

Using Digital Story telling as an educational tool: Didactic Guidelines for Education Science Students

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Abstract: Digital Storytelling is an innovative educational tool that mixes storytelling with the use of new technologies. Specifically, it consists of the creation of a short video (between three to five minutes) in which the subjects express and reflect on specific topics using different digital or technological resources. This educational technique is intended to achieve different objectives such as analyzing the topics studied, promoting personal reflection, contributing to the empowerment of participants, promoting digital skills, improving expressive skills, working on emotional education, developing teamwork, among other secondary objectives. The success of the technique lies in the expressive and reflective capacity resulting from its step-by-step approach. In this work, in addition to establishing previous theoretical notions, a five-phase approach is proposed to be applied in classrooms of any educational level. Finally, some real experiences of the use of this technique are extracted.

Keyword: Digital Storytelling, Active methodology, educational technologies, didactic guidelines, education.

I. INTRODUCTION

Digital Storytelling is an innovative tool that mixes storytelling with the use of new technologies. Specifically, it consists in the creation of a short video (between three to five minutes) in which the subjects express and reflect on opinions and experiences around a given topic using different digital or technological resources such as photos, videos, images, sounds, recordings, etc. [1]. This form of expression is not only characterized by its capacity to transmit information, but also by its expressive and reflective potential [2]. Regardless of being a technique focused on expression and reflection, as Lambert [3] points out, the inclusion of personal images is not a necessary requirement. Moreover, it is an indisputable technique for deepening emotional experiences [4].

With this educational technique, different objectives are sought, such as understanding a phenomenon under study, enhancing personal reflection, contributing to the empowerment of participants, promoting digital competencies, improving expressive skills, working on emotional education, developing teamwork, among other secondary objectives [5, 6, 4].

As an educational resource, this tool has been used mainly in health education [7], as a means to transform students of degrees such as medicine or nursing into the real protagonists of the teaching-learning processes. Subsequently, the technique began to spread in areas of social education for work with sectors of great social and psychological vulnerability [5, 8]. In these areas, the effectiveness of the tool lies in the therapeutic capacity it generates in both the creator of the story and the receiver (audience). Therefore, in this technique it is not only important the process of elaboration of the story but also the exchange of experiences in group.

Finally, its use has spread to different areas, including education at all stages [9, 4]. In the educational field, this technique has been used either as an independent tool or as a complement to others. In addition, both the product (the digital story) and the process of creation and explanation of the production (discussion or interviews about the digital story) have been elements susceptible of being studied [10].

However, the success of this technique lies in the application of an approach based on different phases that encourage as much as possible the processes of reflection and expression [11]. To this end, the final discussion and reflection after the creation of the story become key elements. Lamber [3] calls this last aspect a story circle. In the following section we will detail each of the steps to follow for its elaboration and work. And, finally, we will conclude by highlighting experiences that have been carried out.

II. STEPS FOR USING DIGITAL STORYTELLING IN THE CLASSROOM

In order to respond to a step-by-step approach, the following is a suggestion based on the contributions of Morra [12] and Lambert [3]. Morra proposes an approach based on eight steps: come up with an idea, research/explore/learn, write/script, storyboard/plan, gather/create images/audio/video, put it all together, share, feedback and reflect. In contrast, Lambert proposes an approach based on 7 phases: owning your insight, owning your emotions, finding the moment, seeing your story, hearing your story, assembling your story, and sharing your story.

Our suggestion, unifying both authors, consists of 5 distinct steps:

A. Step 1: Getting familiar with the Digital Storytelling Technique

This phase has several objectives. Firstly, to get to know the basics of Digital Storytelling. For this, it is essential to explain the concept of Digital Storytelling and to show - as an example - a series of digital creations from different fields. Secondly, to lay certain technical foundations necessary for the subsequent creation of digital stories. To this end, it is recommended, on the one hand, to present the wide variety of technological resources that can be used as well as their main functionalities. And, on the other hand, it is essential to promote processes and activities that allow interaction with these resources, some of which may be unknown to the students. Among some of these resources we propose: Flickr, Capa Yapa, Quizlet, Timos, Joomla, WorSift, Genially, Diigo, Bookr, Mashface, Slidestory, Vimeo, Isuu or bubble.us, among a long etcetera. The last objective of this phase is to present the following phases with the objectives to be achieved in each one of them.

B. Step 2: Search for the story

In this phase is the search phase of the story. Here the students take the leading role, although it is important to establish two key notions: 1) the use of total creative freedom, format, and technological tool to be used and 2) the inclusion of the minimum aspects that we want to work with the students (depending on the objectives and competencies of each area). To facilitate this task, we could provide them with a script with questions or items to incorporate in their stories. For example, if they are working on emotional education, the following items could be distributed: moments, people, aspects that mark the emotion being worked on, consequences it generates in me. Within this step, it is essential to elaborate a script/scale that allows them to organize the information they intend to narrate. In this phase, it is essential to reinforce the origin of the idea that the students want to work on in their narratives. Therefore, showing previous examples or brainstorming common ideas can be of great help and usefulness.

C. Step 3: Story development

This session is entirely dedicated to the elaboration of the Digital Storytelling. It is essential to divide this session into all those that are necessary to develop the final product. To facilitate this process, it is important to carry out a previous task in which an outline of what they want to tell and how they want to express it is elaborated. During this session, the support of the guide/teacher is important, especially for the resolution of technical conflicts arising from the treatment of the selected web tools.

In relation to the digital story, we must emphasize that there are many authors who do not stress the need for these to be technically correct or perfect, as this will allow the emotional element to stand out from the technical one. However, this may vary if the objective is not so much the expression or the emotional work but the work of other competences, objective, and contents.

D. Step 4: Story Exchange

This fourth session requires participants to come together to share their digital stories. This aspect is considered by many to be the most important aspect of the Digital Storytelling work. This phase consists of creating a space that allows the presentation of the story to an audience [13] and the exchange of opinions and feelings about the stories presented [5]. For this purpose, story circles will be generated, that is, working subgroups of 5 to 6 members will be configured in which participants will have the floor, first -one at a time-, to explain and show their stories and, later -in a group way-, to debate and reflect, thus promoting interactive and reflective learning about experiences, emotions, and experiences.

To facilitate the development of this session, we propose to divide it into three parts: 1) presentation of the stories; 2) feedback and 3) discussion. In the first part, each member of the subgroup -in turns- should show their digital story with a brief introduction in which they highlight those aspects they consider most relevant or those elements that they want to highlight with their story. After the visualization of all the stories, we move on to the second part based on the exchange of opinions and positive and constructive feedback on the stories created by using the formula: "If it were my story, I could do ..." [5]. The last phase consists of a discussion based on the reflection of the feelings experienced during the creation of the story, as well as during its exposition. For this, they were reminded of the importance of keeping in mind concepts such as empathy, respect, or cordiality throughout the process.

E. Step 5: Final discussion

This last phase serves as a process of evaluation of the technique itself and its development. For this purpose, a discussion group led by the teacher will be organized in which generative questions will be asked to evaluate the impact of the work, as well as the possible means for its improvement. Some example questions could be:

- What has it meant to learn about digital storytelling?
- What has applying digital storytelling meant to you?
- Has this process helped you to improve your well-being/knowledge/skills/etc.? How?
- What has been the most difficult part of your digital storytelling process?
- Did you find the process of developing your digital storytelling fun or challenging?
- What would you improve about the process? Do you find it interesting enough to do it again on another topic?
- What else would you like to say about your experience participating in this project?

III. CONCLUSION

In this section we will highlight some studies of the last five years in which Digital Storytelling is used as an educational tool. The table shows a brief summary of its use in the classroom (Table 1).

TABLE I: EXAMPLES FROM THE LITERATURE

| Author | Brief abstract |
|-----------------------------------|--|
| Mula-Falcón et al. [14] | To analyze the personal experiences of education students on the cooperative work developed during their university education. |
| Cruz-González et al. [4] | To analyze the emotional effects of COVID-19 on students in primary education based on their experiences. |
| Schrum [15] | To examine student learning generated from the use of academic digital storytelling. |
| Spanjaard, Garlin y Mohammed [16] | To explore the role of digital storytelling in promoting perceived individual student and group engagement, and how these interact with group functioning. |
| Lazareva y Cruz-Martinez [17] | To analyze the implications of a collaborative digital storytelling project on student engagement in the context of higher education. |
| Castillo-Cuesta et al. [18] | To analyze the impact of digital storytelling on the writing skills of English as a foreign language (EFL) teacher. |

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|-------------------------------------|---|
| Sunderland, Robinson y Burgess [19] | To test the effect of the use of Digital Storytelling on the personal and professional development of students. |
| Bailey, Southam y Costley [20] | This study aims to 1) increase language learning (L2) performance using Digital Storytelling and 2) investigate students' perceptions of the use of this technique. |
| Al-Murshidi [21] | To evaluate the effectiveness, benefits, and challenges of learning through Digital Storytelling in the. |
| Tanrikulu [22] | Identify the effect of using digital storytelling as product input in foreign language listening lessons listening lessons. |

IV. CONCLUSION

The objective of this work was to show the educational technique known as Digital Storytelling. With this educational technique, different objectives are sought, such as understanding a phenomenon under study, enhancing personal reflection, contributing to the empowerment of participants, promoting digital competencies, improving expressive skills, working on emotional education, developing teamwork, among other objectives. In this paper we have highlighted how the success of such a tool lies mainly in the use of a step-by-step approach.

Based on the contributions of different authors, we have exposed a framework of work with digital storytelling based on five distinct phases that we have called: Getting familiar with the Digital Storytelling Technique, Search for the story, Story development, Story Exchange, Final discussion. And finally, we have highlighted a series of studies in recent years that have made use of this tool. Studies focused on different educational stages and on different contents (language learning, personal and emotional development, performance improvement, promotion of cooperative work, etc.).

Therefore, the educational technique presented here is an innovative and plausible opportunity to work differently in the classroom. A way that, in addition, encourages student participation due to its innovative nature and the use of digital media. That is why we conclude by encouraging teachers of different levels and subjects to use this tool of great wealth for the development of students, which also contributes to the attention of diversity thanks to the expressive capacity of the technique.

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