

# Chapter 3

## Contextualized Educators' Training: The Case of Digital Storytelling

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### Introduction

Currently, the need for the education system to serve the cultivation of the twenty-first-century skills is being discussed (Mishra and Kereluik 2011). The latter refer to “a set of skills, work habits and character traits that are believed—by educators, school reformers, college professors, employers, and others—to be critically important to success in today’s world” (Hidden Curriculum 2014). Although the term is rather vague and several approaches and frameworks for describing these skills exist, it is a fact that “...schooling needs to be fundamentally reconfigured to emphasize higher order cognitive processes...” (Mishra and Kereluik 2011) which derive from the emergence of Information and Communication Technologies (ICT). Nowadays, it seems to be more important for students to learn how to be able to communicate, share, use information to solve complex problems, adapt, and innovate, rather than conduct manual labor or use routine skills (PPRC 2010). Hence, new standards for what students should be able to do are replacing the basic skill competencies and knowledge expectations of the past.

A transformation in education seems necessary in order for the students to be able to acquire such skills. The basic idea is that students, who will come of age in the twenty-first century, need to be taught different skills than those learned by students in the twentieth century and that the skills they learn should reflect the specific demands that will be placed upon them in a complex, competitive, knowledge-based, information age, technology-driven economy and society (Hidden Curriculum 2014).

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Several researchers attempted to record and categorize the twenty-first-century skills (Mishra and Kereluik 2011). Most of them conclude to 3 large categories, namely the following: (a) learning and innovation skills, (b) literacy skills (information, media, and technology), and (c) life and career skills. These include several subcategories (P21 2009). Although many of these skills are not unique to learning in the twenty-first century, two subcategories seem to be. These are information literacy and cultural competence and awareness, which are directly related to the emergence of ICT and the digital era (Mishra and Kereluik 2011). Considering Prensky's (2001) description of today's youngsters as "digital natives", as opposed to the previous generation which is characterized as "digital immigrants", the need for educators' training both on a professional level as well as that of teaching competence.

Taking into account that educators are considered to be adult learners when engaged in professional training, this chapter argues about designing training programs, utilizing the contextualized teaching and learning approach in a work context. The case of digital storytelling as a teaching methodology/approach is exploited in order to highlight the effectiveness of this approach.

This chapter is structured as follows: Initially, the theoretical background is discussed, focusing on contextualized teaching and learning and digital storytelling in education. Then, the contextualization of educators' training is discussed via a case study of seminars about digital storytelling as a teaching tool in which in-service and future teachers participated, before the concluding discussion.

## **Theoretical Background**

In this section, the elements of the theoretical background of this chapter are presented. The first regards the contextualization of teaching and learning in a work context and its significance, while the second discusses digital storytelling as a teaching tool. This presentation aims at identifying the convergence points of the two elements, as discussed in the next section.

### ***Contextualized Teaching and Learning***

Contextualized teaching and learning (CTL) is identified as a promising strategy that actively engages students and promotes improved learning and skills' development (DeLottBaker et al. 2009). Several definitions are available in the literature. Perin (2011) refers with this term to "the practice of systematically connecting basic skills' instruction to a specific content that is meaningful and useful to the students."

This approach relies on the constructivistic perception of learning, according to which individuals learn by constructing meaning through the interaction with and interpretation of their environments (Brown 1998). This meaning is related to their personal experiences and contextualized by real-life situations and problems. According to Imel (2000), among the contextualized perspectives of learning are situated cognition, social cognition, and distributed cognition.

Perin (2011) defines two practices of contextualization, contextualized and integrated instruction. Contextualized instruction serves the objective of teaching basic skills in the context of a specific subject area in order to provide the opportunity of meaningful skills' application. It can be provided by corresponding instructors (language, math, etc.) with the primary objective to teach academic skills, although some implicit content learning may occur. For example, a course of scientific writing can incorporate language learning.

Integrated instruction on the other and is the incorporation of basic skills into the teaching of content. For example, writing and math skills can be incorporated in a science lesson (Tilson et al. 2010) or in complex problem-solving approaches which follow the Content and Language Integrated Learning (CLIL) approach (Dourda et al. 2014). Integrated instruction is found in discipline-area classrooms, with the academic skills serving as a means of developing critical thinking about disciplinary content (Pearson et al. 2010).

In general, contextualized learning is utilized in order to create conditions for more effective learning. The underlying mechanisms include the promotion of learning transfer and improvement of information retention (Boroch et al. 2007; Stone et al. 2006). When information is processed and knowledge is acquired in a context similar to that in which they will actually be needed, the application of learning to the new context may be more likely (Perin 2011).

When addressing adult learning, learners consider the benefits of contextualization to be flexibility and adaptability, enhancement of engagement and motivation by providing relevancy to workforce skills, facilitation of pace acceleration to courses' access and addressing of challenges in the design of traditional developmental and basic skills' education (EDC 2012). The concept of contextualized learning in adult education is not new. It emerged in the early 1940s within military training (Sticht 1997). Since the 1970s, it has been connected to functional content instruction (Sticht et al. 1974), instruction based on learners' immediate needs and "life skills" (Knowles 1980), and the importance of teaching for transfer (Mikulecky et al. 1994).

In this chapter, contextualized adult learning is examined under the scope of training educators in innovative teaching approaches and learning design. Focusing on digital storytelling as a teaching methodology, it is exploited as an approach to teach educators how to teach using it. Thus, contextualization occurs by demonstrating the method to be taught by actually teaching (or learning by the trainees' side) through it. Moreover, additional skills are cultivated, related to ICT, writing, thinking, and more.

## ***Digital Storytelling as an Approach for Teaching and Training***

Storytelling is one of the oldest methods of communication and learning, comprising of two constituents, story and telling. According to the Oxford Dictionary, the former is defined as “a narrative, true or presumed to be true, relating to important events and celebrated persons of a more or less remote past; a historical relation or anecdote” and the latter is “the act of communicating information, facts or news to someone in spoken or written words.” For thousands of years, societies have taught key principles through storytelling (MacDonald 1998), such as culture, values, and history (Egan 1989). Great leaders of all types have used stories as instructional tools in the form of parables, legends, myths, fables, and real-life examples to convey important information (Brown and Duguid 1998; Leonard-Barton 1990).

Digital storytelling is the combination of traditional, oral narration with multimedia and communication tools (Lathem 2005). It is a form of art which combines different types of multimedia material, including images, text, video clips, audio narration, and music to tell a short story on a particular topic or theme (Robin and McNeil 2012). Digital stories can be stored or published on the Internet, allowing people to review, critique, and discuss upon them, thus enhancing their educational value and their life span (Lathem 2005).

Since the tools needed for digital storytelling, such as computers, scanners, and digital cameras have become more affordable and accessible, educators’ interest for its application has lately increased. Besides, even novice computer users can become digital media producers and editors, because of the powerful and yet inexpensive software and Web 2.0 applications.

Some learning theorists believe that as a pedagogical technique, storytelling can be effectively applied to nearly any subject. Constructing a narrative and communicating it effectively requires one to think carefully about the topic and the audience’s perspective. Both listeners and narrators have the opportunity to develop their personal and narrative speech, to represent their knowledge, to present their story and receive feedback (Coventry 2008).

Growing up with unprecedented access to technology has changed the way young people, “digital natives”, communicate, interact, process information, and learn (Oblinger and Oblinger 2005). Technological progress is such that communication and interactivity are easier to facilitate (Jenkins 2006), high fidelity and media-rich learning environments are becoming more and more common (Gee 2007), and this contributes to the belief that life and learning in the information age will differ significantly from that of the industrial age (Reigeluth 1999).

When combined with the latest technologies, storytelling has the potential to be used in all settings, including formal, non-formal, and informal education settings as well as work environment, such as medical practice (Heiney 1995; Chelf et al. 2000) or human resources and knowledge management (Swap et al. 2001).

It is considered by many to be a powerful teaching tool (Pedersen 1995), which can be effectively applied in all levels, from kindergarten to university. Digital stories can be created by teachers or students. As educational tools, they can serve as a way to present new material and capture students' attention (Robin 2008).

Also, they can facilitate students' interaction and help make content more understandable (Burmark 2004). Students can express their thoughts, ideas, and opinions and share them with a larger audience, while at the same time, they improve their writing skills by creating their own stories (Gakhar and Thompson 2007). They also become more active and productive in individual or collaborative communication activities (Bratitsis et al. 2012). The most important, however, benefits of the use of digital storytelling regard the development of twenty-first-century skills, such as critical thinking, problem-solving and decision making, collaboration, creativity, innovation, and development of digital literacy (Microsoft 2010). It is a fact that nowadays, children's access to technology has changed the way they communicate, interact, process information, and learn (Obliger and Obliger 2005). Communication and interaction are easier to occur (Jenkins 2006); high fidelity and rich multimedia learning environments are available more and more (Gee 2007), significantly altering the teaching approaches which are used.

There is evidence in the literature of exploiting digital storytelling as an education/training medium in a great number of fields, including mandatory education, adult education, health (narrative medicine), entrepreneurship, and many more. A collective presentation can be found in the products of the T-Story project (<http://tstory.eu/>). Digital stories act as an educational medium through which also the narrator/storyteller learns, as in his/her effort to deploy the narration and communicate it to the target audience through technology, he/she learns how to incorporate the audience's perspectives, beliefs and needs, in order to better present the story. Under this scope, digital storytelling can be an individual, but also a collaborative process (Bratitsis 2014).

## **Contextualizing Educators' Training: The Case of Digital Storytelling**

It becomes obvious that digital storytelling can be exploited also for training educators within their professional development. Not only it constitutes an innovative teaching approach for them to be trained on how to utilize it, but it can also incorporate the development of several skills, basic and/or advanced. For example, writing skills are enhanced through the deployment of a narration. ICT skills are improved through the process of collecting and creating digital material in order to digitize a story, but also through the process of understanding video creation and online sharing/distribution techniques. Other significant issues are addressed, as discussed in the remaining part of this section.

The case of a training program for educators regarding digital storytelling as a tool or method for educating/training is discussed in this section. Based on its design and implementation, but also through the qualitative assessment via the

trainer's observations and contextualization of educator's training, it is discussed on another level. Proceeding further than the incorporated cultivation of skills through implicit learning, this approach proposes the contextualization of training by implementing the actual program, exploiting the teaching method which constitutes the core aim of the program. Thus, in this case, digital storytelling as a teaching method was taught through a training program, completely designed and implemented with the digital storytelling method.

This training program was designed within the T-Story, an EC funded program (project no. 530860-LLP-1-2013-1-IT-KA3-KA3MP) which was realized from November 2012 to October 2014 (24-month duration) by 7 partners in an equal number of countries. The core aim was to train teachers/educators/trainers how to incorporate the digital storytelling methodology. The learner participated in a fictional world with other classmates, following the narration of Dan, the main character of the course's digital story. The handbook and the course were tightly interconnected and complementary. Dan paused his narration occasionally, asking from the learners to consult the handbook and elaborate on the provided material. The handbook contained examples and exercises, but it also provides interactive links, utilizing the Quick Response Codes (QR Codes) for the learners who wished to study even more resources and expand their knowledge.

Guided by Dan and his colleagues, the learner was aided throughout the process of building his/her own digital story, by the end of the course. Thus, by completing the course, the learner did not only familiarize him/herself with digital storytelling techniques and tools, but would have also produced a tangible outcome which would facilitate the deep understanding of the method. The important aspect of this approach was that this product was based on the actual teaching ideas of the learner, thus constituting an indicative case study for him/her.

The training was realized in various manners. The first followed a blended learning approach, combining video lessons, under the scope of digital storytelling, and three 4-h face-to-face workshops. The second was completely online in a self-learning manner. Several combinations were also realized, with less face-to-face sessions with a longer duration.

Based on all these realization cases, contextualization is to be discussed hereinafter, focusing on efficiency of the training and acceptance by the trainees. Contextualization occurred in various manners. The first level of contextualization is that of cultivating several skills through training on digital storytelling, namely ICT-related and writing skills, along with skills related to educational design. Elaborating on this claim, data from a survey conducted prior to the design of the program in order to record training needs is invoked (Bratitsis et al. 2014). Overall, when the respondents of the survey were asked to grade their skills and digital material creation skills, their answers revealed that significant improvement was necessary. Thus, the designed program addressed this issue not by demonstrating specific ICT tools but by requesting from the trainees to actually create material, using any digital tool (online or not) they wished. A theoretical basis and specific examples were only provided. For instance, the results of cropping a digital image were discussed and explained, examples were provided, and types of tools were

demonstrated for accomplishing proper training. Then, the trainees were able to select any tool they preferred in order to complete the assigned tasks.

In this manner, the training program was not tool-centered as most of the related programs available worldwide, but approach specific. The trainees were able to complete the assigned tasks with any tool they felt attracted to or by deepening their knowledge regarding tools they were already familiar with. Consequently, their ICT skills were significantly enriched in a way that they could exploit them in the future, considering that they chose freely tools to fit their own comfort. The latter is a significant element of informal computer skills' acquisition (Desjarlais and Willoughby 2010; DeLay et al. 2014). Observations from all the implemented training programs revealed that this approach was efficient, as the final products were rather sophisticated, although many of the trainees were not very confident about their ICT skills at the beginning, expressing their doubts about being able to successfully create digital stories. Opposed to this approach are many of the offered seminars and workshop on digital storytelling which can be found all over the Web, which are mainly tool-specific.

Another level of contextualization was achieved by the actual structure of the training program. Based on questionnaires, filled during the registration process by the trainees (Bratitsis 2014), teachers, especially those serving in the lower grades, were familiar with storytelling as a teaching methodology (over 75 %), and almost all of them were rather confident about their ICT skills, having participated in a nationwide training program about basic ICT skills. Nevertheless, they did not exploit digital storytelling as a teaching methodology at all, although many of them practiced storytelling in various ways (e.g., participating in extracurricular activities about the literature and storytelling or even hosting radio broadcasts about the matter). The main conclusion of the questionnaires' analysis (Bratitsis 2014), aligned with the initial program survey (Bratitsis et al. 2014), was that teachers mainly connected storytelling with amusement and not teaching or it is restricted only to language skills' teaching.

This observation is significant when examining the teachers' initial attempt to design a draft of their own teaching stories for the needs of the training program. They were asked to freely select a topic from their own experience and close to their teaching practices and attempt to create a story, through which they would attempt to teach this topic. Divided into groups of four, they presented their story to their partners in order to receive feedback regarding the clarity of their teaching goals, the conformity with the proper narrative structure, and any possible extensions or improvements. During this process, they were asked to reflect upon their stories and proceed to any possible modifications.

The most important observation from the conduction of these collaborative meetings regards the proper application of the narrative structure (Bratitsis 2014). The trainees were careful enough to formulate the opening statement of their stories, by following the lessons they had participated in, thus answering to the questions: Who, When, Where, and How. This technique is used in order to initiate stories and succeed in positioning the audience in the core of the story, facilitating their own "participation" in the story and its evolvement. Furthermore, the

formulated teaching goal was clear in the teachers' presentations, as well as the dramatic question which led to the evolution of the story plot. After this section, most of the stories appeared to have drawbacks. For example, most of them were just making statements instead of highlighting them through a big contrast, for example. The way the teachers approached the issue they wanted to negotiate through their stories resembled traditional, straightforward teaching which is common in real classroom settings. Thus, they were trying to "show" and not facilitate "participation and experience" through their stories, which could lead to comprehension. What became evident was that their perception was rather biased from in-class attitudes and the constraints of the official curriculum which often leads them to adopt a straight forward, teacher-centric approach.

In one of the training programs, a variation of this approach was applied. Due to the large number of participants (about 400) and having a focus on how the process of creating digital stories for teaching can facilitate the cultivation of alternative points of view, the teachers were requested to bring one piece of fruit. Then, they were asked to write its story in a few lines. As expected, most of them described the basic characteristics of the fruit, such as color, shape, and nutritive value. Through a set of questions, they were asked to expand or rewrite their stories, examining the origin of the fruit, its "journey" until the consumption or even the story of its creation and all the creatures related to it. In most cases, instead of extending their point of view, the teachers tried to answer to the indicative questions which were used to explain the corresponding level of examination of the fruit's life cycle. For example, they were asked: "Where did you buy it from? How did it get there? How many hands touched it before you acquired it? What might have happened to one of these people that day?". The answers followed the pattern: "I bought it from the grocery store. Hundreds of hands touched it that day. It arrived there on a truck." Through this approach, what was demonstrated to the teachers was that their point of view was significantly biased by their teaching practice and their initial perception of the fruit. They focused on those qualities of the fruit that are included in nutrition and well-being training programs which are nowadays integrated in the official curriculum, especially in the lower grades.

One could wonder where does training contextualization fit in the discussion of the above paragraphs. The answer lies within the actual structuring of the teachers' participation in the training program. They were asked to work, step-by-step on a topic of their choice, selecting one from their everyday teaching practice. This is very close to the real teaching settings, as the teachers usually prepare themselves and their teaching approach, before entering the classrooms. On the other hand, they were provided with the opportunity to discuss their story designs with peers and experts. This type of feedback is not possible in everyday school life. Following a mentoring-advisory approach, they were confronted with the limitations of their perceptions and attitudes, reflecting upon them and assisted in understanding their handicaps and misconceptions in order to address these issues. Consequently, in a way the trainees were working in real, professional conditions but with an added value; that of expert and peer feedback in order to improve their self-efficacy, challenge their confidence and teaching strategy effectiveness. In this vein, the



training programs were carried out in the context of real-life, professional experience, allowing the trainees to better reflect on the efficiency of their teaching strategies and their learning design. The most important aspect was that they were asked to work on a topic which they had approached with another method in class. Thus, they were able to reflect by comparing the different approaches, also by discussing them with peers and experts.

The most important contextualization aspect was that the teachers were trained using the same method as the one they were being trained for. The whole training program was designed and realized under the digital storytelling method. This allowed the teachers to observe, first hand, the efficiency of the method and many details of the design and implementation process. Throughout the training, techniques that were integrated in the program were explained and demonstrated. It is worthy to mention that regarding the multimedia-video design of the training program, several video editing and creation techniques were exploited with a gradual complexity. Thus, there was a transition from faceless sketches to fully detailed video recordings, from camera panning to full motion picture, from comic strips to video scribing, stop motion video, and many more. The trainers were able to explain the aim of using each technique and discuss the efficiency but also the complexity of the technique.

Lastly, a significant portion of the training program regarded the construction of the storyboard of a digital story. A storyboard is a structured description of the elements that constitute the digital story, with details for every scene of the final product. The storyboard can be very abstract or extremely professional and detailed. It is the phase of a digital story design in which all the important decisions are made, and after its completion, implementation with the selected digital tool follows, with no more setbacks. All the audiovisual effects, the audio carpets, the voice recordings, and the required elements are chosen and placed together in this stage. An issue that emerged in this section was that the trainees faced certain difficulties while designing their storyboards. Most of them tried to transcribe their stories upon a series of images which corresponded to the different scenes. Moreover, most of them restricted the use of audio elements to a music carpet throughout the whole story. Eventually, they simply rewrote their stories in a more visual manner. Of course, under the scope of designing a digital story, these actions provide no value to the final product and make this stage obsolete, leading to a more complex implementation process with many drawbacks. For inexperienced designers, this is more or less expected and partially the training programs aim at addressing this issue.

Consequently, these issues needed to be discussed and resolved. In the case of face-to-face sessions, the flaws and the missing elements of the storyboards were discussed in detail by the trainer. In the case one decided to follow the program individually and online, these issues were required to be addressed through the program itself. This was done in a twofold manner; examples of converting small stories to complete storyboards were provided, but also parts of the storyboard of the story which constituted the training program were presented and explained. The latter allowed the trainees to better comprehend the significance of the storyboard

but also the connection of the audiovisual effects with the intention of the creator and the actual result. Concluding, this paradigm constitutes another level of contextualization on which the trainees were required to work with tangible artifacts (their own stories, the examples but also the story of the main program) and discover on their own all the requirements and the details. The differentiation from other more traditional training programs is that not only the elements are presented in an abstract and theoretical manner nor collaborative activities are designed, but also the trainees participate in hands-on activities with tangible artifacts, able to connect decisions and results, theory with practice and design with implementation and constructive feedback.

## Discussion

In this chapter, the issue of adult training contextualization, educators' training in particular, is discussed. The more wide definition provided by Perin (2011) places contextualization under a constructivist-driven scope, by forming it to be context-specific, meaningful, and useful for the learners. Several frameworks for CTL exist in the literature, with Perin (2011) providing a comprehensive review of them.

Overall, contextualized learning aims at creating conditions for more effective learning by promoting learning transfer and improving information retention Boroch et al. 2007; Stone et al. 2006).

In this chapter, a different form of contextualization in multiple levels was discussed. Examining a training program about digital storytelling as a case study, aspects of contextualizing in-service teachers' professional training were discussed. The success for the training program is not discussed in this chapter, since that is out of its scope, although the program was indeed successful (Bratitsis 2014). The first level of contextualization in the described approach was the most common in the literature, that of incorporating skills in a content-specific program. These skills were ICT-related, which under the scope of the twenty-first-century skills are nowadays considered rather basic ones. The trainees were required to acquire those skills at a certain level in order to complete the assigned tasks. Moreover, the whole approach was meaningful, as all the skills were to be utilized for implementing the final product. Thus, the tangible outcome of the training program elevated meaningfulness and engagement of the trainees.

The second level of contextualization occurred by asking the teachers to work throughout the training on a topic of their choice, directly related to their professional interests. Ideally, this topic should have been something they previously work on within their everyday teaching, using other methodologies. This type of contextualization made the training more meaningful, as it provides a concrete context for comparing elements of digital storytelling with the methodologies the teachers were already familiar with, regardless of which ones those were. Teaching a topic was already a meaningful task. Thus, as discussed earlier, when information

is processed and knowledge is acquired in a context similar to that in which they will actually be needed, the application of learning to the new context may be more likely (Perin 2011).

The final and probably most significant level of contextualization is that of implementing the whole training program with the methodology which constituted the actual training material. This way the trainees were able to comprehend in a very straightforward manner the efficiency of the methodology they were taught, but also to examine and elaborate on the design aspects and details of it. They were able to directly connect theory with practice in realistic conditions. Moreover, they were engaged in a learning process which included expert and peer feedback, as opposed to traditional training programs in which feedback is minimal or impossible to be provided when the educator attempts to later exploit the acquired knowledge in his/her class.

This contextualization approach seems to have worked very well. Partially, the success relied to aspect of digital storytelling, such as engagement. On the other hand, this multilevel approach seems interesting to be tested with other training contexts in order to compare observations and findings. In the case of educators' training, direct connection to their teaching practice is always a goal and having them serving as both teachers and students within a training program seems to be the ideal case. More studies should be conducted in order to create a concrete theoretical framework on this matter.

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