Chapter 15
Enhancing Teaching and Learning with Digital Storytelling

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ABSTRACT
This article intends to help educators interested in technology integration in the classroom acquire a firm theoretical foundation, pedagogical applications, and step-by-step technical procedures for infusing digital storytelling into the curriculum. Through illustrations of digital storytelling projects completed in the authors’ undergraduate and graduate classes, this article discusses the benefits along with the challenges for using digital storytelling as a means of engaging students in reflective, active, and personally meaningful learning.

1. INTRODUCTION
Since the early days of civilization, storytelling has been important for the distribution of knowledge and preservation of heritage from generation to generation in world cultures. From the Egyptian age to the 21st century, storytelling has changed from oral fables and tales to utilizing digital images to display events/plots in multimedia ways. Regardless of the story-telling format, a common element identified in the storytelling is its educational nature—to distribute knowledge and share understanding among people across different cultures.

This article begins with a review of the traditional formats of storytelling in education, continues to introduce digital storytelling including its definition, educational advantages, theoretical foundations, and the research findings of digital storytelling in education, and is followed by procedures of digital story production as well as tools selection. This article also shares the experiences...
of implementing digital storytelling in the authors’ graduate and undergraduate curricula. Challenges in using storytelling as a new pedagogical tool are addressed with suggestions of balancing technical and pedagogical preparation in order to optimize this innovative tool in education.

2. TRADITIONAL FORMATS OF STORYTELLING IN EDUCATION

Prior to the advent of the writing systems, storytelling was the only tool available by which individuals within their communities could pass down their beliefs, traditions, and historical culture to future generations. After the invention of the printing press in 1450, storytelling became even more important to society because printed stories became more available and accessible to many people who could learn from the historical stories and pass down their knowledge and heritage to future generations (Abrahamson, 1998).

As the oldest form of education, storytelling contributes uniquely to children’s language and literacy development in speech and written composition, as well as language development in both reading and listening (Trawick-Smith, 2003). Therefore, as an instructional strategy and learning tool, storytelling was initially implemented mainly in early childhood education. By creating and narrating personal stories or fables, young learners can acquire content knowledge and develop language skills in the process of plotting, writing, revising, and narrating their stories. Abrahamson (1998) observed that, in addition to language and literacy development, literature also shows that storytelling, as an instructional strategy or a learning tool, has been applicable to other disciplines such as communication, social studies, and even math.

Nowadays, the power of storytelling has been widely recognized as an effective, meaningful, enjoyable, and creative way to enhance teaching and learning. Storytelling is found in all types of teaching, thus storytelling is viewed as the foundation of the teaching profession (Abrahamson, 1998). By telling stories of what happens in the world, teachers expose learners to the existing world of knowledge where learners can learn, construct, and further develop their own knowledge by organizing complex elements in a given context, and by reflecting on their learning processes and life experience.

Storytelling is not only effective in early child education, but also effective in all areas of higher education. When applying storytelling in higher education, McDrury and Alterio (2003) presented a five-stage model on Reflective Learning through Storytelling, which involves both tellers and listeners of the stories in connecting the story with their own experiences. Each of the five stages (i.e., story finding, story telling, story expanding, story processing, and story reconstructing) engages students by encouraging them to reflect on learning processes and experiences of their lives. Through these five stages, students can improve their learning because storytelling, as a pedagogical tool in higher education, seriously takes the needs of students to make sense of experiences and seek meaning from their lives (Wells, 1986, cited in McDrury & Alterio, 2003).

3. DIGITAL STORYTELLING AS A NEW PEDAGOGICAL TOOL

Although storytelling as an instructional tool is not new in education, digital storytelling has become a new pedagogical endeavor that emerged from the proliferation of digital technologies including digital cameras, photo editing software, authoring tools, and Web 2.0 technologies such as Flickr and Myspace (Meadow, 2003; Alexander & Levine, 2008). As with practical applications of the traditional forms of storytelling, digital storytelling as an instructional medium has also been used by educators in many ways across the curriculum, not only in arts and humanities, but also in mathematics and science.
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