

# READING AND WRITING IN THE DIGITAL AGE: E-BOOK AND DIGITAL STORYTELLING

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## Abstract

The emergence of technologies has operated profound changes in all sectors of society, at school in particular. *The Digital Agenda for Europe* (2010), published by the European Commission [1] stresses the need to explain "a roadmap which maximizes the social and economic potential of ICT", emphasizing the role of the Internet. In Portugal, the *Technological Plan for Education* is intended to strengthen the digital skills of new generations and to improve the processes of teaching and learning. It can therefore be regarded as a contribution to carry out the *Agenda*.

In this context, we believe that reading and writing take on a new significance through the creation and dissemination of e-books. We are particularly interested in the educational uses of *digital storytelling* due to the multiple literacy skills that this kind of activities can develop in the classroom. In fact, digital storytelling that require complementary media to represent information (text, image, video, sound, animation), enables a more efficient construction and transmission of messages.

The first part of the paper shortly refers to the *Digital Agenda for Europe* and *Portugal Technological Plan* for Education. The second part examines the impact of Web 2.0 technologies on the creation of e-books and it emphasizes digital media, media and linguistic skills needed to digital storytelling activities at school. The paper concludes by presenting two e-books created with *myebook* in pre-school and primary school underlining its potential in learning environments.

Keywords: e-book, digital storytelling, literacy, reading, writing.

## 1 INTRODUCTION

In the light of the widespread changes that the integration of technologies have brought about in all sections of society - and in schools in particular - as much as at the national level as well as the international, more documents are published every day that confirm the absolute priority of equipping citizens with indispensable digital competencies, so that they can exercise their citizenship. Of these publications two have been selected that can be considered emblematic. First is *Uma Agenda Digital para a Europa [A Digital Agenda for Europe]* (2010), which was published by the European Commission and which highlights the necessity of explaining "some rules for maximising the social and economic potential of ICTs with an emphasis on the Internet." For Gomes and Costa the *Agenda* constitutes "the re-confirmation of an idea, which was established a long time ago about what is absolutely necessary is that the base of European citizen training incorporates a set of digital competencies without which Europe will not be capable of being competitive" (p. 1) [2]. In Portugal, the *Technological Plan for Education*, which is currently underway, has as its objective to place Portugal among the five most advanced European countries with respect to the technological modernisation of education. It aims, essentially, to contribute towards the improvement of the processes of teaching and learning and to enhance the qualifications of the new generations. This article can, therefore, be seen as a contribution at the national level, towards carrying out the *Agenda*.

Second is the document *Competências TIC, Estudo de Implementação [ICT Competencies: A study of implementation]* (2008), which should be emphasised for bringing together various notable researchers at the national level and because it is assumed to be "probably the biggest challenge of the *Technological Plan for Education* and the keystone of the strategy for training teachers in the innovation of their pedagogical practices involving Information and Communication Technologies (ICT)" (p. 4)." [3]

In Portugal, the education system tries to promote the development of new literacies by adapting reading and writing methods and practices to the demands of society. Indeed, to respond to the deep

social changes of today, the acts of reading and writing are no longer confined solely to books: reading and writing is done more and more frequently using diversified digital environments, which include e-books.

The reading and writing of *e-books* is gaining a new importance not only because of the exponential growth of the specific devices for reading them but also the increasing range of the contents available and for their quality. In fact, presently, each day more devices appear in the market place, in addition to the computer, *tablets* and other portable *gadgets*, which look perfect for those who like to read books and newspapers or to gain more readers every day. An indicative sign of a profound change in the editorial world is the fact that Amazon sold more digital books by the end of 2010 than paper ones [4]. Equally, it is possible to notice, as a consequence of the proliferation of resources available from Web 2.0 that there are more titles available at the disposal of the reader *e-books* each day, which have been created for companies, researchers, students in various levels of education, libraries, etc.

## 2 THE IMPACT OF WEB 2.0 TECHNOLOGIES ON DIGITAL STORITELLING

As a result of the emergence and democratization of these new sources of reading and writing, the possibility of teachers and students having to relearn how to read and write has been opened up and has resulted in the necessity to acquire new literacies in the use and construction of digital resources. So it will be inevitable that students and teachers will develop new literacies, that is to say, according to Ohler, that they will have learn new “capacities of reading and writing using different integrated significant and coherent means” (p. 9) [5]. The same author argued that “digital narratives permit children to speak in their own language” (p. 10) [5], since they already live in a world characterised by multiplicity and multi-modality and, frequently, by the time they arrive at school they are almost able to completely control digital technologies. Still more, according to Ohler, the future of digital narratives will include small films - like those of *YouTube* - and Web 2.0 will facilitate "interactivity and participation at both the local level and at a distance, thus permitting students to share and collaborate on digital stories" (p. 11) [5] .

Effectively, a new dimension in the relationship between reader and reading material has been entered, which actually is designated as *new literacies*. Then there will be the necessity to promote in school *multiple literacies* from the digital to the visual, as well as new competencies like auditory improvements and particularly the capacity to listen to oneself and to others [6] [7]

However, studies that allow one to argue with confidence about the advantages of reading an *e-book* compared with a traditional book in a reliable and properly, scientifically tested way are sparse [8] Some possible advantages that come from the experience of both readers and users of digital works are the following:

- Portability of the documents, because they can be sent easily and also transported to any location ;
- Rapidity of acquiring an *e-book*;
- An integrated dictionary;
- Availability of making annotations without altering the configuration of the original document;
- Possibility of automatically printing pages of interest;
- Facility of researching words or expressions inside such a document;
- Much lower cost;
- More ecological; and
- The edition can be updated more easily, whether by the publication of errata or by the re-editing of the same e-book.

Other researchers like Sáez (2000), Sotorres (2000), Fernández, Temiño and Illera (2003), as mentioned by [9] and [10] also point out the following advantages of using digital books:

- Ease of downloading the books from the Internet;
- Possibility of carrying a series of books in a single device (pen disk);

- The editing, dissemination and access to digital books reaches very much wider circles;
- Multiple users simultaneously can consult and manipulate the same work;
- The search for terms or keywords is faster and more efficient through the use of search mechanisms;
- Some copies allow for interactivity and the use of multimedia resources;
- They allow the use of hyperlinks to external sites and consulting of materials; and
- They help to foster free knowledge networks.

Naturally, there are also disadvantages. The first ones are concerned with the inherent limitations associated with acquiring the portable devices that support their reading, as well as the contents offered, which already have found themselves in an evolutionary phase and at the height of their democratisation. Other disadvantages also mentioned by the above authors are:

- Reading is slower and more tedious;
- They do not permit manual alterations;
- There is a large quantity of books in existence without multimedia resources;
- Limited dissemination of available texts;
- The devices are still of high cost;
- Information is often badly structured;
- Inadequate sources and quality assurance;
- Small quantity of available texts in specific areas of knowledge; and
- Growing practice of criminal activity against the rights of authors.

There are still other restrictions that can work as serious obstacles in the production and pedagogical use of digital books in an educational context. According to Peralta and Costa [11] it is claimed on the basis of European studies that the countries of southern Europe show a greater reluctance concerning the integration of ICTs. Besides these reasons, there are other factors that inhibit their inclusion, such as curricular organisation, the understanding of their added value on a pedagogical level and the lack of teacher training in the development of innovative pedagogies.

### 3 MYEBOOK

There are various free and available tools in Web 2.0, besides *Myebook*, which allow for the creation of digital books, like *Calaméo*, *Issuu*, *Slideboom*, *Animoto*, *Smilbox*, *Scribd*, etc. Nevertheless, *Myebook* seems to be the digital resource that contains a more complete set of tools and which makes possible wide freedom of expression.

It is believed, then, that the creation of digital books, particularly with the *Myebook* resource will be a good prospect with pedagogical potential, which can be associated with an adequate use of digital resources and an educational context. Implicit in this idea is the concept of *digital narrative*. This is the result of an evolutionary process with the singular purpose of bringing together in one space diverse forms of communication and expression that can be used to design for *multi-modality*. As is suggested in the still recent expression *digital narrative*, which for this reason is without a precise definition, it is possible to produce narratives using the tools of Web 2.0 [12] that work with various supports, such as video, images and sound.

After it is finished, an *e-book* can be embedded in a blog or in Web pages. Its public sharing is always recommended, so that it can be accessible on the Web. Even more, there are a wide range of resources that allow for the personalisation of any digital book. The presentation of two examples of digital narratives constructed with *Myebook* follows.

## 4 EXAMPLES OF THE CREATION OF E-BOOKS IN PRE-SCHOOL AND PRIMARY SCHOOL

The two examples selected appear to be representative of good practice using the resources available with these technologies, while - at the same time - they represent a methodological strategy that will strengthen the development of the processes associated with reading and writing. The resource of the free digital book was made in a transversal way for use from nursery school to secondary education and the creations, which are shown, have various purposes that are characterised by the degree of involvement of their distinctive participants in each of the projects.

In the cases presented, the students were given an opportunity of creating, imagining, recounting and dismantling narratives independently and being responsible for the production of their digital book. Naturally, the teacher, as mediator, supervised the process from initial conception to the structuring of the texts, sounds and images that constituted each one of the parts.

### 4.1 E-TellTales

This first example fitted into a project entitled *E-TellTales* and was carried out in the Rio Côvo Nursery School, Santa Eulália, Barcelos, Portugal. It consisted of an exploration of the book in a family atmosphere and, later on, in the context of a classroom. Conditions were created so that the children could participate individually or collaboratively in the creation of tales, stories or other curricular subject matter. It was intended with this methodological strategy to heighten the creativity, language enrichment and - at the same time - to encourage group work, so that the process would have a significant learning outcome. Among the principal objectives, it is possible to highlight the development of creativity, language enrichment, contact with multimedia mediums and the raising of interest in new forms of reading.

The *Myebook* raised a new prominence in the relationship within the family, because the reading and writing was not limited just to the school area. On the other side - in a latter phase - the children created their own narratives with the help of the teacher and they collaborated in the whole process of making a digital book. A recap of the essential steps follows.

In order to start the creation of the digital narratives it was necessary to take into consideration a sequence of different stages: i) the creation of a plot of the story/argument; ii) the laying down of the text for each page; iii) the selection of images and/or digitalised illustrative drawings for each page; iv) the recording of the audio of the narrative; and v) the integration of all of the elements in the application.

With respect to the audio, the *software* for recording and editing used was *Audacity*, in so far as it permitted the mixing of various sound sources with the aim of emphasising the message. Finally, the integration of all the elements of the selected application was done.

As this transversal tool is applicable to all levels of education, the following example of work carried out in a pre-school context is presented.



**FIG. 1 – MAGICAL CINDERELLA**

[http://www.myebook.com/ebook\\_viewer.php?ebookid=10078](http://www.myebook.com/ebook_viewer.php?ebookid=10078)

## 4.2 Here Everybody Counts

The second experience was born out of the necessity of creating collaborative learning situations for motivating students in the domain of Portuguese language and the preoccupation of improving the levels of performance in all stages of the primary and secondary schools in Vila Cova, Barcelos, Portugal. Precisely, the starting point was a problem: the students showed themselves ever more reluctant to write according to the traditional standardised format that they had been used to over many years. Thus, it was necessary to create alternative models. It was known in advance that the languages offered by information and communication technologies and the non-formal learning environment could be the route to explore. Therefore bearing in mind that language must be seen as a heritage of inestimable value and, simultaneously, as the main instrument for accessing all knowledge, an attempt was made to involve all of the educational community in this project concerning the appreciation of the Portuguese language.

In this context a start was made with a very simple idea: to produce a collaborative narrative that would involve students of the third cycle and others in secondary education. So it was done this way. Class A of the seventh year initiated the story and the other classes of the other years of schooling carried on adding new characters and interactions, by advancing or delaying intrigue, creating new scenarios, environments, etc. This project was concluded within a deadline of approximately two months. Its authors resorted to using electronic mail and to *Google Docs* for its construction, as it demanded a constant process of revision and re-writing.

After it was finished the text was presented in all of the participating classes. Once disseminated by electronic mail and read, the final text had an excellent reception in the educational community.

In response to this good reception, it was possible to publish a book with the result of this experience, which was entitled *Here Everybody Counts: An Experience of Collaborative Reading and Writing*. Later on and then in the environment of a training workshop for teachers, the challenge was made to turn this book into an *e-book*. The result is accessible and available from the address below.



**Fig. 2 - The Coordinates of a Dream**

<http://www.myebook.com/index.php?option=ebook&id=9776>

## 5 FINAL NOTE

With the enormous set of digital resources that Web 2.0 puts at the service of education,<sup>1</sup> teachers from pre-school education to higher education can revolutionise their way of teaching today by responding to the challenges of the Digital Society.

In order to propose the use of digital books in the development of new strategies for reading and writing, a pragmatic perspective can be argued for the utilisation of these resources not only as *productive tools* but also as *cognitive tools*, as Jonassen [13] defines them. The former are mechanical tools that facilitate physical work, while cognitive tools trigger the cognitive processing that is inherent in the construction of knowledge. “[They] are mental and computational resources that help, guide and extend the process of thinking of their users (...) for to use them, the students have to think deeply about the content that they are learning and they learn by stimulating mental processes” (p. 26) [13].

Without being dazzled in the presence of the marvels of technological advances, one should always bear in mind that the digital environment “facilitates access to an enormous and varied set of resources but does not directly promote learning” (p. 37) [14], which will always demand a big personal effort on the part of the student, thus – at the same time -reinforcing the role of the, teacher as creator and manager of learning environments at the heart of which are technologies of information and communication

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<sup>1</sup> It is possible to find a variety of digital resources and, in particular, various applications for the creation of digital books in the website <http://cooltoolsforschools.wikispaces.com/>

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