10 Digital textbooks and the politics of content enrichment in EFL textbooks

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Introduction

Publications about digital textbooks usually define them in terms of what they offer to students and teachers and relate them to the importance of using new technologies in the twenty-first-century classroom. Several studies in related research talk about a "paradigm shift" (see, for instance, Hee-Young &Hye-Yoon, 2010), yet very few have actually addressed issues concerning digital learning materials' ideological nature or the complex ways in which multimedia content interweaves with the main text of digital language textbooks. Contributing to this unexplored area of research, this chapter first attempts a critical reading of the main research strands on digital textbooks and the complex ideological underpinnings involved in each one of them. This overview serves as the context for framing the discussion about the cultural and ideological nature of digital EFL textbooks. The chapter then turns to the *Digital School* project of the Greek Ministry of Education and discusses the principles employed for the digital enrichment of the EFL textbooks. The specific example of the *Digital School* is offered as an extensive case study to illustrate some of the main challenges facing the design of digital textbooks today.

The working definition employed in this chapter views the digital textbook as a *highly contested* and *hybrid macro-genre*. First, the digital textbook is a *macro-genre* which includes a number of sub-genres and is shaped (at least in part) by sociocultural and contextual constraints. As a genre, it is a dynamic and multidimensional construct, an "instantiation of groups of conventionalized selections, which present certain synchronically identifiable regularities, but which may also be observed in terms of diachronic variations, since they are not static entities but are in fact highly dynamic" (Parodi, 2010, p. 198). Specifically, it is a *hybrid* macro-genre which draws on both print and digital media and it brings together two domains with their associated discursive and social practices: the well-established tradition of print educational publishing and the digital world.

In addition, the notion of the digital textbook adopted in this chapter is a *highly contested* one because it still draws extensively on practices and ideologies of the print textbook. However, as Lemke (1998) reminds us, what looks like the same genre on paper and on screen—in our case, the print and the digital textbook—are not functionally the same, because they follow different meaning conventions and require different skills for their successful use. As he claims, "typical meaning







differences arise because people exploit the affordances of one medium differently from those of another" (Lemke, 2002, p. 300). That is why in order to develop a good understanding of the nature of the digital textbook we need "a good understanding of textbooks, their history and their current situation, and on the other hand, to know the possibilities of new technologies and the complex game they can play with textbooks" (Bruillard, 2007, p. 115).

Similar to print textbooks that have been used since the beginning of the twentieth century responding to a need for standardized materials (Apple, 2004), digital textbooks today are part of the curriculum and, consequently, are involved in a complex story of cultural politics since they constitute "messages to and about the future" (Apple, 2000, p. 48). Through their content and form, they participate in constructing ideologies and what a society recognizes as legitimate and truthful knowledge (Dendrinos, 1992). The issue with textbooks, print or digital, is that they are products of what Williams called selective tradition—a process determining what is selected to be taught (both in terms of content and form). The selection process constitutes someone's idea and vision of legitimate knowledge and culture, which entails "an intentionally selective version of a shaping past and a pre-shaped present," and signifies particular constructions of reality and particular ways of organizing the vast universe of possible knowledge (Williams, 1977, p. 115). Studies from various disciplines and contexts have illustrated that ideological forces can shape the production of textbooks (see Hickman & Porfilio, 2012; Moss, 2010; Ya-Chen, 2007; Yongbing, 2005; Dendrinos, 1992; Apple & Christian-Smith, 1991; Luke 1988, among others).

Against claims of neutrality and universality found in several e-learning discourses (Koutsogiannis, 2010; Warschauer, 2007; Friesen, 2004), the digital textbooks that are analyzed in this chapter are based on design principles that acknowledge the existence of selectivity. The focus of this chapter is then to explore issues related to the politics of digital textbooks and of digital content enrichment by attempting a self-reflective account of the principles adopted in the development of Greek EFL digital textbooks. The guiding questions are what does content enrichment mean? How do we enrich a language textbook with digital content? What kinds of selections are made and upon which criteria? How can you avoid incidental enrichment and why is a systematic approach to enrichment more preferable? How are the ideologies of the (print) foreign language textbook affecting the development of digital enrichment?

From the moment they are embedded in a textbook, digital resources stop having a life of their own and they become recontextualized, part of a bigger whole affecting and changing its content. Taking, therefore, into account that the relocation of a text to a new site irrevocably changes its nature (Dendrinos, 1992) and that every time discourse moves "there is a place for ideology to play" (Bernstein, 1996, p. 24), it is also important to explore what cultural and social knowledge is recontextualized in digital enrichment and how the recontextualized is related to the original (i.e., the textbook's) text.

It should also be noted that this chapter offers a critical analysis of the EFL digital textbooks from the perspective of developers and designers of digital







materials. This claim to criticality is twofold: on the one hand, it acknowledges the existence of a selective tradition when it comes to decisions concerning what to include in a digital textbook, while on the other hand, it offers a self-reflective account which draws on critical accounts of language as a social semiotic system (Halliday, 1978).

Ideological strands in digital textbook research

Before we turn to analyze the Greek EFL digital textbooks, we need to develop an understanding of the ideological basis upon which digital textbooks are generally created and to position the EFL textbooks in the "Digital School" project within the relevant research strands. Research on digital textbooks has overall moved along two different ideological strands with very different perceptions of the digital textbook.

The first strand conceptualizes digital content creation as the development of learning objects and the creation of a *personalized textbook* (Bruillard, 2007). The use of learning objects, which is at the heart of the instructional design paradigm in e-learning (Barritt & Alderman, 2004; McGreal, 2004), is based on the decomposing of the educational content into small, self-contained and reusable learning units, which can then be combined in practically infinite ways to create a personalized digital textbook (Polsani, 2003). The underlying pedagogical principle of using learning objects as building blocks for the creation of digital textbooks is that individualized instruction is tailored to the instructional needs of different learners in different educational contexts (Boyle, 2003; Northrup, 2007). By combining content in the form of learning objects, learners are supposed to create their own individualized textbook which caters to their abilities and interests. Embedded in this logic is the development of universal learning objects that are placed in online repositories (databases with learning objects) with metadata so that they can be reused.

The problem with this research strand is that it ignores the ideological aspect and the selectivity issue involved in digital textbooks. Some theorists have criticized it as a fragmented approach (see, for example, Friesen, 2004; Parrish, 2004), which ignores the social aspect of learning and the collective organization of teaching (Bruillard, 2007), as well as the heterogeneity of educational contexts. On the other hand, it promotes decontextualized learning, since it is based on the development of universal and transferable skills. For Friesen (2004), the problem is that this strand celebrates the creation of pedagogically and culturally neutral digital textbooks (e.g., Conole, 2002). He argues, however, that pedagogically neutral digital textbooks cannot at the same time be pedagogically relevant, and learning cannot possibly be reduced to the exchange of learning objects. In fact, Friesen argues that learning objects bear the imprint of the ideology and culture of the American military-industrial complex, which stresses systems thinking and the prominence of uniformity and standardization, characteristics which are contrary to the values and interests of public education.

Another point of critique that Friesen identifies relates to a claimed benefit of online personalized textbooks: that they can meet the specific learning needs of





individual students. As Horsley (2001) points out, research has shown that online education does not function in this way. Once web designers have chosen the topics, tasks, illustrations, demonstrations and information that will be included in the pedagogical content, and once the site has been developed, the digital text-book becomes as fixed as a print textbook which cannot easily respond to learning needs of individual learners who are not included in the original content design. Consequently, this strand of the *personalized textbook*, which is based on notions of neutrality, universalization and normalization, and on re-organization of learning objects, is reinforced by competence and skills-based approaches and not by critical accounts of learning. The ideological perspective employed in this strand calls for a specific type of educational pragmatism which aims to equip learners with technical skills, not with culturally rich knowledge.

The second research strand is the freeware digital textbook which is associated with the free software and open education movement (Iiyoshi & Kumar, 2008). This strand involves the creation of online digital textbooks which are available through open platforms to everyone with Internet access. Therefore, the ideological framework of the open movement strand is very different from the personalized textbook strand. Contrary to the educational pragmatism of the first strand, the open education movement is based on the belief that knowledge should be open to anyone and that the Internet is a new kind of participatory medium which can support new modes of learning. This strand is often based on collective construction of freeware digital textbooks in which several authors participate with their own resources in the development of the digital textbook, thus ensuring a kind of polyphony not often found in other types of textbooks. A characteristic example is Sesamath, a series of mathematics digital textbooks co-designed and co-authored by a French association of teachers, whose goal is to provide through the Internet free pedagogical resources and digital textbooks (Bruillard, 2007). It remains to be seen, though, in future research how polyphony is handled in these digital textbooks, whose knowledge is represented and what kind of selective tradition these textbooks draw upon. The collective authoring of an online textbook and its distribution through an open platform changes both the design process and the economic model in the textbook industry and constitutes a case of how digital technology changes the traditional relations between producers and consumers of educational materials (Blyth, 2009). It also opens up theoretical discussion on issues concerning the politics of learning materials and the ways sociohistorical, cultural and ideological perspectives are embedded in these new types of digital textbooks.

Bruillard (2007) suggests that the possible forms of hybridization in this research strand are many and cannot be predicted, since print and digital practices with their own modalities are intermingled, leading to new forms of content delivery. The widespread adoption of Internet broadband connection, which led to the exchange and rapid downloading of large audio and video files, has allowed digital textbooks to become like websites, yet all contained in a document. What started as single webpages, with poor web design, including lists of hyperlinks







with sources for language teachers and straightforward navigation, has turned today into sophisticated portals with built-in dictionaries and pronunciation guides, hyperlinks to other sites or other sections of a text, animated graphics, interactive simulations and multimedia content with audio and video resources (Mitsikopoulou, 2013).

Another direction of this strand includes large-scale projects which make available online digital textbooks to both teachers and students. In Europe, there are at least two such large-scale projects in progress at the moment, led by Ministries of Education. The first is the national project of the French Ministry of Education which was launched in September 2009. The digital textbooks program² started with three main aims: to reduce the weight of students' schoolbags, to propose innovative digital educational resources, and to enhance the use of ICT in the French classrooms. This project, which is the product of cooperation between the French Ministry of Education, university departments, textbook publishers, textbook distribution platforms and digital platform vendors, is made available to several thousand students and their teachers in France digital textbooks from anywhere at any time. These digital textbooks are digitized forms of the print textbooks students used in schools with the addition of digital enrichment that accompany them (Bruillard, 2011).

The second large-scale project, to be extensively discussed in the rest of the chapter, is the "Digital School" project of the Greek Ministry of Education which covers all school subjects in primary and secondary education through an open access platform. The next sections present a brief outline of the project and continue with an analysis of the EFL digital textbooks, with a particular focus on the complex ways digital content interweaves with what was earlier a print textbook. This analysis is important because, as we shall see eventually, the move from print to digital textbook opens up many questions and issues which are not so much about the digitization of textbooks, but about the changes that it will bring to education (ibid.), and changes concerning EFL teaching and learning practices.

The "Digital School" project

The "Digital School" project (www.digitalschool.minedu.gov.gr) is co-funded by the Greek Ministry of Education and the European Union³ and implemented by the Computer Technology Institute and Press.⁴ The overall aims of the project are the promotion of ICT and the creation of a digital culture in Greek schools, including the development of an open digital educational platform with the digital textbooks of all school subjects for primary and secondary education; the enrichment of Greek textbooks with digital content; the collection of available digital resources (e.g., photos, audio and written texts, videos, digital educational materials) from various sources such as the Educational TV, the National Audiovisual Archives, Libraries and Museums, and the development of a national repository of digital learning objects. From the multiple sub-projects of the larger project, in this chapter I will focus on digital textbooks.







The textbooks and the digital enrichment resources are made available to the public through the open platform, which provides opportunities for active involvement of users with web 2.0 tools and offers complete access to all materials. One of the first steps of the project has been the digitization of textbooks⁵ used in primary and secondary Greek schools in.pdf and.html form. After turning textbooks into websites (.html form), it was possible to move to the next step of adding links to digital enrichment resources at specific points of the book. In other words, the. html form of the textbooks (see Figure10.1) was to serve as a kind of canvas upon which additional interactive material would be added, and used by teachers, learners and parents everywhere. Therefore, the EFL digital textbooks that we deal with in this chapter are of a specific type: they are digitized forms of the print EFL textbooks that students use in Greek schools which have been transformed into websites and which have been enriched with additional digital content through hyperlinks.

In February 2011, working groups for all school subjects were created to develop digital enrichment content for the specific books. The English Language Group of the "Digital School" project has undertaken the development of digital enrichment for five *gymnasium* EFL textbooks (the equivalent of junior high school) for beginners and advanced learners, and four primary school textbooks (grades 3–6). The Group consists of 14 members, including nine highly qualified teachers of English with extensive experience in EFL materials development and ICT training, two e-learning experts, two computer engineers, and myself as the coordinator. In order for all these specialists from different disciplines to work efficiently together, it was important from the beginning to build a form of group solidarity, to explore the potential and perspective offered by each group member, and to establish a common language of communication and a common understanding of the aims of the project.



Figure 10.1 The introductory webpage of Think Teen! 3rd Grade of Junior High School

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The Greek EFL textbooks

The state (print) EFL textbooks were introduced in Greek schools just a couple of years before the beginning of the "Digital School" project. Their production was a joint venture between independent publishers and a team of authors with the Pedagogical Institute of the Greek Ministry of Education. As stated in the introductory section of the Teachers' book, these textbooks are based on current methodological and pedagogical principles of literacy, plurilingualism and pluriculturalism as set by the Common European Framework of Reference (2001) and the Cross-curricular Unified Framework for Languages of the Greek state (2003). Consequently, there seemed to be two broad aims that were taken into account in the creation of these EFL textbooks. The first is the promotion of the concept of the European dimension and the need to respond to the multicultural and multilingual issues facing Greece. The second aim, which is also related to the previous one, is the promotion of a crosscurricular and crosscultural approach which

... engages the learners in using English to communicate knowledge related to subjects such as History, Environmental Studies, Maths, Language, Social Studies and, generally, knowledge of the world around them. It encourages them to engage in procedures of generalization, abstraction and structure through becoming aware of the similarities-differences between the Greek and the English language and culture. It also involves the learners in an exploratory procedure of finding and using knowledge through projects.⁸

What should also be stressed is that the authors of the Greek EFL textbooks are Greek EFL professionals with extensive experience in materials development, whose perspective is not the monolingual one found in many EFL publications by British or American publishers, but a local, Euro-centric perspective. This has significant effects with ideological implications on the content of the textbooks, i.e., the selection of texts and activities to be included, and consequently on the type of enrichment that is produced for digital textbooks. For instance, selected texts often represent the multicultural reality which has been created in Greece over the last twenty years with a great number of immigrants entering the country. The first unit of the sixth grade textbook, for example, is entitled "Our multicultural class," and builds the lesson around three written reports in which newcomer students from Albania, Georgia and Ukraine are describing their country. The digital enrichment application our group developed includes a geography quiz, a listening activity in which students from these countries narrate their experiences in English, and a reading activity in which students should find information about the weather, and some problems these countries are facing. These digital applications are extensions of the textbook's activities and their aim is to build students' multicultural awareness. Most importantly, familiarization with the culture of the other here does not only refer to the English culture (the culture of the target language in an EFL classroom) but includes a more general conception of "the culture of the other" (in this case, the cultures of Albania, Georgia and Ukraine). The English language, therefore, becomes a contact language among people from





different nationalities within a globalized world. Before we turn to some examples of digital enrichment, let us first explore the notion of digital enrichment and the principles employed by the English Group.

The notion of enrichment in foreign language textbooks

The notion of enrichment in foreign language textbooks goes back to the 1930s when Vera Peacock first published an article entitled "Effective enrichment of the textbook in foreign language" in which she talked about "enriching a basic textbook along broadly cultural lines" using photographs, maps, calendars posters, foreign money, music, newspapers and magazines, radio programs and films, and other realia (Peacock, 1939, p. 24). She also outlined some principles of enrichment for foreign language textbooks, according to which enrichment should be within the grasp of the students, it should be kept subservient to the purposes of a textbook, it should involve selecting resources that are relevant to a specific textbook, it should be taught and not simply presented to students, and it should be connected to students' lives.

These principles of language textbook enrichment refer to realia, that is, objects or activities used to relate EFL classroom teaching to real life, especially the life of the peoples who are studied. As such, they relate to the foreign culture and, consequently, are ideologically loaded and associated with particular ways of being and doing. However, from the beginning of the "Digital School" project, we realized that these principles may be extended and be relevant to other forms of enrichment, such as the digital one, since they helped us address three critical issues: what kind of enrichment, how much enrichment, and where in the textbook. For instance, taking into account Peacock's principles, we specifically placed emphasis on the role of enrichment in the digital textbook as resources which do not develop into ends in themselves but which respect the purposes of a specific textbook. We also took into account the role of enrichment in an overcrowded syllabus and avoided extensive coverage with additional materials.

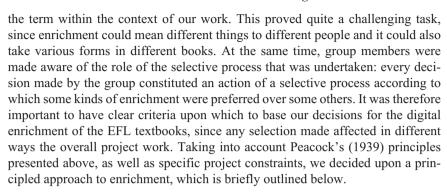
These directions led us to the development of a principled approach to digital enrichment which is presented in the next section. Most importantly, they led us to the realization that the notion of enrichment is a highly ideological one, since the selection of digital materials used to enrich a digital textbook constitutes in itself an ideological process and is part of a *selective tradition*. Every answer to the question "how do we select what to enrich, which parts of the book and to what effect?" and every choice for digital enrichment that was made left out other possible alternatives of enrichment that could have been used instead. It was therefore important from the beginning of the project to make group members aware of this ideological process and, at the same time, to develop a sense of critical awareness of this fact.

A principled approach to digital enrichment

At the beginning of the project, it was important for our group to come to an understanding of the notion of digital enrichment in EFL textbooks and to define







Principle 1: Digital enrichment should be systematic, targeted with clear aims, and running throughout the book.

Attention was paid to have specific, identified educational aims and objectives, for any type of suggested digital enrichment. For instance, interactive comics were introduced to teach new grammatical items throughout the textbook, genrebased writing applications were used to scaffold the writing activities included in a textbook, and interactive edu-games were prepared for each unit for the practice and consolidation of thematic vocabulary. To maximize the effect of the digital resources in the learning process, the same type of enrichment was used in different units of a textbook. This principle ensured that instances of incidental enrichment which do not serve the identified aims of enrichment are excluded. Systematic enrichment also meant that both students and teachers would be familiar with the types of enrichment found in the book and in this way, as they progressed through the various units of the digital textbook, they would know what to expect and how to use the enrichment material. In this way we also wanted to create some kind of internal cohesion for the digital enrichment we developed for each digital textbook.

Principle 2: An analysis of the digital textbook precedes any decisions made for the type and extent of digital enrichment.

A procedure was set for the analysis of the digital textbooks before informed decisions were made by group members. The first step involved analysis of the students' book (for the overall structure of each chapter, the book themes, the types of texts and the tasks used in each book), the teachers' book (for the employed teaching philosophy and the pedagogical approach) and the workbook (for the scale and amount of offered activities). The second step included interviews with the textbook authors to get their insights both on the difficulties they had encountered during the production of the textbook (e.g., constraints imposed by the Ministry of Education and by the publishers, copyright issues, etc.) and their suggestions as to what kinds of enrichment would be useful for the specific textbook. The next step involved interviews with EFL teachers who used the specific textbook in the classroom in order to get their side of the story about what works well and what needs strengthening in the book. Whenever possible, informal interviews were





also held with pupils. After collecting comments from our book analysis and the interviews, group members met to discuss ideas about enrichment and possible applications. The next step was to find the best pedagogical and technical solution for the implementation of the decided applications, a step that often proved to be quite time-consuming. Finally, during the production stages, digital resources were piloted with EFL learners. Important feedback from this pilot phase resulted in changes and improvements of the produced materials. By involving all interested parties in the production of digital resources, this principle avoided one-sided approaches to enrichment and ensured that our selection process took into account the feedback offered by teachers, students and authors of the textbooks.

Principle 3: Enrichment materials are not the same for all digital textbooks.

Although we opted for systematicity in the types and extent of enrichment to be developed for each digital textbook, it was mostly the analysis of each textbook and the interviews with the main interested parties that guided us in making informed decisions about the types of additional materials that would be appropriate for each book. For instance, for some textbooks that were dense with an overload of activities in each unit, long texts and challenging vocabulary, we decided that enrichment would illustrate existing material and not add new content to already dense textbooks. In some other cases, ways to simplify long and complex texts were sought. This eclectic approach to digital enrichment ensured that each textbook received different treatment according to its needs.

Principle 4: Intervention is supportive of the textbook philosophy.

It was very important to clarify from the beginning of the project that the nature of the intervention should be supportive of the textbook and its philosophy, not subversive of it. In other words, the nature of enrichment should not be a corrective one, trying to "fix" problems or "improve" the textbook design or philosophy, but a positive one, aiming "to add to the quality" of the existing textbook. In this way, our selective process moved away from the ideology of correction (for textbooks which were approved to be used in schools by a number of agencies including the Greek Ministry of Education) to the ideology of support which established a positive perspective towards the textbooks by group members.

Principle 5: Opt for different uses of the produced resources.

In order to maximize the effect of the produced resources, particular attention was paid to deliver digital enrichment resources in different formats and to offer various views of the same digital content. In this way students and teachers were offered the flexibility to select, from a range of different forms of the same materials, the one that would best fit their particular educational aims each time.

The above principles were followed in the various steps of the production of digital enrichment. Eventually the digital textbooks with their enrichment turned out to differ significantly from their equivalent print textbooks in at least two ways.









Firstly, they became more interactive, since it was now possible to accept and respond to input from the users. This interactivity was made possible through the use of hyperlinks which led to the prepared digital resources. Another type of interactivity of prime importance is the ways digital content interacts with the content of the main textbook and its effects on learning. Secondly, digital textbooks allowed visual representations in digital format that were not limited to still pictures but also included short videos or animations with sounds.

In the next two sections, I present examples of digital enrichment to illustrate two important changes of the digital EFL textbooks; namely, the new forms of interactivity that are created through the digital textbook and the type of cultural and social knowledge that is conveyed through the digital enrichment. Although the list of the presented resources is far from exhaustive, it serves its purpose to illustrate some new ways of meaning that are created through the digital EFL textbooks.

New forms of interactivity in digital textbooks

Digital resources available in multiple forms

Digital enrichment is connected to the main EFL digital textbook in various ways, offering EFL learners cultural and social experiences in a more integrated way than previously with the print textbook. One such example is the case of audio extracts which accompany the EFL textbooks. The audio files created for the "Digital School" project were placed on the.html version of the book right below the instructions of each listening activity (Figure 10.2). In this way, they were made available to be used in the classroom through an interactive whiteboard, or for self-study, since learners could access them from their home computer.

The specific feature that the digital textbook offers in this case is to bring together learning resources that were placed separately in the print version of the textbook (with the audio text to be included in the accompanying CD). In addition, it makes available to students the audio files that were previously only given to teachers, since in the past students did not have access to the CDs with the audio extracts.

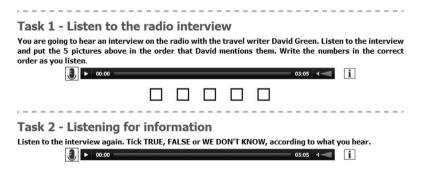


Figure 10.2 Audio recordings in the digital textbook







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Additional recordings were also created in order to expand students' experience with oral English. In the next example (Figure 10.3), Greek EFL learners are given the opportunity to read the famous Greek poem *Ithaca* by Constantine P. Cavafy, translated into English, while listening to a reciting of this poem by a poet through the digital enrichment. The audio file enriches the multimodal aspect of the activity and offers students an additional cultural resource and a richer educational experience through which they explore an aspect of their own culture through the English language and understand how texts, in this case a literary text by one of the finest Greek modern poets, travel from one culture to another through translation.

The audio files for the listening comprehension activities were also used for the creation of stand-alone flash applications (Fig. 10.4) that could be used for additional practice. These applications include an introductory page, a number of activities which are based on an audio extract, the audio file (in mp3 form), its transcript and a glossary. Placed through hyperlinks next to the listening activities on the digital book, these applications provide further practice on the same oral text and contribute to the differentiated pedagogy promoted by the textbooks' philosophy.

Finally, in an attempt to maximize the effect of the produced learning resources, all recordings used in a textbook were also made available together in a folder



Figure 10.3 Extract from Think Teen! 2nd Grade of Junior High School, Advanced, Unit 8, Lesson 24











Figure 10.4 Screenshot from a listening application (1st Grade of Junior High School, Beginners)

through the main menu of the digital textbook for teachers who would like to have them stored on a CD-ROM, hard-drive, USB stick, or other digital medium. In this way, the recordings could be reproduced for listening comprehension activities in case there is no Internet connection in the classroom. The above example illustrates a number of different ways digital enrichment may interact with the EFL digital textbooks.

Genre transformation

One of our main considerations in the digital enrichment project has been to make accessible the existing textbook materials and to foreground the rich materials they offer. In this case, revision tests from the teachers' books, which according to our textbook analysis were rarely used in the classroom due to lack of time, were transformed into online self-assessment tests to be used by students. In this case, a test designed for class assessment purposes was turned into a self-study evaluation tool for students to use on their own. The free software Net Quiz Pro 4 was selected for this application. Quite surprisingly, this task proved to be more challenging in its implementation than initially thought, only to prove once more that the move from the print genre (in this case the genre of test) to the online genre (of self-assessment test) is a complex procedure involving the employment of





different representation modes (Jewitt, 2002; Snyder, 1998). The Internet medium has added unique properties to the online genre in terms of production, distribution and reception of the test which affect the genre itself and cannot be ignored (Askehave & Nielsen, 2005). Specifically, activities in the pen-and-paper revision tests had to be re-designed in order to become appropriate for online selfassessment tests. Some other activities had to be left out (e.g., those that required the production of lengthy texts) or changed significantly due to software restrictions. The ideology of the electronic medium and its associated practices has functioned here as a criterion of the selective process. For instance, software restrictions, such as the limitation of accepting only short typed answers by students, led to changes in the semiotic presentation of specific print test items. In this example, the digital resource led to genre transformation and to changes in the representation modes employed in the online self-assessment test. In addition, it changed the role of the tests from assessment by the teacher to online selfassessment by students, a significant change which is in line with the textbooks' philosophy to promote self-assessment methods of evaluation.

Elaborating on existing materials and adding Web sources

Another type of digital enrichment that serves to enrich and enhance existing materials is the English Quests. The idea behind this type of enrichment has been to digitize the detailed descriptions of project work included in each unit of gymnasium EFL textbooks along the lines of WebQuests. This was possible because most of the suggested projects in the books are using Internet resources and, in this way, they are similar to WebQuests which ask learners to search through Web links, assess a given problem, collect and analyze information from different sources and finally synthesize a response by creating a final "on- or off'-line project. Each English Quest focuses on a specific theme and is based on the description of the project work included in the students' book as well as the detailed instructions included in the teachers' book. Following the categories of a WebQuest, an English Ouest consists of the following parts: Introduction, Task, Process, Evaluation, Conclusion and Teacher sections. Through its menu, this inquiry-based application puts together information about a project found in students' and teachers' books and provides a scaffolding learning structure which promotes learning in context (Laborda, 2009) and guides students in every step of their project.

The use of hyperlinks in an English Quest allows direct access to Web sources that have been preselected by the teacher, enabling EFL learners to spend time reviewing for information, not looking for it. In this case, the context is given by the producers of materials and students are invited to work with the specific resources. Alternatively, unlike a typical WebQuest, an English Quest may not rely exclusively on the use of preselected Internet sources but invite EFL learners to search for appropriate sources, review them and evaluate their usefulness for the specific quest. In either case, EFL learners are engaged in inquiry-based activities which require good use of internet sources and which help them practice their English language skills through a scaffolding tool guiding them in every step of the process.







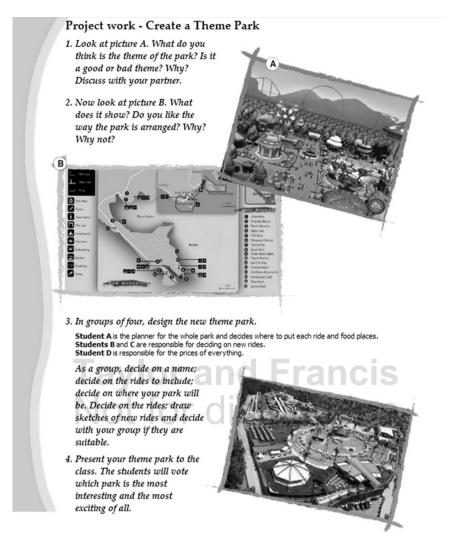


Figure 10.5 The project as it appears in the textbook (Think Teen! 3rd Grade of Junior High School, Unit 3)

What cultural and social knowledge is recontextualized in digital enrichment?

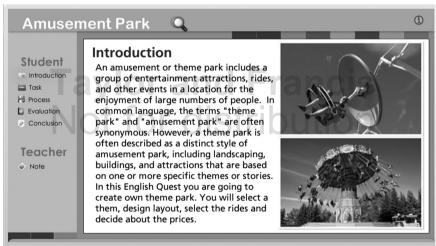
Realistic visualizations of cultural sites

Geographical information plays an important role in EFL textbooks, as part of cultural knowledge and lifeworld experience. Learners are often asked to understand the notion of space, communicate spatial concepts in English, analyze spatial









Figures 10.6 and 10.7 The cover page and the main menu of the Amusement Park
English Quest application (from Think Teen! 3rd Grade of Junior
High School)

relationships in the target language, learn about countries and culture, and about various places they have never visited. For this type of digital enrichment, we used Google Earth, the most popular technological map tool today, in an attempt to make spatial relationships more relevant to students (Patterson, 2007). After recording landmarks and locations which are included in the various activities in the Greek EFL textbooks, we prepared short videos for each one of them, using









Figure 10.8 Screenshots from a virtual tour on the London Eye

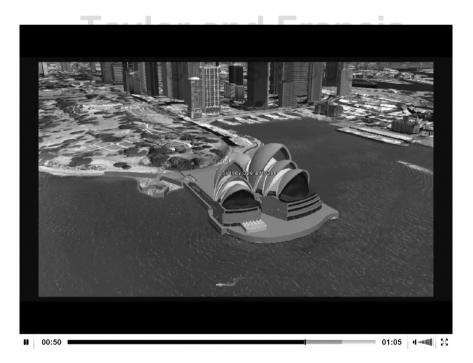


Figure 10.9 Screenshot from a virtual tour of Sydney Opera House







the tools offered by Google Earth. The prepared applications are movie-like short tours of cultural sites enriched with enhanced navigation, street-view imagery and 360° panoramic views of selected landmarks (e.g. the Statue of Liberty in New York, the Taj Mahal in India, the Leaning Tower of Pisa in Italy). The mapping of the area and the specific buildings make this virtual tour authentically realistic for the viewers. The multicultural aspect of the EFL textbooks is supported by this type of application through which EFL learners become familiar with important landmarks worldwide (not only with the ones of the target language), including landmarks of their own country (such as Lefkos Pyrgos in Thessaloniki). The glocal perspective adopted in the books entails in itself a selection process which is ideological. Contrary to international publications which adopt a monolingual Anglo-centric perspective promoting important landmarks of the target culture (e.g., North American or British landmarks), the Greek EFL textbooks with their glocal perspectives include landmarks from different parts of the world. The virtual tours developed through the digital enrichment of the textbooks enable learners to take multiple spatial perspectives and to explore landmarks or sites in different parts of the world, and in their own country, and at the same time to develop the necessary language resources to talk about them.

Contextualized learning

One of the main aims of our digital enrichment was to provide opportunities for contextualized learning through multimedia applications that use text, audio, still pictures and videos. In this case, scenario-based series applications, such as the "Mystery" and the "Lost" series applications, were produced, which are related to specific texts or activities in the textbooks. In one of the "Mystery" series applications, for instance, Sherlock is called upon to find a thief who stole a famous painting from a museum. In order to solve the mystery, learners should decode a hidden message by a blind witness who heard the thief, and follow the clues to find the thief and get the painting back. To do so, they have to use the Braille code (Figures 10.10, 10.11). This scenario-based application enables students to practice their English language skills and at the same time it exposes them to the Braille code, raising their awareness of an important aspect in the life of blind people.

In addition to the "Mystery" series, a "Lost" series was also prepared with different episodes. One of them is the 'Lost in the Museum' application which is related to a text on Egyptian culture (Figures 10.12, 10.13). This application is based on a scenario where Paul visits the British Museum but loses his way and needs his friends' help. After studying the museum map, EFL students start receiving text messages which describe objects that Paul sees in front of him. Their task is to find Paul's location and guide him to the museum exit within five minutes before the museum closes. The aim of this scenario-based application is to involve learners in exploration of specific cultural artifacts such as those of the famous British Museum. Several other episodes in the two series focus on cultural issues concerning Greek culture and aim to equip Greek speakers of English













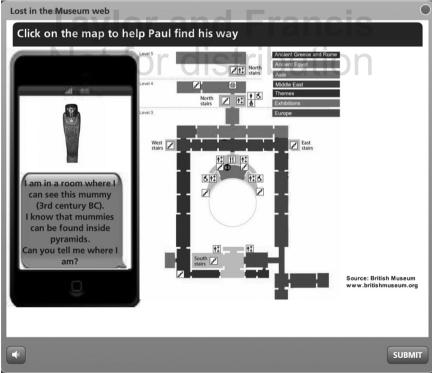
Figures 10.10 and 10.11 Screenshots from "Break the code"











Figures 10.12 and 10.13 Screenshots from the "Lost in the museum" application







with the necessary language resources in the English language to enable them to discuss issues concerning their own culture in English.

Conclusion

The perspective adopted in this chapter is clearly that of the designers of digital textbooks, not of the receivers of these textbooks, such as students and teachers. Thus, the aim of this chapter was to make explicit the design principles upon which digital enrichment can be based and to present some of the new ways of interactivity employed in the digital Greek EFL textbooks, as well as the ways cultural knowledge is delivered through the digital textbook. Through the new types of modalities used in the digital EFL textbooks and the new delivery medium—the open online platform—students are exposed to new ways of meaning-making. Of course, these are already familiar ways of meaning-making to the majority of Greek students outside school, since they are digital natives. The changes in textbooks, though, signal an ideological undertaking which connects formal learning with young people's life (Bulfin & Koutsogiannis, 2012). How students deal with these new ways of meaning in educational contexts remains to be investigated. Yet it should be pointed out that the availability of the digital EFL textbooks with their online resources to all students through the open platform constitutes a step towards the democratization of schools. This is in line with the open education movement, which constitutes the ideological framework upon which this project has been based.

In a future review of these textbooks, analysts have to take into account not only the content of digital enrichment but also the delivery means, i.e., the technological solutions that were selected for the implementation of the specific educational goals, and they should explore their impact on the learning that takes place. Most importantly, it should be taken into account that these digital environments are not neutral literacy practice environments, as some people tend to think, but are entangled in a complex nexus of power structures and relations (Koutsogiannis & Mitsikopoulou, 2004), involving interests that must be uncovered and critically challenged and causing an impact that remains to be investigated. A critical analysis of digital textbooks is therefore inevitably multidisciplinary and should include, for instance, an analysis of the broader context of the pedagogy on which these materials draw, of the embedded ideologies in the instructional texts (e.g., for reading comprehension), of the different forms of textuality which emerge from the interaction of different semiotic resources in terms of both informational and design complexity, and of the complex nature of hypermedia design and its effects on educational practices and materials.

It is true that the digital EFL textbooks prepared today may soon become outdated. Maley (2011) warns about the danger of "total capitulation to technology" in education and contends that, because of rapid changes in the employed technologies, digital resources are bound to be ephemeral. The employment of a principled approach to digital enrichment, which was followed by the English Group of the "Digital School" project, ensured that this attempt was at least characterized by pedagogical consistency, multicultural awareness and relevance for the Greek EFL learners.





Notes

- 1 See http://www.sesamath.net (accessed December 19, 2014).
- 2 Known as the "Digital Textbooks through the Digital Working Platforms" project.
- 3 In the context of National Strategic Reference Framework (NSRF) for the years 2007–13.
- 4 The Computer Technology Institute and Press "Diophantus" is a research and technology organization focusing on research and development in ICT with particular emphasis on the deployment of conventional and digital media in education.
- 5 It should be stressed at this point that the same textbooks are used by all students all over Greece for the same subject in each grade.
- 6 Enrichment for the EFL textbooks will be completed by 2014.
- 7 From the Think Teen Series for junior high school.
- 8 From the Teachers' Book, 4th Grade EFL textbook.

References

- Apple, M. (2000). Official knowledge. Democratic education in a conservative age, 2nd edn. New York: Routledge.
- Apple, M. (2004). Ideology and curriculum, 3rd edn. New York: Routledge.
- Apple, M.W. & Christian-Smith L.C. (eds.) (1991). *The politics of the textbook*. NewYork: Routledge.
- Askehave, I. & Nielsen, A.E. (2005). Digital genres: A challenge to traditional genre theory. *Information Technology & People*, 18(2), 120–41.
- Barritt, C., & Alderman Jr, L.F. (2004). Creating a reusable learning objects strategy: Leveraging information and learning in a knowledge economy. San Francisco, CA: John Wiley & Sons.
- Bernstein, B. (1996). *Pedagogy, symbolic control and identity: Theory, research, critique.* London: Taylor & Francis.
- Blyth, C. (2009). From textbook to online materials: the changing ecology of foreign-language publishing in the era of ICT. In M.J. Evans (ed.), *Foreign language learning with digital technology* (pp. 174–202). London and New York: Continuum.
- Boyle, T. (2003). Design principles for authoring dynamic, reusable learning objects. *Australian Journal of Educational Technology*, *19*(1), 46–58. http://www.ascilite.org. au/ajet/ajet19/boyle.html (accessed December 19, 2014).
- Bruillard, E. (2007). Textbooks and numerical publishing: an instrumental point of view. In B.-S. Kwak & C.-C. Gim (eds.), *Internet and textbook 2006* (pp. 115–32), IARTEM Seoul Mini-Conference Volume. Korea: Kyoyook Kwahak Sa Publishing.
- Bruillard, E. (2011). Current textbook research in France: an Overview. International Textbook Symposium, ITS 2011, April 28, 2011, Seoul, Korea.
- Bulfin, S. & Koutsogiannis, D. (2012). New literacies as multiply placed practices: expanding perspectives on young people's literacies across home and school. *Language & Education*, 26(4), 331–46.
- Common European Framework of Reference for Languages: Learning, teaching, assessment (2001). Cambridge University Press: Council of Europe.
- Conole, G. (2002). Systematising learning and research information. *Journal of Interactive Media in Education 2002*, 7. http://www-jime.open.ac.uk/2002/7 (accessed December 19, 2014).
- Cross-thematic Curriculum Framework for Languages (2003). Athens: Pedagogical Institute.

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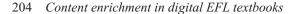


- Dendrinos, B. (1992). The EFL textbook and ideology. Athens: Grivas Publications.
- Friesen, N. (2004). Three objections to learning objects and e-learning standards. In R. McGreal (ed.), *Online education using learning objects* (pp. 59–70). London: Routledge.
- Halliday, M.A.K. (1978). Language as social semiotic. London: Edward Arnold.
- Hee-Young K.J. and Hye-Yoon, J. (2010). South Korean digital textbook project. *Computers in the Schools*, 27(3–4), 247–65.
- Hickman, H. & Porfilio, B.J. (eds.) (2012). *The new politics of the textbook: Critical analysis in the core content areas*. Boston, MA: Sense Publishers.
- Horsley, M. (2001). Emerging institutions and pressing paradoxes. In M. Horsley (ed.), *The future of textbooks? Research about emerging trends* (pp. 35–52). Sydney: TREAT.
- Iiyoshi, T. & Kumar, M.S.V. (2008). Opening up education: The collective advancement of education through open technology, open content, and open knowledge. Boston, MA: MIT Press.
- Jewitt, C. (2002). The move from page to screen: The multimodal reshaping of school English. *Visual Communication*, 1(2), 171–95.
- Koutsogiannis, D. (2010). ICTs and language teaching: the missing third circle. In Stickel, G. &Váradi, T. (eds.), Language, languages and new technologies: ICT in the service of languages (pp. 43–59). Contributions to the Annual Conference 2010 of EFNIL in Thessaloniki. Frankfurt am Main: Peter Lang Verlag.
- Koutsogiannis, D. & Mitsikopoulou, B. (2004). The Internet as a global discourse environment. *Language Learning & Technology*, 8(3), 83–9.
- Laborda, J.G. (2009). Using webquests for oral communication in English as a foreign language for Tourism Studies. *Educational Technology and Society*, 12(1), 258–70.
- Lemke, J. (1998). Metamedia literacy: Transforming meanings and media. In D. Reinking, M.C. McKenna, L.D. Labbo & R.D. Kieffer (eds.), Handbook of literacy and technology: Transformations in a post-typographic world (pp. 312–33). Mahwah, NJ: Lawrence Erlbaum.
- Lemke, J. (2002). Travels in hypermodality. Visual Communication, 1(3), 299–325.
- Luke, A. (1988). Literacy, textbooks and ideology: Postwar literacy instruction and the mythology of Dick and Jane. London: Falmer Press.
- Maley, A. (2011). Squaring the circle—reconciling materials as constraint with materials as empowerment. In B. Tomlinson (ed.), *Materials development in language teaching*, 2nd edn., pp. 379–402). Cambridge: Cambridge University Press.
- McGreal, R. (ed.). (2004). Online education using learning objects. London: Routledge.
- Mitsikopoulou, B. (2013). *Rethinking online education: Media, ideologies, and identities*. Boulder, CO: Paradigm Publishers.
- Moss, G. (2010). Textbook language, ideology and citizenship: The case of a history textbook in Colombia. *Functions of Language*, 17(1), 71–93.
- Northrup, P.T. (2007). *Learning objects for instruction: Design and evaluation*. Hershey, PA and New York: Information Science Publishing.
- Parodi, G. (2010). The rhetorical organization of the textbook genre across disciplines: A "colony-in-loops"? *Discourse Studies*, 12(2), 195–222.
- Parrish, P.E. (2004). The trouble with learning objects. *Educational Technology Research* and Development, 52(1), 49–67.
- Patterson, C.T. (2007). Google Earth as a (not just) geography educational tool. *Journal of Geography*, 106(4), 145–52.
- Peacock, V. (1939). Effective enrichment of the textbook in foreign language. *The School Review*, 47(1), 24–31.

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Polsani, P.R. (2003). Use and abuse of reusable learning objects. *Journal of Digital Information*, 3(4). http://journals.tdl.org/jodi/article/viewArticle/89/88.

Snyder, I. (ed.) (1998). *Page to screen: Taking literacy into the electronic era*. New York: Routledge.

Williams, R. (1977). Marxism and literature. Oxford: Oxford University Press.

Warschauer, M. (2007). The paradoxical future of digital learning. *Learn Ing*, 1, 41–9.

Ya-Chen, S. (2007). Ideological representations of Taiwan's history: An analysis of elementary social studies textbooks, 1978–1995. Curriculum Inquiry, 37(3), 205–37.

Yongbing, L. (2005). Discourse, cultural knowledge and ideology: A critical analysis of Chinese language textbooks. *Pedagogy, Culture and Society*, 13(2), 233–65.

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