

# Digital Storytelling as a Whole-Class Learning Activity: Lessons from a Three-Years Project

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**Abstract.** This paper introduces PoliCultura, a project created by Politecnico di Milano for the Italian schools, which has just completed three years of deployment. Participating classes (with pupils aged between 4 and 18 years) are required to create their own multimedia story, using an authoring-delivery environment (1001stories) provided by Politecnico di Milano. PoliCultura has offered us the opportunity to investigate the *prolonged* use of digital storytelling authoring tools as a whole-class educational activity in a *wide number* of real educational settings: approximately 7,620 pupils from 381 classes have been involved in this project since its birth in 2006. From the overall PoliCultura experience and from the wide amount of qualitative and quantitative data collected from participants through online surveys, focus groups, interviews and contextual inquiry activities, we have learned a number of lessons that we discuss in the paper.

**Keywords:** Multimedia Storytelling, e-learning, education, adoption, educational benefits, case-study.

## 1 Introduction

From preschool to high school, storytelling is a very common educational experience that teachers propose to their students, in order to develop a variety of skills, e.g., communication capability, search, or (collaborative) tasks completion. Interactive multimedia technologies provide new means to support story authoring that in principle facilitate the work of teachers and pupils, limiting some drawbacks of working with physical tangible tools like pen and paper, and foster new forms of creativity, increasing engagement through interactivity. Still, the adoption of tools for digital storytelling in conventional educational settings is currently limited; most reported educational projects based on these systems are largely based on episodic, short-term experiences involving a limited number of teachers and students for a short period of time. In this respect, the PoliCultura project discussed in this paper represents an exception. Since the birth of PoliCultura in 2006, its storytelling tool has been used by over 7,620 students - from pre-schools to high schools - in our country, for whole class activities in the conventional school context spanning along several months and oftentimes repeated year after year by the same class.

The paper presents PoliCultura and discusses the most relevant lessons learnt after the three years of life of this project. They pinpoint that the conditions for adoption of a digital storytelling tool go beyond the design characteristics of technology per se, and highlight that even a relatively simple tool can promote students' creativity and achieve significant educational benefits.

## 2 PoliCultura and the 1001stories Storytelling Tool

PoliCultura is shaped as a competition for Italian schools requiring classes to complete a “multimedia narrative” on different subjects either proposed by organizers or freely selected by participants. The multimedia story has to be created using “1001stories” [1, 2], a streamlined authoring environment developed by HOC-LAB at Politecnico di Milano. The narrative format is based on a two levels structure: (1) a *short* story, consisting of a number of topics (from 4 to 7 are suggested); (2) a *long* story, consisting of the topics plus their sub-topics (from 3 to 5 suggested – Fig. 1). In the educational version of 1001stories, each topic or subtopic is composed by an audio, its text transcript, and a slideshow of images with their captions which are displayed in sequence and synchronized (automatically) with the audio track. The professional version supports also other types of media such as Flash animations and videos. The user can explore topics and subtopics at her own pace; alternatively, she can enjoy the story passively, while the system automatically presents either the short or the long version of the narrative.



**Fig. 1.** “Milan during the Roman Empire Age” (primary school). The screenshot shows how the final story looks: on the *left*, there is the list of sub-topics of the topic on display (the “Roman Thermae of Milan” – as the title on top of the image reads). In the *middle*, a short slideshow of images runs (1 minute approximately) and eventually on the *right* there are the images’ captions and the transcript of the audio comment.