

## Chapter 13

# The Secret Power of Digital Storytelling Methodology: Technology–Enhanced Learning Utilizing Audiovisual Educational Content

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### ABSTRACT

*In light of the extensive exposure to digital narratives through technology and the exposure to a vast amount of audiovisual material every day, researchers, since many years, have been investigating the effects of using and applying digital storytelling methodology. This chapter briefly describes the critical role of digital storytelling methodology in learning from and through technology-enhanced learning utilizing audiovisual educational content. Finally, it presents the various types of audiovisual content that can impose different kinds of cognitive load on the adult learner's working memory through the research findings and results of various studies.*

### INTRODUCTION

Over time, storytelling is considered the most important inherent element of humanity and perhaps it is one of the oldest, natural, and most significant practices used in social life, communication and learning (Bratitsis & Ziannas, 2015; Nicolaou & Kalliris, 2020; Nicolaou, 2020). Undoubtedly, in the 21<sup>st</sup> century, storytelling continues to dominate more than ever through numerous multimodal ways of communicative narration. Admittedly, digital technology has now greatly affected the way a story is delivered and consumed from and through the Internet and social media (Matsiola et al., 2018; Nicolaou, 2021a; Sarridis & Nicolaou, 2015). Moreover, it is a fact that stories have also been transformed and conceptualized into digital storytelling with the employment of technology-enhanced use of digital technological communication tools (Pilgrim & Pilgrim, 2021; Schwab, 2017), in particular in the educational environment

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for delivering an enhanced learning outcome and experiences (Nicolaou et al., 2019; Xu et al., 2011). Digital storytelling nowadays has the magical ability to revolutionize the way we learn, aiding learners to assimilate all kinds of knowledge regardless of their education levels and disciplines (including adult education and afterschool programs). It is a fact that the receivers of digital storytelling from and through teaching-learning procedures can easily identify themselves with the story and manifest a plethora of emotions (Herskovitz & Crystal, 2010; Nicolaou & Kalliris, 2020). Nevertheless, implementing digital storytelling in a teaching-learning procedure inevitably comes with a unique set of challenges that each educator must face.

A digital storytelling is mainly made up of digital narratives and nowadays is mostly used in personal or even academic nature as short stories in the framework of teaching or even learning procedure (henceforth, teaching-learning procedure). Additionally, digital storytellers transform narrations into videos lasting a few minutes, but there is no standard duration. On the other hand, the term digital storytelling is a form of art that simultaneously combines images, text, video clips, audio narration, while also it may include the use of multimedia digital technological communication tools or even hypermedia-supported tools to be able to tell a story about a subject (Gürsoy, 2020; Matei & Hunter, 2021; Podara et al., 2021; Robin & McNeil, 2012; Weder et al., 2019). Furthermore, the use of digital storytelling in adult learning and higher learning has also highlighted that it can still develop multiple-multimodal skills and create new forms of digital storytelling (Göksün & Gürsoy, 2022; Gürsoy, 2021; Limone et al., 2021; Matsiola et al., 2022). These new forms seem to be more intense when adult learners (18 years-old and older) have significant learning pre-requisites such as high cognitive ability or even high prior knowledge (Matsiola et al., 2022; Schnotz & Rasch, 2008).

This chapter briefly describes through a literature review the critical role of digital storytelling methodology in learning from and through technology-enhanced learning utilizing audiovisual educational content. Specifically, this will be achieved through discussion using references to scholars working on this field. Additionally, a cross-cultural case study of the digital storytelling methodology which was applied in the framework of an action research on higher education learners and adult educators as adult learners (18 years-old and older) from both Greece and Cyprus is also briefly presented. Finally, this chapter will highlight that various types of audiovisual content through digital storytelling methodology can impose different kinds of cognitive load on the adult learner's working memory.

## **THEORETICAL BACKGROUND**

As it has been highlighted in the literature, the first instances of digital storytelling, which were real theatrical performances, were created in the 1970s by Dana Winslow Atchley, which were real theatrical performances (Zheng et al., 2011). This format was gradually modified and condensed, and since the 1990s, a more contemporary arrangement that was crystallized into videos of about two–three minutes long emerged. Over time, the duration of these narrations has been reduced further to a maximum of two minutes (Kidd, 2006). These videos mainly include animations, film/movie scenes, photos, titles, and effects, such as transitions, often accompanied by the creator's narrative voice or even a soundtrack background (Matei & Hunter, 2021). On the one hand, these narratives are not implied to be works of art in the sense of sophisticated technology (Weder et al., 2019). Likewise, they are also not glossy and commercial products but are somewhat distorted and imperfect from a formal and language point of view (Weder et al., 2019). Notably, these are authentic, personal stories that illustrate the true nature of digital

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