colleagues, thus promoting, in addition to writing for pleasure, reading.
Field of best practice	☐ Storytelling (ST) ☐ Virtual reality/technology (VR) ☒ Combination of ST and VR
Direct/ultimate target groups (TG)[7] of best practice	**Direct TG:** Higher cycle language commission, made up of 5th and 6th grade tutors
	Ultimate TG: 5th grade students who were the ones who implemented and carried out the activity.
Type of education related to best practice	☒ Formal ☐ Informal ☐ Non-formal
Aim and objectives of best practice (min. 150 words max. 250 words)	The main objective of this activity was to promote the motivation, imagination and the writing for pleasure and not for obligation. Although it may seem that the grammatical content, the spelling and formal aspects of writing should be the main focus, we consider that it is more important to motivate the students to do the activity, and then, when we have that item achieved, focus on the specific objectives that are related to the content of the language. In addition, the correct use of new technologies is encouraged. Students are used to use them daily, but the use they give them is rarely related to educational applications or resources. Therefore,

[7] In the Story Changers project, for example, the distinction between direct and ultimate target group refers, respectively, to the teachers who will benefit from the innovate teaching methods, and the pupils who will then acquire basic social skills.

	schools must be committed to an educational and useful use of new technologies for the future of students, through motivating applications. Thus, this activity has a transversal character, since thanks to it, aspects of many areas of knowledge are worked on: - Language: Spelling, grammar, formal aspects, presentation, adequacy and coherence of the text ... - Art: On one hand, the artistic work with its authorship, the year of realization and the artistic movement, and on the other hand the design that each student makes of their own final result. - Informatics and innovation: The use of new technologies and online applications makes this activity bet on a digitized education, which we consider to be the future of education.
Short description of best practice – context and notable aspects (min. 250 words max. 500 words)	This activity was developed as follows: First, students must choose a piece of art from any artistic period. The idea is that first, they have to explain the basic information of the work (title, author, year, artistic movement and other aspects of interest). Afterwards, the creative part of the activity will be carried out, in which the students will have to relate, in a free and imaginative way, what they think is happening in the scene (in a narrative form). Therefore, when they have all this information captured in an online document and it has been reviewed by the teachers who teach the language course, the teachers will explain how the Thinglink application works. This resource is an interactive application that allows editors, educators, journalists, bloggers, etc. to create more attractive content by adding links such as videos, music and audios in general, web pages, photos and texts; enriching the graphic material they present.

	This tool is not only being applied to the educational field but also in the journalistic field. An example would be: https://www.thinglink.com/scene/627980463654305792 As can be seen, the students can capture the chosen work in the background and introduce, in different vignettes, everything they want to add. In this way, they will be able to introduce all the aspects that have been discussed previously. Finally, there will be a short oral presentation so each student can explain their work to the rest of the class and read the basic information about it and the creation of the story that they consider to be happening in the scene. Thanks to this application, teachers can: • Create images for class explanations with the contents that we are going to show to the students, propose analysis activities for class related to images: History, Literature, Experiments, Science Reports, etc. • Create compilations of links, videos and resources related to any class topic. • Create personal profiles with our photo and musical tastes, educational interests, cultural concerns, etc. • Add interactivity to timelines The website for this application is as follows: https://www.thinglink.com This application, everything and that has been made with students of 9 and 10 years, we consider that it has many possibilities to work with all types of students, either as visual material for the little ones, and as material for creating and preparing content for the oldest. Finally, there will be a short oral presentation so that each student can explain their work to the rest of the class, read the basic

	information about it and explain the story that they consider to be happening in the scene. Thanks to this application, teachers can: • Create images for their class explanations with the contents that we are going to show to students, propose analysis activities for class related to images: History, Literature, Experiments, Science Reports, etc. • Create compilations of links, videos and resources related to any class topic. • Create personal profiles with photos and musical taste, educational interests, cultural concerns, etc. • Add interactivity to timelines The website for this application is as follows: https://www.thinglink.com This application, although it has been tried with students of 9 and 10 years old, we consider that it has many possibilities to work with all types and ages of students, for example with visual material for the little ones, and material for the creation and elaboration of content for the oldest. It is a very intuitive and easy-to-use platform. Thus, this activity was carried out in a school week, in 5 hours spread over 1 hour a day): - 1st hour: Choice of the painting, introduction of general information in a document and outline of the creative story. - 2nd hour: Writing of the creative story and subsequent review by the teachers. - 3rd hour: Explanation of the Thinglink platform and introduction of the written text. - 4th hour: Introduction of the information in Thinglink and design of our presentation.

	- 5th hour: Putting in common the stories students made and brief explanation of the work.
Resources (human, material, equipment, infrastructure etc.) for application of best practice	As resources we find: - Humans: Teachers who will carry out the activity with the 5th grade students. These teachers will adopt the role of learning guides, leaving the students themselves to carry out all the activity and intervening only if a student has a problem or does not know how to function. - Material: Computers and iPads with Internet connection, sheets of papers and pens for the outlines of the stories, a projector and a digital whiteboard to be able to capture all the works at the end and for the other colleagues to see them. - Infrastructures: Ordinary classroom.
Impact of best practice (min. 250 words max. 500 words)	First, we would like to comment that the activity was received by the students in a very positive way, since their motivation was active throughout the process of creating the artistic composition. In addition, a shared file was created with the remaining teachers of the school that included the links of each of the presentations, so that all the students of the center were able to benefit from the learning that the 5th grade students had. However, it was not only a source of inspiration for the students, but the teachers of the center learned a new very useful tool to carry out in their programming. It could be clearly seen how the fact of carrying out an activity that includes motivating material for the students, such as electronic devices (iPads and computers), was one of the positive points we had in favor, because we have seen how some written expressions and activities that have been taught in the center with these gadgets do not have the same impact between them. Leaving their comfort zone and carrying out an activity that they are not used to do, with a new platform for them such as Thinglink, was

	very positive, since they learned in a playful way, and, therefore, they internalized the knowledge with an active and reciprocal attitude. This activity will be published on the website of the educational center so that the entire educational community can see and benefit from the work carried out, and, therefore, the impact will be much more significant.
Strengths and weaknesses of best practice (min. 250 words max. 500 words)	**Strengths:** As strengths of the activity, we can see: - In first place, the positive reception it received from the children. - In addition, the fact of working on content related to storytelling in a creative way and seeing that it really works and opens up a world of possibilities for future interventions. - It should also be noted that, in the highly digitized world in which we live, promoting the proper use of electronic devices from school is a very positive point in favor. - This activity is transversal and can be used not only in one area of knowledge, but many, as previously seen. - The Thinglink platform is a very useful and easy-to-use tool for students and teachers. - Each student can work independently and at their own pace, taking into account their individual abilities and the learning process of each one. **Weaknesses (please include also any suggestions for improving the practice):** Although we consider this activity has many advantages to carry it out in the classroom, some of the difficulties that we can find are: - For example, first of all you have to verify that all devices are well connected to the network and have a battery, so you could lose a bit

	of time (one way to ensure that this does not happen is to check it before starting the activity). - Another weakness that we could see is the fact that, as the teacher cannot control what all the students are doing at the same time, he does not detect who is doing correctly the activity and who, on the contrary, does not follow a correct rhythm of work. In addition to these two difficulties that may arise during the implementation of the activity, we can find many more with which we did not initially have, but the important thing is to know how to face them at the moment and have a plan B so that the activity continues as normal.
Additional information about best practice	N/A
Source of information of best practice	Practice implemented by the partner

Table 6: BP 5 - Designing art with thinglink (Aguilera)

Best Practice 6: Storytelling map with QR

TITLE OF BEST PRACTICE	**Storytelling map with QR**
Identified by (partner)	AGUILERA (Spain)
Developer and participating organisations/partners in development of best practice (name and country)	**Developer:** Meritxell Picón and Daniel López
	Participating organisations/partners: Escola Sant Josep (Terrassa, Barcelona)

Main actors involved in implementation of best practice (stakeholders, policy makers etc.)	At Sant Josep's School an internal project about creative writing has been carried out this school year in the 5th grade class. It was seen that boys and girls had a hard time making written expressions because they did not find a source of motivation, and, therefore, they took it as an obligation. From this point forward we decided to create a project entitled CREAWRITE, in which the written expression classes would have an innovative character in terms of the use of new technologies or activities that promote writing for pleasure. Therefore, and being a primary school, we have believed convenient to attach many of the activities that we have done ourselves in relation to storytelling. We believe that the intrinsic motivation of the students to do the different activities proposed is key to promote a meaningful learning.
Date of first implementation of best practice	2nd November 2021
Duration of best practice	This activity was carried out during two educational months (the entire month of November and December)
Field of best practice	☒ Storytelling (ST) ☐ Virtual reality/technology (VR) ☐ Combination of ST and VR
Direct/ultimate target groups (TG)[8] of best practice	**Direct TG:** Higher cycle language commission, made up of 5th and 6th grade tutors

[8] In the Story Changers project, for example, the distinction between direct and ultimate target group refers, respectively, to the teachers who will benefit from the innovate teaching methods, and the pupils who will then acquire basic social skills.

	Ultimate TG: 5th grade students who were the ones who implemented and carried out the activity
Type of education related to best practice	☒ Formal ☐ Informal ☐ Non-formal
Aim and objectives of best practice (min. 150 words max. 250 words)	The main objective of this activity is to work on written expression and narration in a contextualized, playful and digital way. Children are expected to create different narratives based on the main narrative genres (drama, comedy, horror, romance, adventure, and science fiction), as they discover the treasures of a pirate map. In addition, the use of new technologies is promoted with the use of electronic devices and the QR Code & Barcode Scanner application to transfer the narrations to QR codes, post them around the school in order all students can read the end of the stories. The main aspects of the language are also worked through a transversal learning, in which many areas of knowledge intervene, such as Language, Art and Innovation, among others. Another objective is related to the creation of digital citizens, who are capable of correctly using electronic devices for their daily use. Children spend many hours with these devices and the important thing as teachers is to offer them educational tools so that they can have a broad vision of their use.
Short description of best practice – context and notable aspects (min. 250 words max. 500 words)	This activity is developed as follows: First, the teacher shows to the students the pirate map with the path they have to make to get the treasure, and the different stops that are made along the way, which will correspond to the narrative genres that they intend to work on.

	Once the activity and dynamics have been introduced, the guidelines will be presented to be able to make the written composition (number of words in particular, formal aspects, review of the writings ...) When the guidelines are clear, it will begin with the first genre (for this part they will have two weeks to write it and present it in QR format). So, the tracking of the first of the genres will be explained, but the formula will be repeated with the following: - In a document shared with the teacher, they will first have to capture the general idea of the story and the characters. - Once they have everything to start writing, they will write their story and the teacher, from his computer, will review them one by one to improve them. - Once the main part of the activity has been carried out, they must decide which final part they will include in the QR code, with the intention of leaving the reader wanting to know how the story ends. - Thus, the teacher will explain how the QR Code & Barcode Scanner application works. It is very intuitive and easy to use, but a little explanation will be made to make it clear. - Once the application is understood, the students will choose the text that they will put on the QR and they will introduce a photograph as the outcome of the story, they will pass it to a PDF document and they will introduce it into the application, for which they will be given a QR code. - This code, they must copy it into their Word document with the writing of the first part of the story, give it a title, write the author and send the finished file to the teacher. - The teacher will print the file and, when everyone is there, it will be read in class and the other classmates will try to guess how they think the story ends.

	Once the activity has been presented in the classroom, the different written compositions will be posted around the school so that the students, with electronic devices, read the stories and scan the QR codes to see how the stories end. As we said before, this sequence should be repeated with all other genres, with the intention of filling the corridors of the school with letters. When the project is finished and they reach the pirate treasure, they can be gifted with one little present.
Resources (human, material, equipment, infrastructure etc.) for application of best practice	- Human resources: Teachers who carry out the activity with the 5th grade students. These teachers will adopt the role of learning guides, leaving the students themselves to carry out all the activity and intervening only if a student has a problem or does not know how to function. - Material resources: Computers to write the different stories with an internet connection and iPads with the QR Code & Barcode application to be able to create and decipher the codes. A map will also be needed for each student and thus they will be able to mark those stops that they have made successfully, which are equivalent to the different literary genres that will be worked on. - Infrastructures: Ordinary classroom and corridors of the school to hang the different compositions.
Impact of best practice (min. 250 words max. 500 words)	As in the previous one, it is intended that the impact of this activity falls first on the agents directly involved, which in this case are the students, since they will be able to see the narration and the written expressions, which are the tasks that normally do not cause positive feelings among students, as a fun and motivating activity for them. Usually they write for obligation, and we must encourage them to enjoy writing and narrative, since it is possible to work on the aspects that are related to learning content, but the way in which we present them and approach the students are key to the correct acquisition of these.

	In addition, as also happens in the previous activity, it is intended that the impact does not fall only on the group that has carried out this particular activity, but that it goes a little bit further and can be presented to the rest of the educational community that is related with the centre (other teachers, students from different courses, their families and followers of social networks), with the intention of having the maximum possible dissemination, a fact that will also continue to motivate students. The different compositions are going to be captured in the corridors of the school. This way, all students, teachers or family members who pass by, will be able to read the stories and decipher the QR code to see how the story continues, encouraging the taste for reading. Examples would also be reflected on social networks and on the centre's website, so that all those who cannot go to school have access to the stories. If the activity is successful, the fact of hanging the compositions in different establishments of the neighbourhood could be considered with the excuse of involving the entire neighbourhood in this activity and encouraging large-scale reading.
Strengths and weaknesses of best practice (min. 250 words max. 500 words)	**Strengths:** The positive contributions that can be made with this activity are: - Promotion of the taste of writing. - Creativity and imagination on the part of the students. - Autonomy of the students. - Knowledge of digital tools they are not used to work with. - Work on linguistic aspects. - Digital and quality education. - The good reception by the students.

	- The correct use of new technologies. - Management of digital skills that will be key and very useful for the future of students. In addition to all these points, which are the ones that we consider most important to highlight, there are many other advantages that derive from the activity, since, when the student works comfortably and in a contextualized way, everything that surrounds it has positive aspects.
	Weaknesses (please include also any suggestions for improving the practice): We believe that one of the negative points that this activity can have is to allow free improvisation on the part of the teacher. It is necessary to let the students investigate and be autonomous, but the previous knowledge of the teacher to carry out the activity must be very extensive to be able to guide them if any type of problem arises. In addition, the fact of letting the students themselves be the ones who manage the creation of their stories a little, may generate that they have to have more hours than planned, but seen from an objective point of view, it is more worth being spending more time to make the concepts clear, than, on the contrary, having to go against the clock so that everything is done in the agreed time. As we have also said in the previous activity, the important thing about weaknesses is knowing how to manage them and learn to solve them in the moment, looking for alternatives so that the activity continues flowing without any problems.
Additional information about best practice	N/A
Source of information of best practice	Practice implemented by partner

Table 7: BP 6 – Storytelling map with QR (Aguilera)

Best Practice 7: Fables with Stop Motion

TITLE OF BEST PRACTICE	**Fables with Stop Motion**
Identified by (partner)	AGUILERA (Spain)
Developer and participating organisations/partners in development of best practice (name and country)	**Developer:** Mª Carmen Devesa
	Participating organisations/partners: CEIP Voramar (Alicante, Comunidad Valenciana).
Main actors involved in implementation of best practice (stakeholders, policy makers etc.)	The activity was carried out by the teacher Mª Carmen Devesa, a second grade teacher. This activity is part of a writing project entitled We have eMotion, in which the following partners (Luz Beloso, Juan Carlos de Miguel, Ana Gullen Hernandez, Eugenia Fernanez, Adela Camacho Manarel, Jose Antonio Fraga Moreiro, Rosa Navas Calabaza , Belén Mariño Taboada, Antonio Garrido, Juli Garola Bertolí, María Peco Guerra, Garbiñe Larralde Urquiojo, Patricia Cabrejas, Manuel Perez Bañez, Concha Barceló Gras, María José Soto, Yolanda Juarros Barcenilla, Susana Vila, Juan Carlos Lago Bravo, Lucía Álvarez, Claudia Margarita Romero Delgado, among many others) participated in this collaborative project of Stop Motion as a tool for working with digital narrative in the classroom. It is intended that this work can serve the participants and all teachers interested in using this animation technique to work the digital narrative with their students, and as a meeting point and learning community.
Date of first implementation of best practice	December 5th 2016 was the first time this project was carried out.
Duration of best practice	2 months duration

Field of best practice	☐ Storytelling (ST) ☐ Virtual reality/technology (VR) ☒ Combination of ST and VR
Direct/ultimate target groups (TG)[9] of best practice	**Direct TG:** Teacher Mª Carmena Devesa from CEIP Voramar. Alicante, Valencia
	Ultimate TG: 2nd grade students who carried out the activity, but we could also include all teachers and students who have benefited from this activity to carry it out in the classroom.
Type of education related to best practice	☒ Formal ☐ Informal ☐ Non-formal
Aim and objectives of best practice (min. 150 words max. 250 words)	The main objective of this activity is to bring students closer to the creativity and originality involved in working with Stop Motion, in addition to working and practicing the main linguistic elements. On the one hand, the first objective is related to the acquisition of skills that are generated when working playfully and in a contextualized way a specific content, since it is not the same to make a written composition without any significance than to do it starting from a specific context. On the other hand, the acquisition of the main elements or aspects of linguistics, such as spelling, grammar, formal elements, the adequacy and coherence of the writing, becomes important. Another objective that can be highlighted with this activity is the one related with the teacher's focus. It would be the introduction of innovative elements in their programming. It is important to promote the lifelong training for teachers, because they are in constantly in

[9] In the Story Changers project, for example, the distinction between direct and ultimate target group refers, respectively, to the teachers who will benefit from the innovate teaching methods, and the pupils who will then acquire basic social skills.

	contact with the new methodologies that are appearing. They have to enrich their teaching practices and never get stuck.
Short description of best practice – context and notable aspects (min. 250 words max. 500 words)	This activity was divided in two main parts: The first activity was carried out in December with the intention of creating a Christmas greeting for the families of the 2nd grade students of CEIP Voramar. The second part of the activity took place in January and the aim was to animate some animal fables that they made as part of a project of caring about nature. The sequence that they followed in the work of the textual typology of the fable was the following: - First of all, an animal that was in danger of extinction was chosen to be the protagonist of the fable. - Then, in groups of 4 or 5 students, the writing of the fable was made as a team. Once this was done, the teacher revised the texts so that they adjusted to the linguistic criteria of the students' age (spelling, grammar, adequacy and coherence, presentation and formal aspects). - Subsequently, the different characters were created with plasticine and the decoration according to the story with different materials. - Afterwards the students rehearsed when they had finished the whole set. - Finally, the Stop Motion was recorded with the LEGO Movie application on the iPad and a short montage was made with the voice-over of the students explaining the story while the events were happening. Thanks to this activity, the content of creation of fables was worked transversely, since the following areas of knowledge were intertwined: - Language and literature (written and oral expression) - Innovation (use of new technologies)

	- Arts and Crafts (creation of animals and sets to record the different scenes)
Resources (human, material, equipment, infrastructure etc.) for application of best practice	The resources that were carried out for the design and implementation of this activity were: - Humans: Teacher in charge of carrying out the activity. - Materials: Plasticine, cardboard, scissors, colours ... (to carry out the animals and the stage), iPads to record the scenes and a projector with an Internet connection to be able to reproduce the final compositions of the other classmates in the classroom) - Infrastructures: Ordinary classroom.
Impact of best practice (min. 250 words max. 500 words)	This activity is explained in the following blog: http://contamosconemotion.blogspot.com/2016/02/fabulas-con-stopmotion.html As we can see, the teacher explains that, although the final result was not very professional, the important thing is that the students had a good time and learned what a fable was, they invented one and discovered new ways of doing it, giving free rein to their creativity and ingenuity. Thus, in relation to the impact, the first to benefit from this practice were the 2nd grade primary students who carried out the activity. In addition, as we have explained previously, the first part of the task was to make a small postcard or a Christmas greeting for the families of these students, so they could also see, as a gift, the work that they had done. In reference to all the productions in general that were carried out, in order to be part of the We Count on Emotion project, a blog was created in which the different activities that all the partners who were part did with their students in class have been written. Therefore, all these partners are also part of the impact of the activity, since they have access to the website.

	It should be noted that all the productions were recorded and posted on the YouTube platform to introduce the files to the blog. Therefore, we can see how clearly thanks to the creation of a project blog for all partners to introduce their productions and what they had done with their students is key and a very useful source to increase the impact of the activities.
Strengths and weaknesses of best practice (min. 250 words max. 500 words)	**Strengths:** The strengths of the activity are: - The introduction of digital elements in the didactic programs with first cycle primary school students, since many times it is chosen to only let the elders of the centre to carry out this type of activities, but it is important that from an early age have direct and correct contact with new technologies. - It is also important to highlight the motivation that students had when working on the element of written expression through the LEGO Movie application. - Teamwork is a strong point to highlight, since in this way learning is more enriched. - Finally, I would like to highlight the fact of having created a blog so that all the teachers who have participated in the project can include their activities and that these are open to everyone who wants to access them, so peer learning and cascade training are promoted.
	Weaknesses (please include also any suggestions for improving the practice): The points that I think should be improved in this implementation are: - In first place, the activity explains that at first the Christmas greetings are made to the families through the use of Stop Motion, but at no time does it explain if the students already knew how to use it before, if they did a preparatory class ...

	- We could also say that, perhaps for children who are in 2nd grade, not being used to work with electronic devices, it may be difficult for them to grasp the functionality of the different applications the first time, therefore, it is very necessary that the teacher do a previous activity so that they learn to handle these devices.
Additional information about best practice	N/A
Source of information of best practice	http://contamosconemotion.blogspot.com/2016/02/fabulas-con-stopmotion.html

Table 8: BP 7 – Fables with stop motion (Aguilera)

Best Practice 8: All in the word

TITLE OF BEST PRACTICE	**All in the word**
Identified by (partner)	AGUILERA (Spain)
Developer and participating organizations/partners in development of best practice (name and country)	**Developer:** Begoña Roldán (CEPA Paulo Freire, Madrid, Spain)
	Participating organisations/partners: Begoña Roldán (CEPA Paulo Freire), Marilina Correro (Escuela Nuestra Señora de la Fuenciscla), Nieves García (Colegio Buenavista I), Ana Galindo (CEPR Virgen de la Cabeza), Ismael Alonso (IES Villa de Valdemoro), Julita Fernández (CEIP Father Manjón), Esther Díaz Álvarez (Buenavista I School), Lourdes Molejón (Buenavista I School), Cecilia Valdés (Buenavista I School), Carmen Blanco (Buenavista I School), María Jesús Montes (Buenavista I School), Luisa Fernanda Álvarez (Colegio Buenavista I) and Rosa Andreu (Colegio Buenavista I).

Main actors involved in implementation of best practice (stakeholders, policy makers etc.)	All the aforementioned teachers participate in this project along with their students from different primary education courses. *Everything in the word* is a collaborative project promoted by Begoña Roldán in which teachers from all over Spain participate. They teach their classes at different academic levels. The theme revolves around the lyrical genre in all its possible manifestations. It is designed for the participation of kindergarten, Primary, ESO and Baccalaureate students, promoting the fact that poetry does not cover ages.
Date of first implementation of best practice	October 2018
Duration of best practice	The project ended in May 2019, therefore, it had a duration of 7 months.
Field of best practice	☒ Storytelling (ST) ☐ Virtual reality/technology (VR) ☐ Combination of ST and VR
Direct/ultimate target groups (TG)[10] of best practice	**Direct TG:** Teachers who carried out the activity with their students.
	Ultimate TG: Students from each of the educational centers belonging to the *All in the word* project.
Type of education related to best practice	☒ Formal ☐ Informal

[10] In the Story Changers project, for example, the distinction between direct and ultimate target group refers, respectively, to the teachers who will benefit from the innovate teaching methods, and the pupils who will then acquire basic social skills.

	☐ Non-formal
Aim and objectives of best practice (min. 150 words max. 250 words)	The main objectives of this activity are: - Encourage the reading of poetry, a genre less popular today than narrative: It is true that, although Story Changers is more related to storytelling, there are many ways of explaining stories, and one of these possibilities is the one offered by the poetry. - Use the tools offered by the network to investigate and find teaching materials: Encourage the proper use of the network and the Internet among students. - Increase the literary sensitivity of students: Many times, because students do not read, they do not have literary culture or sensitivity to works, so this project can help them to promote their literary taste. - Improve reading comprehension and written expression: Like all linguistic activities, one of the basic objectives is to improve or increase the abilities of the students. Other objectives that can be worked with this project are: - Promote the use of web 2.0 resources and multimedia applications to carry out work. - Generate a collaborative and supportive environment among students. - Exchange impressions with students from other centers. - Understand that we can all learn a lot from others. - Generate our own works.
Short description of best practice – context and notable aspects (min. 250 words max. 500 words)	With the completion of this project, it is intended that students speak to delimit the world, since the limits of our learning are those of our knowledge. All this will be done through the use of new technologies for learning. Thus, the project has been conceived as follows:

	Teachers who are Infant and Primary will have to prepare two topics per course, and those of larger courses will prepare three. Every time we have a topic, the class will be divided into four groups: - Group 1: Collectors (they collect poems by famous authors or songs in relation to the chosen topic). - Group 2: Troubadours (they recite the poems selected by their classmates). - Group 3: Creators (write their own compositions on the subject). - Group 4: Editors (they are in charge of translating the final composition in an online presentation) The groups will rotate in each topic, in order that all students go through the phase of searching, reciting, creating and editing. Once all teachers have compiled the work, it will be posted on the project blog, in which all partners will be administrators. When everything is done, a debate will be held on Google+ where each student must post their impressions of the project in the form of a comment (adapting the text to the age of the participants). In this way, the entire blog is made up of material created by the students themselves, and they will be the ones to comment on their perceptions on the different topics that are addressed throughout the course, also comparing what they think with what other children from other educational centers think.
Resources (human, material, equipment, infrastructure etc.) for application of best practice	As resources we can find: - Human: All teachers who are in charge of carrying out the project activities in their educational centers. - Material: Computers with Internet connection for searching, writing and editing compositions. - Infrastructures: Ordinary classroom.

Impact of best practice (min. 250 words max. 500 words)	This project can be found in the following blog: http://proyectotodoenlapalabra.blogspot.com/p/que-es-todo-en-la-palabra.html As in the previous activities, the most direct impact that this task causes is on the students who carry it out, since they learn about the immense universe of literature and the correct use of new technologies to become digital citizens. Not only do the students benefit when the works are created, but, since they can access to see the works of the other students in the centers enrolled in the project, they can learn from each other and share experiences. In addition, it must be taken into account that, as all the compositions are presented on the project blog, each teacher can approach the activity in the way they consider most appropriate, and that can help the other teachers who are immersed in the project They can benefit from the different methods that the others use to address the same topic. Finally, having an open blog to share all the resources that have been used, allows not only the educational communities of each center to access it, but also people outside the project can find out about good practices and be able to implement them in their classrooms. For the dissemination and impact of an activity, an element that helps is the creation of a web page or a blog to publicize the work that has been done.
Strengths and weaknesses of best practice (min. 250 words max. 500 words)	**Strengths:** As strengths we can see: - Work on narrative aspects approached from the lyrical genre - The fact of being able to comment on the interventions of the other students from the other educational centers. - The creation of the blog to be able to spread the project with other educational centers and with other people who may be interested in the program.

	- It is also considered positive not to focus the activity on a specific age group, but to approach it from any educational level. - The autonomy of children at work. - Divide the children into small groups and that each one has a specific function. It should also be noted that the groups rotate the functions so that everyone, at the end of the project, has gone through all the learning phases. - Finally, we would like to comment on the practicality of the blog in which the project is explained, since it is very intuitive and provides a lot of information of interest such as the participants, the general and specific objectives and the timing.
	Weaknesses (please include also any suggestions for improving the practice): The aspects that could be improved are: - One of the few drawbacks that we see in the project is, perhaps, the little publicity it has. We refer to the fact that it is not a well-known project, although it is done every year, so they should study its dissemination to get more schools to carry it out. - A percentage of courses could also be distributed to each school, since one school may not have many primary courses participating, and in another there may be. Therefore, they cannot have many comparisons or have much material to be able to visualize from other students of the same age.
Additional information about best practice	N/A
Source of information of best practice	

Table 9: BP 8 – All in the word (Aguilera)

Best Practice 9: Designing a creative storytelling workshop to build self-confidence and trust among adolescents

TITLE OF BEST PRACTICE	**Designing a creative storytelling workshop to build self-confidence and trust among adolescents**
Identified by (partner)	Jeanne D'Arc (Greece)
Developer and participating organisations/partners in development of best practice (name and country)	**Developer:** Veronique Rizzi, Caroline Pigeon, Florian Rony, Alexandra Fort-Talabard
	Participating organisations/partners: Organization "Imagineo", Lyon, France
Main actors involved in implementation of best practice (stakeholders, policy makers etc.)	Imagineo is a non-profit organization which aims at promoting creativity, innovation abilities and empowerment in youths. Following its pedagogical orientation, Imagineo commits to building an active and responsible society and helps children and teenagers to become authors of a sustainable future. Imagineo's lab conducts pedagogical research, in order to develop cutting-edge educational methods, to measure their impact and to share them. Source: Imagineo – Let's imagine the world we want
Date of first implementation of best practice	The creative storytelling workshop was held in three half-day sessions on three consecutive days in April 2017.
Duration of best practice	The creative storytelling workshop was carried out in a format of three sessions, lasting three hours each.
Field of best practice	☒ Storytelling (ST) ☐ Virtual reality/technology (VR) ☐ Combination of ST and VR

Direct/ultimate target groups (TG)[11] of best practice	**Direct TG:** Practitioners who design and implement life skill enhancing workshops
	Ultimate TG: Adolescents who participate in these workshops and will benefit from them
Type of education related to best practice	☐ Formal ☒ Informal ☐ Non-formal
Aim and objectives of best practice (min. 150 words max. 250 words)	The aim of this paper was to present the design of a creative storytelling workshop based on pedagogical mechanisms that specifically build self-confidence and trust in a non-clinical adolescent population. In three consecutive half-day sessions, adolescent participants are given the opportunity to invent stories based on their self-reflection and self-expression, to audio-record them and to create a finalized podcast. By presenting the relevant elements of the intervention design, this paper provides guidance to practitioners for creating and implementing life skill enhancing workshops, particularly those aiming to develop self-confidence and trust. Besides creativity and storytelling, relevant elements of the workshop were a framework of positive psychology, the cooperative experience of small successes towards a shared goal, experiential learning, a balance between task types including movement, the creation of a safe and immersive space and an encouraging posture of the facilitators. A pilot study was carried out with twelve teenagers in order to gain first evidence on the effects of the intervention on the above mentioned components of self-confidence and trust. Results from self-report data indicate several components of self-confidence and trust can be positively impacted by the experience provided through the workshop.

[11] In the Story Changers project, for example, the distinction between direct and ultimate target group refers, respectively, to the teachers who will benefit from the innovate teaching methods, and the pupils who will then acquire basic social skills.

Short description of best practice – context and notable aspects (min. 250 words max. 500 words)	In the workshop, participants were given the opportunity to invent stories, to audio-record them, and to edit the recordings so as to create a finalized podcast. The creative process integrated a strong component of self-reflection and self-expression, facilitated through a storytelling approach. Participants gathered in groups of three based on a signature strength they had in common, and they assigned it to the hero of their story. They created a scenario where the hero put his/her strength into action, and a second one where the hero used it to help out a hero from a fellow group. This procedure was designed to give participants the opportunity to become aware of their own possibilities through the experience of an imagined character. They got their inspiration for their fictional stories from a reflection on their own strengths and weaknesses, and on the values they stand for. Self-reflection and self-expression were facilitated through back and forth moves between reality and fiction during the course of the workshop. A series of exercises led participants from becoming aware of themselves and acknowledging their strengths and weaknesses, to progressive self-disclosure in front of the group. The creative storytelling workshop gave the participants the opportunity to express what made sense to themselves and to actively listen to fellow participants, under the pretext to fuel their stories. The groups shared their creations at several stages of the workshop, leading them to get used to speaking to an audience and to take creative risks. The creative storytelling workshop was carried out in a format of three sessions, lasting three hours each. The workshop structure featured an alternation of plenary sessions and small group work. During the plenary sessions, group dynamics could be initiated and positive interactions among participants could be experienced. Subsequent phases of creation in small teams allowed the participants to reproduce the dynamics they had experienced in the plenary sessions, while creating their stories in a more intimate and more autonomous setting. This structure aimed at giving the participants the opportunity to gradually open up to themselves and others, experience interactions with fellow participants in more or less controlled settings, while enjoying to co-create the stories.

Resources (human, material, equipment, infrastructure etc.) for application of best practice	A pre-experimental design including a pre- and post-measurement was applied with 12 participants. The participants (seven girls, five boys) aged from 13 to 15 years (mean (M) = 13.5, standard deviation (SD) = 1.0) were recruited on a voluntary basis through convenience sampling from a non-clinical setting. They were offered to participate in a creative storytelling workshop, and the objective of raising self-confidence and trust was not disclosed before the final debriefing at the end of the workshop. None of the participants knew more than one fellow participant before the workshop. The study was organized in accordance with the Declaration of Helsinki. The parents of the participants signed a parental consent form. The two workshop designers took the role of facilitators. They followed a previously established workshop thread, including the exercises to create a safe space, the creative storytelling activities and the impact measurement tools for data collection.
Impact of best practice (min. 250 words max. 500 words)	The feedback of the participants suggests that the workshop increased their self-confidence, especially in terms of communication, technical and creative skills. Indeed, they declared they overcome: "the fear of talking to people", their "shyness", and the challenge of "speaking in front of everyone" and they felt gifted "in the use of the software", "in recording", "as an actress" and "creatively". Participants acknowledged that the workshop led them to collaborate with others: they met the challenge of the group work and they overcame the "reluctance to trust people". They also reported having "met new people" and "made friends" during the workshop. Finally, the participants had fun participating in the workshop: they declared having "good times" and left "in a good mood", with "good memories" and with "happiness". The results of the pilot study show that the experience provided to the participants during the workshop positively impacts several of the measured components of self-confidence and trust. Indeed, quantitative results reveal a statistically significant improvement at the end of the workshop for the self-confidence items relating to confidence in learning (growth mindset) and speaking, as well as the trust items referring to the willingness to rely on others in challenging situations. An improvement which tends to be significant has been

	observed for the self-confidence item referring to generalised self-efficacy. The feedback of the participants was in line with these results, since they declared having acquired or improved personal and relational skills. The concepts of self-confidence and trust were specifically mentioned by teenagers although the objectives of the workshop had not been revealed to them. In terms of their perceived achievements during the workshop, they did not only refer to their tangible results (e.g. production of stories) but underlined the effect of the experience on their personal growth (e.g. overcome their shyness).
Strengths and weaknesses of best practice (min. 250 words max. 500 words)	**Strengths:** This paper presented a creative storytelling workshop as a promising positive intervention to build the components of self-confidence and trust among adolescents that will help them thrive in today's society. Practitioners can find guidance to create and implement life skill enhancing workshops (especially those targeted at self-confidence and trust) that provide an impactful experience to the participants, by considering the relevant elements and pedagogical mechanisms exposed in this study.
	Weaknesses (please include also any suggestions for improving the practice): The first limitation of this study is its reduced sample size. A second limitation concerns its measurements, which rely exclusively on self-report data. It is recommendable to further assess the effect of this type of workshops with other types of data, such as extensive questionnaires or semi-structured interview techniques.
Additional information about best practice	N/A
Source of information of best practice	Véronique Rizzi, Caroline Pigeon, Florian Rony, Alexandra Fort-Talabard, Designing a creative storytelling workshop to build self-confidence and trust among adolescents, Thinking Skills and Creativity, Volume 38, 2020, 100704, ISSN 1871-1871,

	https://doi.org/10.1016/j.tsc.2020.100704 https://www.sciencedirect.com/science/article/pii/S1871187120301784

Table 10: BP 9 - Designing a creative storytelling workshop (Jeanne D'Arc)

Best Practice 10: Interactive storytelling in a mixed reality environment: The effects of interactivity on user experiences

TITLE OF BEST PRACTICE	**Interactive storytelling in a mixed reality environment: The effects of interactivity on user experiences**
Identified by (partner)	Jeanne D'Arc (Greece)
Developer and participating organisations/partners in development of best practice (name and country)	**Developer:** Marija Nakevska, Anika van der Sanden, Mathias Funk, Jun Hu, Matthias Rauterberg
	Participating organisations/partners: Department of Industrial Design, Eindhoven University of Technology, Eindhoven, The Netherlands
Main actors involved in implementation of best practice (stakeholders, policy makers etc.)	• **Forty-one participants** joined the study, all university students from 18 to 33 years old (13 female, 28 male, mean age 23 with a standard deviation of 3). • An **experimenter** who, depending on the experimental condition, would interact with the participant, prompting actions or even giving them hints how to proceed through the narrative.
Date of first implementation of best practice	**Not mentioned** **Article history:** Received 9 March 2015, Revised 28 December 2016, Accepted 11 January 2017, Available online 16 January 2017

Duration of best practice	All experimental sessions (41 in total) took less than 20 min: the experience itself took approx. 4 min and filling the final survey approx. 15 min.
Field of best practice	☐ Storytelling (ST) ☐ Virtual reality/technology (VR) ☒ Combination of ST and VR
Direct/ultimate target groups (TG)[12] of best practice	**Direct TG:** Stakeholders involved in building mixed reality environments that implement interactive storytelling scenarios
	Ultimate TG: All users of such mixed reality environments
Type of education related to best practice	☐ Formal ☒ Informal ☐ Non-formal
Aim and objectives of best practice (min. 150 words max. 250 words)	This paper describes an experimental study that was performed in the fully realized interactive story ''Eat me, drink me" which is inspired by one of the chapters from the narrative ''Alice's adventures in Wonderland" as part of the interactive mixed reality ALICE installation. The aim of the study is to investigate the user interaction and measure the overall experience in three conditions: ● with a fully interactive environment (IE), ● in a non-interactive, but dynamic setting (NIE), and ● in a noninteractive setting with minimal stimuli.

[12] In the Story Changers project, for example, the distinction between direct and ultimate target group refers, respectively, to the teachers who will benefit from the innovate teaching methods, and the pupils who will then acquire basic social skills.

	The essential aspects of the narrative episode as an interactive story are presented, as well as the technology utilized to realize the experimental setup with the desired experience, and important design decisions that went into creating the system.
Short description of best practice – context and notable aspects (min. 250 words max. 500 words)	The experiment is based on the original narrative of Alice in Wonderland: Alice enters a room with doors all around that differ in size. She finds a key that unlocks one small door, but she is too big to fit through it. After she drinks and eats, she undergoes several changes, she grows and shrinks. Eventually she has the right size and the key from the small door. The participants find themselves trapped in a cubical room and to continue in the installation (and narrative), they need to find the right relation between their size and the room, and need to acquire the key to ''open" the exit door. The participants were invited to take part of the ''Alice's Adventures in Wonderland" and they were led into the room with the instruction to ''have fun". It was not mentioned to the participants that it is interactive environment, or how and when they should find the way out from the VR room. They experienced one of the following interaction modes: – **Interactive environment (IE):** The environment used all the available interaction features. The interactive setting was designed to give a range of feedback and feedforward messages from the story characters. The feedback was implicit and depended on the actions of the user in the physical environment (walking, standing, drinking, taking cookie). For example, the steps of the participants were coupled with sound design simulating a wooden floor; a narrator voice gave feedback on the behavior of the participant over longer time (by observing if he walks or stands in the environment). Explicit feedback was given by a doorknob: if the participant does not find the exit, after ten minutes, the doorknob points out which actions can be taken in order to finish the intended story plot. – Non-interactive environment (NIE): A pre-programmed scenario of the story plot was played without taking in consideration the behavior of the user.

	– Non-interactive with minimum stimuli (NIMS): A preprogrammed scenario of the narrative that involves minimum stimuli was played.
Resources (human, material, equipment, infrastructure etc.) for application of best practice	• A five-sided Cave Automatic Virtual Environment (CAVE) is 3 x 3 x 3 meter cube made of white semi-translucent canvas. • Projectors • Pressure sensors • Physical props
Impact of best practice (min. 250 words max. 500 words)	The experiment with 41 participants measured participants' experiences through self-reports given in different questionnaires, and the participants' behavior through recording and observation, in matters of: • Presence • Agency • Satisfaction • Behavioral measures The results showed that the different treatments, i.e., interaction types, did not influence the feeling of presence and the satisfaction visitors gained from the experience. Through observation of the actions of the users and by quantifying the number of actions clear differences appear in the users' behavior. The participants that were immersed in a not responsive environment (NIE) were more active and tried out more interaction possibilities (touch, walk, look around). The participants who experienced minimum stimuli in a non-interactive environment (NIMS) did not performed as many actions, instead they would rather stand and look around. The participants in the non-interactive environment (NIE) more often showed confusion and frustration, while the participants in the interactive environment (IE) seemed satisfied every time they discovered an interaction asset.

	The stimuli provided by the environment evoke different behaviors and with that also a different personal user experience. In the interactive setting (IE) everyone had slightly different experience depending on the triggered stimuli and the actual context. Not everyone would reveal all of the events from the narrative, e.g. the virtual garden was visible only if the participant approached the small VR door and had the key.
Strengths and weaknesses of best practice (min. 250 words max. 500 words)	**Strengths:** The findings of the between groups experiment with 41 participants show that immersiveness is not necessarily depending on the modality of the stimuli, but instead on their time density. The study thereby contributes to our knowledge about the design of interactive and mixed reality spaces, and how the responsiveness and the amount of stimuli induce or bias behavior and experiences.
	Weaknesses (please include also any suggestions for improving the practice): The usage of subjective post hoc measures of experience, where presence and engagement are measured based on the overall perception of the immersive environment. Further studies could also explore the user experience in an enriched interactive setting that implements more challenging scenario of the interactive narrative.
Additional information about best practice	N/A
Source of information of best practice	Marija Nakevska, Anika van der Sanden, Mathias Funk, Jun Hu, Matthias Rauterberg, Interactive storytelling in a mixed reality environment: The effects of interactivity on user experiences, Entertainment Computing, Volume 21, 2017, Pages 97-104, ISSN 1875-9521, https://doi.org/10.1016/j.entcom.2017.01.001

	https://www.sciencedirect.com/science/article/pii/S1875952117300046

Table 11: BP 10 - Interactive storytelling in a mixed reality environment (Jeanne D'Arc)

Best Practice 11: Props: 3D-game-like mediator for improvisational storytelling

TITLE OF BEST PRACTICE	**Props: 3D-game-like mediator for improvisational storytelling**
Identified by (partner)	Jeanne D'Arc (Greece)
Developer and participating organisations/partners in development of best practice (name and country)	**Developer:** Paula Alavesa, Timo Ojala, Daniele Zanni
	Participating organisations/partners: Urban Computing and Cultures Group, Department of Computer Science and Engineering, University of Oulu, Finland
Main actors involved in implementation of best practice (stakeholders, policy makers etc.)	• Urban Computing and Cultures Group • Audiences from different age groups who used Props • Children participating in the 2013 Oulu Improvisational Theatre Festival who used Props
Date of first implementation of best practice	2013 Oulu Improvisational Theatre Festival. Month is not clearly stated.
Duration of best practice	To explore the narrative potential of Props, **three field trials** involving **eight separate storytelling events** were conducted where Props was played by audiences from different age groups. Moreover, it is illustrated how Props mediates storytelling with a pilot study conducted with children. It was arranged in a **15-min timeslot** at the very end of children's storytelling hour during the 2013 Oulu Improvisational Theatre Festival.
Field of best practice	☐ Storytelling (ST)

	☐ Virtual reality/technology (VR) ☒ Combination of ST and VR
Direct/ultimate target groups (TG)[13] of best practice	**Direct TG:** Stakeholders involved in building 3D games for improvisational storytelling
	Ultimate TG: All users of such 3D games
Type of education related to best practice	☐ Formal ☒ Informal ☐ Non-formal
Aim and objectives of best practice (min. 150 words max. 250 words)	Props is a 3D-game-like system for mediating collaborative and improvisational storytelling. Props combines a virtual 3D stage and the surrounding physical world into a hybrid space for storytelling. Prop master sets the stage for a story that is narrated by a narrator by speaking or acting. The iterative and collaborative process of staging, narrating and acting goes on until the players agree that the story has been told. Props was evaluated by hosting several storytelling events where Props was played by audiences from different age groups. As the theoretical framework in the analysis of the storytelling events an extension of the Church–Murray aesthetics of virtual environments was used. The data showed that the interaction from props and prop masters to narrators dominates storytelling, and that the participants generally enjoyed playing Props.
Short description of best practice – context and notable aspects (min. 250 words max. 500 words)	Storytelling is a way of conveying a message with speech, sounds, movement or imagery. While there are already many games to aid improvisational storytelling, not that many of them make use of digital media or game technology.

[13] In the Story Changers project, for example, the distinction between direct and ultimate target group refers, respectively, to the teachers who will benefit from the innovate teaching methods, and the pupils who will then acquire basic social skills.

	As a platform for storytelling, Props first creates a virtual 3D scene depicting a performance stage that is modelled in detail after a real-world performance stage at downtown Oulu, Finland. The virtual stage is presented to the audience in a suitable manner, for example on a laptop's screen, as a large-scale projection or in a computer assisted virtual environment (CAVE). Together with the surrounding real world, the virtual stage establishes a hybrid space for collaborative storytelling. A prop master sets the stage for a story with a computer, by selecting from an inventory of virtual 3D assets a background, a scene and various objects and effects, i.e. virtual props placed on the virtual stage. The props serve as cues to a narrator who narrates the story by speaking or acting. The iterative and collaborative process of staging, narrating and acting goes on until the players agree that the story has been told. In its simplest form Props can be played by two people, a prop master and a narrator, with a laptop. However, Props has been targeted to larger audiences so that the virtual 3D stage is projected onto a large flat surface or on the multiple walls of a CAVE, and the members of the audience dynamically take different roles during storytelling.
Resources (human, material, equipment, infrastructure etc.) for application of best practice	● Material equipment: laptop, large-scale projection, computer assisted virtual environment (CAVE), physical props ● Prop master, a narrator, audience
Impact of best practice (min. 250 words max. 500 words)	The participants' perceived enjoyment of the storytelling events was assessed from the questionnaire data. Both adolescents' and adults' perceived enjoyment was at the upper end of the scale. Adolescents found storytelling in CAVE a more enjoyable experience than in the conference room. The participants' enjoyment of the events was also assessed from the video recordings by interpreting laughter by at least two participants as an emotional cue suggesting enjoyment.
Strengths and weaknesses of best practice (min. 250 words max. 500 words)	**Strengths:** The study proved that immersive setting, guidance and the available inventory of visual elements have significance to the narrative

	potential and the enjoyment of participants in storytelling events mediated by a hybrid storytelling system like Props. The younger participants seemed to prefer easier choices and fast shifts in the resulting narrative. Yet, the same storytelling system was able to cater for also older participants in an enjoyable manner that resulted in a meaningful narrative.
	Weaknesses (please include also any suggestions for improving the practice): The predefined and fairly small inventory of props obviously both constrained and steered narrative in particular directions.
Additional information about best practice	N/A
Source of information of best practice	Paula Alavesa, Timo Ojala, Daniele Zanni, Props: 3D-game-like mediator for improvisational storytelling, Entertainment Computing, Volume 5, Issue 4, 2014, Pages 381-390, ISSN 1875-9521, https://doi.org/10.1016/j.entcom.2014.10.003 https://www.sciencedirect.com/science/article/pii/S187595211400038X

Table 12: BP 11 - Props 3D-game-like mediator for improvisational storytelling (Jeanne D'Arc)

Best Practice 12: Immersive virtual reality as a tool to learn problem-solving skills

TITLE OF BEST PRACTICE	**Immersive virtual reality as a tool to learn problem-solving skills**
Identified by (partner)	Jeanne D'Arc (Greece)
Developer and participating organisations/partners in development of best practice (name and country)	**Developer:** Paola Araiza-Alba, Therese Keane, Won Sun Chen, Jordy Kaufman
	Participating organisations/partners: Swinburne University of Technology, Hawthorn, Victoria, Australia

Main actors involved in implementation of best practice (stakeholders, policy makers etc.)	• Swinburne University of Technology, Hawthorn, Victoria, Australia represented by the authors Paola Araiza-Alba, Therese Keane, Won Sun Chen, Jordy Kaufman • 10 participants in the pilot study • 120 children aged 7–9.9 years who participated in the final study
Date of first implementation of best practice	Not stated. **Article history**: Received 2 July 2020; Received in revised form 18 December 2020; Accepted 28 December 2020
Duration of best practice	Not stated
Field of best practice	☐ Storytelling (ST) ☒ Virtual reality/technology (VR) ☐ Combination of ST and VR
Direct/ultimate target groups (TG)[14] of best practice	**Direct TG:** Stakeholders involved in building immersive virtual reality games to cultivate problem-solving skills
	Ultimate TG: All children who will use these games
Type of education related to best practice	☐ Formal ☒ Informal ☐ Non-formal

[14] In the Story Changers project, for example, the distinction between direct and ultimate target group refers, respectively, to the teachers who will benefit from the innovate teaching methods, and the pupils who will then acquire basic social skills.

Aim and objectives of best practice (min. 150 words max. 250 words)	Various theories, described above, support the premise that an IVR experience could either enhance or hinder children's ability to learn from an immersive 3D environment. This study aimed to investigate whether IVR technologies could be a useful tool to develop and practice problem-solving skills. The rate of success or failure of participants was compared using a problem-solving game (river crossing task) on three different mediums: IVR, a tablet application, and a board game. More specifically, this study sought to answer the following questions: (1) Is IVR a useful tool to learn and practice problem-solving skills? Do children using IVR perform better at solving the game than those using a tablet or a board game? (2) Does IVR provide a more engaging experience for children to practice problem-solving skills than on a tablet or board game? (3) Do problem-solving skills learned with immersive virtual environment technology transfer to real-life (physical game)?
Short description of best practice – context and notable aspects (min. 250 words max. 500 words)	The experiment was based on a common mathematical game called the River Crossing Game. The simple version used in this research includes a farmer, boat, wolf, goat, and basket of cabbages. The aim of this puzzle game is to carry items from one riverbank to another in as few moves as possible. The conditions imposed on the game include: (a) only one item can be carried at a time, and (b) only some items may be safely left together. For example, if the wolf is left with the goat, the wolf will eat the goat, and if the goat is left with the cabbage, the goat will eat the cabbage. The optimal solution involves seven moves. The experiment included four phases conducted in the following order: (1) warm-up phase, (2) stimuli phase (problem-solving game), (3) distraction phase, and (4) transfer-of-learning phase. **Warm-up phase (10 min):** A female researcher introduced herself to and played games with the child for approximately 5 min (Tic-tac-toe/noughts and crosses). **Stimuli phase (problem-solving) (10 min):** Children were randomly assigned to one of the three conditions: BG, tablet, or IVR. In the IVR condition, the researcher explained to the participant that they would be playing a problem-solving game called the River

	Crossing Game using VR goggles and controls. Then, the researcher demonstrated to the participant how to use the controls and how to identify the boundaries of the room while using the HMD to avoid any contact with the walls. The HMD display was fitted on the participant's head, and the controls were handed to the participant. The participant was given 5 min in a VR sandbox to acclimatise to the VR environment and practice using the controls. The researcher commenced the IVR game and started the timer to record the time the participant took to solve the problem. **Distraction phase:** The subsequent distraction phase was **10 min** of free play. During free play, children could choose to independently play with LEGO© pieces or Candy Crush (on the iPad). **Transfer-of-learning phase:** During this phase, the researcher asked the child to solve the River Crossing Game again but in a different modality from the stimuli phase. Hence, participants in the IVR and tablet conditions during the stimuli phase were asked to solve the problem using the board game, and the participants in the BG condition were asked to solve the game using the IVR headset.
Resources (human, material, equipment, infrastructure etc.) for application of best practice	Board game, tablet, HTC Vive, a VR set with an HMD and handheld controllers
Impact of best practice (min. 250 words max. 500 words)	The demographic and media-use survey completed by the parents indicated that 59.5% of children in this study had previously used an IVR headset; among these participants, 41% had used it on only a single occasion, 42% had used it between two and four times, and 16% had done so more than five times. Most parents (70%) reported having completed a tertiary degree. Preliminary analyses revealed neither significant main effects of the child's sex or age nor interactions with sex or age on the key dependent measures (performance, interest and enjoyment, and transfer of learning); therefore, sex and age were not included as covariates in subsequent analyses.

	To determine whether more children using IVR solved the game than those in either the tablet or BG conditions, a chi-square test of independence was conducted using the binary variable solved–not solved as the outcome variable. A statistically significant difference was found in the proportion of children who solved the river crossing task across conditions shows that the majority of the participants in the IVR condition (77.5%) solved the problem successfully, compared with those in the tablet (32.5%) and BG (30%) conditions. In relation to the number of moves taken to solve the task, the research showed that children in the IVR condition used fewer moves to solve the game than the children using the tablet. No statistically significant difference was found in the number of moves between the BG and the other two conditions. Follow-up Mann-Whitney tests revealed that children in the IVR condition expressed greater interest and enjoyment than children in both the tablet condition and the BG condition.
Strengths and weaknesses of best practice (min. 250 words max. 500 words)	**Strengths:** The performance outcomes indicated that children in the IVR condition performed better at solving the task than the children in the tablet or BG conditions. Also, a smaller number of IVR participants gave up solving the problem. Results related to the interest and enjoyment perceived by the participants can also help us understand why children using IVR performed better in the problem-solving task. IVR has the ability to stimulate the senses of the participants and present the information in a more realistic and authentic manner, resulting in increased interest and willingness to interact with the VR content or environment. Moreover, when children are interested in the material that is presented to them, they try harder to learn and solve learning tasks. In this study, the children in the IVR condition persevered longer to solve the task than in the other two conditions, where more children gave up within the 10 min. Moreover, the results suggest that learning how to solve a problem-solving task and transferring the learning to the physical world is

	possible using IVR. Children in the IVR condition (as well as those in the tablet condition) were able to transfer the problem-solving knowledge learned during training to the physical board game.
	Weaknesses (please include also any suggestions for improving the practice): The study presents two main limitations for testing learning transfer. The first limitation is related to the short time frame (10 min) between the stimuli phase and the transfer-of-learning phase. A second limitation in this study was the type of problem-solving game used and the type of learning measured in the transfer-of learning task. A basic level with a minimal number of characters was used for this study; therefore, when the children understood and learned that they could bring items back in the boat, it became relatively easy for them to apply the learning to the physical game. The complexity of the River Crossing Game can be increased by adding a new character, so using a more advanced level on the transfer task could leverage the complexity of the game and allow testing of adaptability or flexible thinking skills. Thus, a future study could use either a higher level of difficulty of the River Crossing Game as a transfer-of-learning measure or a different game that involves the same type of solving paradigm.
Additional information about best practice	N/A
Source of information of best practice	Paola Araiza-Alba, Therese Keane, Won Sun Chen, Jordy Kaufman, Immersive virtual reality as a tool to learn problem-solving skills, Computers & Education, Volume 164, 2021, 104121, ISSN 0360-1315, https://doi.org/10.1016/j.compedu.2020.104121 https://www.sciencedirect.com/science/article/pii/S0360131520303195

Table 13: BP 12 - Immersive virtual reality as a tool to learn problem-solving skills (Jeanne D'Arc)

Best Practice 13: Kinful

TITLE OF BEST PRACTICE	**Kinful**
Identified by (partner)	MMC & Apostolos Varnavas Primary School (Cyprus)
Developer and participating organisations/partners in development of best practice (name and country)	**Developer:** Kinful and Pic Interactive
	Participating organisations/partners: N/A
Main actors involved in implementation of best practice (stakeholders, policy makers etc.)	School teachers Students
Date of first implementation of best practice	2016
Duration of best practice	Not specified
Field of best practice	☐ Storytelling (ST) ☒ Virtual reality/technology (VR) ☐ Combination of ST and VR
Direct/ultimate target groups (TG)[15] of best practice	**Direct TG:** Teachers
	Ultimate TG: Students of primary and secondary education

[15] In the Story Changers project, for example, the distinction between direct and ultimate target group refers, respectively, to the teachers who will benefit from the innovate teaching methods, and the pupils who will then acquire basic social skills.

Type of education related to best practice	☒ Formal ☐ Informal ☐ Non-formal
Aim and objectives of best practice (min. 150 words max. 250 words)	Kinful is a social-emotional learning (SEL) program to be used by teachers in the classroom. The aim is to enhance students' social-emotional learning skills through experiential learning. The five core SEL competencies which Kinful aims to develop in students are: self-awareness, self-management, social awareness, relationship skills and responsible decision-making. By enhancing social-emotional skills one can improve academic performance, increase empathy, reduce depression and stress, as well as address initiatives like anti-bullying, diversity and inclusion. The Kinful curriculum is built on three pillars which work in tandem in order to enhance social-emotional competencies in students: Intercultural Exchange; Social Emotional Learning exercises and Virtual Reality Technology.
Short description of best practice – context and notable aspects (min. 250 words max. 500 words)	The Kinful curriculum was developed by Peace Corps Volunteers as a culmination of their Peace Corps service. The idea came when they realised that social-emotional learning competencies (such as empathy, self-awareness, social awareness, etc.) can be nurtured in all people and SEL can be used to combat social divisions. A Kinful lesson consists of non-sequential workstations where students rotate between activities. Half of the workstations are VR-related (viewing and 360 filming), and half are "standard" non-tech SEL activities (e.g. teamwork games, group reflections, etc.). Through moving from one workstation to the next, students experience and reflect on SEL themes. That is, they use the VR videos and then are guided through in-classroom exercises to discuss the experience. Students can also use the Kinful Kit to create their VR videos, while they can improve their SEL skills by stepping into the perspective of other students from around the world.

Resources (human, material, equipment, infrastructure etc.) for application of best practice	Kinful Kit: - VR hardware (VR headsets and cameras) - Non-tech activity supplies - A global library of student-created VR videos - Each exercise comes with a detailed step-by-step guide
Impact of best practice (min. 250 words max. 500 words)	Students develop social-emotional skills, thus becoming able to manage themselves, understanding the perspectives of others and becoming capable of making sound personal and social choices. They develop positive attitudes toward oneself and others: confidence, persistence, empathy, connection and commitment to school, more positive social behaviours and relationships with peers and adults.
Strengths and weaknesses of best practice (min. 250 words max. 500 words)	**Strengths:** The VR aspect of Kinful allows students to see things from someone else's perspective, thus enhancing their social-emotional skills such as empathy, social awareness etc. Kinful makes social-emotional learning technologically exciting for the students and easy to facilitate for the teachers, as no additional supplies are required. In addition, no technological or SEL experience is needed to lead students through a Kinful lesson, while each exercise comes with a detailed step-by-step guide. According to a user of Kinful, the "Kinful Kit is a pure delight to open. Composed of everyday objects, games, and VR supplies, the kit immediately sparks intrigue and promises a varied set of learning activities. From card games to feats of physical dexterity requiring nylons and coins, the activities present a range of engaging challenges that are informative to those participating. Even as adults, my coworkers and I felt Kinful was a great exercise in team building, collaboration, and just generally getting to know each other better."

	Weaknesses (please include also any suggestions for improving the practice): One of Kinful's users points out that it would be useful if the information provided at the onboarding session was presented in writing as well. Explicit objectives could be added at the top of each activity page in order to guide and orient educators so that they can clearly communicate the learning goals of Kinful to students. He also remarks that the aspect of intercultural exchange could have a larger role in the Kinful curriculum. Finally, he points out that the VR videos do expose students to other experiences and perspectives, but, unlike the in-person activities, they not offer opportunities for real exchange.
Additional information about best practice	N/A
Source of information of best practice	https://www.kinful.org/curriculum Review of Kinful: https://blog.library.tc.columbia.edu/b/19921-Kinful-Lets-Students-Learn-Social-and-Emotional-Skills-Through-Play

Table 14: BP 13 - Kinful (MMC & Apostolos Varnavas)

Best Practice 14: Charisma

TITLE OF BEST PRACTICE	**Charisma**
Identified by (partner)	MMC & Apostolos Varnavas Primary School (Cyprus)
Developer and participating organisations/partners in development of best practice (name and country)	**Developer:** Brain Performance Institute at the Center for BrainHealth, The University of Texas at Dallas, USA
	Participating organisations/partners: N/A

Main actors involved in implementation of best practice (stakeholders, policy makers etc.)	Cognitive neuroscientists, clinicians and game developers at the Center for BrainHealth providing the training to participants
Date of first implementation of best practice	2019
Duration of best practice	10 hours (10 x 60-minute sessions)
Field of best practice	☐ Storytelling (ST) ☒ Virtual reality/technology (VR) ☐ Combination of ST and VR
Direct/ultimate target groups (TG)[16] of best practice	**Direct TG:** Youth 8+ and Adults who: • withdraw or become isolated in social settings • combat fear in starting or maintaining a conversation • struggle with working in groups and negotiating with peers • have trouble expressing positive emotions to others • experience difficulty connecting to others related to a diagnosed neurodevelopmental difference such as ADD/ADHD, Autism Spectrum Disorder, Social Anxiety and other social, emotional or behavioural challenges
	Ultimate TG: • Educational Systems • Transition Programs • Treatment Centres

[16] In the Story Changers project, for example, the distinction between direct and ultimate target group refers, respectively, to the teachers who will benefit from the innovate teaching methods, and the pupils who will then acquire basic social skills.

Type of education related to best practice	☒ Formal ☐ Informal ☐ Non-formal
Aim and objectives of best practice (min. 150 words max. 250 words)	Charisma is a virtual simulation platform which is combined with a cognitive training program and aims to help users increase their social adeptness. Through the clinicians' guidance in engaging in complex social situations in the safe environment of the virtual world, participants develop confidence and adopt behavioural changes that have shown to translate into real-word interactions. The main objectives are for participants to improve their ability to: - initiate and maintain conversations - navigate peer relationships - identify emotions and intentions - manage confrontation and peer pressure - integrate social skills into daily life
Short description of best practice – context and notable aspects (min. 250 words max. 500 words)	Charisma is a game-based, virtual training platform which allows practice with real-time simulation of social interactions at varying levels of complexity. Participants receive live, interactive coaching from licensed clinicians. The training starts with a complimentary consultation with participants. During the sessions, a Charisma clinician guides the participating child through real-world scenarios in a virtual world setting. The child interacts with others, receives clinician advice and strategies, then applies that coaching in real time. Trainers teach science-based strategies that boost social brain health and performance. Relevant, customized feedback in real time is provided by a live Charisma Coach, which includes a personalised summary of social strengths, weaknesses, and progress. After the completion of the 10-hour training, booster sessions are offered.

Resources (human, material, equipment, infrastructure etc.) for application of best practice	Charisma coach Online access to the programme In-person training is available at the Brain Performance Institute located in Dallas, Texas
Impact of best practice (min. 250 words max. 500 words)	Out of 120 youth ages 8-16 who completed the Charisma for Youth training: - 86% were able to better understand others' points of view - 71% improved their ability to start a conversation - 100% demonstrated improvements in maintaining conversations - 90% were able to better recognize emotions - 86% reported having stronger relationship-building skills after completing the training Overall, the programme benefitted kids facing self-assertion challenges (e.g. bullying situations) and other social learning deficits (i.e. not recognizing social cues, difficulty working in groups, extreme shyness).
Strengths and weaknesses of best practice (min. 250 words max. 500 words)	**Strengths:** Charisma is remotely accessible from home, school, or the organization's computer. It is an innovative approach that uses research-proven strategy-based learning and it is customised. The combination of the virtual platform, cognitive strategies and customised coaching allows the personalisation of each session. Learners experience social interactions in a safe environment. Unlike other virtual simulation programs, Charisma users always interact with a live, licensed clinician. Leverages familiar gaming technology to promote ease of use. Customized control panel with objects and props.

	Weaknesses (please include also any suggestions for improving the practice): Not specified
Additional information about best practice	N/A
Source of information of best practice	https://brainhealth.utdallas.edu/programs/charisma/#learnmore

Table 15: BP 14 - Charisma (MMC & Apostolos Varnavas)

Best Practice 15: The 360 Workshops: Virtual Reality to Help Teens with Social and Emotional Learning

TITLE OF BEST PRACTICE	**The 360 Workshops: Virtual Reality to Help Teens with Social and Emotional Learning**
Identified by (partner)	MMC & Apostolos Varnavas Primary School (Cyprus)
Developer and participating organisations/partners in development of best practice (name and country)	**Developer:** Jasmin Roy Foundation, Quebec, Canada
	Participating organisations/partners: • Institut Pacifique • Sherbrooke University
Main actors involved in implementation of best practice (stakeholders, policy makers etc.)	• School staff • Facilitators • Students
Date of first implementation of best practice	2018

Duration of best practice	Each workshop is 75 minutes long; each workshop day includes a maximum of 4 workshops
Field of best practice	☐ Storytelling (ST) ☒ Virtual reality/technology (VR) ☐ Combination of ST and VR
Direct/ultimate target groups (TG)[17] of best practice	**Direct TG:** High School Teachers
	Ultimate TG: High School Students
Type of education related to best practice	☒ Formal ☐ Informal ☐ Non-formal
Aim and objectives of best practice (min. 150 words max. 250 words)	The main aim of 360 Workshops is to use virtual reality to foster empathy and consideration for others in conflict, violent and bullying situations in order to achieve meaningful, integrated and sustainable learning. The objectives of 360 Workshops are: • To create a forum for discussion with students on social and emotional learning (SEL) • To stimulate reflection and discussion on creating conditions that promote social and emotional learning (SEL) in schools • To promote the adoption of healthy emotional and social lifestyles among students • To document the effects and feasibility of the large-scale use of virtual reality technology with high school students
Short description of best practice – context and	The 360 Workshops activity consists of three virtual reality videos presented to students. Each video addresses a specific set of skills. Using the facilitators guide, an external facilitator, who is familiar with virtual reality technology and social and emotional learning

[17] In the Story Changers project, for example, the distinction between direct and ultimate target group refers, respectively, to the teachers who will benefit from the innovate teaching methods, and the pupils who will then acquire basic social skills.

notable aspects (min. 250 words max. 500 words)	(SEL), leads the video viewing and ensuing discussion on various skills related to the prevention of violence and bullying. Questions to be asked after the viewing of the videos are included in 360 Workshops Booklet 4 "Practical Application to Everyday Life", as well as examples of everyday situations where students may apply what they have learnt.
Resources (human, material, equipment, infrastructure etc.) for application of best practice	• 3 VR videos: The Little New Kid; Nerves on Edge in the Gym; Teamwork • VR glasses and computer equipment • Four 360 Workshops Booklets: 1. Preparation Document for School Staff 2. Virtual Reality, Social and Emotional Learning and School 3. The Adult's Role 4. Practical Application to Everyday Life
Impact of best practice (min. 250 words max. 500 words)	Not specified
Strengths and weaknesses of best practice (min. 250 words max. 500 words)	**Strengths:** VR environments and characters can cultivate empathy and perspective, social attitudes and behaviours, and wide range of emotions, as VR can depict everyday situations in a quite reliable and accurate way.
	Weaknesses (please include also any suggestions for improving the practice): Not specified
Additional information about best practice	N/A
Source of information of best practice	https://fondationjasminroy.com/en/initiative/the-360-workshops/

Table 16: BP 15 – The 360 Workshops: Virtual Reality to Help Teens with Social and Emotional Learning (MMC & Apostolos Varnavas)

Best Practice 16: Exploring Social Skills and Character Education of Students through Storytelling in L2

TITLE OF BEST PRACTICE	**Exploring Social Skills and Character Education of Students through Storytelling in L2**
Identified by (partner)	MMC and Apostolos Varnavas Primary School (Cyprus)
Developer and participating organisations/partners in development of best practice (name and country)	**Developer:** Rosmery León-Garzón and Harold Castañeda-Peña, Universidad Distrital Francisco José de Caldas, Colombia **Participating organisations/partners:** State School Bogota (Colombia)
Main actors involved in implementation of best practice (stakeholders, policy makers etc.)	English language teachers Research facilitator
Date of first implementation of best practice	2018
Duration of best practice	12 weeks
Field of best practice	☒ Storytelling (ST) ☐ Virtual reality/technology (VR) ☐ Combination of ST and VR
Direct/ultimate target groups (TG)[18] of best practice	**Direct TG:** Students of 7th grade (aged 12-14) English language class at a mixed-sex state school located in Bogota (Colombia)

[18] In the Story Changers project, for example, the distinction between direct and ultimate target group refers, respectively, to the teachers who will benefit from the innovate teaching methods, and the pupils who will then acquire basic social skills.

	Ultimate TG: N/A
Type of education related to best practice	☒ Formal ☐ Informal ☐ Non-formal
Aim and objectives of best practice (min. 150 words max. 250 words)	The aim of this action research process was to solve peer rejection in the English language classroom through the use of L2 storytelling workshops. The storytelling workshop activities had two objectives: first that the students through reading and understanding the short stories' contents reflect upon their own social behaviour in the classroom and adjust their behaviour towards their classmates and, secondly, that students practice their English language skills in this context.
Short description of best practice – context and notable aspects (min. 250 words max. 500 words)	The practice was implemented in five different stages. In the first stage (Identifying), the actors used visual tasks and sociograms to identify the social issues in the classroom on which they wanted to focus. The main social issue that these showed was peer rejection. In the second stage (Planning), they explored the literature to understand how storytelling is related to character education and social skills within a transformative curriculum framework. Then they designed the L2 storytelling workshops focusing on social topics. In the third stage (Acting), four L2 storytelling workshops were implemented. Short stories with a heightened social content on social rejection and exclusion were adapted for use in the English language classroom. At the end of each storytelling workshop, there were reflection activities about the social skills related to the story. These activities were developed to provide students with opportunities to express their ideas, and to share and write about their own experiences and perceptions of different situations and characters in the stories using the language structures learned in the English class. Another resource that was used were drawings.

	The fourth stage (observing) involved the analysis of the L2 storytelling workshops data (e.g. class transcriptions, students' artifacts, students' interviews and students' evaluation of the workshops). Data was analysed codifying repeated patterns or themes which ultimately constituted one analytical category that shed light in the teacher's/researcher's understanding of peer rejection in relation to healthy L2 learning environments through two sub-categories (e.g. awareness of acceptance and building a community). The last stage (reflecting) consisted of the drawing of conclusions.
Resources (human, material, equipment, infrastructure etc.) for application of best practice	• Teacher • Research Facilitator • Stories • Materials for drawing • Sociometric questionnaire
Impact of best practice (min. 250 words max. 500 words)	Some changes in students' character education were visible along with their ability to make sense orally and in written form based on the drawings that contextualised what they wanted to communicate. Students were stimulated to reflect on different topics related to social skills using the foreign language naturally. They reflected on their personal experiences by connecting new experiences, and through this process they were apparently empowered to reflect on and make decisions in future situations that they may face. The students also had used the language in oral and written forms more comfortably as their performance in the activities demonstrated; the students gained more confidence to write about their reality, became familiar with the new vocabulary and used it to share experiences with their peers. They were motivated to build texts that explained their personal experiences. They wrote pieces of advice or suggestions to their partners. They were attentive to their partner's ideas and in some cases, they encouraged their partners to solve a specific situation. In some cases, the students fostered their social relationships, and they felt more confident about participating and interacting with their peers in order to take part in academic activities. The project allowed the students to be closer to their partners, and some of the participants explained that they had changed their assumptions, misunderstandings etc. In addition to the

	fact that they had accepted their peers as part of their group, some students (called rejected or isolated) were motivated by their peers to work in the activities through positive comments. The participants acknowledged the importance of social skills to live in a community.
Strengths and weaknesses of best practice (min. 250 words max. 500 words)	**Strengths:** Four different instruments were used to gather data on participants' reflections upon social skills through the use of storytelling in the EFL class: artifacts, interviews, evaluation forms and transcriptions. This made the conclusions drawn more reliable and comprehensive. For the validation process, the triangulation technique was used in order to have different points of view about social skills in the class in question. In addition, this practice combines the increase of social competence with the increase of language performance. That is, storytelling engages students in learning a foreign language because it provides students with an opportunity to feel more comfortable sharing ideas with their peers about stories presented in the English class. Furthermore, the students were organised in groups, which strengthens students' interaction and empowers students to participate in school activities.
	Weaknesses (please include also any suggestions for improving the practice): This practice was implemented only in one class in one school. Further studies in a larger geographical scale would better substantiate the correlation between language improvement to the use of L2 storytelling workshops as well as the increase of social competences through storytelling.
Additional information about best practice	N/A

Source of information of best practice	R. León-Garzón R. and H. Castañeda-Peña, "Exploring Social Skills and Character Education of Students through Storytelling in L2", *Gist Education and Learning Research Journal* 17 (2018), 128-157. https://files.eric.ed.gov/fulltext/EJ1200243.pdf

Table 17: BP 16 - Exploring Social Skills and Character Education of Students through Storytelling in L2 (MMC & Apostolos Varnavas)

Best practice 17: Storytelling Schools

TITLE OF BEST PRACTICE	**Storytelling Schools**
Identified by (partner)	MMC and Apostolos Varnavas Primary School (Cyprus)
Developer and participating organisations/partners in development of best practice (name and country)	**Developer:** Storytelling Schools Ltd (teachers, writers and creative artists)
	Participating organisations/partners: N/A
Main actors involved in implementation of best practice (stakeholders, policy makers etc.)	Teachers School headmasters
Date of first implementation of best practice	2011
Duration of best practice	One half-term
Field of best practice	☒ Storytelling (ST) ☐ Virtual reality/technology (VR) ☐ Combination of ST and VR
	Direct TG: Primary school teachers

Direct/ultimate target groups (TG)[19] of best practice	**Ultimate TG:** Primary school students
Type of education related to best practice	☒ Formal ☐ Informal ☐ Non-formal
Aim and objectives of best practice (min. 150 words max. 250 words)	The aim of the Storytelling Schools teaching and learning method is to enhance pupils' attainment in reading and writing through their learning a repertoire of stories by heart. This helps pupils to memorise information as well as learn how stories are structured, which, in turn, gives them the skills to narrate their own stories. The objectives are for the students to develop oral communication skills, master the language and ideas they need for subsequent writing.
Short description of best practice – context and notable aspects (min. 250 words max. 500 words)	Storytelling Schools is a teaching and learning method which centres on children learning to tell stories and make verbal presentations. The Storytelling Schools trainers provide training, planning support and mentoring to schools which wish to adopt the method. The key elements of the Storytelling Schools system are: 1. Telling: how to tell a story and teach the class to retell it 2. Deepening: how to immerse the class in the language and content of the story through drama, poetry, song, dance, reading, writing and linking across the curriculum 3. Creative writing: how to demonstrate and teach writing through shared writing practice 4. Story recycling: how to create new stories from old 5. Story creation: how to invent new stories using a simple one-stop-shop for storymaking 6. Non-fiction: how to apply these same 5 elements to the teaching of non-fiction texts The children map the story using pictures and a few rough words. Then they move on to "stepping" the story. This means physically getting up and moving around the room to mark out important points

[19] In the Story Changers project, for example, the distinction between direct and ultimate target group refers, respectively, to the teachers who will benefit from the innovate teaching methods, and the pupils who will then acquire basic social skills.

	in the plot. Pupils work in pairs, each telling the tale to the other. Once a story has been learned, the teacher can then introduce work around it to develop the key themes. In addition, they can deepen the character through role play or interviews.
Resources (human, material, equipment, infrastructure etc.) for application of best practice	• Teachers • Books: - The Storytelling Schools Method – A Handbook for Teachers - 147 Storytelling Games and Creative Activities for the Classroom and the Home - History through Stories - 147 Traditional Stories for Primary School Children to Retell - Science through Stories: Teaching Primary Science with Storytelling • YouTube Videos: - Training videos - Storytelling clips - Songs and other enrichment resources
Impact of best practice (min. 250 words max. 500 words)	Storytelling Schools has worked with more than 240 schools in the UK, many in areas of socio-economic deprivation and the method has impacted c. 2000 teachers and 60 000 pupils in England. Four case studies have shown that the Storytelling Schools method has raised standards in schools: 1. Poplar Partnership Evaluation Report on the Storytelling Schools pilot project in ten Tower Hamlets schools highlights the positive impact that the method had: levels of attainment in writing at the end of the evaluation period were above the national and local averages, evidence suggested that the method builds children's confidence and engagement with writing, and children stated that the method made them feel positively about their identity as writers and storytellers. 2. High Meadow Infant School (Birmingham): 100% of disadvantaged pupils met national expectations in writing, compared to 66% nationally; since become a Storytelling School, the school has been awarded Ofsted "Outstanding" status.

	3. Larkrise Primary School (Oxford): the Storytelling curriculum contributed to a rise of SATS results. 4. Mayflower Primary School (London): their standards in reading and writing rose dramatically, while the school was awarded "Outstanding" status by Ofsted.
Strengths and weaknesses of best practice (min. 250 words max. 500 words)	**Strengths:** Overall, the Storytelling Schools method is a way to make schools more engaging and effective, especially in areas of social deprivation. The framework is simple and easy to understand and at the same time it is versatile, allowing for freedom and creativity. It increases children's confidence by encouraging them to use their own voice in an improvised way. From the teachers' training perspective, it is an engaging teaching method, as the workshops are interactive, inclusive and playful, while they provide the methods that can be implemented in their classrooms. Teachers' skills are enhanced and themselves are empowered to deliver exciting, inspiring lessons. Furthermore, Storytelling Schools methods increase parent engagement in their child's learning, which is decisive for their success.
	Weaknesses (please include also any suggestions for improving the practice): Not specified
Additional information about best practice	N/A
Source of information of best practice	https://storytellingschools.com/ https://www.hawthornpress.com/2015/05/tes-review-of-the-storytelling-schools-model/

Table 18: BP 17 - Storytelling Schools (MMC & Apostolos Varnavas)

Best Practice 18: Emerging Digital Storytellers

TITLE OF BEST PRACTICE	**Emerging Digital Storytellers**
Identified by (partner)	MMC and Apostolos Varnavas Primary School (Cyprus)
Developer and participating organisations/partners in development of best practice (name and country)	**Developer:** Ryan Stone and Mary White
	Participating organisations/partners: William Ian O'Byrne as participant researcher (as objective observer), two teaching assistants
Main actors involved in implementation of best practice (stakeholders, policy makers etc.)	• Classroom teachers • Teaching assistants • Pupils • Parents
Date of first implementation of best practice	2018
Duration of best practice	Four months
Field of best practice	☐ Storytelling (ST) ☐ Virtual reality/technology (VR) ☒ Combination of ST and VR
Direct/ultimate target groups (TG)[20] of best practice	**Direct TG:** Teachers and 4, 5 and 6-year-old students of a mixed age classroom, USA
	Ultimate TG: Primary School teachers and students in general

[20] In the Story Changers project, for example, the distinction between direct and ultimate target group refers, respectively, to the teachers who will benefit from the innovate teaching methods, and the pupils who will then acquire basic social skills.

Type of education related to best practice	☒ Formal ☐ Informal ☐ Non-formal
Aim and objectives of best practice (min. 150 words max. 250 words)	This practice aims at students' social-emotional development and at helping students to find their voice through writing and digital content construction. It also builds opportunities to mentor students in positive child-computer interactions and human-computer interactions, while also working collaboratively and cooperatively with peers.
Short description of best practice – context and notable aspects (min. 250 words max. 500 words)	The "Emerging Digital Storytellers" instructional model entails little direct instruction by the teacher, but a lot of scaffolding and modelling and the use of student work product as a means to motivate and illustrate story elements to other students. Teachers address prompts to students such as "What is your plan?" and "Tell me about your story". Students write their stories regularly in an open-ended context, in one setting or over several days. Usually, stories are in the form of hand-drawn images on paper and journaling notebooks and are shared with teachers, peers and parents. Then, one of the classroom teachers creates a digital version of the students' stories. That is, students are mentored in two kinds of storytelling: digital and traditional. Both types of storytelling are considered as being equivalent and both incorporate the students' writing, drawing and voice in the final work product. In terms of the traditional storytelling part, students are asked to share their stories and in some instances by adding visuals such as photographs, drawings. For the digitisation of the stories, students draw out or storyboard their stories and narrate them to the teachers. Students are given time to "free write", where they can engage in initial conversations with peers or adults about what they are going to write about. In groups of 6, each student illustrates their story in their journal and then the teacher records the story verbatim as told by the child. It was possible for the story to change because of peer comments, stories or questions. Then various tools are used to digitize students' stories: a microphone or camera to capture audio, a scanner or camera to capture pictures and Adobe Photoshop and

	Premiere to animate students' stories. The final products are shared with students via animation and printed stories with CD-ROM. The digitisation of the story allows for a greater level of engagement and understanding by visually representing the action through the movement of the child's drawings, adding sound effects and having the child narrate. The audio is burned on a CD-ROM and the images and words are printed and put in a presentation book. The final products are added to a listening centre in the classroom, where students can listen to their peers' stories.
Resources (human, material, equipment, infrastructure etc.) for application of best practice	• Teachers, teaching assistants, researchers • Drawing tools • Cameras • Scanners • Microphone • Software (Adobe Photoshop and Premiere) • CD-ROMs • Audio device
Impact of best practice (min. 250 words max. 500 words)	Through this practice students developed various literacy skills and competencies such as information, media and visual literacies, as well as the storytelling ability. In addition, this practice was used as an opportunity to provide exposure to creative and expressive forms of computer-child interaction use in and out of the classroom. In the course of developing the stories and their digital form, students improved their storytelling skills, expanding the range of their ideas, while they became more and more familiar with what would work better in terms of the digitised version of their stories. Some students were even able to mentor their peers or help the classroom teachers to modify the process of digitisation by creating targeted comments on their sketches referring to their vision for their animation. Overall, digital storytelling motivated students to create and share their stories.

	Digital stories were shared with the family and classmates, which had an impact on the social connections and learning in and out of the classroom. In addition, teachers had the chance to implement collaborative teaching in the class.
Strengths and weaknesses of best practice (min. 250 words max. 500 words)	**Strengths:** Through the use of digital tools for creating and sharing stories, children develop various kinds of skills and competencies at an early age. Students become familiar and learn how to work with a great variety of tools and modes: text, drawings, images, audio, music, sound effects, cameras, scanners. Students receive mentoring into the storytelling process and the digital storytelling process, thus developing storytelling skills. Animation (moving image and sound effects) capture students' attention, engage them and motivate reluctant storytellers. Digital stories are portable, which allows the teachers to document the work process and product of the learner, while allowing the students to view the work of others. They can also be shared with parents as a memory or keepsake.
	Weaknesses (please include also any suggestions for improving the practice): In order for the digital practices to be implemented, it is necessary for the children to have positive or informed exposure to computer interactions at home or at school. Also, targeted professional development of educators to build the skillsets need to use the tools, as well as time and freedom are necessary for this practice to take place.
Additional information about best practice	N/A

Source of information of best practice	W. I. O'Byrne, K. Houser, R. Stone, M. White (2018), 'Digital Storytelling in Early Childhood: Student Illustrations Shaping Social Interactions', *Frontiers in Psychology* 9: 1800. https://www.frontiersin.org/articles/10.3389/fpsyg.2018.01800/full

Table 19: BP 18 - Emerging Digital Storytellers (MMC & Apostolos Varnavas)

Best Practice 19: Play the school newspaper online

TITLE OF BEST PRACTICE	**Play the school newspaper online**
Identified by (partner)	MYTHOS (Greece)
Developer and participating organisations/partners in development of best practice	**Developers:** Petrina Karidia, Eleni Mpasdara, Popi Nakou, Dimitra Tsiotra
	Participating organisations/partners: Mythos Centre Greece
Main actors involved in implementation of best practice (stakeholders, policy makers etc.)	Students' community
Date of first implementation of best practice	Beginning of the school year
Duration of best practice	Throughout the school year
Field of best practice	☐ Storytelling ☐ Virtual reality ☒ Combination of ST and VR
	Direct TG: Pupils and Teachers (Elementary school)

Direct/ultimate target groups (TG)[21] of best practice	**Ultimate TG:** Community around the school
Type of education related to best practice	Combination of Formal, Informal and Non-formal Education
Aim and objectives of best practice (min. 150 words max. 250 words)	● Students will develop skills of creativity, leadership, extroversion, etc. through the possibility of creating, administering and managing areas of cooperation of the electronic newspaper with their classmates. ● Students will develop their own digital self-management and acquire social skills about how students behave in the digital world. ● Understand social media security situations so that students can acquire assessment skills and the ability to understand the digital world, identify risks that may harm children's physical or mental integrity, and reduce the risks associated with digital media and provide information on how to deal with child victims ● Virtual reality and storytelling will be able to help students come closer to knowledge in a fun and creative way. Through it they can create their own stories and tell them, enriching them in their own experiential way. This develops their oral and written ability, as well as strengthens their self-esteem ● Students will acquire communication skills in the written language of the electronic newspaper by commenting on views with classmates through the wall and messages. ● Students will gain collaboration skills and how to share their material, through the participation of collaborative blogs, collaborative documents, file and material sharing, etc. ● Through the participation of students in this process they will develop with the other members of the group relationships of teamwork, cooperation, interaction, respect, tolerance in different ways of thinking

[21] In the Story Changers project, for example, the distinction between direct and ultimate target group refers, respectively, to the teachers who will benefit from the innovate teaching methods, and the pupils who will then acquire basic social skills.

	● Students will broaden their spiritual horizons by engaging in appropriate activities, with the interdisciplinary approach of knowledge.
Short description of best practice – context and notable aspects (min. 250 words max. 500 words)	This best practice tries to give a refreshing view on the traditional school newspaper. As it is widely known the school newspaper is made from pupils under the teachers' guidance and addresses pupils, teachers and the community around the school. The press team usually consists of reporters, artists (designers, photographers) and computer "experts" that work on the electronic version of the newspaper (typing, downloading and uploading relevant content, internet searching etc). The content is not restricted as an actual press project, it can be about school life (lessons, social and festive events, reports about excursions to interesting places) and a variety of topics that appeal to the pupils such as games, pop culture, sports, arts, interesting trivia etc. What is innovative about this particular practice is the actual presentation of the work. It is very usual nowadays to have an online edition of the school paper uploaded on the school's blog or site. What is added to the written form of the articles is a "play" button that gives each reader the option to push the button and watch the pupil-journalist reporting his/her story, like a TV reporter, and present images (videos, photos, even interviews etc) of what their article discusses. A very interesting effect can be the green screen, which replaces the actual background of the video with a digital or virtual background. So a pupil that wrote an article about a field trip to an archeological site may tell the story and simultaneously present and be part of this particular environment. This practice tries to follow the technological speed of our time, making use of the immediacy of virtual reality, making time and distance shorter, giving the reader the opportunity to be a viewer and also take part in the shared experience.
Resources (human, material, equipment, infrastructure etc.) for application of best practice	● electronic equipment for production: cameras, microphones, switcher and a green screen for the shoot of the videos, a wardrobe and props and computers for editing ● a specific classroom to be used as a studio for the newspaper's redaction

	● the editorial board consisting of students, teachers of various teaching specialties, like Computer teachers, Language teachers, Art teachers, Music teachers, Drama teachers etc.
Impact of best practice (min. 250 words max. 500 words)	This best practice creates communication networks between the school and the parent/guardian association, other schools and the society in general, which makes the school open to the community. As a means of free expression it can give a great boost to the students' creativity and may reveal their talents and inclinations. It also develops a number of social skills such as teamwork and collaboration, the responsibility of sharing information and being an active member of the society. Last but not least, students experience school life having a more energetic and meaningful role.
Strengths and weaknesses of best practice (min. 250 words max. 500 words)	**Strengths:** ● Online newspapers are borderless. There will be a big community where not only students from all around the world come in contact ● Students with disabilities have the chance to participate ● Readers will have access to daily updates promptly and free ● Children who participate in the editorial board will be able to express their interests and feelings in a creative way.
	Weaknesses (please include also any suggestions for improving the practice): ● Image preponderates the text. In that case, we recommend that the page's structure should be in a way that the text is more visible than the videos. ● Online environments put a lid in physical contact and promote long-hour work in front of a computer. These may cause lack of real-life socialisation and health problems to the children. We suggest that the children who participate in the editorial board

	conduct their meetings in real time and plan festivities once in a while for their audience. ● The high cost of the technical material needed for this project. We recommend that children and teachers could seek economic support from both school's community and state funding. ● Leak of the personal data of the students since they are minors. We suggest limited access only for the students, their families and teachers.
Additional information about best practice	This is just the basic form of the proposal, which can be enriched as far as the content of the articles, the number and style of columns is concerned, which will originate eventually from the school community.
Source of information of best practice	Our former experience as students and teachers

Table 20: BP 19 - Play the school newspaper online (Mythos)

Best Practice 20: If you were in my shoes

TITLE OF BEST PRACTICE	**If you were in my shoes**
Identified by (partner)	MYTHOS (Greece)
Developer and participating organisations/partners in development of best practice	**Developers:** Konstantina Filippopoulou, Nikoletta Hadjipolydorou, Maria Kaisari, Panagiotis Papaioannou, Aikaterini Theodorou, Stella Tsatsaroni
	Participating organisations/partners: Mythos Centre Greece
Main actors involved in implementation of best practice (stakeholders, policy makers etc.)	School and communities

Date of first implementation of best practice	Beginning of September or Spring Equinox
Duration of best practice	It is dependent on the number of the selected artists.
Field of best practice	☐ Storytelling (ST) ☐ Virtual reality/technology (VR) ☒ Combination of ST and VR
Direct/ultimate target groups (TG)[22] of best practice	**Direct TG:** Pupils and teachers of pre-primary, elementary, special schools, secondary schools.
	Ultimate TG: Community associated with the school.
Type of education related to best practice	Formal Informal Non-formal
Aim and objectives of best practice (min. 150 words max. 250 words)	Through the best practice, participants should be able to develop their social skills. **Creating new knowledge (Cognitive)** ● They will acquaint new knowledge on the Arts, as well as Storytelling **Developing feelings and emotions (Affective)** ● They will learn how to communicate with each other and how to cooperate.

[22] In the Story Changers project, for example, the distinction between direct and ultimate target group refers, respectively, to the teachers who will benefit from the innovate teaching methods, and the pupils who will then acquire basic social skills.

	● They will have the opportunity and feel free to express their feelings through art and storytelling ● They will develop the ability to understand and respect other people's feelings. **Enhancing physical and manual skills (Psychomotor)** ● They will learn narration and artistic techniques. ● They will learn to use body language properly and comprehend the whole procedure. ● They will develop their personality in many fields especially their creativity, their fantasy and their motivation to participate in commons. ● They will learn to interact with virtual reality applications. ● They will enhance their language skills. ● They will learn to follow instructions. ● The nature of the best practice is all inclusive in terms of all forms of education (typical- non typical), due to the combination of storytelling and virtual reality environment. ● The best practice also helps children to develop the skill of problem solving.
Short description of best practice – context and notable aspects (min. 250 words max. 500 words)	The idea of "**If you were in my shoes**" is based upon a different way of looking at "reality or fantastic worlds" through some magical shoes, which give the bearer the opportunity of taking a walk around certain virtual "spots". A child or a group of children wander around a city or a country environment, discovering in each and every spot various hidden pairs of shoes. These magical shoes could appear in a virtual book or behind a rubbish bin or even under some forest bush (anywhere)! Each newly discovered pair of shoes belongs to a different famous or unknown artist: a painter, a sculptor, a composer-musician, a performer, acrobat, joggler, an actress/actor, a street artist (graffiti artist), etc.

	As soon as the child puts on those magical shoes, a selection of artworks of the artist appears in front of him. The child has the possibility to enter into the artist's artwork of his choice. When the child enters the artwork of her/his choice, immediately several details of the artwork come to life, introducing themselves and motivating the children to make a story out of the artwork. Moreover, the details of the artwork ask for the children to solve a riddle or complete a challenge in order to move forward. The challenge may consist of various drama techniques (freeze frame, pantomime), craftworks, musical performances or even a short choreography. When the children complete the challenge, a new pair of shoes of a different artist will appear, along with some new artworks. The children after a short discussion will choose the new artwork from the new artist. The artists could be coming from different cultures or having special qualities/needs. Each piece of art may contain information about the artist or the story behind it. The stories produced can be autonomous or connected to each other.
Resources (human, material, equipment, infrastructure etc.) for application of best practice	Human resources would be teachers, educators, instructors, animators. The material equipment would be: ● Computer, tablet with a stylus pen or cellphone. ● An interactive whiteboard or a projector would be useful to a group of children. ● Speakers or headphones together with microphones. ● Musical instruments ● Craft materials, such as drawing pads, crayons and pastels, pens and markers, paints and brushes, plasticine or clay.

Impact of best practice (min. 250 words max. 500 words)	It will support the teaching and learning process through introducing and combining new methods and techniques, motivating teachers to be creative and visualise new possibilities. **The practice will improve the social skills of the participants:** Children will cooperate with each other in order to solve the riddles and pass to the next level. It will also improve their communicative skills through the comprehension of storytelling, discussions with each other and also the efforts to make their own stories. Participants will get to know each other better, and interact. They will learn to negotiate and practise democratic processes. Participants will become aware of their own prejudices, and be led to dissolution of stereotypes. Participants will recognize and accept the result of their choices and the consequences of an action. **The best practice will develop cognitive and meta cognitive skills (critical thinking, self reflection, cooperation):** It will stimulate learning. It will motivate children to gain new knowledge and to participate actively in the educational process. It will help acquisition of new knowledge. The participants take into account different learning styles, needs and attitudes. It will develop their communicative skills, and techniques relevant to reading, listening, speaking and writing. It will enhance the ability to analyse and compose oral expression elements. Children will meet remarkable unknown as well as famous artists. Children will get familiar with the new technologies (IT) and virtual reality environment. **The participants would develop their personality in many fields:**

	They will develop affective skills for instance: encouraging oneself and others, empathising with others. They will express themselves in a creative way. They will see and learn to respect different perceptions of the world.
Strengths and weaknesses of best practice (min. 250 words max. 500 words)	**Strengths:** ● The utilization of narration in the educational process. ● The utilization of new technology. ● The utilization of virtual reality which eliminates time and distance. ● It raises awareness to the needs of people with disabilities and special needs. ● The arts stand in the center of our educational project. It incorporates various aspects of the Arts many of which are neglected by the majority of people. ● At the same time, it allows for more freedom of choice, which we believe is vital in the course of active learning and resourceful imagination reinforcing. ● It is original and it induces originality to the participants.
	Weaknesses (please include also any suggestions for improving the practice): ● A weakness of the practice is that the educator is fully dependent on technology and technology sometimes collapses. ● The need for very specialized and organized processes, as well as for adequacy of skills, training and experience of the teachers-pedagogic animators. *Suggestion*: training in artful pedagogic practices. For instance, museum programs, training platforms like in the "Coursera" institution as well as acquisition of sound formative skills in storytelling (solid pedagogic and storytelling practices).

Additional information about best practice	It could contain storytelling in different languages (multilingual) also in sign language.
Source of information of best practice	Our experience so far, as students, teachers and storytellers.

Table 21: BP 20 - If you were in my shoes (Mythos)

Best Practice 21: Chronis' traces: An interactive fairytale

TITLE OF BEST PRACTICE	**Chronis' traces: An interactive fairytale**
Identified by (partner)	MYTHOS (Greece)
Developer and participating organisations/partners in development of best practice	**Best practice developers:** Teachers and Students **Video Developers:** Concept and creative writing team: Marios Voutyrakis, Katerina Theodorou, Stella Karasmanoglou, Petrina Karidia, Eleni Mpasdara, Popi Nakou, Voula Papastergiou, Katerina Tzanaki, Nadia Filippopoulou, Nikoletta Hadjipolydorou Drawings: *Planets*: Thanasis Radoglou, Lia Hatzopoulou. *Heroes and Objects*: Marios Voutyrakis, Katerina Theodorou, Stella Karasmanoglou, Petrina Karidia, Eleni Mpasdara, Popi Nakou, Voula Papastergiou, Nikoletta Hadjipolydorou, Lia Hatzopoulou. Musical composition: Maria Kaisari Animation and editing: Sevi Xeini Team coordination and narration: Giorgos Evgenikos
	Participating organisations/partners: Mythos Centre, Paramythofono
Main actors involved in implementation of best practice (stakeholders, policy makers etc.)	Pre-school and Elementary school students and teachers

Date of first implementation of best practice	Whenever during the school year
Duration of best practice	One or two class periods
Field of best practice	Combination of Storytelling (ST) Virtual reality/technology (VR)
Direct/ultimate target groups (TG)[23] of best practice	**Direct TG:** Pre-school and Elementary school students
	Ultimate TG: Students' families
Type of education related to best practice	Formal, Informal, Non-formal
Aim and objectives of best practice (min. 150 words max. 250 words)	This best practice is trying to make the children familiar with the sense of time. As we all know, time and time components are difficult for children to understand. So through this best practice, we try to focus on some basic characteristics of time. These characteristics are: the speed associated with time (slow-fast), the quality of time that always moves forward and never backwards, the time that never stops, the age that depends on time and music, which is based on time. This best practice also gives children the opportunity to interact with the story through virtual reality, where they can choose the sequel of their choice. Interaction plays a big role in this practice. The direct interaction and participation of the children in the storyline is the main purpose in the story of Chronis. Children have to play an important role, the "role of the creator". They understand the multiple possibilities that exist in the composition of the story. As a result, children experience the joy of creation and discover the path of imagination.

[23] In the Story Changers project, for example, the distinction between direct and ultimate target group refers, respectively, to the teachers who will benefit from the innovate teaching methods, and the pupils who will then acquire basic social skills.

	The opportunity to affect the development of the story with a single click or a single touch, is the element of interaction that engages the audience directly and makes them an integral part of the story.
Short description of best practice – context and notable aspects (min. 250 words max. 500 words)	The main element of this technique - the series of videos with Chronis' adventures - was originally created in order to be presented in an online book fair. Seeing the viewers' positive response, we thought that it would be a great tool to be used in the classroom of preschool and the first grades of primary school, with various educational purposes. Chronis' traces is a fairytale meant for interactive storytelling. The idea behind the story was the need to create a time-related plot and its meaning. So, it would be a suitable opportunity to use it as a stimulus to introduce the concept of Time and its components to young students. In order to understand the material better, it is worth having a look at the way it was created. The tale's plot was processed- based on the use of the basic functions that characterize the acting characters of the 'tales of magic' narrative morphological type; this was pursued according to the acting characters' structural features as were described (theoreticized) by the great Russian folklorist Vladimir Propp (Hero-Heroine, Antagonist, Helper, Interdiction, Violation of interdiction, Trickery, Departure, Guidance, Transference, Struggle, Magical item, Prize, etc.) First of all, the acting characters were determined and identified, and the episodes of the story were created. Afterwards, members of the creative team designed and painted the acting characters and the planets, along with the objects pictured and animated in every single episode or/and action unit. Finally, the paintings were turned into animated pictures which were accompanied by the storytelling and musical recordings in a unique timeline! The tale is presented in the form of an interactive video, which gives the viewer - listener the opportunity to choose between different suggested itineraries for the Hero (Chronis), to follow. For example, each child - viewer is given the possibility to choose the next planet the Hero is going to visit. In every turn of the interactive tale the child

	is given two possible choices (story modules). The video consists of animated pictures and storytelling (voice over technique). There are plenty of propositions concerning the use in the classroom. Firstly, the video will be viewed in class and the majority may decide which part of the story they will follow. When the video ends the students can view the alternative parts and discuss Chronis' adventures, the characters and the ending. Since there is no alternative ending the teacher may ask the pupils to write one, trying to empathise with Chronis and express how they would feel after such an exciting journey. Another challenging activity would be to ask the pupils to draw the final form and shape Chronis took after his journeys. The works of the pupils could be presented to the rest classes of the school, also an exhibition with their drawings could be held and the other pupils could vote their favourite versions. Finally, the most popular versions of stories and pictures could be animated and added to Chronis' saga.
Resources (human, material, equipment, infrastructure etc.) for application of best practice	● Teachers ● Students ● Computer, internet connection, projector, projection room or the actual classroom
Impact of best practice (min. 250 words max. 500 words)	● Better understanding of the Time concept ● Working on critical thinking ● Improving social skills by discussing with the classmates the next path of Chronis' journey ● Harvesting creativity ● Improving self-confidence through problem solving ● Developing personality through empathising with characters' paths and problems ● Giving the viewers an active role draws and keeps their attention

Strengths and weaknesses of best practice (min. 250 words max. 500 words)	**Strengths:** ● Images and videos are very appealing to modern children and enhance the story's impact on them. ● Each part of the story is written and illustrated by different persons which makes the work pluralistic and the notion of time is depicted from various points of view. ● The main character is a creature without a particular form, just like time itself. The children are free to imagine his looks. ● By choosing which path the character will choose next, the viewer has the chance to create and watch various versions of Chronis' story. ● This practice encourages children to have new experiences (discover new places, meet new people) through the characters' adventures and the moral of the story. ● Multiple intelligence skills are taken into consideration and are activated with the activities that follow the viewing.
	Weaknesses (please include also any suggestions for improving the practice): ● The lack of features in Chronis' animation might confuse younger children, although if teachers focus on kids' vigorous imagination, this weakness will turn into a strength, since students will be able to picture. ● Since there is no text in the video about the story, it can be difficult for people with hearing disabilities and/or people who cannot understand Greek, to watch the videos and follow the story. Subtitles in different languages could solve the problem.
Additional information about best practice	This interactive fairytale was created especially for the 17th Book Fair of Thessaloniki (November 2020)

	https://www.thessalonikibookfair.gr/event/ta-ichni-toy-chroni-ena-diadrastiko-paramythi-gia-ton-chrono/
Source of information of best practice	The hyperlink of the first video in Paramythofono's channel on YouTube https://youtu.be/x16IyJMdw3U

Table 22: BP 21 - Chronis' traces: An interactive fairytale (Mythos)

Best Practice 22: Digital Storytelling for 21st Century skills in Virtual learning Environment

TITLE OF BEST PRACTICE	**Digital Storytelling for 21st Century skills in Virtual learning Environment**
Identified by (partner)	Mater Boni Consilii (Malta)
Developer and participating organisations/partners in development of best practice (name and country)	**Developer:** Hannele Niemi, Vilhelmiina Harju, Marianna Vivitsou, Kirsi Viitanen, Jari Multisilta, Anne Kuokkanen University of Helsinki, Helsinki, Finland
	Participating organisations/partners: 1 Institute of Behavioral Sciences, University of Helsinki, Helsinki, Finland 2 Faculty of Behavioral Sciences, Cicero Learning Network, University of Helsinki, Helsinki, Finland
Main actors involved in implementation of best practice (stakeholders, policy makers etc.)	This study involved 319 students and 28 teacher participants from Finland, USA (California) and Greece. Researchers

Date of first implementation of best practice	Data was first collected between September and November 2012
Duration of best practice	3 months
Field of best practice	☒ Storytelling (ST) ☐ Virtual reality/technology (VR) ☐ Combination of ST and VR
Direct/ultimate target groups (TG)[24] of best practice	**Direct TG:** The students involved in the study and their teachers – 319 students from Finland, USA and Greece of ages 10-12 years and their teachers 28 in all
	Ultimate TG: Wider education communities with whom the study was shared
Type of education related to best practice	☒ Formal ☒ Informal ☐ Non-formal
Aim and objectives of best practice (min. 150 words max. 250 words)	The main aim of the study was to demonstrate how digital storytelling (DST) can create virtual learning environments when used, to learn/acquire 21st Century skills and competencies needed for the future working and learning life of students. One of the main outcomes of the study was to create a virtual learning environment to help students and their teachers forge links between formal and informal learning settings through the use of digital storytelling. Another objective of the study was to show how the technology enhanced learning tools and spaces using mobile technology and

[24] In the Story Changers project, for example, the distinction between direct and ultimate target group refers, respectively, to the teachers who will benefit from the innovate teaching methods, and the pupils who will then acquire basic social skills.

	Web 2.0 applications used, as well as social media provided powerful tools for learning. The last objective was to provide a reflection on how digital storytelling can be a powerful tool to acquire the 21st century skills when analysed against the global sharing pedagogical framework that establishes categories of processes or tools as mediators.
Short description of best practice – context and notable aspects (min. 250 words max. 500 words)	319 student participants and 28 teachers from Finland, USA and Greece of ages ranging between 10-14 years of age produced videos using MoViE platform and shared it with their partners. The experiences and processes were then analysed against a theoretical conceptualization of a set of categories: **1) learner-driven knowledge and skills creation, 2) collaboration, 3) networking, and 4) digital literacy** after data was qualitatively and quantitatively collected by the researchers. One of the main aims was for the students to learn to collaborate and share in the virtual environment by designing and producing products in groups and sharing them with others. Part of the process was to give feedback and to seek learning strategies in the learning environment. The students then produced 1000 videos altogether varying in length between 2–4 minutes about different topics related to school subjects and school life from their perspectives as well as themes related from their daily lives and hobbies. Others produced videos which reflected current phenomena in society and school. The student shared their videos with other participants in the project and were given and received feedback with regards to their products from their peers. They also shared the videos by uploading them on the platform. The videos were then analysed by the researchers against the Global Sharing Pedagogy as a Theoretical Framework for storytelling and the categories.
Resources (human, material, equipment, infrastructure	The **human resources** needed for the implementation of the study were the **students** of ages ranging from 10 to 12 years and their **teachers** as well as the **researchers** who trained the participant teachers to use the platform MoViE. As for infrastructure the school

etc.) for application of best practice	needed to have internet connections and as for resources the students needed access to mobile devices such as smartphones or tablets or access to a computer lab. Research questions and research instruments to analyse the data collected.
Impact of best practice (min. 250 words max. 500 words)	The students involved in the study were engaged in their learning and were motivated to work hard. The students enjoyed creating their digital stories and were motivated to use the various technologies and apps to produce their work. Although the students came across technical problems, they tried to find solutions to these challenges by seeking help online. In this manner the students used computers in a different way. The experience proved to be a lesson in collaboration as this was an area that the students found to be most challenging. Collaboration and decision making did not come easy to the students and they often experienced tensions within their groups, but they had to find ways around these tensions to get things done. They also experienced difficulties in giving and receiving meaningful peer feedback. From the teachers' perspectives they felt that the students were motivated and enjoyed the experience for the most part. The teachers felt that the students benefitted from the project as it made the students seek and create new knowledge.
Strengths and weaknesses of best practice (min. 250 words max. 500 words)	**Strengths:** The best practice presented in this study did not need a great many resources and it did not require the participating school to have any pre-requisite of technological knowledge to participate in the study. It also left the teachers and the schools to choose the themes and topics for their projects so they could work within the daily life of school. In this way the students could choose to connect school subjects or depict perspectives from their school life as well as their hobbies. The study also gave the students the space to voice their opinions and pass on important messages about social phenomena like environmental issues and concerns.

	With regards to the DST project itself, the students enjoyed creating knowledge and related well with the technology and sought to find solutions for the difficulties by themselves. The students were also at the centre of the study where they got to pick their own topics, plan and design their video stories. They also had to readjust their designs and modify them that others could understand them. The teachers commented that the DST project helped the students to acquire collaborative skills and also facilitated critical thinking on the part of the students. The teachers also felt that the DST provided the students with opportunities to learn about decision making processes and looking at things from various perspectives. The project also helped the students gain more knowledge by constructing the content themselves and then share it with others. In this manner they were making an impact on the learning environment. The study also provided the students and the teachers with opportunities to combine formal and non -formal learning. Sharing the products to a platform and networking with other students from other countries was also seen as a positive by the students and their teachers. Analysing the projects and data collected against a theoretical framework presents the study and the practice of DST as a powerful tool to help students practice and develop the 21st Century skills for learning in their future life.
	Weaknesses (please include also any suggestions for improving the practice): The main difficulties faced by the students in the project were the challenges they met as they worked in groups and had to resolve their own issues and tensions to produce their work. In this regard perhaps the practice could be improved by providing the students with more opportunities/exercises through PSCD

	lessons to learn empathy skills and to share and look at experiences from different viewpoints. Another suggestion could be that students could practice peer evaluation by learning to give feedback with a positive comment and ask a question technique. Often this peer-to-peer technique is practiced in creative writing workshops. The teachers in the study were not really accustomed to managing students working in groups and making their own decisions so they were mostly facilitating and guiding. The teachers in the study expressed the need for future projects to be better prepared to solve the technological problems with devices that arose and also, they felt the need to acquire more management skills to organize their groups that were student – driven. As far as scheduling was concerned the teachers felt that their schedules were tight and that trying to connect and network with different countries in various contexts and possibly time zones were not amenable to network. Perhaps the schools and grade levels could have been explored and matched before the study took place. For this reason, the interaction between countries was limited. order for more connections to be made in the different countries. The schools also experienced challenges to acquire permission from their local authorities to obtain permissions to conduct the study and implement the project.
Additional information about best practice	Data collection: The data for this best practice was collected from students and teachers through a survey covering features of the GSP conceptual framework. After the project was completed, 2-8 students were interviewed in focus groups and all teachers were interviewed so data was collected with mixed methods.
Source of information of best practice	Niemi, H., Harju, V., Vivitsou, M., Viitanen, K., Multisilta, J., & Kuokkanen, A. (2014). Digital Storytelling for 21st-Century Skills in Virtual Learning Environments. *Creative Education, 5,* 657-671.

	http://dx.doi.org/10.4236/ce.2014.59078

Table 23: Digital Storytelling for 21st Century skills in Virtual learning Environment (Mater Boni Consilii)

Best Practice 23: A New Approach Toward Digital Storytelling: An Activity Focused on Writing Self-efficacy in a Virtual Learning Environment

TITLE OF BEST PRACTICE	**A New Approach Toward Digital Storytelling**: An Activity Focused on Writing Self-efficacy in a Virtual Learning Environment
Identified by (partner)	Mater Boni Consilii (Malta)
Developer and participating organisations/partners in development of best practice (name and country)	**Developer:** Yan Xu, Hyungsung Park, Youngkun Bek
	Participating organisations/partners: University of Education South Korea, Boise State University, USA
Main actors involved in implementation of best practice (stakeholders, policy makers etc.)	Sixty-four undergraduates from University of Education in South Korea Researchers
Date of first implementation of best practice	2009
Duration of best practice	6 weeks in the second semester of 2009
Field of best practice	☐ Storytelling (ST) ☐ Virtual reality/technology (VR) ☒ Combination of ST and VR

Direct/ultimate target groups (TG)[25] of best practice	**Direct TG:** 64 undergraduate university students aged between 20 to 22 years divided into 2 groups taking a class "Media Production for Teaching and Learning"
	Ultimate TG: Teachers of writing and for students to improve their writing
Type of education related to best practice	☒ Formal ☒ Informal ☐ Non-formal
Aim and objectives of best practice (min. 150 words max. 250 words)	The study's main objective was to understand better the effect of digital storytelling on students' writing with particular focus on when the students were actively engaged in the writing process. Through the use of authentic tasks, meaningful technological integration helps the learners to construct their own meanings from thinking about their own experiences (Johnassen et al., 1999). The researchers also wanted to examine the flow and writing self-efficacy in a virtual environment such as Second Life and possibly find differences between the group that were writing off-line and those who were engaged in the virtual-reality learning environment. The researchers also wanted to show how digital storytelling enmeshed with potent technology can be a powerful tool to enhance teaching and learning. As the students create the digital stories they apply critical thinking skills while choosing what media best fits the message they want to convey to the audience. Digital story telling also provides the student with a learning environment where they need to collaborate and meet content and technology standards.
Short description of best practice – context and	The study targeted 64 undergraduate university students from two classes of "Media Production of Teaching" from the University of

[25] In the Story Changers project, for example, the distinction between direct and ultimate target group refers, respectively, to the teachers who will benefit from the innovate teaching methods, and the pupils who will then acquire basic social skills.

notable aspects (min. 250 words max. 500 words)	Education of South Korea. The ages of the students ranged from 20-22-year-olds. The students were divided into 2 groups where one group had to create a story off-line using Windows Movie Maker, whilst the second group had to perform a digital story in *Second Life.* The first group had to follow a procedure as suggested by the University of Houston for digital storytelling. The second group – those who were conducting the activity in Second Life had to follow the procedure that was developed by the researchers. Second Life is an online world in which residents create their own avatars representing them and interact with other avatars. Step 1) Introduction to Second Life The second group performing in Second Life had to first create an account. The students were first shown how to use the functions of flying, walking, teleporting, communicating, and building objects. They were also shown how to collect free items, how to upload their images, take snapshots and how to buy objects. Step 2) Introduction to Digital Storytelling The researchers then had to teach the steps of digital storytelling and model a story in Second Life. Step 3) Story topic: the students had to create either a real story or an imaginary one – with the topic – travelling through spaces and time. Step 4) In this step the students needed to work in a team. Each team consisted of 5 – 6 students. In each class there were four teams with 5 members and another 2 teams with six. In this step the students had to move in the various places in Second Life and take snapshots that they intended to use in their stories. After gathering their ideas hey had to compose the story.

	Step 5) Writing the story – in this step the students had to write down the story in a Word processing document. Step 6) The students were then required to construct panels and upload the images to create an environment after having highlighted the main sentences of their story and added them to the photos they had captured earlier. The panels were then to be arranged sequentially so that other visitors (residents) could see the story by walking the path that had been laid out. The students could apply any modification necessary to improve their story until the story was finalised. Step 7) Sharing – in this step the students had to tell their stories in teams – one student acted as narrator whilst the rest were the audience. After sharing the stories, the students were to provide feedback. In this manner in this best practice the researchers put a great deal of emphasis on the writing process itself and highlighted the features of the digital storytelling in a virtual environment with open-ended '*edutainment'* qualities. They also wanted to demonstrate how this process influenced the flow of the narration and self-efficacy.
Resources (human, material, equipment, infrastructure etc.) for application of best practice	Human resources – test subjects – university undergraduates - 64 in all. 2 groups needed -control group and test group. Computers with a digital processing application as well as offline Windows Movie Maker as well as Second Life as a platform which was the primary tool. 2 tests were designed – a self- efficacy test and a test of flow. These tests were applied twice before and after the experiment for data collection. Self-efficacy test by Pajares and Valiante(2001) – the test was modified and translated to Korean. Flow test – according to Jackson and Eklund (2004)

Impact of best practice (min. 250 words max. 500 words)	As a direct impact of the best practice highlighted in this synthesis it was noted that the test subjects themselves were influenced in their writing process. After conducting the tests for self-efficacy and flow following the experiment, the researchers found that the scores between the two groups when compared were significant. The writing of self-efficacy in the group writing on the Virtual environment – was much improved. Even the flow of writing was significantly higher in the group that was writing in Second Life than the group that was performing in Movie Maker offline. Moreover, the participants in the activity in Second Life, were immersed at a higher level than the ones who were performing in the Windows Movie maker. It was concluded by the researchers that the main features that contributed to digital storytelling in virtual worlds were challenge-skill balance, clear feedback as well as loss of self-consciousness. In this manner the users were highly motivated in and engaged throughout their activity in the virtual environment. The learners could see their stories and so they could find solutions to their problems by revising their stories more easily. The participants in the stories were represented by avatars and this led to the students being much more involved in the activity in the virtual world which led to a better flow. This best practice outlines how by integrating meaningful technology in the curricula by presenting authentic tasks may contribute to the learners to construct their own meanings from thinking about their own experiences (Jonassen et al.,1999). The findings, from this study has implications for teachers of writing, as it highlights how digital stories may be used in a classroom setting to teach writing. Virtually, the students may transport themselves without any constraints, stimulating their imagination and helping them to be more creative in their writing. Through visualization the learners can see the whole story clearly and build their thinking logically in a structured way when enacting the story. The virtual environment also provided the learners with the opportunity to see

	the flaws in their stories but also gave them the space to correct and revise their stories. This study supports the idea that virtual technology can be a powerful support for educational purposes and may enable learning. The students seem to perform better when they are actively engaged in constructing their own knowledge in a virtual environment.
Strengths and weaknesses of best practice (min. 250 words max. 500 words)	**Strengths:** The strength of this study lies in the fact that the outcomes from the findings support the initial idea generated that digital storytelling combined with potent emerging technologies can enhance teaching and learning. Digital storytelling has much to offer the learner with regards to what is termed as edutainment – education and entertainment (Baek2005). This study highlights the way the student participants engaged and were highly motivated in the process of writing their stories. The study is very well presented with an abundant support of literature and it is also very well explained. The research seems to be very well thought through and it is structured. Moreover, the process it entailed to conduct the experiment could be replicated or adapted to the classroom.
	Weaknesses (please include also any suggestions for improving the practice): The limitation of the study could be that it was confined to one particular age -group that probably had already an idea of digital stories and how to use the applications used to conduct the study. It is very likely that the learners in the classroom especially those who are learning writing in the primary classroom would need a longer time frame or more steps to be able to work with the apps or platforms used.
Additional information about best practice	The online virtual life – Second Life was first launched in 2003 by Liden Lab in San Francisco. The platform was a 3D environment

	where participants could socialize, play, shop, build and explore. It was a virtual space that reflected reality. Over the years leading companies and educators have utilised this virtual reality as a space to meet, socialise and hold out conferences or classes.
Source of information of best practice	X, Y., Park, H., and Baek, Y. (2011). A New Approach Toward Digital Storytelling: An Activity Focused on Writing Self-efficacy in a Virtual Learning Environment. January 2011 Educational Technology & Society 14(4): 181-191.

Table 24: BP 23 - A New Approach Toward Digital Storytelling (Mater Boni Consilii)

Best Practice 24: Boundary crossing and learning identities-digital storytelling in primary schools

TITLE OF BEST PRACTICE	**Boundary crossing and learning identities-digital storytelling in primary schools**
Identified by (partners)	Mater Boni Consilii (Malta)
Developer and participating organisations/partners in development of best practice (name and country)	**Developer:** Anne Mette Bjorgen
	Participating organisations/partners: University of Oslo
Main actors involved in implementation of best practice (stakeholders, policy makers etc.)	3 Norwegian primary school classes of 5th – 7th graders aged 9-13 and their respective 3 teachers.
Date of first implementation of best practice	2008
Duration of best practice	1 and a half months in the spring of 2008
Field of best practice	☐ Storytelling (ST)

	☐ Virtual reality/technology (VR) ☒ Combination of ST and VR
Direct/ultimate target groups (TG)[26] of best practice	**Direct TG:** Teachers and students of 3 primary schools in Norway
	Ultimate TG: The wider community for DSP teachers in primary schools
Type of education related to best practice	☒ Formal ☒ Informal ☐ Non-formal
Aim and objectives of best practice (min. 150 words max. 250 words)	The main objective of the study was to establish out how Digital Storytelling processes in the primary classroom may potentially develop learning identities and digital competencies as well as agency in an educational setting. The researcher discusses three different examples of digital story telling processes in 3 classrooms to look at how pupils related learning at home to learning at school. The researcher also wanted to look at how the teachers impacted the pupils' activities with storytelling activities. Another objective of the study was to look at the possibilities and challenges of using digital storytelling in the primary school to develop pupils' identity and agency from an ontological perspective. The researcher also wanted to explore to what extent does digital storytelling cross boundaries between school and home activities involving digital technology. The researcher also wanted to establish if pupils got opportunities to combine "cultural codes" from the leisure time to the more formal codes in school.

[26] In the Story Changers project, for example, the distinction between direct and ultimate target group refers, respectively, to the teachers who will benefit from the innovate teaching methods, and the pupils who will then acquire basic social skills.

Short description of best practice – context and notable aspects (min. 250 words max. 500 words)	This article is based on empirical data collected during video observations of DSP classes in 3 Norwegian primary schools. The pupils participating in the study were 5th – 7th graders aged 9-13. Class A was observed for 4 days and was made up of 18 girls and 16 boys who were from 6th and 7th Grade. Class B consisted o f 16 girls and 30 boys all in the 6th grade and these were observed for 8 days. Class C was observed for 4 days and it consisted of 14 girls and 8 boys all 5th graders. The 3 schools chosen were representative of Norwegian primary schools in terms of size and technical facilities as well as socio – economic status. However, the 3 school were purposefully chosen as they were part of the National project "The Learning Network" who were focusing on digital competences at the time of the data collection. All the participants had prior experience in digital storytelling apart from the 5th graders in Class C. The study collected qualitative data through video-observations and semi-structured interviews individually and in groups in a space of 1 and a half months in Spring of 2008. There were 319 captures in all varying from 15 seconds up to 4 minutes. In addition to the video observations a focus group from each class were interviewed for 30 minutes. To complement this, 2 boys and 2 girls from each class were also interviewed individually. The teachers involved were also interviewed and they also assisted in the selection of which pupils to interview. The data was then analysed using the ethnographic approach (Skaar, 2009). Each interview was transcribed and coded and then analysed according to thematic analysis (Bernard and Ryan, 2010). Class A revealed how DSP can augment learning identity and agency. The pupils could choose with whom to work and which multimodal resource to use within the topic assigned "*Travelling outside Europe".* The students were left free to pick the theme which they wanted to work on within the topic. They had to use the internet to find and collect information. The students could work in groups or individually and they could also choose to work in the class, the gym or the media-lab. The final products were presented in the gym in the presence of the parents. The students could present their work both digitally as

	well as analogue or a mixture of both modalities. Their productions were also supported with dances, posters or role-play. The learners explained that they worked differently at home than at school. Things at home were less formal. They worked on most of their digital content outside school in their leisure time. They were engaged in the project as it interested them on a personal level. Class B focused on fact finding about the Nordic countries. The learners were required to write a manuscript and to combine textual information and pictures in Photostory and upload their products in the Learning Management System. The learners had been given an introduction how to use Photostory prior to the task. They were also familiar with computer use. In Class B it was noted that the focus was more on technical skills rather than on pupil participation. Class C was more focused on aesthetics. The topic about Front doors was chosen by the teacher and the pupils had to find a picture, put it on paper and give it a tile as well as write a poem and build the presentation using Photostory or Paint.
Resources (human, material, equipment, infrastructure etc.) for application of best practice	3 pre -selected Norwegian schools who were part of the "The Learning Network" which was focusing particularly at digital competencies at the time of the study. The empirical data was collected through a period of video observations of DSP in the 3 classes. Access to a computer with Photo story and Powerpoint as well as access to the internet. The 3 DSP teachers who were implementing the DSP sessions at the time of the study. From the study it resulted that DSP could enhance learning identity and agency when opportunities are provided for pupils to engage and collaborate. It also became apparent that students challenged the traditional relationship between teacher and pupil with the teacher as the deliverer of knowledge. Through SDP the students could become knowledge producers. The pupils in the study also brought

	knowledge from their digital competences during their leisure time into the classroom.
Impact of best practice (min. 250 words max. 500 words)	From this study it became evident that teachers need to draw upon the digital competences that pupils already know and have acquired from outside school. It also became apparent in this study that young people were unable to reflect critically on their own. Moreover it seemed that the 3 schools in the study were faced with challenges when it came to realise the full potential of new technology to change educational practice (Erstad and Silseth, 2008). The pupils in the study used the digital skills they had obtained outside school and applied them in class. They also took on the role of guides with their peers. For some other pupils the new ways of learning in school enabled them to explore new ways of how to use their digital competences in their free time. In this manner DSP may serve as crossing boundaries between school and home activities. During the study it also became evident that DSP in an educational setting may restrict the pupils depending on how the teacher approaches the process as in one case the assignment set was prescriptive and did not allow the pupils to become agents of their own learning. However, DSP may support the identity of the learner.
Strengths and weaknesses of best practice (min. 250 words max. 500 words)	**Strengths:** This study looks at Digital storytelling as a *new cultural tool* – it also looks at ways how digital story telling can also be an after- school alternative in engaging young people to learn new things by using technology. The study also looks at 3 very different approaches of applying DSP in school and this sheds light on the way that students learn.

	Weaknesses (please also include any suggestions for improving the practice): Perhaps a wider range of schools who were not focussing only on the digital technologies could be included in a future study to see how the students can handle with the digital technologies presented.
Additional information about best practice	In this practice it was also brought to our attention that schools and teachers are faced with challenges sometimes to realise the full potential of new technologies. Moreover, teachers need to draw upon the digital competencies that pupils already know from outside school, for students to become agents of their own knowledge.
Source of information of best practice	Anne Mette Bjørgen, Boundary crossing and learning identities - digital storytelling in primary schools PhD Candidate Research fellow at Lillehammer University College/Institute for Educational Research, University of Oslo Email: Anne-Mette.Bjorgen@hil.no Seminar.net - International journal of media, technology and lifelong learning 161 Vol. 6 – Issue 2 – 2010

Table 25: BP 24 - Boundary crossing and learning identities-digital storytelling in primary schools (Mater Boni Consilii)

Best Practice 25: Virtual San Storytelling for Children: Content vs. Experience

TITLE OF BEST PRACTICE	**Virtual San Storytelling for Children: Content vs. Experience**

Identified by (partner)	Mater Boni Consilii (Malta)
Developer and participating organisations/partners in development of best practice (name and country)	**Developer:** I. Ladeira and E.H Blake
	Participating organisations/partners: Collaborative Visual Computing Lab, The University of Cape Town, South Africa
Main actors involved in implementation of best practice (stakeholders, policy makers etc.)	A sample of 44 high school students aged 15 to 17 Researchers from Collaborative Visual Computing Lab and University of Cape Town South Africa Prof John E. Parkington, John Turest-Swartz, Vera Vukovic, Karl Liljie, Peter Steyn, Atomic VFX, David Nunez, Cara Winterbottom, Dawn Langdown for the storyteller's voice, Neil Rusch and Stephen Townley Bassett for San rock painting photography, the CAVES project team and the Innovation Fund of the South African National Research Foundation.
Date of first implementation of best practice	2004
Duration of best practice	Not specified
Field of best practice	☐ Storytelling (ST) ☐ Virtual reality/technology (VR) ☒ Combination of ST and VR
	Direct TG: 44 high-school students

Direct/ultimate target groups (TG)[27] of best practice	**Ultimate TG:** To enlist the interest of cultural exhibits especially those for preserving fragile cultures
Type of education related to best practice	☐ Formal ☒ Informal ☐ Non-formal
Aim and objectives of best practice (min. 150 words max. 250 words)	The aim of this research was to ascertain the effectiveness of retelling a San story VE with high-school students. The researchers wanted to foster an interest in the cultural story-telling experience. The researchers also wanted to ascertain the effectiveness of story-telling VE as compared to reading story as a text. The comprehension of the story as well as the levels of enjoyment, boredom or confusion were measured.
Short description of best practice – context and notable aspects (min. 250 words max. 500 words)	The study was conducted with 3 different classes during school hours. 8 students were chosen randomly to Form the VR group who would hear the San story in the VE. Four members of the VR group experienced the story VE individually each on a computer. For this specific study the VR story needed to be constructed and for this various other resources and references were used to create the San story as close to the original as possible. Care was taken to include the traditional setting of a San story. This was set in a cave at dusk, with a San gathering sitting around a fire. The cave was modelled on those found in the Cederberg mountains of the Western Cape of South Africa. Particular attention was taken in creating the cave itself as well as the characters, complete with the clothing and physical appearance of the San people. Detailed sketches of the San characters were also included in the VR as were the cave that were pertinent to the story. All of this was used to augment the user's

[27] In the Story Changers project, for example, the distinction between direct and ultimate target group refers, respectively, to the teachers who will benefit from the innovate teaching methods, and the pupils who will then acquire basic social skills.

	involvement in the story. The story itself was taken from the Bleek and Lloyd collection of San folklore (LBB23). An archaeologist was also consulted in the process of creating the VE and a detailed storyboard was also drawn up. Before experiencing the story, the use of the keyboard and navigation were explained, and the participants practiced using the controls till they were at ease using them. Then they listened to the story in the presence of an experimenter. The text group were given the text to read the San story once and then turn it face down on their desks. Both groups were given 2 questionnaires to complete, and they were not informed of these prior to the test so that the information gleaned would be incidental. The rest of the group were the text group who read the story. The questionnaires used for this study were constructed purposely for this study as the variables were unique for the study. The questionnaires tested the comprehension of the participants by means of a cloze test and they were also tested as to how well they understood the flow of events. Finally, the interest and enjoyment of the San culture were also measured, by means of a Likert- type seven-point scale. Before conducting a psychometric analysis, the reliability of the questionnaires was also measured.
Resources (human, material, equipment, infrastructure etc.) for application of best practice	High-school students, construction of the VE with the CAVEAT authoring tool, questionnaires Researchers from Collaborative Visual Computing Lab and University of Cape Town South Africa 4 computers in a quiet experimental room - headphones Prof John E. Parkington, John Turest-Swartz, Vera Vukovic, Karl Liljie, Peter Steyn, Atomic VFX, David Nunez, Cara Winterbottom, Dawn Langdown for the storyteller's voice, Neil Rusch and Stephen Townley Bassett for San rock painting photography, the CAVES project team

	and the Innovation Fund of the South African National Research Foundation.
Impact of best practice (min. 250 words max. 500 words)	From this study it resulted that **comprehension was higher** for the text group than for the participants in the VR. The researchers observed though that this could have been because the participants in the text group reread parts of the story even though they were instructed to read the story only once and to put their papers face down once they finished. Contrary to this the participants in the VR experienced the story only once and they could not visit the story again. Moreover, in the VR environment the participants had visual and audio factors to attend to in the story so perhaps their focus was not always solely on the story. Even the fact that they could experience the cave environment in the story and move away from the story-teller could have affected their focus. The text group subjects only had the text in front of them to contend with and they also could pace themselves in the story. As for **Interest** – the researchers found that this was higher for the VR group than for the text group. This was put down to the fact that the VR group experienced the story more enjoyably and this led to greater interest. The researchers also acknowledge that for the text group the students considered reading the story as a common experience, whereas in the VR experience this was not likely so. The fact that in the VR experience present along with the story there is also the setting and the visuals, and this may have enhanced the interest factor. The researchers also looked at the **enjoyment** factor and as for interest the VR group registered higher levels of enjoyment and less tedium than the text group and this again could be attributed to the fact that navigating through the VR experience was a novel idea. The use of a real storyteller could also have increased the enjoyment factor and made the storytelling experience more appealing. To the surprise of the researchers, it was found that confusion was higher for the text group than for the VR group and this was strange for the researchers as the text group seemed to have higher levels of comprehension than the VR group. The researchers also found no

	correlations between comprehension and confusion. It appears that experiencing the story in VE with a San gathering made the story content seem less strange and they could relate to it more. The researchers found out that both testing methods of the story-telling experience, had their advantages and disadvantages. The researchers found that there is a quid pro quo for content versus experience in creating a fun experience that generate an interest in the San people. From this study presented it was found that success in content and experience do not come jointly. Consequently, they were prompted to ask which was more effective to preserving the stories and cultures of the San people – retaining and understanding the story but experiencing as boring and not pursued further or experiencing the story with such enjoyment that the curiosity is aroused further and instigating further reading.
Strengths and weaknesses of best practice (min. 250 words max. 500 words)	**Strengths:** The strengths of the study lie in the meticulous way that the VR environment for the setting of the story of the San was researched and many disciplines were consulted prior to designing the setting of the story even took shape. There was great care in producing an authentic experience as much as possible and the ultimate goal of presenting a piece of history in a lively and interesting manner was a great success due to the infinite detail that went in to create the story and its setting. The researchers also took their time to demonstrate to the participants how to navigate the technical aspects of the VR environment till they were comfortable with it**.** The study also achieved what the researchers were hoping to achieve when creating the VR for the story – that of creating an enjoyable experience that arouses curiosity and draw interest in pursuing further reading on San culture and stories and consequently preserving the culture of an indigenous people. The study also acknowledges that VR may be a novel potent tool in preserving the cultural heritage.

	Weaknesses (please include also any suggestions for improving the practice): In their conclusions the researchers also mention the limitations of the study in the respect of the VR environment had on grasping and retaining content by the participants in the VR as well as they had expected and so they were faced with a dilemma of what was most effective retaining content and stopping there or enjoying the experience so much that further reading and knowledge about the San people is sought. The study would benefit from exploring how the VR story would compare when performed against live storytelling or a storytelling video.
Additional information about best practice	Although Virtual Reality can be a potent tool for social impact, the researchers of this best practice deem VR to be a compelling means to preserve cultural heritage but were surprised that application of VR in Africa was not given so much attention.
Source of information of best practice	Ladeira and E.H. Blake / Virtual San Storytelling for Children: Content vs. Experience The 5th International Symposium on Virtual Reality, Archaeology and Cultural Heritage VAST (2004) K. Cain, Y. Chrysanthou, F. Niccolucci, N. Silberman (Editors)

Table 26: BP 25 - Virtual San Storytelling for Children: Content vs. Experience (Mater Boni Consilii)

Best Practice 26: Qtales Storytelling Platform and its progress

TITLE OF BEST PRACTICE	Qtales Storytelling Platform and its progress
Identified by (partner)	Omega Technology

Developer and participating organisations/partners in development of best practice (name and country)	**Developer:** Omega Technology
	Participating organisations/partners: Omega Technology, Publisto, Megaprojects, Ortelio, Gamifico, Real Group (UK), National University of Ireland Galway, Krakow Chamber of Commerce, Rome Chamber of Commerce
Main actors involved in implementation of best practice (stakeholders, policy makers etc.)	Writers, illustrators, voice actors, animators
Date of first implementation of best practice	**2015**
Duration of best practice	**2 years**
Field of best practice	☐ Storytelling (ST) ☐ Virtual reality/technology (VR) ☒ Combination of ST and VR
Direct/ultimate target groups (TG)[28] of best practice	**Direct TG:** European self-publishers, authors, illustrators, voice actors, animators and other related SMEs & professionals
	Ultimate TG: Kids with their parents

[28] In the Story Changers project, for example, the distinction between direct and ultimate target group refers, respectively, to the teachers who will benefit from the innovate teaching methods, and the pupils who will then acquire basic social skills.

Type of education related to best practice	☐ Formal ☒ Informal ☐ Non-formal
Aim and objectives of best practice (min. 150 words max. 250 words)	The Q-Tales project has been initiated following the approval of the H2020-ICT-2014-1 proposal entitled: "A Collaboration Ecosystem enabling EU Creative SMEs to exchange multi-media content and create multi-plot, interactive Apps for Children, curated according to Reader ability and educational value". At its heart, lies our commitment to serve the needs of the European children app and e-book industry. The Q-Tales platform main objectives are: • Build the Q-Tales Storytelling Platform and respective ecosystem, including Gamification Aspects, where European self-publishers, authors, illustrators, voice actors, animators and other related SMEs & professionals will find & submit industry news, communicate, offer & receive services and collaborate. • Develop the Q-Tales Authoring Tool, featuring an easy-to-use interface with powerful and sophisticated authoring features which will be used to create the Q-Tales stories, utilizing gamification techniques. • Launch the Q-Tales Store where the authored e-books and apps will be offered worldwide. • Define the Technical and Pedagogical Q-Tales Curation Frameworks
Short description of best practice – context and notable aspects (min. 250 words max. 500 words)	Q-Tales was used by Ellinogermaniki Agogi (www.ea.gr), one of the top private schools in Greece. Q-Tales' developers collaborated with EA's teachers, IT department and the management, in order for the Q-Tales platform to be combined with the work already taking place in the first grade of the primary school. Throughout the school year, teachers in the first grade ran a project called "Tales in the Mixer"

	where each kid draws an image with text from a selected story. Each story has four phases and each kid's drawing corresponds to a specific phase of the selected story. At the end, the drawings for each single phase of the stories are mixed up and by selecting randomly one page of each phase, a funny story comes out. Q-Tales platform was adjusted to the needs of "Tales in the Mixer", the voices of the kids narrating their own texts on the drawings were recorded, and an e-book in Q-Tales platform was created per class, that apart of the common functionality offered by Q-Tales platform, random page mixing is taking place. This way when selecting the e-book of a class, a different funny story appears mixing heroes, action and results! The e-books, results of the cooperation between the school and Q-Tales' team, were presented in the graduation event organized by the school for the end of the school year. An interactive whiteboard was used to present Q-Tales player with the seven e-books created - one for each class of the primary school.
Resources (human, material, equipment, infrastructure etc.) for application of best practice	PCS and Tablets, VR headsets
Impact of best practice (min. 250 words max. 500 words)	The impact of the platform was quite high. Kids in EA that used it when presented their work to their parents were clicking in the e-books of their classes and they were excited and very satisfied when they managed (after several attempts some of them...) to find their own drawings and click on them so their parents could hear their voices. http://www.q-tales.eu/EA Qtales was so successful that lead to STORIESOFTOMMORROW PLATFORM where students create and presents their missions from earth to mars using the Qtales storytelling platform. The Platform was upgraded to include Rocket selection and loading and Colonies building in mars. Virtual reality was added to the storytelling platform

	and now the end users can read the stories wearing VR headsets and virtually walk in the Colonies that the students build on Mars. http://www.storiesoftomorrow.eu/ Nowadays the platform is still upgraded and a new planet (the moon) is added to the available destinations. http://www.distars.eu/
Strengths and weaknesses of best practice (min. 250 words max. 500 words)	**Strengths:** The main strength of the storytelling platform is that authors (including kids) can build their own stories form a web browser and then the result becomes available through PCs but also VR headsets.
	Weaknesses (please include also any suggestions for improving the practice): The main weakness is that the authoring tool applies some limitations to the type and size of assets uploaded and that the editing tools are limited to basic features (resize, rotate, move. Etc).
Additional information about best practice	The platform is made with Unity Game engine.
Source of information of best practice	http://www.storiesoftomorrow.eu/ http://www.distars.eu/ http://www.q-tales.eu

Table 27: BP 27 – Q-Tales (OMEGA)

Best Practice 27: IDEA Platform

TITLE OF BEST PRACTICE	IDEA Platform
Identified by (partner)	Omega Technology
Developer and participating organisations/partners in development of best practice (name and country)	**Developer: Omega Technology**
	Participating organisations/partners: THEOFANIS ALEXANDRIDIS KAI SIA EE (OMEGATECH) Regional Education Directorate of Peloponnese Computer Technology Institute and Press 'Diophantus' (CTI) NATIONAL UNIVERSITY OF IRELAND GALWAY 10th Primary School of Kalamata Donaghpatrick National School Apostolos Varnavas Primary School Colegio Las Chapas M.M.C MANAGEMENT CENTER LIMITED The Spanish Confederation of Education and Training Centers (CECE)
Main actors involved in implementation of best practice (stakeholders, policy makers etc.)	School Teachers
Date of first implementation of best practice	**December 2021 – February 2022**
Duration of best practice	**3 months**
Field of best practice	☐ Storytelling (ST) ☐ Virtual reality/technology (VR) ☒ Combination of ST and VR

Direct/ultimate target groups (TG)[29] of best practice	**Direct TG:** Teachers of primary school
	Ultimate TG: Students of the first three grades of the primary school
Type of education related to best practice	☐ Formal ☒ Informal ☐ Non-formal
Aim and objectives of best practice (min. 150 words max. 250 words)	IDEA comes to help teachers help students overcome their fear of math through European Cultural Heritage 3D games. **The main objectives of IDEA platform are:** • To develop a framework for introducing new technologies and game-based learning to the schools. • To combine culture and math training in an interdisciplinary game-based tool. • To develop an initial set of scenarios covering math material of the first 3 grades of the primary school. • To evaluate the effectiveness of the scenarios (using 3D game mechanics), deeper learning and the engagement of the students. • To offer an authoring tool for the teachers to modify existing and create more scenarios. • To offer for free mobile versions of the scenarios for Android Devices. • To disseminate the project and its result to as a broader group of stakeholders as possible and to communicate the project and its achievements to decision maker
Short description of best practice – context and notable aspects (min. 250 words max. 500 words)	The project is based on cartoon 3D environments representing selected cultural routes, one in each country. In these environments, with the help of different math puzzles the students will be able to interact with the 3D objects solving these puzzles and getting points,

[29] In the Story Changers project, for example, the distinction between direct and ultimate target group refers, respectively, to the teachers who will benefit from the innovate teaching methods, and the pupils who will then acquire basic social skills.

	rewards and badges while at the same time they learn about the cultural heritage site they are in. The innovation of the 3D games is that those will be available on web browsers (WebGL) and tablets, and that the puzzles will be dynamically updated by the teachers through their web browser or tablet.
Resources (human, material, equipment, infrastructure etc.) for application of best practice	Teachers to prepare students to the use of the platform. PCS and Tablets.
Impact of best practice (min. 250 words max. 500 words)	From the first impressions of the students the impact of the platform is very high.
Strengths and weaknesses of best practice (min. 250 words max. 500 words)	**Strengths:** Storytelling platform combining cultural heritage information (included in the level descriptions and attributed badges) and math exercises.
	Weaknesses (please include also any suggestions for improving the practice): None
Additional information about best practice	IDEA comes to help teachers help students overcome their fear of math through European Cultural Heritage 3D games. These games will make pupils work effectively fulfilling missions, including confidence-building mini-games that look challenging but enable all students to do well.
Source of information of best practice	http://www.idea-erasmus.eu http://play.idea-erasmus.eu/game

Table 28: BP 27 – IDEA Platform (OMEGATECH)

Best Practice 28: Envstories

TITLE OF BEST PRACTICE	Envstories
Identified by (partner)	Omega Technology
Developer and participating organisations/partners in development of best practice (name and country)	**Developer: Omega Technology** Participating organisations/partners: THEOFANIS ALEXANDRIDIS KAI SIA EE National and Kapodistrian University of Athens Primary School of Vivlos, Naxos Nareg Gymnasium Cyprus certification Company Colegio Las Chapas The Spanish Confederation of Education and Training Centers (CECE)
Main actors involved in implementation of best practice (stakeholders, policy makers etc.)	Zographeion High School Comune di Pescara
Date of first implementation of best practice	**2020-2021**
Duration of best practice	**One year**
Field of best practice	☐ Storytelling (ST) ☐ Virtual reality/technology (VR) ☒ Combination of ST and VR
Direct/ultimate target groups (TG)[30] of best practice	**Direct TG: Teachers and Students**

[30] In the Story Changers project, for example, the distinction between direct and ultimate target group refers, respectively, to the teachers who will benefit from the innovate teaching methods, and the pupils who will then acquire basic social skills.

	Ultimate TG: Students and Parents
Type of education related to best practice	☐ Formal ☒ Informal ☐ Non-formal
Aim and objectives of best practice (min. 150 words max. 250 words)	The students with their teachers use the storytelling platform during a full school year to learn and to create stories and visit cultural heritage sites (natural history museums, geological parks) to gather material (photos, videos) for their stories. Objectives: • Increase educators' competences on advanced teaching methodologies and ICTs. • Provide educators and pupils with the necessary training material and digital tools to collaboratively create attractive stories tackling more complex tasks together than they could manage individually. • Develop a digital platform and interactive teacher guide to be used by all project partners and also other schools as a best practice. • Encourage and strengthen inter-cultural understanding and communication by school collaboration and pupils exchange.
Short description of best practice – context and notable aspects (min. 250 words max. 500 words)	The Envstories platform offers an online collaboration platform to be used by the pupils for the co-creation of interactive stories (in the form of e-books), spreading to their social environment the need for more sustainable lifestyles. Teachers, acting as coaches, assist pupils to develop these (env)stories triggered by a library of relevant free assets. Pupils can work collaboratively using the platform in order to produce stories that will communicate complex concepts to others structuring information and data in meaningful and useful ways (storytelling). The students with their teachers use the platform during a full school year to learn and to create stories and visit cultural heritage sites (natural history museums, geological parks) to gather material (photos, videos) for their stories.

Resources (human, material, equipment, infrastructure etc.) for application of best practice	Teachers to prepare students to the use of the platform. PCS and Tablets.
Impact of best practice (min. 250 words max. 500 words)	The impact of the best practice was very high. Over 3.500 participants followed the final presentation of the project and the platform through webex, YouTube and Facebook on 12/12/2020. Ms Gkika, General Secretary of The Ministry of Education of Greece was one of the key speakers in the event.
Strengths and weaknesses of best practice (min. 250 words max. 500 words)	**Strengths:** Online Authoring tools and a library with free assets to use.
	Weaknesses (please include also any suggestions for improving the practice):
Additional information about best practice	There is a implementation guide available. EnvStories_IMPLEMENTATION_GUIDE_ENG_compressed.pdf
Source of information of best practice	http://www.envstories.eu

Table 29: BP 28 – Envstories (Omega)