

ALICE THROUGH THE COMPUTER SCREEN: A STUDY OF LITERARY READING AND WRITING ON DIGITAL DISPLAYS

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ABSTRACT: This article presents a summary and a series of conclusions and reflections on the digital reading and writing experiences carried out during the years 2009-2010/2010-2011, by the research group LEETHI (Spanish and European Literatures: from text to hypertext) from the University Complutense of Madrid. With the purpose of gathering data regarding the new reading habits introduced by onscreen reading, we devised a series of experiences organized around three modes: intensive reading through the computer screen, extended reading in e-readers and tablet PCs, and creative digital reading and writing. These experiences have been collected in the work *Alicia a través de la pantalla: lecturas literarias en el siglo XXI* (CITA: Fundación Germán Sánchez Ruipérez) to appear soon online.

KEY WORDS: Digital reading habits. Digital literacy. Electronic literature. Digital reading devices. E-reader.

Introduction

In this article we discuss some necessary critical approaches to evaluate digital literacy in education and to read and write effectively in digital environments. The ultimate objective is to provide resources and strategies to teachers, students, professionals and those just interested in learning about new ways of reading and writing with digital devices.

Today a growing number of books is accessible from different types of digital displays (e-readers, tablet PCs, computers, mobile phones, etc.), but, in both digitalized versions, text and image forms, we may be losing touch with books as tangible objects. Are the ways of reading and writing affected by the material device? The book size, font types, paper type, binding, cover, illustrations, colours and even how the pages smell, are factors that can influence the reading experience almost as much as the book's content. In any case, it is necessary to reflect on the changes that digital technologies can introduce into the habits of

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reading and writing, especially to analyse and harness these new possibilities for the classroom.

The accessibility of certain works, which previously could be difficult to find, is an undeniable advantage of the World Wide Web; if the reader is connected, he will be able to sit in front of the screen and browse through dozens of "books" in one hour. The *International Children's Digital Library* web, for instance, offers free access to exemplary works from more than 42 countries¹.

Those who, before the technological changes, were already regular readers seem to lack something in digital reading; the longing for the weight and all the material aspects of the book: to turn the pages, to get an idea of the thickness of the volume, to be able to go back to re-read a paragraph, underline or add notes, etc.

Moreover, many voices, some very alarming, have been raised in the last decade with respect to the changes which digital textualities and their medium, the internet, are producing in our capacity as readers. Most of these voices base their arguments on personal appreciations. For Sven Birkerts, for example, our jump into cyberspace and its saturated digital media environment has meant an irreversible loss: we have changed our concentrated and single-track reading over paper for the "restless, grazing behaviour of clicking and scrolling" (Birkerts 1996: XIV). Without questioning the validity of Birkerts' statement, we have oriented our research so that we could obtain data in order to test these arguments with respect to literary reading practices. We think that to be able to calibrate the effect of the internet in our reading habits, it is necessary to take into account the nature of the different reading rituals which are being performed on the internet. Particularly, we are interested in literary reading.

¹ ICDL is only one example that can be find in: <<http://en.childrenslibrary.org/>>. Access in: March 14 2012. Other useful resources for digital literature can be found in:

- Digital Literature Anthology . In *Hermeneia* de Laura Borràs.
- Literatura: Hipertexto. In *Open Directory Project*.
- Hiperficciones on line. Jaime Alejandro Rodríguez (Colombia)
- Literatura Electrónica Hispánica. Juan José Díez in *Biblioteca Virtual Cervantes*.

In *Electronic Literature*, Katherine Hayles acknowledges that the ELO's (Electronic Literature Organisation's) definition of "electronic literature" is tautological and, therefore, poses further questions (Hayles 2008). For a work to be considered electronic literature, the work must contain "important literary aspects" at the same time that the work incorporates the creative possibilities that computer technology has to offer. Hayles assumes that after five hundred years of print literature, readers who approach electronic literature will do so with a series of reading expectations and conventions belonging to the literary print medium (3-4). The task of the readers, therefore, is to recognise the literary aura of the digital work, even when the work modifies or transforms those conventions. The time has come to revise the expectations that readers take with them in their encounter with electronic literature and to assess how those expectations are redefined after that encounter.

To address these issues, we have revised reception and reader-oriented theories. In particular, we have used Wolfgang Iser's concept of the "implied reader", Hans Robert Jauss's "horizon of expectations", and Jonathan Culler's emphasis on "interpretive conventions". All three concepts emphasise the dialectics between the production and reception of the literary work in terms of patterns of reading inside a community of readers that are shared by authors and readers alike and are independent of the subjective variations in reading acts that individual readers perform. In this sense, the notion of genre emerges as the condensation of those interpretive conventions that summarise the internal logic of reading. For this reason, the question of whether the readers consider the works of electronic literature we will present to them to be literary texts must be answered before more refined questions regarding the reading strategies used to approach texts of various types can be posed.

Different expectations are also evoked depending on the task the reader has at hand at any given time because reading is not a single ritual but many. In this respect, we have resorted to a theoretical frame borrowed from ethnography. In particular, as regards the different types of rituals, ethnography establishes a distinction between ritual, ritualised behaviour and habit, which we have applied to

our particular ethnography of reading. We understand on-screen reading as participation in different types of rituals, using this ethnographic classification to highlight a gradation in the value attributed to different reading activities and, therefore, in the resistance to change that each activity offers, the rite being the most reluctant and the habit the least. We can foresee that the first reading ritual that will be affected by technological change will be reading habits, which involve a lower degree of consciousness and socialisation. In contrast, the richness of content that adheres to rite makes rite one of the most powerful means of resisting change in the transmission of values and meanings.

We expect that this theoretical framework will help us recognise which type of reading evolves more easily, who participates in the activity, what degree of implication or active reading is expected of the reader, etc. The framework could also expose the different horizons of expectations that each culture evokes with respect to on-screen reading, an aspect that has not been fully analysed in previous research. In short, we would like to reflect upon what happens when the ideal reader, projected from the digital creation pole, meets the actual reader and evaluate the way in which our reception of literature is being modified in the electronic medium. The concrete questions we ask are as follows:

- Is the horizon of expectations modified with respect to print literature? Does the manner in which readers approach the text or generate their reading hypotheses change?
- What are the interpretative conventions used when meeting an electronic literary text? Which conventions from print literature are moved to the digital domain, and what type of adjustment do actual readers make?
- Is the work of electronic literature still perceived as literature, or is the value attributed to the literary work altered in some way?

We organized three types of reading experiences corresponding to what we perceived to be three different (yet deeply interconnected) reading modes or literary reading rituals: intensive reading, extended reading, and creative reading

and writing. In the first case, we took under consideration the type of reading students make when analysing a literary work as a class assignment, following the academic tradition of a close, intensive reading. But in this case, reading was carried out on the computer screen. For the second mode, extended reading, we selected portable reading devices, such as tablet PCs and e-readers, which invite a more immersive, ludic approach to reading. And finally, we returned to the computer screen to propose different activities in which students could embody the type of active reader digital textualities are calling for, and become true “wreaders”.

What follows, then, is a summary and a series of conclusions and reflections on the reading experiences carried out during the years 2009-2010/2010-2011, by our research group LEETHI (Spanish and European Literatures: from text to hypertext) and which have been collected in the work *Alicia a través de la pantalla: lecturas literarias en el siglo XXI* (CITA: Fundación Germán Sánchez Ruipérez) to appear soon online.

1 Intensive Reading

Our first approach to the study of literary reading practices focused on the type of close reading demanded from students in an academic setting. For that purpose, we organized a series of reading experiences with 181 students from academic years 2009-2010 and 2010-2011 in different courses offered by the Faculties of Philology and Education at the University Complutense of Madrid (see Table I, Appendix 1, for more information about the development of the experiences).

We selected four texts varying in the difficulty and complexity of their deviation from the print medium and their evolution towards a purely digital format. We asked students to reflect upon their notion of literature in connection with these texts, whose literary character ranged from the classicism of Edgar Allan Poe to examples of what could be classified under the rubric of Net art (such as the work of Belén Gache or those of Dan Waber and Jason Pimble). For example, the list of readings for students working in English were:

1. An html text, *The Tell-Tale Heart*, by Edgar Allan Poe, read from the following web address: <<http://www.literature.org/authors/poe-edgar-allan/tell-tale-heart.html>>.
2. A hypertext selection from *The Waste Land*, by T.S. Eliot, in two versions, a simplified one with two frames found at <<http://eliotswasteland.tripod.com/>> for Education students, and a more complex one from <<http://world.std.com/~raparker/exploring/thewasteland/explore.html>>, for English Studies students.
3. A literary text designed for screen reading but with significant ties to the print medium, *Patchwork Girl* (1995), by Shelley Jackson. (CD Rom).
4. A literary text designed for screen reading but with a more digital nature, *I, You, We*, by Dan Waber and Jason Pimble (2005) in <http://collection.eliterature.org/1/works/waber_pimble_i_you_we.html>.

For each text, the students had to answer similar series of questions that are variations on the model proposed by Joel Wingard (1996) to encourage reflective reading in literature classes (because we had to integrate our research into the curricular needs of the classroom):

1. Writing a synopsis of the text or extracting the text's message or main theme.
2. Giving a personal opinion of their experience as readers.
3. Commenting on the interface and the mode in which reading from the screen influenced their reading experience.

During the first week of classes, we passed out a questionnaire to gather information about the participants (their age, social and cultural background, language proficiency, previous reading experience (online and offline), acquaintance with literature on the Web, etc.). Because most students in English Studies and Education are female, we did not take the gender variable into account. The conclusions we have drawn from the obtained results are the following:

As we have observed in the student responses, there is an equilibrium in the number of students that are reluctant to accept an online literary reading ritual and those that are more prone to see the advantages than the disadvantages. That is, we can consider that Luddites and tecnophiles were evenly distributed in the groups tested. However, we noticed that as we proceeded with our experiments, the number of students that reacted positively towards the digital medium increased. From an interpretation of their responses, we gathered that this change was due to the nature of the texts chosen (which evolved away from print conventions to embrace purely digital ones). When the texts offered reading possibilities not open to print ones, the advantages of online reading for some operations were obviously more apparent. For example, in the first reading experience, we used Edgar Allan Poe's story "The Tell-Tale Heart" to be read online (without any kind of modification from its print version). In this case, more than 50% of the surveyed students complained that reading from a screen was uncomfortable for their eyes, while this complaint was not so frequently expressed with the other, more "digital", texts. The evident conclusion we extract from this is that reading online needs to offer something extra to compensate for its disadvantages (mainly, eye strain), which is the same assertion we could reach in the case of the extended reading experience in tablets and e-readers.

A general comment found among responses to our first text was that concentrating on the story was difficult because they were tempted to explore other Web pages, including some related to the text in question (to learn more about the author or the work). They also felt distracted by other activities (checking their e-mails, chatting, going on Facebook, etc.). Consequently, reading in a traditional book format is associated with concentrated reading, whereas reading online presents itself as fragmented and distraction-prone.

Moreover, on-screen reading affects the way the story is perceived. Connection with characters or immersion in the story does not seem deep because concentration is not achieved in the same way. In this regard, we found the commentaries that provided an assessment of the value of the literary work in the

digital medium to be relevant: more than 20% of the students shared the perception that reading Poe's story online trivialises the story, making the story less interesting and less important. For some of the students, physically possessing the text and accessing the text's contents by touching its pages unites them sentimentally with the story. Therefore, even for readers who are used to reading from a screen (newspapers, blogs, comics, etc.), the literary text is still closely linked with the traditional book.

Making students read a traditional story online has had the effect of emphasizing the ritualistic dimension of reading a printed book. Students are aware of a pleasure in reading associated not only with some stories but also with a ritual of sensations: the sound of pages turning, the smell and feel of the book's cover, the cosiness of touching its pages, underlining a sentence with the finger, etc.

In this first experience, the students who responded more positively to the digital medium appreciated instantaneous access to texts, that the texts are free, the Internet's invitation to make an intertextual reading of one text, which leads them to other texts and that the latter are immediately accessible. These students judged positively the ability to use a variety of tools for the study of texts, such as online dictionaries, translators, and resources providing information about the text. However, the book appears as a simple technology with many advantages as well, like portability and easy note-taking. Taking notes or underlining while reading have become habits of academic reading that the majority of students have not yet transferred to the digital medium.

Reading T.S. Eliot's *The Waste Land* on screen proved a challenging experience. The main issue was to overcome the information overload of the hypertext and, in this respect, previous literary reading experience proved essential. The overload was managed in different ways. For 10% of students, the hypertext created an environment that hindered the formation of their own opinions regarding the poem. Faced with a multiplicity of comments from others, the students felt very submissive readers. Another 10% of the students underlined that not all the information offered by the hypertext was useful or relevant. For advanced

students, however, this hypertext was a more stimulating academic reading than the printed version of the same, where footnotes at the bottom of the page felt dry and boring.

For English Studies students who had previously been reluctant about on-screen reading, reading the hypertext proved to be a novel experience, and they appreciated the advantages more than the disadvantages. In this case, students combined reading the text from printed books with the reading of the hypertext. Nevertheless, due to the nature of the digital text, far fewer students printed the text to read it.

Among the disadvantages appears again the ease with which readers can be tempted in other directions. However, we notice that what could be considered a drawback (distracted online reading) can be turned into an advantage from an educational point of view, because students have devoted a significant amount of time to exploring and reading the text, used multiple secondary sources, and even used their curiosity to go beyond the assigned task, for example, by listening to the poem being recited on YouTube.

Among students who disliked reading the hypertext, comments regarding their own lack of experience navigating the Internet were frequent; they confessed, for instance, not using tools that were commonplace for their fellow students, like online dictionaries. Among the advantages, the students emphasised the communal nature of the Web and the fact that people had used the hypertext to share their knowledge of the poem with others. The Internet is perceived as a medium that makes knowledge more democratic and literature more accessible to all types of people. In that respect, we noticed that young readers have become accustomed to Internet culture, encouraged by programmes like *Spotify* and similar ones, which favour the shared use of cultural artefacts stored on a remote server, utilising a new paradigm of property.

In the case of electronic literature reading experiences, all students agreed that, in their role as digital readers, they felt that they participated in the creation of the

work through the projection of meanings and emotions on a fragmented and subjective text. However, for some readers, this sensation of freedom at the time of projecting generated some anxiety and uncertainty. On the other hand, we observed that students who considered themselves to be “good readers” of traditional (paper) literature encountered fewer problems than the others when it came to facing the new formats of digital literature. In any case, we are aware that the reading intertext of students is fairly limited in general, as we could notice in the initial questionnaires. Thus, people with a lower level of reading and comprehension skills and with less liking for traditional literature were also the ones who had the most difficulty relating digital to printed literature.

What has become apparent is that shifting from the linearity and successiveness of the traditional narrative to simultaneousness and multimediality requires the skills of an expert reader. Even if the surmise may seem paradoxical, and in spite of the attraction that can be generated by the digital medium above all in young people, electronic literatures, able to convert the boldest proposals of the avant-garde of the 20th century into real performances of the 21st, loaded with intertextualities and metareflections, certainly challenge us as teachers. Judging by the results of our empirical work, we can state that good literacy as a traditional reader makes access to electronic literature easier. Moreover, the problem of access to technology has become secondary, what is of primary importance is what exactly are our students doing in cyberspace, what is their degree of digital literacy and how are they exploiting the web to progress with their studies.

Thus, what we need to do as teachers is help readers establish strategies to use this attraction for active and multimedia reading, which our young students seem to enjoy, with the aim of investing meaning in the acquisition of literacies, bridging the gap and establishing a continuum between traditional and digital literacy, between the work on paper and the work on an electronic device, to encourage them to continue reading literatures.

2 Extended Reading

We have associated the ritual of an extended on-screen reading with electronic devices different from desk computers: the new cohort of e-readers and tablet PCs begin to replace the traditional book in our literary reading practices. To study the changes produced by digital technology in the field of extensive reading, we have carried out a series of experiences with e-readers and tablet PCs with teachers and students from the Faculty of Philology of the Universidad Complutense de Madrid during the course 2010-2011. Our main objective was to advance in the knowledge of reading habits beyond matters related with the ergonomics of reading; we were rather more interested with evaluating the way in which the electronic devices were affecting the literary experience, that is, the reader's relationship with the content rather than with the medium or container. We wanted to explore to what extent the literary concepts used to analyze the reading experience are anchored to the book and the print technology and thus need to be reformulated when applied to the reading experience in the digital domain. Therefore, we wanted to design and test an experimentation model that would allow us to study the changes experienced by readers in this transitional moment, when readers familiarized with literary reading in the print tradition, but already native users and readers of the digital medium, begin to experience literature in the mobile screens of e-readers and tablets.

More concretely, we were interested in exploring the manner in which readers dealt with the transformation experienced by texts, if they perceived the "remediation"² to which print texts have been submitted or if, on the contrary, the medium disappears in the hands of a reader immersed in the literary experience. This is a relevant question since it is going to have a bearing on the type of reading made, the degree of awareness that the reader will develop regarding the activity being performed and the perception of his own identity as a reader. For example, is immersion facilitated or the opposite? Are the identification processes

²BOLTER, J. D.; GRUSIN, R. *Remediation. Understanding New Media*. Cambridge, Mass: MIT Press, 1999.

with characters, situations, etc. affected by the change of medium? Do readers devote the same amount of creative effort to “concretize”³ the text, or, on the contrary, the practices of cyberspace reading (rapid scanning of texts, hypertextual zapping, multi-task reading, etc.) influence the reading experience on electronic devices despite the traditional nature of its content?

If we give credit to Sven Birkerts’ assertion that “the novel is the vital antidote to the mentality that the internet promotes”⁴, imaginative evocation and immersion, two basic mental operations for extended reading, must be experiencing a deep crisis. But we still need to check for ourselves the type of reception that this new “digital prosthesis”, the e-reader, promotes; if the processes of generating “horizons of expectations”⁵ or predictions regarding the plot or narrative development remain the same or become altered when reading on a digital display. Do we scan the text in the same ways we did before in search of a specific plot line, character, ending, etc.? Is the perception of narrative time altered? Do we read quicker or do we have more trouble reading with sustained focus long passages?

Following Marshall McLuhan’s maxim “the medium is the message”, we need to gather data that will provide information to the researcher of the type of reception promoted by the digital medium, but focusing on how the medium modifies the message or content that has been remediated. For example, does the reader’s perception of literary value alter when reading on a digital display, is it depreciated or increased in relation to the rest of contents with which it competes in the same device?

Also, the idea of having a privileged access to electronic devices, does it affect

³ INGARDEN, R. *Das literarische Kunstwerk*. Tübingen: 1960.

⁴ “Imagination, the one feature that connects us with the deeper sources and possibilities of being, thins out everytime another digital prosthesis appears and puts another layer of sheathing between ourselves and the essential givens of our existence, making it just that much harder for us to grasp ourselves as part of an ancient continuum.” (BIRKERTS, S. Reading in a Digital Age. *The American Scholar*, Spring 2010. Available in: <<http://theamericanscholar.org/reading-in-a-digital-age/>> . Access in: May 26, 2012).

⁵ JAUSS, H. R. *Literaturgeschichte als Provokation der Literaturwissenschaft*. *Konstanzer Universitätsreden*. Konstanz, 1967.

the reading experience or the perception of the reader's status? Is the concept of the "implicit reader"⁶ just a textual structure, or is it also inscribed in the code and the medium? Do the actual readers experience an added distance from e-books' implicit readers?

Finally, we would like to explore the characteristics of the literary texts that are being created to be specifically read in e-readers and electronic devices: Which are their main characteristics (multimediality, interactivity, hypertextuality, etc.)? What do readers expect from the reading experience nowadays? In which ways do the different text formats (PDF, EPUB, MOBI, etc.) or the characteristics of electronic reading devices affect the type of reading habits and practices exercised by the reader?

We still find ourselves at a very early stage of our research, however, from our first experiences with electronic reading devices we have already gathered some relevant information that has encouraged us to continue studying in more depth the evolving reading rituals and practices of a new generation of readers. In a first stage, we designed a reading experience among the researchers of the LEETHI group, formed by 11 members, in which they had the chance to test at least two different reading devices (Appendix 2, table 1) without time limitations. From this experience, it came out a series of preliminary impressions, a questionnaire (Appendix 2, table 2) and a selection of electronic reading devices. In a second stage, two reading experiences with 29 students were carried out. These reading experiences were not integrated in the course tasks, but we rather demanded from the students their voluntary collaboration.

From this initial group, we selected four models to be used in the students' reading sessions, among them the Amazon e-readers (Kindle II, Kindle DX), and the two tablets (Toshiba Tablet FOLIO 100 and the iPad), which we thought offered the readers more features and a more intuitive use. The following questionnaire was used to gather data at this preliminary stage. We divided the questions among five

⁶ ISER, W. Leserkonzepte und das Konzept des impliziten Lesers. *Der Akt des Lesens: Theorie ästhetischer Wirkung*. München: Fink, [1976] 1994, 4^aed. p. 50-67.

sections (student data, previous experience, ergonomics of reading, reading rituals, literary experience, comparative). The reading sessions took place at university with postgraduate-level students (see table 3 for details).

In general, teachers had more difficulties than students adapting to the different e-readers and tablet PCs' models and their features. Teachers declared their alarm at the lack of academic rigour of many of the e-books available: there was a general lack of precise bibliographic information and a very unbalanced offer of titles. In general, they observed that free e-books were very poorly edited and formatted, and contained numerous errors. The offer in different languages was also very unequal.

In matters related to the ergonomics of reading, tablets received a more favourable evaluation than e-readers. The most appreciated characteristic of new reading devices was their capacity to integrate all the connectivity advantages of a computer with the lightness and simplicity of the tablet. However, eye-strain was their main disadvantage in long reading sessions.

The quick search for words in the dictionary was also highly appreciated. The possibility of underlining and annotating a text was also considered indispensable, being the tablets the ones that provide greater facility of use. In general, however, most students were unable to perform these operations due to their lack of technical knowledge. One of the operations that students have demanded more often is the possibility of cutting and pasting text fragments and images from e-books to other documents.

Among the disadvantages, students and teachers alike underscored the slowness or impossibility of doing a fast scanning of the text in search of a concrete passage (the double page was greatly missed in some devices). Again, tablets minimized these sort of problems, with a greater and more flexible image quality.

Regarding their reading speed and concentration, except for students with limited previous experience reading extended texts on screen – who claim to read at a

slower pace and experience a certain disorientation –, most students declare that they read at the same pace or even quicker than print, even when they have never used an electronic device to read long texts before. Some student, however, comment that their reading is fast but somewhat superficial, without paying attention to detail. As a student has pointed out: “with the e-reader I am a little less concentrated. Since I am reading an e-book I have the impression that it is there to be read with a quick scanning of it (...), as when one looks for information on the internet”. Another student observed that she lost photographic memory of the page.

In general, most subjects have experienced less immersion in the reading process, however, it was difficult to forget about the medium when they were asked to evaluate it. Teachers that had the chance to take the e-reader or tablet home and read for longer sessions experienced less difficulties in this respect. In this respect, previous experience also proves influential: students that read a lot in the computer screen claim to forget easily about the medium or device, and they acknowledge the advantages of the e-reader versus the computer screen in that respect.

There is another generalized tendency to reminisce with nostalgia about the intimate relationship of readers with their books. They miss the warmth of a careful binding and aesthetically pleasing edition, the ritual of sensual contact with the book, the passing of its pages, its smell, touch.

They would like to be able to read graphic novels, illustrated books, comics. They regret that it has not been more extensively exploited the e-book’s potential to integrate images. They also would like that the electronic medium were used to rescue books that are hard to find. Most students would have liked to have a wider selection of titles.

Conclusions

Our most important verification seems to contradict some of the assertions that have been made currently with respect to the oppositional logic that situates digital reading versus print reading as two radically different reading practices. What we have observed instead is that, with respect to the literary reading rituals, a gradual logic prevails. Readers are little by little integrating the digital medium into their reading rituals without an abrupt opposition between their rituals of reading on paper and on the screen. Without arriving to the division announced by Marc Prensky in 1998 between the print generations and what he called the “Google Generation”⁷, we observed that within the same generation coexist different types of readers with diverse degrees of adaptation to the electronic medium and of literary reading experience. We have not found clear dichotomies between two forms of access and information processing (parallel processing vs. linear processing, aleatory access vs. linear thought, graphic approximation vs. textual approximation, immediate result vs. patience, technophilia vs. technophobia, analytic vs. contemplative thought, or reflexive vs. informative, goal oriented thought) (PRENSKY, 2008, n/p). It is true that students have proved more agile in their use of electronic devices than their teachers, but students with previous experience reading on digital devices also took advantage of this familiarity and had less difficulties having an immersive reading and enhanced concentration. They were the ones which perceived less the remediation of the text, in general, however, forgetting about the medium was difficult. The page continues to be an essential unit of reference and it was missed.

With respect to the value attached to a literary work, the electronic remediation produced a paradoxical effect; on the one hand, the literary work becomes depreciated in the competition with other forms of entertainment available within the same device; but, on the other hand, the fact that a last generation gadget exists dedicated exclusively to reading seems to encourage people not particularly

⁷ PRENSKY, M. The Google generation: the information behaviour of the researcher of the future. In: ROWLANDS, I. et al. *Aslib Proceedings*, v. 60, n. 4, 2008, pp. 290-310; Also in CIBER, *Information Behaviour of the Researcher of the future*. Available in: <<http://www.bl.uk/news/pdf/googlegen.pdf>>. Access: Sept. 13, 2009.

interested *a priori* in this activity. As a result, reading is recuperating in some respects the central space in culture it once enjoyed thanks to e-readers.

But this passage from books to e-readers is not a just change of medium, as it could represent the movement from manuscript to print, with the cultural revolution it entailed, it also implies a new relationship between the sign and its encoding processes. Thus we could talk of a parallel remediation that affects not just the layout, visible aspect of the text, which becomes malleable, but the relationship between the linguistic code and its possible digital translations (mainly as text or image) and manipulations. It is to this new layer of sheathing between ourselves and the text to which many readers are not accustomed, and which is generating a new gap between readers. Thus it is necessary to review how the concepts previously used to analyse the reading experience are being themselves remediated. We could say, for example, that technology is generating its own “implicit reader”, the one capable of using skillfully the electronic reading device and take advantage of its potential. This actually involves being able to transfer to the digital medium the practices traditionally associated with the reading practice; underlining, annotating, search for references, etc. This superimposed image of the technologically gifted ideal reader is added to the implicit reader of the literary work. In many cases, the digital medium interferes, increasing the distance between a work’s implicit reader and its actual one, who is distracted by the multiplicity of entertainment alternatives of the electronic *dispositif*. But this is not necessarily the case in every reader, since previous in-depth experience with both electronic devices and literary reading play a major role in the concentration and fulfilment obtained of the on-screen reading experience.

We need to continue with our research at a deeper level –with more subjects, reading experiences of longer duration, different e-book software formats and more complete questionnaires- to be able to gather data concerning the concretization of the literary text. What we do have observed, however, is that readers perceive the e-book format and the electronic device as a cold medium, not in tune with the warmth of the emotional response that literary texts use to demand from its readers.

Lastly, we observed that the offer of available e-books titles does not take advantage of the digital medium's potential. Readers are claiming these new possibilities of interaction with the text and of "polyartistry" expression, qualities that would justify the losses or disadvantages of the digital medium versus the print one. In every change, there are losses and gains to be taken into account, and students have proved very receptive to the novelty, yet highly demanding with respect to the reading experience electronic devices offer. Now it is time for the producers and editors of e-books to be up to the expectations they have raised.

3 Creative Reading and Writing

3.1 Classroom experiences

With the purpose of increasing creative writing activities in Primary and Secondary schools and other education levels, this section offers a series of strategies and examples to develop creativity programs at the university, in this case at the faculty where the future school teachers are studying. Education students are in general very motivated, but they have at least three main issues: firstly, they are not good readers, or at least, they have not read enough yet; secondly, they are not competent writers, more than thirty per cent of them are not even correct when writing in their own language; and, finally, they are not used to read or write literature on digital devices.

Most readers of fiction usually read stories or novels in a passive way and, consequently, they do not recognise the style techniques and the resources that the author has used in the text. For this reason it is important to show the students what they can do in order to read in a more active way. Cortázar said that the best reader is the active reader, because he feels complicity with the author, especially if this active reader practises also creative writing. The term *W-reader* can also mean in this context that the best reader may be the one who becomes a writer himself.

The first approach to writing activities in the classroom has to be taken as an entertainment, the teacher can choose some simple literary texts to read as examples; digital poetry and short tales may be good genres to begin with. It may sound simple, but the best strategy to learn to write is...writing. Therefore creative writing is a very good option, because it is playful, active and funny. After reading the literary models, students can try to write their own versions, in which they have to change some elements, as characters, time or narrator.

In these pages we are going to present the experiences of digital creative writing that were realised in the Faculty of Education at the University Complutense of Madrid, from 2005 to 2012, in the following subjects: "Literature and their Didactics", "Techniques of oral and written expression" and "Reading and creative writing" (Pilar García Carcedo, teacher of the Spanish section) and "Literature of the English Language and their Didactics" and "English Language II" (M^a Luisa García Bermejo, teacher of the English section).

3.2. Children's Literature and Digital Literature

Children's literature is a landmark of great interest to analyse what is already happening in *digital literature*, the literature that is made with computers and takes advantage of multimedia. Picture books and digital texts are related by the emphasis on illustration and images, but above all, by its playfulness, which has led to an increased presence of interactivity and hybridity with all kinds of codes. Sounds and movement can be found both in children's albums (with flaps to lift, wheels spinning, pages that are displayed and buttons that play music or onomatopoeia), as in the newest examples of literature created for digital media. For example, in the highly recommended work of Argentinean author Belen Gache, *WordToys*, which is played with words, images, sounds, movement ...

The influence of postmodern currents in literature is reflected in a striking increase of irony, game perspectivism and intertextual allusions, not only among texts but also between different systems or codes, such as films, music and painting. Thinking about children's literature you can see that, even in this field, the plots

are more complex, with musical or pictorial literary references, such as the picture books of Claude Ponti:

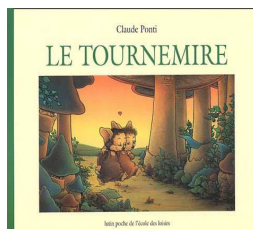


Fig. 1: Book of Claude Ponti

Furthermore, in current children's literature, as in digital literature, the image is not just an ornament but becomes a design element. In some works the picture not only complements the information or replaces the descriptions but it can also contradict the written text. The contrast between the letter and the image can produce humorous effects that favour the rebellion, and, of course, appeal to children with their irony. As in the subversive example, the French booklet *Maman était petite avant d'être grande* (Mom was small before being a grown-up, LARRONDO, Valérie and DESMARTEAU, Claudine (2001)), in which all the story is based on the paradoxical contrast between text and illustrations, where the images refute the sincerity of the memories and the advice the mother is giving to the children: "And, of course, your mom never pulled the dog's tail," says the text when in the illustration mom appears as a child pulling the tail.

Literary criticism today encounters many challenges when faced with quality children's literature and with new digital literature. The original intent of the authors has to be balanced with the response of different readers, following *Reception theories*⁸. Digital texts (especially hypertext and interactive ones) are unstable and versatile, each player builds his own reading routes, in the case of books aimed at the youngest, children's imagination can completely transform the expected interpretations.

⁸ MACHOR, J. L; GOLDSTEIN, P. (Eds.). *Reception Study: From Literary Theory to Cultural Studies*. Nueva York: Routledge, 2001. Also in: JAUSS, H. R. *Toward an Aesthetic of Reception*. Minneapolis: Univ. of Minnesota Press, 1981.

3.3 Examples of students' creative digital texts

Nowadays young students read and write more in digital devices than in traditional printed books. Then, it is obvious that teachers have to adapt to these new supports and use them to motivate youngsters, even if sometimes they do not feel comfortable teaching with technology that their students may use better than themselves. Firstly, motivation is one of the main positive aspects of digital reading and writing, and, secondly, each time more literary texts (digital and digitalised) can be found freely on the net. Some of the digital examples are made especially to encourage readers to write their texts (in their language or in a second one). Let us see a model in Spanish: *El jardín de los relatos inacabados* de Félix Remírez (2009)⁹:



Fig. 2: *El jardín de los relatos inacabados*

In this digital fiction Remírez offers the reader a selection of unfinished tales that have to be found with the mouse across the garden; the purpose is to push the active reader to finish the tales that he chooses.

We began the experiences at the university showing selected models of quality digital literature; Jason Nelson's poems, for instance, as "Uncontrollable Semantics" (which obtained the first digital poetry prize "Ciutat de Vinaròs") in <http://www.secrettechnology.com/mouse/undirection.html>.

⁹ Available in: <http://dl.dropbox.com/u/14089180/selva298.html>.

In classroom activities, students may not be able to create such technologically elaborated pages, but motivation compensates the lack of computer programming abilities and resultant texts are interesting. The students welcomed the experiences, which were voluntary, with a lot of interest and motivation. The degree and the typology of digitalization of its texts have been varied: from the simple union of text and images, text and sound, videos, hypertexts with links, to the creation of blogs or a webpage. Let us see some examples:



Hello, my name is Robinson Crusoe...Friday and I found a strange artefact...we both thought that it was a magical machine, a diabolic invention. It had a strange shape, it had keys (just like a piano) a strange object with a tail, which reminded me to a mouse and by some magic of this infernal machine, we learnt how to use it. We also discovered that we can use something called ``internet`` (such a strange name!!) which allows us to send messages to somewhere (I do not know exactly where). And this is my message... Please, if you are there try to send us someone!!!!¹⁰

In the following case, students created a blog to advertise their own performance of *The Merchant of Venice*, among a compilation of information about Shakespeare's play in <<http://shakespearemerchantofvenice.wordpress.com/>>.

- Another experience consisted in transforming Goytisoló's poem "Érase una vez un lobito bueno" The webpage in which the students' resulting versions can be consulted is: <<http://www.palimpalem.com/3/chiquipoetas/index.html>>. In this page

¹⁰ *Poor Robin Crusoe*. A modern view of the classical story. Available in: <<http://poorrobincrusoe.jimdo.com/>>.

we found their digital texts subdivided in the following sections: power points, hyperlink poems, videos, blogs, etc.

- *Haikus in Twitter*: That platform of the Web 2,0 that forces its users to write messages of a maximum of 140 characters favours the Japanese and minimalist poetic expression, which has a fixed extension of 17 syllables (verses of five, seven and five syllables). Therefore *Haikus* are becoming one of the poetic subgenre with more presence in the Web. In twitterhaikus.com we have a good example of the impact of the technologies in the world of the digital writing. The Twitter Haiku Movement:

Whether you call it /
Tweeku, Twaiku or Taiku. /
This group is for you.

We have taken profit of these platforms to suggest our students activities of creative writing online with Haikus.

We finish with a selection of texts in which the students explain the way they accomplished their digital creations and the technical problems they found:

I created and illustrated every page of my story. After drawing and colouring, I scanned the paintings so I had them in my computer. But there was a problem, I used some light colours, so it was difficult to see clearly the pictures. I used Photoshop and Photoscape to obtain a better quality in the drawings, and I also used both programs to turn the first page into the front page, adding the title and the name of the author (me). Then I started to make the video. I used Windows Movie Maker. It's not the best program to create videos, but it's the one I have, and I didn't have so much time to down-load another program, learn how to use it and create a good project.

It was very motivating and interesting, and we were excited and involved to carry it out. We think that it was a great opportunity to get involved in the process of creating our own materials that we can use in class.

Conclusion: Digital Reading and Writing Skills

The processes of reading and writing are increasingly associated with digital environments: on one side, *blogs*, *fanfics* or social networks like *Twitter* or *Facebook* (this one, for instance, has more than 500 million active users worldwide) and, on the other hand, digital literature, the one that has been specifically created with technology and uses potential possibilities of multimedia such as images, sound or movement. Although these communities of net users do not create as often as one would expect comments on their literary readings, teachers should use this youthful passion for digital reading and writing. Digital literature has to be analysed to understand the skills that new readers need nowadays.

The most significant changes that these texts, written for the new media, have introduced into the structural elements of the narrative are related, as already mentioned, with the characteristics of postmodern culture: relativism, breaking of boundaries, mixing genres, indeterminacy, fragmentation, humour and irony, dissolution of authorship, perspectivism, intertextuality, etc. In recent works, both paper and digital ones, we found a wider acceptance for the breaking of limits and standards, as well as for a greater ambiguity and plurality around the complexity of conflicts. In the case of digital works, the texts cross borders leaving back previously admitted artistic conceptions of literariness.

Digital literature readers' and writers' skills and expectations are changing in many respects. The reading habits encouraged by the digital medium, together with the qualities of electronic literature, have modified readers and writers' expectations in several points that we have tried to classify during the experiences:

a) Active reading and writing:

Far away from linear tradition, in digital literature parallel processing and random access are increased; time and space can change and develop in each reading. The postmodern indeterminacy reaches its peak in digital stories in which the

reading schedule will be chosen by the user, rather than by the author, as in the story by Echaniz Olaizola Ainara, *Un relato de amor/desamor* (http://www.unav.es/digilab/proyectosenl/0001/final/amor_desamor).

b) Interactive expectations:

Cyber readers do not accept the old passive role and they expect to interact with texts.

c) Multiple narrators and autobiographical point of view:

In digital storytelling frequent identifications of the figures of the narrator and the author can be found (see, for example, the literary style of many blogs). The accumulation of different perspectives is also increased, so that the same story is told by different people.

d) Combination of graphic and textual systems:

Text is not the main character any more, images, sounds and movement share the protagonism. A beautiful example of this combination can be seen in *Poemas de agua*, by Belén Gache, in which fragments of classical poetry (in several languages) are placed in a sink calligram; when you open the faucet with a mouse click, the words appear on a spiral line and load a new random poem (where such randomness is another recreational feature of this new literature):

e) Structure of an inverted pyramid:

The story is not necessarily increasing literary tension until a final climax, but it tends to have a completely opposite organization: the most attractive part is placed at the beginning to retain impatient and elusive cyber-readers.

f) Sensual and simple styles:

Fragmentation and short texts predominate; Internet seems to foster a quick scanning of texts, also due to these abrupt jumps we provoke with a mouse click, moving away from our one-time patient and slow reading.

g) Disappearance of generic boundaries:

Within the same work can coexist prose, poetry, images, special effects and performances.

h) Velocity and search of immediate results

Readers seem to move faster inside the texts, claiming for immediate feedback, responses, information. And the new texts adapt to this demand, or subvert it.

i) Collaborative writing

Global connection has erased the solitary activity of the traditional reader

To conclude, we can say that the horizon of expectations is one of the aspects that are changing more quickly with digital reading and writing. Young cyber-readers expect texts online to be totally interactive, full of images, sounds and movement. Hence, they tend to be impatient readers that do not accept on the screens long linear texts or texts with a “boring” traditional presentation, which reminds them to a book in paper; and this still happens even when they are good readers. We have seen that the same reader that chooses a six hundred pages book in a library and reads it with great pleasure, would never expect his computer or i-pad to offer him a digital literary text as long and linear as the printed book. As for digital writing skills, the challenge consists in finding channels of collaboration between literature writers and specialists in computer programming, as well as in establishing the bases for a generalized computer literacy in schools.

Conclusion

What we can deduce from all this is that we will no longer read nor teach literature in the same way for three main reasons:

- The new reading devices impose on us quantitative and qualitative changes, given the number of available titles and the reading/writing possibilities they offer;
- The new profile of readers and writers, which has already integrated in great measure the new onscreen reading rituals;
- And the new social status of literature, which is characterized by a certain loss of prestige as spaces of evasion and dream in favour of the screens (film, television, computer) as spaces of fictional immersion, as well as a discredit of literature as the cultural baggage of the cultivated elites. In fact, we are witnessing a process of “detraditionalization” of literatures, because authority is no longer on the side of the past tradition but on the progress yet to come, and a process of “externalization” of literatures, in as far as our youth assume that knowledge (what they call “information”) is always at their disposal out there and, consequently, they do not need to appropriate or interiorize that information to transform it in knowledge.

It is time, then, to take advantage of the massive virtualization of libraries’ literary collections to allow citizens to reach other works that would expand the literary corpus available to them, from the local to the global spaces. And it is also time to harness the new potential offered by electronic textualities to create new works that can translate to a new digital language the literary experience of today.

Because there is a reading that looks for information, a reading that constructs Knowledge, a reading to evade oneself, to identify and to transgress, it is time, therefore, to take advantage of all the other possible electronic readings.

Works Cited

CULLER, Jonathan. Literary Competence. In: Tompkins, Jane P. (Ed.) *Reader-Response Criticism: From formalism to post-structuralism*. Baltimore: The Johns Hopkins University Press, 1980. p. 101-116.

ELIOT, T.S. *The Waste Land*. Tripod. Available in <<http://eliotswasteland.tripod.com/>>. Access in Jun 3 2011.

_____. *Exploring the Waste Land*. Available in <<http://world.std.com/~raparker/exploring/thewasteland/explore.html>>. Access in Jun 3 2011.

HAYLES, Katherine. *Electronic Literature. New Horizons for the Literary*. Indiana: University of Notre Dame, 2008.

ISER, Wolfgang. Readers and the Concept of the Implied Reader. In: _____. *The Act of Reading: A Theory of Aesthetic Response*. Johns Hopkins: UP, 1978. p. 27-38.

JACKSON, Shelley. *Patchwork Girl, Eastgate* [CD-Rom], 2011. Available in <<http://www.eastgate.com/>>.

JAUSS, Hans Robert. Literary History as a Challenge to Literary Theory. In: *Towards an Aesthetic of Reception*. Minneapolis: University of Minnesota Press, 1982.

POE, Edgan Allan. The Tell-Tale Heart. In: *Literature.org. The Online Literature Library*. Available in <<http://www.literature.org/authors/poe-edgar-allan/tell-tale-heart.html>>. Access in Jun 3 2011.

PRENSKY, Marc. The Google generation: the information behaviour of the researcher of the future. In: ROWLANDS, I. et al. *Aslib Proceedings*, v. 60, n. 4, p. 290-310, 2008.

WILLIAMS, Peter; ROWLANDS, Ian. *Information Behaviour of the Researcher of the future*. 2007. Available in <<http://www.jisc.ac.uk/media/documents/programmes/reppres/ggworkpackageii.pdf>>. Access in Jun 3 2011.

WINGARD, J. *Literature: Reading and Responding to Fiction, Poetry, Drama and the Essay*. HarperCollins: College Publishers, 1996.

Digital Poetry and Narrative

NELSON, Jason. *Uncontrollable Semantics*. Available in <<http://www.secrettechnology.com/mouse/undirection.html>>.

OLAIZOLA, Ainara Echaniz. *Amor y desamor*. Available in <http://www.unav.es/digilab/proyectos/enl/0001/final/amor_desamor/index.htm>.

WABER, Dan; PIMBLE, Jason. *I, You, We*. Available in <http://collection.eliterature.org/1/works/waber_pimble_i_you_we.html>.

Students' Creative Writing

Electronic Storytelling and Cyberdrama. Available in <<http://www.cyberdrama.tumblr.com/>>.

Poor Robin Crusoe. A modern view of the classical story. Available in <<http://poorrobincrusoe.jimdo.com/>>.

The Merchant of Venice. Available in <<http://shakespearemerchantofvenice.wordpress.com/>>.

PADILLA, Marta; TRILLO, Maria. *Sunny Summers particular*. Available in <http://relatouniversitario.wix.com/sunnysummer#!_videotext>.

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APPENDIX 1

Table I

Experiences in the Faculties of Philology and Education at the UCM

Faculty	Philology	Education			
Study Goal	Bachelor's Degree in English Studies	Bachelor's Degree in Education (Foreign Language) (English)	Bachelor's Degree in Education (Foreign Language) (English)	Bachelor's Degree in Education	Bachelor's Degree in Education
Text language	English	English	English	Spanish	Spanish
Course	Introduction to Literary Texts in English	Literature	English Language II	Written and oral expression techniques	Creativity and expressiveness in children's language
Course Type	Compulsory	Elective	Compulsory	Elective	Elective
Year	1st	1 st , 2 nd and 3 rd	2 nd	1 st , 2 nd and 3 rd	1 st , 2 nd and 3 rd
Duration	5 months (October to January) Reading experiences spread throughout the 4-month course	5 months (October to January) 4 sessions of 1 h 30 min.	5 months (October to January) 4 sessions of 1 h 30 min.	5 months (October to January) Reading experiences spread throughout the 4-month course	5 months (October to January) Reading experiences spread throughout the 4-month course

Location	At home, through the virtual learning platform of the university (Campus Virtual)	Computer room	Computer room	At home, through the virtual learning platform of the university (Campus Virtual)	At home, through the virtual learning platform of the university (Campus Virtual)
Age of participants	18-33	19-32	18-31	18-?	18-?
Number of students	58	22	51	25	25

APPENDIX 2

Table 1

E-Readers	Tablet PC
Kindle II	Toshiba Tablet FOLIO
Kindle DX	100
Sony PRS-700	iPad (Apple)
Papyre 6.1 (Grammata)	
Cybook Gen3	

Table 2

Student Data	<ul style="list-style-type: none"> -Name -Course title -E-reader model -Work/s read
Previous Experience	<ul style="list-style-type: none"> -Do you usually read for long sessions in any type of electronic device? In which one? - Have you ever used an e-reader? Of what kind?
Ergonomy of Reading	<ul style="list-style-type: none"> - Do you have the impression of reading quicker or slower? - Do you get more or less tired? Why? - Have you noticed differences in your concentration? - Have you missed anything? - Have you appreciated advantages?
Reading Rituals	<ul style="list-style-type: none"> - What type of operations have you made with the e-reader while reading? <ul style="list-style-type: none"> • Dictionary searches • Information searchers related to the reading (author, works, period, literary theory and criticism, etc.) • Underlining • Annotating • Other - What type of operation would you have liked being able to do while reading?

Literary Experience	<ul style="list-style-type: none"> - Have you been able to do an immersive reading and forget about the medium? Why? - Have you enjoyed reading? Why? - What type of works would you like to read in an e-reader? - What do you perceive that changes when you read in an e-reader?
Comparative	<ul style="list-style-type: none"> - Which model have you liked more? - Which has been simpler to use? - With which have you been able to do more things?

Table 3

Faculty	Philology - Grup 1	Philology - Grup 2
Degrees	5th year of the B.A. in German Philology and Master Program in Literary Studies	Master in French as a Second Language
Text languages	Spanish, English	French, Spanish
Subject	20th Century German Novel Contemporary German Narrative	Ciberculture and French Studies (8 students) 17th Century French Literature (11 students)
Type of subject	Elective	Elective
Timing	90 min. session	60 min. Session
Place	Reading Room	Computer Room
Age	22-35	22-31
Number of students	10	19