

FOLK CULTURE AND DIGITAL ENRICHED BOOKS: THE CASE STUDY OF THE DIGITAL ENRICHED TOOL “E-ANAGNOSIS”

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Abstract

This proposal refers to the dissemination and projection of folk culture through the use of digital books (e-books) and more specifically through enriched and immersive e-books. The enriched e-books are developed in parallel to the e-book such as ePUB, PDF and Mobipocket, the digital or electronic book such as HTML, TXT, RTF, DOC, etc and devices used as e-readers such as the e-book reader, the iPad and other tablets as well as the PC. The enriched e-book is a digital edition of a book which is digitally enriched with a variety of items such as videos, photos, animations, quizzes, maps and special symbology that leads to hyperlinked locations inside and outside of the book such as Wikipedia, youtube, dictionaries and thesauri as well as other sources.

The relation of folk culture with digital reading (e-reading) can be used in education and training initially through the creation of learning assets. These learning assets can then evolve to complex learning resources and be re-used as digital material units aiming at education and training.

This paper focuses on the presentation of commercial and public efforts to enrich digital books, such as: a) the platform with the enriched digital schoolbooks by the Ministry of Education in Greece (digital school), and b) the Greek application for digital reading and writing of rich digital books with the title “e-Anagnosis” (Marginalia Composer & Paspартu), which can be used in folk culture with a specific example (case study).

Keywords: enriched e-book, e-book, e-book reader, digital school, folk culture, education.

1 INTRODUCTION

In recent years the educational community has initiated a dialogue on digital books and digital reading in general. These views are associated with how easy it is for someone to read books using electronic devices and if this would accommodate the needs of students and teachers. Digital reading as a concept and practice is not something new for students and teachers in our days. If we extend the above thought we will understand that teachers and students are familiar with the concept of digital reading through the TV, the computer, the mobile phone and other portable devices. This shows that every day we read digitally – and that we can read - the day's news from online newspapers and blogs, our friend's news on Facebook, our e-mails, mobile texts, the subtitles of foreign language films without any difficulty because all these are just part of our lives. However, a lot of times our mood is different when we read a book of literature in printed form than when we navigate on the web or we do some other work. But finally we concentrate on the substance which is the content and not the means.

The term e-book is found in the literature as eBook, e-textbook, web textbook, online textbook, digital textbook, ePUB, Portable Document Format (pdf), Mobipocket and it indicates the version of a printed book in electronic form. The electronic book (e-book) can be read on a desktop computer, laptop, handheld device, PDA: Portable Digital Assistant, Dedicated Reading Devices and eBook Readers [1], [2], [3].

Most of the important features which the combined use of e-books and e-book devices provide are: a) the promotion of reading as people and especially the young ones, spend most of their time in front of screens, b) the possibility to produce a book on current issues and events through a faster way, c) the facilitation of updating for the correction of mistakes and the addition of information, d) its portability, as an entire library can be accommodated in a device, e) the facilitation of easy reading since books can become accessible to people with disabilities, as the text size and font can be increased for people with visual impairments [3] or a voice narration can be used.

The relationship of folk culture with digital reading can be interconnected and utilized in education primarily through the creation of digital learning assets. Learning assets can then be transformed into learning resources as reusable units of digital material, with the ultimate aim of teaching and learning. The creation of learning assets can become the raw material for the enrichment of digital books with folk culture (for example, habits, beliefs, myths, narratives, practices, behaviors, rules, etc.) using the HTML or other format.

2 ENRICHED EBOOKS

If we tried to define the concept of the enriched e-book, we will result in the following tentative definition: “The enriched e-book, is a the digital version of a book as a website (html), e-pub or any other format, digitally enriched with learning assets such as images, texts, sounds, videos, research activities and representations of data or learning resources as educational games, practice exercises, case studies, applications of evaluation, demonstrations, presentation and educational scenarios, role plays, glossaries, reference guides, webcasts, or a combination of the above with special marking capability and information (mouseover) on each icon and additional web links (hot words)” [4].

The term Learning Object is used to describe reusable modules of digital material that can be used for teaching and learning. Several definitions exist in the literature and the most characteristic is that of L.T.S.C. (Learning Technology Standards Committee). According to L.T.S.C., generally, learning objects are defined as entities, digital or otherwise, which can be reused by various educational systems and educational environments [5].

As it is reported by Guenette, Trippe, & Golden, with the exception of some powerful interactive systems that exist in the area of education, there is a lack of enriched digital books, which makes the future of enriched books to some extent uncertain. The start for the creation of enriched eBooks began in 1990, when Robert Abel founded the company “Synapse Technologies” a pioneer company of interactive media applications, which produced innovative educational programs for IBM, including the implementation of “Columbus: Discovery, Encounter and Beyond”. In our days we have a continuous development in the field of enriched eBooks which are principally developed for tablets (for example i-pad) [6].

With the use of current and future technologies that provide increasingly higher resolution, color, texture and other tools, we have the ability to read digital books with integrated multimedia that include narration, music, animations, short games and videos. These digital versions of books are a growing industry that is associated with a wide range of computer technologies especially tablets such as the ones from Apple, Samsung, Google, ASUS etc as well as smartphones. The majority of digital books are offered in e-pub format, which is a satisfactory template for texts but not so good for digital versions that require precise layout or specialized format, as illustrated children’s books or educational books. Today an increasing number of digital books offer integration of multimedia applications, especially children’s and educational books (Toy Story by Disney, Cat in the Hat by Oceanhouse Media, Curious George by Iceberg Reader, and Our Choice by Push Pop Press). These interactive eBooks usually provide functions such as animations and sounds, which are caused by the choices and interventions of the user. Zoom, embedded videos, integrated activities and mini-games render them more interactive and attractive in comparison to static digital or printed books [7].

The digital readers (hardware) through which we can read enriched eBooks (software) are (but not limited to): a) tablets (Apple iPad, Samsung Galaxy, Sony Xperia, Samsung Tablet, Toshiba Tablet, Acer Iconia Tablet), b) personal computers (CD/DVD ROM, html sites - on line book), c) e-book reader (pdf, e-pub). Respectively some indicative tools for the authoring of enriched eBooks are: a) iBooks Authors της Apple (<http://www.apple.com/ibooks-author/>), b) e-Anagnosis (Marginalia Composer & Paspantu) (<http://e-anagnosis.com/>), c) Easy Book Authoring Tool (<http://www.easyteach.com/easybook.html>).

2.1 Features of Enriched EBooks

One of the reasons that would facilitate the selection of ebooks in the future, especially in the educational field, is to avoid problems regarding the form and often the incomplete content of a printed text. The disadvantages of a conventional book are: a) rough layout, b) a variety of terms that require the recourse to various dictionaries or glossaries for photographs, drawings and paintings which are located in other pages, c) recourse to references at the end of chapters, d) recourse to references on other books and e) recourse to references of internet links that cannot be directly accessed. The

enriched eBooks come to eliminate all the above with a variety of tools that increase the functionality and interactivity of reading.

Indicatively some of the characteristics of enriched eBooks are associated respectively with e-book devices:

- reading and automatic turning of pages
- touch or mouse selection of photos that are simultaneously magnified
- transfer to a specific page
- content's table view
- multimedia content (video, video from You tube, sound, recorded speech, animation, illustration)
- internal and external links
- full access to embedded Internet browser to navigate on sites related to the book and the work of the student, simultaneously with reading
- drafting short essays using a rich text editor that can be displayed next to the open eBook
- appearance of enriched material without the student having to move from the page that he/she reads (Shadowbox),
- use of bookmarks, attachments, markings, and generally many interventions that students can make up on the printed books
- search by keywords
- change font or font size
- change page color, text and luminance
- horizontal and vertical display
- activation or deactivation of alignment and hyphenation

3 THE CASE OF ENRICHED DIGITAL BOOKS IN THE EDUCATIONAL SYSTEM OF GREECE

According to the plans of the Ministry of Education and Religion, Culture and Sports in Greece, the digital school is the basic pillar of the new school. The use of new technologies becomes the catalyst for the change of: a) the content of the curriculum and the school knowledge, b) teaching and learning, c) the relationship between teachers and students, d) the relationship between parents and school. One of the five pillars of the design of digital school is related to digital educational content. In particular the design which is implemented for the axis of digital educational content concerns:

- rich and interactive e-books for all grades and subjects, in correspondence with the curriculum
- creation of publicly available digital open source platform, with opportunities for active involvement of the users with the use of Web 2.0 tools, in which all books in digital form will be integrated, enriched with additional interactive material (animations, videos, hyperlinks, etc.)
- digital supportive teaching (videotaped teaching standards) for key courses of nationwide examination
- lesson plans for each module with the incorporation of new technologies in teaching
- additional digital material such as photos, videos, digital educational games in correspondence with each module's courses from digital files (Libraries, Museums, etc.)
- capabilities of educational management for each class (exchange of projects between pupils and teachers, notices, exams, grades, absences, etc.) [8].

Apart from the digital school, the project of "Greek Academic Digital Papers and Devices" is in progress. Specifically, this effort, which takes place in higher education, has the ambitious goal to motivate, educate and support the academic community in the production and use of open access enriched eBooks (<http://www.kallipos.gr>).

3.1 The Enriched eBooks of Digital School

At the publicly available digital platform (<http://digitalschool.minedu.gov.gr>), which is the main supporting structure of the digital school, we can tour in the enriched books of primary and secondary education section with multiple digital resources from the fields of culture, history and folklore. The main aim of this platform except from the possibility of recovering all the textbooks in digital format (pdf), is the presentation of the material in enriched eBook format with additional interactive items.

The enriched e-book for the digital school is an online version of a book in a web page (html) format, digitally enriched with digital resources (educational games, animations, video, hyperlinks, etc.), with specifically marked icons and interconnected internal and external links (link), with free encyclopedia wikipedia, Youtube channel, dictionaries and other sources. The enriched resources are displayed as standard icons, which are pasted at various points on the e-book and they are activated as links to the material that has been developed for this section of the book. The implementation title, chapter, section of the lesson, instructions, and the relevant information for creators of digital resources are usually embedded on every digital resource [4].

Digital resources or learning objects include: the narrative text, audio, text, video, image, shapes, tables, charts, graphs, models, glossaries, indexes, dictionaries, self-assessment exercises, questionnaires, quiz, activities, open and research activities, problem statements, investigations, concept map, presentation files, lectures, demonstrations, scripts, youtube videos, etc.

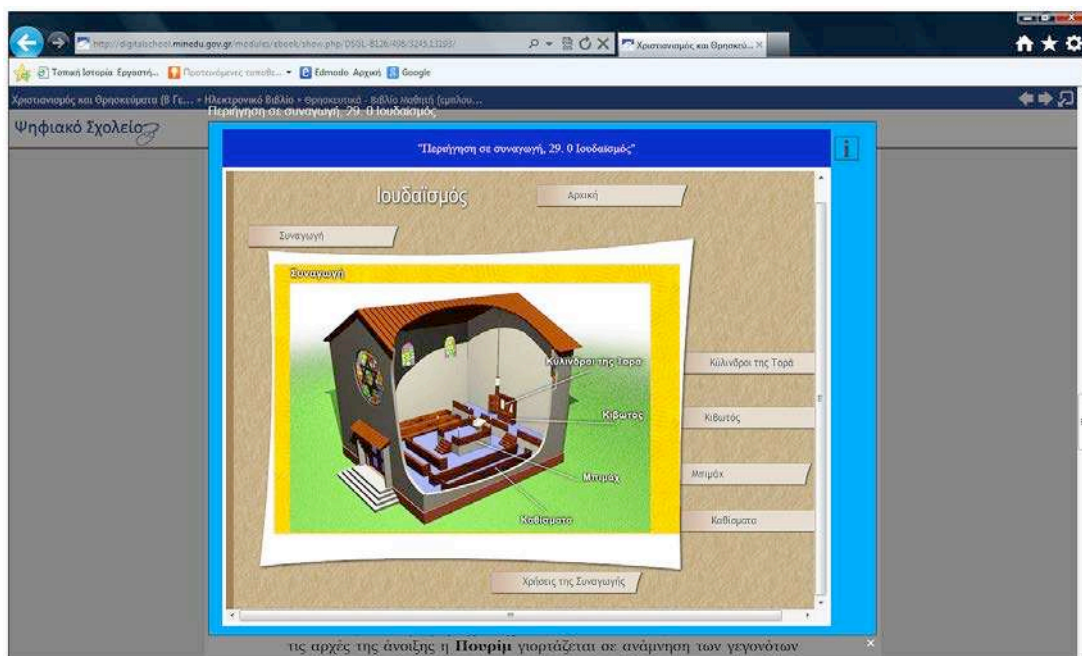


Figure 1: Enriched ebook (HTML) of the Religion Course of the Second Year Class of High School Education

In enriched eBooks apart from the icons of digital enrichment resources or learning objects, there are external links over words (hot words), which refer to the free encyclopedia Wikipedia, to dictionaries and other sources, as well as internal links such as glossaries or annexes. The links of enriched eBooks are displayed in such form in which students can see the page as a frame (Shadowbox) without raising another external page or get confused using the browser options (front - back). In any digital resource of the enriched books there are enriched options (in a button form), which are related to the IT enrichment tab (author, copyright, digital controller interface resources, information about the project). Also, other options (in a button form), are related to instructions for the application of the digital resource, and an option to return to the enriched eBook [4].

4 FOLK CULTURE, EDUCATION AND DIGITAL READING

The new digital culture which is shaped online and the importance of folk culture's education, both lead to the use of all digital media in the field of folklore. According to Gasouka & Foulidi the

relationship between folklore, internet and the relevant digital media presents a great interest. In particular, the folkloric dimension of the «World Wide Web» and of the associated digital media helps in the regeneration of folk culture (habits, beliefs, myths, narratives, practices, attitudes, norms, etc.). Also Mixahl, in Gasouka & Foulidi, characterizes the world of the internet as a literal folk world and argues that: “Internet is an opportunity for a second life or better the online life is a second life, which is not a caricature of the first. It is instead a comprehensive new life, a «vita nuova». This is important for the “interneticus” humans. They live a life parallel to the first” [9].

The use of new technologies during the teaching of folk culture through drawings, photographs, digital presentations, audio and video can be effective as they offer to students the opportunity to ask questions, receive clarification, etc., which enhances the comprehension of the subject. However, many teachers have not even integrated new technologies into their teaching practices as they appear to be afraid of them and they do not know how to use them or they do not have the appropriate audiovisual material. There are many people who claim that technology can be a simple entertainment, a waste of time for pupils, students and teachers or even pedagogically harmful, a view that certainly is not correct. The issue is not the depreciation of technology, but on the contrary its utilization with appropriate ways that promote both teaching and learning, communication, etc. and this concerns all the courses, while it enriches the modern educational process [9].

The enriched eBooks are a technological tool that can enrich the learning process, presentation and training in the field of folk culture. Enriched eBooks can be used in conjunction with the relevant reading devices in the teaching of folk culture: a) in the classroom, b) in educational visits to museums, libraries, showrooms, c) for folklore fieldwork research, d) as auxiliary material in various school projects. With the help of enriched eBooks, the opportunity is given to the student to come in contact with fairy tales, myths, riddles, folk songs, folk art and traditional occupations in a completely interactive way where the participation and the unique learning way of the student is constructed by him/her in a sufficiently constructive manner. Thus the student is not a passive receiver who serially reads a conventional book but he/she can interact with a variety of multimedia elements, links, pop up text information and parallel with the use of internet that is embedded in the respective readers of enriched eBooks, he/she can participate in activities and games of folk culture.

5 APPLICATIONS OF DIGITAL READING AND ENRICHMENT (MARGINALIA)

The Marginalia (Composer & Paspартu) applications of eAnagnosis (www.eAnagnosis.com) provide satisfactory solutions to the needs of reading and creation of enriched eBooks with additional interactive content. They exhibit a significant degree of originality and they have appeared recently in the international market. In particular the Marginalia Composer software is free by the respective eAnagnosis company's website where users can read the contents of free or paid enriched publications. Respectively with Marginalia Paspартu software, which is not free, teachers and students can create their own enriched eBooks principle inserting PDF or ePub eBooks files. Overall the Marginalia suite, which is composed by the reading (Composer) and writing (Paspартu) software, offers readers and authors material management capabilities and multimedia content (text, audio, image, video, Internet). The Marginalia Composer reader software for enriched eBooks can be used in any type of computer, automatically adapted to the dimensions of its screen. Whichever multimedia content displays on eBook format and it can be constituted of text with embedded images, video and sounds. The usability of software is satisfactory because its use is simple, it does not involve complex hierarchical menus, while the user continuously has in front of him/her only the functions that are allowed at any time. Multimedia help, with screens and video, is supporting features that are not directly visible [10].

5.1 Tools Presentation of Marginalia Composer and Paspартu Software

The Marginalia Composer software works as a viewer software of enriched eBooks or simple digital book (pdf or epub). Correspondingly, the Marginalia Paspартu software has the ability of authoring enriched eBooks. The management capabilities of a file that are provided by the Marginalia Composer and the Marginalia Paspартu (Figure 2) are:



Figure 2: Book reading through Marginalia Composer software

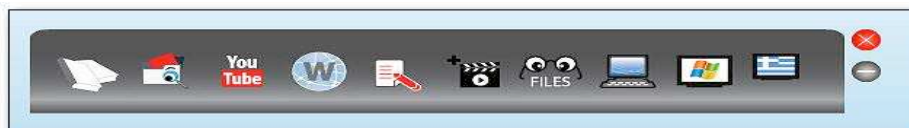


Figure 3: Marginalia software (Composer & Paspартu) management tools

a) open files from an embedded library (Figure 3), where the reader or student can store files of digital books (simple or enriched), b) searching in notes and all e-books with keywords combined with a degree of importance for each digital resource, c) searching and management of video from YouTube via toolbox (video's presentation, video's artwork, video's titles, comments, favorites), d) access to the Internet through a browser in the book, e) notes and hyperlink insertions through a browser in the book, f) searching and display of pdf files and swf e-books, g) possibility to change the wallpaper on the desktop, h) show/hide desktop, i) language switch with four options (Greek, English, French, German).

The enrichment of digital books is made through the toolbox offered by the Marginalia Paspартu (Figure 4) and they are the following:



Figure 4: Toolbox for enrichment of digital books

a) hide notes, b) create notes using a nested notebook, c) create coloring underline, d) create hooks for the delimitation of text area or image, e) import bookmarks, f) import video, g) import video from YouTube. In all these functions the possibility to integrate the digital resource or image anywhere in the text and when it is activated with double click via mouse to display an insert window accompanied by a descriptive text is provided along with the ability to import titles, website, possibility of removal of the digital resource and Selection of the importance of digital resource with a specific syntax highlighting (normal, interesting, remarkable, critical, attention).

5.2 Presentation of the Creation of an Enriched eBook for Folk Culture

The digital book that was chosen for the digital enhancement with Marginalia (Paspартu) software is a folk tale entitled "The dragon that lost his tail" which has been written in 2012 but follows all the conventions and structural elements of a classic folktale. The story is for children in preschool age and has teaching content, it negotiates diversity and disability and it is structured in classic forms of folk fairies [magical elements (witch, enchanted castle, dragons, magic and secret key map), enlarged characters, repetitions, climax of story, teaching content, folk motifs illustrations].

After the writing of text and illustrations of fairy tale with folk motifs, a file in pdf format was created and inserted in the library of the Marginalia (Paspартu) software. Thereafter the digital enrichment of the story took place based on the pedagogical context of constructivism. The design of the enriched eBook followed the following specifications: a) to be as interactive as possible with simple and complex learning assets/resources, b) to provide multiple complementary representations of information (video, text, audio, video, links to relevant Web sites, wikipedia and footnotes with additional text), c) to provide simple activities and tasks for the student, d) to provide tips and guidelines for the students and teachers through footnotes and color annotation (normal, interesting, remarkable, critical, attention), e) to incorporate background information and resources on issues of folk culture and f) to provide opportunities for exploration and discovery so that the student through his/her own learning path to building his/her personal knowledge.



Figure 5: The second two pages of the illustrational story

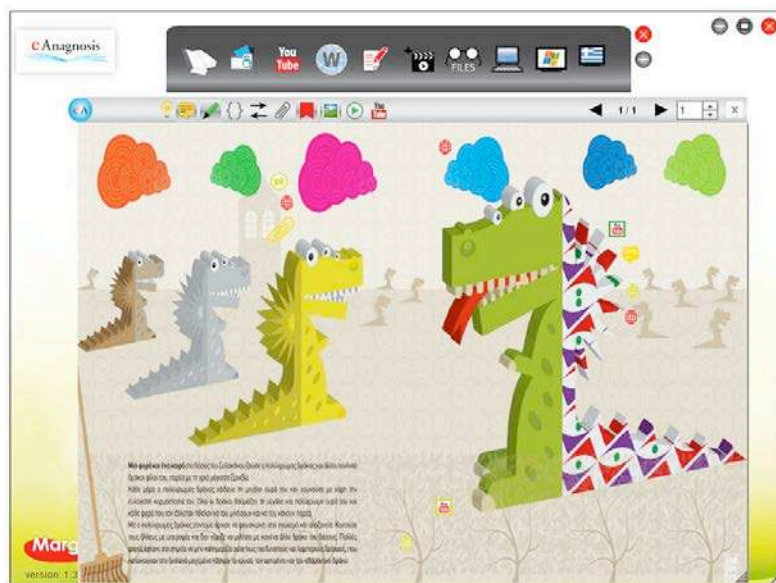


Figure 6: Pages of the story during the process of enrichment

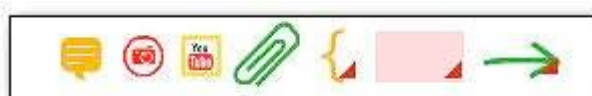


Figure 7: Icons which stick to the story and connect learning objects

The learning assets which are used for the digital enhancement are: a) create notes with the help of an insert noteBook, b) create coloring underline, c) create hooks for the delimitation of text area or image, d) import video, e) import video from YouTube, f) insert text and links from wikipedia.

The learning resources which are used during digital enhancement are: a) educational games, b) quiz, c) glossary d) educational scenarios.



Figure 8: Learning resources: activity (construction of a dragon), video game (collage), photo and text

6 CONCLUSION

The enriched eBook or interactive digital book, as otherwise it is called, was late in its development and it did not follow the rapid development of computers, Internet and information and communications' technologies (ICT). While traditional applications of multimedia and educational presentation software have been the ancestors of enriched digital books, they failed to evolve into what we call today enriched eBook or interactive digital book. The evolution of technology in the construction of interactive websites in combination with the entrenched online cultural search information and study with main characteristics speed, interactivity and multimedia (multiple media - text, video, audio) banished the classic multimedia and educational software. In recent years, anything beyond rich interactive pages is no longer so attractive. The advantages of interactivity, speed, modulation, web search, information and culture study were developed gradually and now they are coming to "exploit" the enriched eBooks. Also it should not be overlooked that the gradual development of enriched eBooks in the future is likely to be reinforced by the fact of familiarity of young people with relevant new technologies and methods, from the first stages of education [11]. All those which were mentioned above in combination with the high cost of printed textbooks, the ability for multiple versions of a tutorial in minimum time and the rapid development of portable reading devices (tablets, PDA, mobile phone, e-book reader) marks the evolution of enriched eBooks. In Greece two major projects concerning enriched eBooks are in progress, the first in secondary education (digital school – enriched eBooks) and the second in higher education (project "Greek Academic Digital Papers and Devices").

In the area of education and folk culture, the enriched eBooks can upgrade the relationship between folklore fieldwork researches and projects in school on matters of local history and folk culture. As the internet, so the enriched eBooks as digital media can contribute to the rescue, documentation and promotion of folk culture both in schools and places of education (museums, libraries, archives, educational programs). The enrichment of digital books on folk culture can be performed alternately by teachers and students. One of the tools for digital enrichment is the Marginalia (Paspantu) which was introduced earlier wherein the student with the help of the teacher can create a different version of an enriched eBook even in pdf format. In the future the role of the teacher with such kind of work is interwoven with the formulation and support of activities and scenarios that will reinforce students to build their own mental model issues for popular culture and education.

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