# E-book for IT Experts Learning English

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**Abstract - Living in this age of technology, where knowledge and information are just a click away, the authors wish to present an e-book which would be used for teaching English for Specific Purposes (ESP) at the College for Information Technology in Zagreb, Croatia. The article gives a detailed explanation of the idea and purpose of such a book. The contents and a possible software solution are also given. The results of a survey conducted at the mentioned college, among the students of the first year, are shown. The function of the book in education of IT professionals is commented and a firm conclusion, based on practical work with IT students, is made.**

## I.    INTRODUCTION

To try to offer a proposition for an electronic textbook is nothing without giving an easy to grasp definition of what an electronic book actually is. "The electronic book is a document of monographic character available to the public online or in physical form (on CD-ROM, DVD) and it may include pictures and sounds, links with related online pages, and programs to change and supplement it. It should also have an ISBN, either as its only identifier or as part of the DOI and URN identifiers specific for electronic materials. The electronic book may be available in various formats. The recommendation is for every format of the electronic book to have its own ISBN "[1]. This definition summarizes all the features that are explained in this article, putting the proposed electronic textbook right inside the defined margins.

Coming across a very interesting topic, which was occupying the American media mostly throughout 2009 but still continues even today, barely scratches the surface of the new electronic and Internet culture. The American governor of California had stirred the public with his proposition to introduce electronic textbooks with the aim to save hundreds of million dollars a year [2]. The governor explained that the interactive environment, besides saving money, can offer students various possibilities considering that the needs of young people are changing on a daily basis [3]. The format of these books is very practical to use and their ecological role is very significant when thinking of forest preservation. In addition to these two important factors in favoring electronic textbooks, the students' needs are what has to be considered when looking at the methodological aspect of discussing the applicability of such books. What do students really get from using electronic textbooks?

This article deals with an isolated segment of students, making the answer to this question quite simple. The information technology students use their computers on a daily basis. This gives them the possibility to have their study materials on a hard disk rather than in printed form somewhere in their school bag or at home overstuffing their shelves. Due to the extremely fast development of information technologies, practicality is not what matters the most. Using electronic books, students enter a new educational dimension of interactive study, where they can spend good quality time in self-study, expanding their knowledge without the guidance of a mentor or a teacher. Considering the historical change of language teaching methods which contributed to all the possibilities that exist today, this article gives a suggestion for an electronic book in the field of language study. Such a field of study requires a lot of audio-visual materials and this kind of a publication can offer just that.

## II.    THE IDEA

With the development of the World Wide Web and all the technological breakthroughs, teachers of foreign languages have profited concerning the increase in the choice of teaching materials. Browsing through numerous web pages, entering key words relevant for their search, teachers and students can find a huge number of pages containing interactive exercises with simple and interesting grammar overviews and explanations.

Why not offer something similar in one unified package for an even simpler use? This article gives a proposition of an electronic book (e-book) which would serve as a substitute for an ESL (English as a second language) student's book in the field of Information technology for the students at the College for Information Technology in Zagreb, Croatia.

At this college, all students have their own laptop with a wireless Internet access. Having this in mind, a need for such a book has appeared to be a very useful solution in many aspects as well as the materials of the book itself being connected to various materials available on the Web. In such a manner, this English language course would keep in touch with the cutting edge technology, which is of great value to this type of course considering the rapid IT development.

In order to achieve independent reading comprehension of texts found on the Internet, links to online dictionaries would be offered. The e-book would, of course, have its own glossary which would be linked to the vocabulary in each unit (text, exercise, etc.), thus making the comprehension of the materials faster and simpler. In addition to the standard materials that each ESL student's book should have, this e-book would contain links to web pages which would serve as extra teaching materials. Interactive exercises, being part of the

application itself, would make correct answers with explanations always accessible and feedback possible even when the student is not in class.

Having numerous audio-visual materials at their disposition, students would have the opportunity to listen and view various video lessons which are of great importance when learning a foreign language. Even if students are absent, they could receive adequate teaching materials which would help them study even when the teacher is not present.

Standards for publishing electronic textbooks have not been given, although an International Digital Publishing Forum (www.idpf.org) has been organized by the International Trade and Standards Organization for the Digital Publishing Industry. This website offers useful and interesting information about the electronic book industry.

This e-book could be published on a CD-ROM as a desktop application or offered as a Web application. A computer would be needed to access its contents, but for a complete and full usage of all the extra materials the user would also need access to the Internet. A possible software solution is given in the following parts of the article.

The answer to the question of the publisher and the license arrangements lies in the following statement: "When educators pool their expertise to foster a culture of shared knowledge, everyone benefits" [11]. The proposed e-book would join the same cause which the Community College Open Textbook (CCOT) Project supports and it would be offered to students as an open textbook. The open textbooks "are freely available with nonrestrictive licenses. Covering a wide range of disciplines, open textbooks are available to download and print in various file formats from several web sites and OER repositories"[11]. As the infringement of copyright laws rises with the development of technology, the idea of prosecuting individuals for illegally obtaining an electronic book (either a digitalization of already printed books or newly developed textbook applications), kind of puts the idea of free education into the background. This electronic textbook would be offered to the academia for the same interest of both students and teachers: the thirst for knowledge.

## III. THE CONTENTS OF THE BOOK

The book, under the title 'IT English', would be divided into six main study sections which would further be divided into twelve smaller study units:

1. Computer basics
   1.1. Computer history
   1.2. Computer architecture
2. Input and output units
   2.1. The basic division
   2.2. The photos of the future
3. Data storage
   3.1. From the beginnings
   3.2. The future of data storage
4. Software
   4.1. Operation systems
   4.2. Computer applications
5. Programming
   5.1. Programming languages
   5.2. Usage
6. Network connections
   6.1. WWW and the Internet
   6.2. Computer networks

The book would also have its own glossary, which would be written by the users themselves with the help of external links to an online dictionary. This would give the students the possibility to create an individual list of words during their time of study. The book would also offer the option of storing already completed exercises so that the students can monitor their own work and see progress when reviewing the studied lectures.

Each of the twelve study units would include the following areas of dealing with the proposed study content:

*A. Grammar*

A traditional approach to grammar would be used, giving adequate definitions and providing examples relevant to the field of study in each study unit. Grammar exercises for practicing each grammatical unit would be offered to the user (student) in such a way that they would be transformed into interactive so that students would be automatically corrected.

*B. Reading*

Each study unit would include interesting texts based on the topic of the unit. While reading, the users would be able to select the word which they do not understand and the link in the application would direct them to the glossary. In case of the word not being in the glossary the user would be redirected to one of the online dictionaries. After finding the meaning, the users would be able to note down the new word in their own personal glossary which could be created from the beginning of using the application. In addition to the texts in each study unit, the user would have the option to explore different links to additional topics which are of interest. In order to secure comprehension of the new texts, links to online dictionaries would be provided.

*C. Listening and viewing*

Interesting video clips of different lengths would also be included in each study unit. A visual component of learning the study materials would thus be included. The video clips would be authentic, taken from important and interesting presentations, conferences and lectures, so as to make the actual environment of information technologies closer to the learner.

## D. Writing

What makes writing easier in this kind of environment is the fact that all wrong entries would be corrected. This is not something that a standard book has. However, there would be one limiting factor. The writing corrections would be limited to only some type of exercises, while writing of essays, letters, etc. would face the problem of all grammar and spelling checking tools. This would not suit a learning environment, thus such a tool would not be included in the e-book.

## E. Communicating

Practicing communication is not such a huge problem when a teacher creates a simulated environment in the classroom where students participate in discussions and the teacher corrects them. The problem appears when students wish to practice at home. The solution to this problem is to provide a simulation between the student and the computer. The structures would have to be prepared in advance, because it would not be the case of artificial intelligence.

Review exercises would be found at the end of each study unit. If the student (user) was absent, he/she could practice and study at home without many problems. This kind of approach to teaching is valuable because it allows students to study under supervision, so that the number of their mistakes could be taken down to a minimum. Unfortunately, in classroom teaching, teachers cannot give their full attention to each student and there is always too little time to reinforce what has been learned. With this e-book students would have a certain kind of independence and would gain more confidence in using the English language.

If compared, the structure of a printed textbook is not that different. However, this electronic book would open the interactive dimension where students could explore their own interests and enjoy the idea of having everything in one place. This economization stems from the fact that this e-book would substitute a number of handbooks such as the student's book, workbook, various dictionaries and grammar books which have to be used in language learning.

## IV. SOFTWARE SOLUTION

The evolution of 'the printing press', as we may call it, has reached the unimaginable. To some extent, what was once revolutionary, today starts to be forgotten.

The IT market offers numerous free and priced software publishing tools, which give individuals the opportunity to make their own electronic publications. These publications can also be created in different formats. In this article, a newly issued publishing tool will be presented as the solution for creating this particular e-book in an EPUB format.

The EPUB format supports the following features: the DRM (Digital Rights Management), table, image, sound, interactivity, word wrap, open standard, embedded annotation and book-marking. With these features in mind and in comparison to other formats, the EPUB has been chosen as the most suitable for the publication of this e-book.

The proposed tool for publishing is the Adobe InDesign CS5. This software has been chosen for its feature to help create interactive documents. One of the many interactive features of InDesign CS5 is the option to navigate an animation, sound or video, as well as to launch an external web page in the user's browser [4]. As the e-book proposed in this article is intended for IT students learning English and has thus been described as a document with many interactive features, it is essential that the software chosen meets the needs of the authors. The InDesign document can be converted to the EPUB format. A variety of digital readers are offered to users and it seems that most of them support the EPUB format, thus it would be wise to publish in the mentioned. Fig. 1 shows how a hyperlink to the Adobe website is easily created within a document.
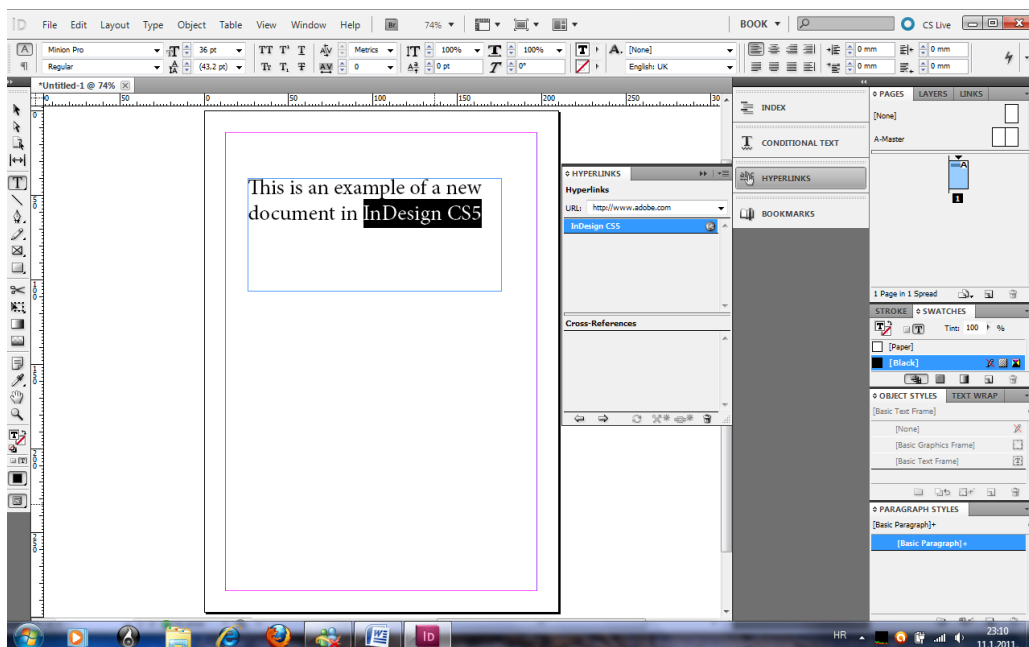


Figure 1. Hyperlinks in InDesign CS5

## V. SURVEY RESULTS

Despite the fact that studies can be found which show that for learning purposes students prefer textbooks over e-books [6], a survey has been conducted among first year students at the College for Information Technology. Based on a study performed at the Oakland University which attempted to determine usage of books depending on the format (print or electronic), this survey wants to reinforce the conclusion to the 'correlation between the popularity of a subject area and its use in either print or electronic formats' [7]. According to this conclusion, the study showed that there is a great preference for electronic books in the fields like computer science and technology.

In order to show that there is a need for such a book among the students at the College for Information Technology, a questionnaire has been given to first year students. The number of valid respondents was 38, of which 5 were female. The questionnaire was comprised of 10 questions as follows:

1. Are you satisfied with your current English language textbook? Please, elaborate your answer.

2. How important are extra materials for you as an English learner? Please, elaborate your answer.

3. Does watching short movie clips in class help you study the English language?

4. Do you sometimes miss explanations when you are studying by yourself?

5. Would you like to have a book which would help you study by offering explanations even when you are not in class?

6. Do you miss having a dictionary as a part of your English textbook?

7. Would you like to have the possibility to make your own glossary and have it in a digital format?

8. To what extent does browsing the Internet help you in the study of the English language? Please, elaborate your answer.

9. Do you feel that you enhance your knowledge of the English language by browsing through the web pages?

10. Are you familiar with the term 'electronic book'?

The answers were numbered from 1 to 5: 1 - I completely disagree, 2 - I mostly disagree, 3 - I cannot decide, 4 - I mostly agree, 5 - I completely agree.

Questions 3, 5, 8 and 9 have received the biggest 'answer 5' percentage. Question 3 was given in order to show a great interest in audio-visual language learning methods among students. 58 % of the students completely agree and 18 % mostly agree with the idea of watching short videos to help them learn (Fig. 2).

Question 5 addresses explicitly the idea of having a book that would help them learn even if they are not present in class. Despite not being introduced to the idea of the research, the students have answered positively to the suggestion of an e-book (Fig. 3).
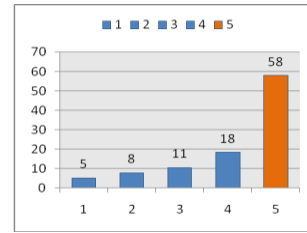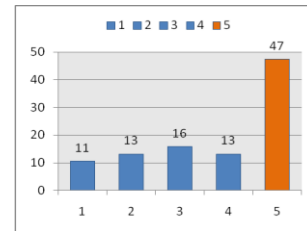


Figure 2. Answers to survey question 3



Figure 3. Answers to survey question 5

The role of the Internet and the importance of the information that can be received from browsing web pages have already been introduced. It seems as though students have also come to see the Web as a great source of help while learning English, especially because of their future field of work. Charts for questions 8 and 9 show a great percentage of students feeling that the world's biggest network has a great deal to offer them in their study of language (Fig. 4 and 5).
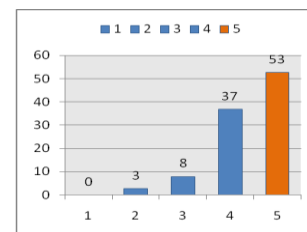


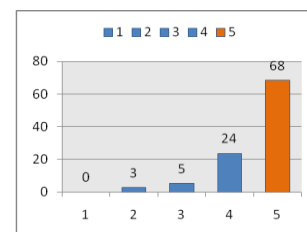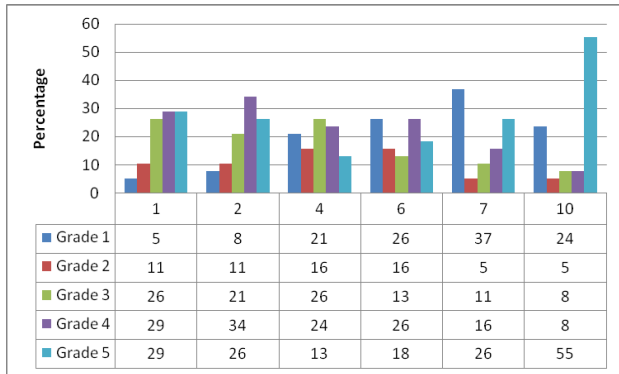Figure 4. Answers to survey question 8



Figure 5. Answers to survey question 9

TABLE I.  QUESTION (1, 2, 4, 6, 7, 10) RESULTS



| | 1 | 2 | 4 | 6 | 7 | 10 |
|---|---|---|---|---|---|---|
| ■ Grade 1 | 5 | 8 | 21 | 26 | 37 | 24 |
| ■ Grade 2 | 11 | 11 | 16 | 16 | 5 | 5 |
| ■ Grade 3 | 26 | 21 | 26 | 13 | 11 | 8 |
| ■ Grade 4 | 29 | 34 | 24 | 26 | 16 | 8 |
| ■ Grade 5 | 29 | 26 | 13 | 18 | 26 | 55 |

A study on technology-enhanced language learning (TELL) has been executed at a university in Taiwan where 84 % of students thought this kind of learning to be 'more interesting and rewarding' due to the special approach which includes an 'active learning style, interactivity, self-control, motivation and immediate feedback' with the 'ability to learn more diverse and practical knowledge' [8]. This sentence actually summarizes all the features which this e-book would encompass.

The results of the other answers in the survey have not been analyzed individually because of their lower significance to this research. The mentioned results can be found in Table I where a chart is also given for the overall comparison.

## VI.  ENHANCED TEACHING METHODS

Throughout the history of language teaching the methods have truly developed and changed. One of the possible divisions of such methods is the one which Diane Larsen Freeman gives in her overview of teaching methods and techniques. In this book the author mentions the following methods: the grammar-translation method, the direct method, the audio-lingual method, the silent way, desuggestopedia, community language learning, total physical response, communicative language teaching, content based approach, task based approach, participatory approach, learning strategy training, cooperative learning and multiple intelligences [5]. All these methods have contributed to one another and have resulted in the language teaching methods that we have today.

A new challenge has arisen. In the age of technology, massive communication and connections, educators are forced to be computer literates and use this technology to the highest level. This article suggests a solution not only for the students but also for the teachers, who might not be experts in the IT field but are great educators of the English language. An interactive textbook like the one proposed could help them achieve their educational goals in a less exertive but more productive way.

The usage of the suggested electronic textbook in class could be seen as a method of online education. Linda Harasim suggests three modes of delivery in online education: adjunct mode, mixed mode and the totally online mode [9]. In the case of the presented e-book, the adjunct mode would have to be considered. Although this mode is used to describe 'the earliest examples of online education', it is suitable for this description because it 'uses networking to enhance traditional face-to-face or distance education' [9]. This e-book would be used to support and enhance existing teaching methods while offering newest and updated information to the students of Information Technology.

If put in the context of e-learning, using an electronic textbook for educational purposes could be seen as blended learning: 'a combination of e-learning and traditional learning systems' [10]. Furthermore, Saul Carliner presents a model of different e-learning uses (Table II).

TABLE II.          E-LEARNING USES

| Formal Learning | Informal learning |
|---|---|
| • Online education<br>• Online training<br>• Blended learning with classroom delivery and printed materials | • Knowledge management<br>• Electronic performance support<br>• Blended learning with related materials in other media |

Differing between formal and informal learning as intentional and unintentional [10], the usage of the proposed electronic textbook for language study would combine these two types of learning. Combining the conservative teaching methods with this kind of textbook would offer students to explore the informal side of learning, this being connected to their self-study.

## VII.  CONCLUSION

There is no doubt that the future lies in the 'digital' or 'electronic', no matter which field of study we speak of. However, teaching should never lose the face-to-face component; it should never be strictly reduced to online education. The only aim of this article is to offer the means of enhancement for teachers and students but not to deprive students of real time communication and classroom management.

The idea for this kind of electronic textbook arose from teaching experience at the College for Information Technologies. The survey results support the goals at which this e-book is aimed. Students of the College for Information Technologies have shown that they have already recognized the importance of digital media in the context of language learning, 79% of them completely or mostly agreeing with knowing the concept of what an e-book is. The conclusion which can be drawn from the survey results is that these students are aware of all the advantages of enhanced teaching methods, having the

potential to explore, use and adopt all the features that 'IT English' would offer them.

The proposed electronic textbook would fulfill one of the many requirements that are expected of the European Union countries, considering higher education priorities. The European Ministers responsible for higher education expect the students and staff of these institutions to strive for excellence and face the challenges of the new era, ready to respond to the demands of this fast evolving society [12]. 'IT English' would be just one small part of the great education puzzle which is being pieced together diligently every single day.

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