# THE E-BOOKS AND THE EDUCATION TODAY

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**Abstract**

*This article presents the possibilities of creating e-books and their technical use in order to raise the young primary teachers' level of qualification. Here you can find specific solutions as well as examples of how to create and use an e-book on different technical devices.*

**Keywords:** *eBook, e-book, distance education, enhancing the qualifications of young teachers*

## 1. INTRODUCTION

Our country is constantly subjected to changes, which a man could observe in every social sphere, including the educational system. The dynamic surroundings lead to alterations in people, most commonly in the younger generations. The modern students are heralds of new values, they use more sources of information, and they also study and develop in a new way. Having that in mind, it comes naturally that teachers in primary schools should keep up with the demand, and moreover, be intrigued to further work on their qualification. For that purpose, apart from the traditional course of education, a new one has been applied, which involves innovative methods of teaching online. In any case the topic about creating electronic educational applications and in particular e-books, is extremely up-to-date and so is going to be in the future.

## 2. THE E-BOOK TODAY AND ITS NEAR FUTURE

As we all know, an e-book is a file (informative resource) in appropriate digital format, which presents scientific, fiction or else content. In modern world the authors of e-books include not only text, tables, figures and images in their content, but also references to outside sources, bidirectional forms of communication with their readers, links to Web-based multimedia. In this meaning, the modern e-book is a guarantee of a full learning experience or if you want entertainment, and practically is no longer a simple file, but rather a combination of linked informative resources.

Historically speaking, right after the e-book was invented, there were a lot of attempts to oppose (either reject or praise) the new invention to its paper kind. This way of perceiving is prompted by different motives, but they all could be classified in two major aspects: (1) the natural physical and psychological distinctions of using and understanding the new product and (2) different companies' and public formations' financial choices and business interests, whose job is to publish and spread books. The technical progress and the public opinion on every new product predetermine its success and growth. The fact that the circulation of e-books has turned into a sensation says a lot about their secure future. In the process of transformation and change hybrid alternatives were created, which combine the strengths of both kinds of books: the traditional way of thinking, together with the reader's attitude towards the paper and what is written on it and practically the unlimited possibilities to present information and data on digital sources. What we have in mind is a paper body with summarized content, which includes a lot of references (written or via bar code) to resources of electronic content.

The main reasons, due to which the e-books will become wide-spread and commonly used, are:

- possibility to search through the content for key-words; this provides us with a glance over the content, the convenience to quote, write annotations and create ticks;

- presumably lower price in comparison to the traditional book, since there are no expenses regarding materials, transport, storage, as well as the opportunity to sell it on the Internet. On the other hand, however, in order to read an e-book, you must own a specific device, which sometimes could be used for different purposes (e.g. organizers, mobile phones, tablets);
- the comfort of purchase, delivery, payment and usage of e-books.

All this in reference to the change in life on Earth determines the use of the digital product as main one.

*2.1. Ways to create an e-book*

An e-book could be created in different ways. According to the explanation given earlier, the only tool you need to write an e-book is a simple piece of software, in this case a text editor. However, in order to have one well-structured and valuable book you should include elements such as:

- animated GIFs, which the reader could or could not control;
- built-in audio and/or video apps;
- dynamic generated content provided from different web-sources, based on the reader's behavior;
- dynamic generated tables with data based on outside circumstances;
- links to outside sources for addition information on content's topics;
- links to outside multimedia apps, while presenting the content;
- surveys and researches as two-way communication between the reader and the writer; e.g the reader has to complete a survey about a topic in the book; he/she sends the survey and in return receives the summed up information or in other words: how did all other readers answer the questions;
- other technical elements that could possibly make the book interactive and result in changing the content or the plot according to the survey results.

Technically speaking, the making of an e-book is not a hard thing to do. A good one, however, requires skills to match an interesting story with modern electronics. The entire process should be consistent with the expectations of future readers regarding the user interface, accessibility and simplicity.

*2.1.1. Easy ways to create an e-book*

The easiest way to create an e-book is to use a text editor (even with the built-in text editors for every OS), such as:

- Notepad, Notepad++, UltraEdit (for Windows);
- Kate, Pico, gEdit and VIM (for UNIX/LINUX).

In order to create a file-like e-book you could also use:

- MS Office, Apache Open Office, Libre Office (for Windows);
- Web-based environment for creating and sharing documents, such as: MS Office 365, Google Documents, Only Office, etc.;

As an alternative to the later you could always make use of the social networks [1].

Following, the e-books are made on personal computer stations with installed OS – Windows or Linux, and/or on mobile devices [2] supporting Android. The file formats differ according to the app that creates the book and also the app that is responsible for supporting the book. The most common ones are: doc, docx, rtf, pdf, odt, html, epub or txt. The author's decision is based on his/her target group or in other words – the owner of the Hand Held device, the way of distribution as well as the type of content material.

Once created the e-book could be set in circulation in different ways:

- as attached file to an e-mail;
- Screencast [3], Dox [4], Mega [5], Google Drive [6], DropBox [7], Sugar Sync [8], Just cloud [9], Adrive [10], and/or YouSendIt [11] (these are all free access servers for sharing files and apps [12]);
- direct circulation or via post services; the e-books are saved on a CD, DVD or flash drives;
- sent in a chat/messaging session;
- via other personal Web-based services for saving and/or sharing of files, e.g. Owncloud [13].

*2.1.2. The use of electronic readers and Hand Held devices*

The market today offers an incredible variety of mobile devices - all sizes, shapes and weight but also different in regard to technical parameters like software, OS, types of communication supported. Amazon Kindle is a type of electronic reader owned by Amazon.com [14]. The name of the device (Kindle) is a metaphor for awakening the interest of reading. Users could download or buy, read or look through books on Amazon.com or simply transfer them via cables from other electronic devices. When reading a book on Kindle, the reader is left with the feeling of reading a paper book, due to the special technology (E-Inc electronic paper) where the screen reproduces 16 gray-black tones. In this article the following experiments and examples for converting and using different file formats are based on a Kindle - Kindle Keyboard 3G, which the author owns since 2013.

Kindle Keyboard 3G supports the following file formats:

- Kindle (AZW, AZW1, AZW2);
- Text (.TXT);
- PDF (.PDF);
- Mobipocket (.MOBI and .PRC), no password required;
- (.AA, .AAX) – for audio books;
- MP3 – for audio data;
- AZW is the format for Amazon Kindle. It is also compatible with Kindle software for PC and iPhone. The format .AZW1 is transmitted via Whispernet - the network for Kindle books' circulation. AZW1 could have built- in fonts [15] unlike AZW.

The software Calibre [16] could be used to create an educational app and later this app could be converted into a Kindle book.

Furthermore, Amazon [14] has an online converting service, where you can convert different file formats into AZW-format. The files you could send via e-mail or directly onto your Kindle, but for the later you will need a registration on Amazon.com. Once the file has been converted, Kindle Keyboard 3G can make use of the following formats:

- MS Word (.doc and .docx) no password required;
- Rich Text Format (.rtf);
- HTML (.htm and .html);
- JPEG (.jpg and .jpeg);
- PNG (.png);
- BMP (.bmp);
- GIF (.gif);

- ZIP (.zip).

The original idea of tablets is to make them as light and as easy to transport as possible, and yet to have all the necessary technical parameters. On the other hand, during the last few years producers have succeeded in making the mobile phones almost as good as the tablets. Probably the only advantage of the later is the better screen. If you want to make use of tablets during your studies, here are some rather important parameters to search for in your device:

- generation network (2G, 3G, 4G), brand, producer, year of production;
- screen resolution;
- Ram memory size, card slot, Internal memory size;
- CPU type;
- GPRS, EDGE, UMTS, HSDPA, USB, Bluetooth, WLAN;
- OS;
- Battery life.

Nowadays, pretty much every Hand Held device supports all file formats and we could say that whatever knowledge there is, it could be introduced to the public in every form [17]. The following statements show the advantages of the tablets:

- tablets apart from all other parameters have cameras (main and selfie camera), which can come handy if a two-side communication between the teacher and the students is introduced in the course of education;
- Amazon Kindle devices are poor in matter of starting and running programs in different programming language unlike tablets; they neither can browse well;
- thanks to the built-in GPS module, tablets are excellent in geo targeting, orientation, routs, navigating tasks and apps;
- tablets from a higher price sector have incomparably better communicative parameters than Kindles, and they even leave some smartphones [18], [19] behind;
- the memory capacity of a tablet is not only enough by itself, but has an upgrade option, which is a total advantage, although Kindle can offer enough disk space to save and storage incredibly large amount of e-books;
- if used in schools the tablets would be preferred over Kindles for its colourful screen.

However, Kindle has also good sides:

- extremely long battery life due to the specific technical production and screen type;
- perfect simulation of reading on paper, no matter how bright or dark outside/inside it is; the brighter the better visualization;
- three times lower price [15].

The described ways of creating an e-book in 2.1.1 and 2.1.2 all require self-development mediums. Practically speaking, every teaching method will hit its target, but the efficiency depends on the quality of the educational application and its way of distribution and usage. As next we will examine even more flexible methods to create an e-book.

*2.1.3. The use of Open Source Software*

When using Open Source Software the user has the possibility to create one of a kind educational applications and in particular e-books. Usually a content control systems (CMS) are used, together

with mediums for creating blogs, informative systems, etc. Open Source Software allows the user to complete complex solutions including:

- the freedom to show the whole picture of the author's idea via interactive tables and graphs, multimedia apps, links to outside sources;
- the created product is not a static final object- the readers have the power to add content to the book, give suggestions and ideas, to criticize the author's decision (all with the agreement of the author); this is the starting point of a process of creating versions of the book, based on what is happening in the society and the development of electronic devices;
- the Open Source Software is supported by third side party, who built up the medium; on one hand, supplements or riders are meant to further explain the content, while others serve to sell part of it or the entire book to a scientific data base or to a social network; this comes in favor of the e-book, since advertising and popularizing the paper body in such way would be impossible;
- easy and comfortable to use, enabled search for keywords or whole texts, possibility to write notes, ticks, etc.

The author's observations and knowledge go back mainly to using and working with Wordpress [20], in particular creating blogs with the medium. This same program offers a great variety of topics and supplements - up till this moment there are thousands only on their official website. Logically it will be a lost, not to take advantage of what has been offered and transform it accordingly to your purpose.

A survey [21] based on 320 supplements for Wordpress selects some of the best additions for presenting data on the Web. Here are the criteria for their choice:

- ability to position the object in space and time;
- ability to present objects and phenomena as vision, device, behavior and interaction with the environment;
- date of creation, latest update and rate of updating;
- versions and removed bugs in the extension code;
- compatibility with the hosted server environment;
- compatibility with the latest Wordpress version;
- language support;
- support of browsers and their versions;
- support and help offered on the web-site of the extension;
- number of active installations and rate of change;
- user rating and evaluation;
- price;

Below are extensions for Wordpress (Table 1.), which present various possibilities for content display [21] in the medium:

| Area of presentation | Name of plugin and URL |
|---|---|
| **Time** | Timetable for Wordpress, http://rikdevos.com |
| | WP SIMILE Timeline, |
| | http://www.simile-widgets.org/timeline |
| | TimelineJS WordPress Plugin, |
| | http://timeline.knightlab.com |
| **Space** | Maps Marker Pro, https://www.mapsmarker.com |
| | WP Google Maps, https://www.wpgmaps.com |
| **Pictures, albums, sliders** | Albums Switcher, https://codeasily.com |
| | Photo Cluster, https://codeasily.com |
| | Phantom Pro, https://codeasily.com |
| | Album Stripes, https://codeasily.com |
| | MetaSlider, https://www.metaslider.com |
| | Master Slider, http://www.masterslider.com |
| **Audio** | Wave Surfer, https://codeasily.com |
| | Music Player, https://codeasily.com |
| | Compact WP Audio Player, |
| | https://www.tipsandtricks-hq.com |
| **Video** | FV Flowplayer Video Player, |
| | https://foliovision.com/player |
| | YouTube, https://www.embedplus.com |
| **Text, tables and data, diagrams (charts)** | TablePress, https://tablepress.org |
| | WP Statistics, https://wp-statistics.com |
| | WP Charts and Graphs Lite, https://themeisle.com |
| **Pages, posts and their design** | Elementor Page Builder, https://elementor.com |
| | WP Page Builder–Beaver Builder, |
| | https://www.wpbeaverbuilder.com |
| | Live Composer, https://livecomposerplugin.com |

**Table 1.** Wordpress extensions to present data and information

Wordpress offers options to flexibly expose the content without any restriction in the utterance [22]. The separate chapters of the e-book could be shaped as different pages or postings. The access to them and in particular the app's user interface takes place in a menu system or hot links, which are situated on the chapter-pages/postings. In fact, the e-book created via Wordpress could be presented as an entire web-site, where depending on the hosting all possible opinions and criticism could be shown, communication via E-mail could be organized, additional content could be uploaded (generated by the users). If the author agrees to, there is a capability for feedback sections, chat sessions, conference calls or other forms of electronic communication.

The access to the e-book's content takes place on computers, tablets, smartphones or any other Hand Held device. If an e-book is meant to be read on a PC, the way it appears on a Hand Held device could be much different or even to be impossible to be displayed. One of the reasons for this problem is the lower resolution that some smartphones have. In such case it would be necessary to use the mobile version of the Open Source medium. Wordpress also comes with a solution- the program analyzes the device's resolution and then depicts the adapted content according to the results of the analysis. On the Web you can find famous and cheap (free) content reducers according to the end terminal of usage.

The circulation of the created apps on the Web is available thanks to other Open Source solutions for online stores (PrestaShop [23], Magento [24] and/or Open Card [25]).

Wordpress uses the expansion WooComers [26], which basically attaches online store to the e-book. Other solutions are also possible, e.g. different systems for micro-payments via short messages (SMS) [27] or servers with FTP resource transfer [28].

*2.1.4. Creating unique applications via self-development programs and program languages*

If you want to create apps, which can easily and successfully adapt to the original idea and circumstances, the best way would be to use self-development programs [29] and/or program languages. This method requires knowing the basics of programming, as well as being able to work with the respected program. Thinking about the future of e-books developers are making it possible for the users to create, save and use the apps on the Internet or on global private networks. Different solutions to accomplish this are likely, however, so far the progress has led to:

- necessity to install and use Web-server;
- creating lots of program scripts, that carry the quoted content and the access organization; as far as this article goes, the e-books are programmed on HTML5, CSS, Java Superscript and/or PHP; it is thought, that the listed languages can be used to display every human knowledge;
- creating and administering Web-based data base, that should storage experimental data and scientific information, together with the personal data of the user.

In order the e-book to be available for everyone, it should be uploaded on the Internet (in other words save it on the hosting server). You must first have a domain and then create a hosting service. Another way to upload it is to host your own Web-server (e.g. via Apache [30]), to use real IP address or if you use local network (LAN)-IP address from the region 192.168.X.X. It is hoped that the domain and the hosting are on the same registrar, since sometimes parameters of the program could be changed. Use national suppliers since the e-book will be listed on higher position and the readers will easily find it.

## 3. THE USAGE OF E-BOOKS

It is common knowledge that e-books are part of our educational system. This app could be found in variety of fields, as it follows:

Classification according to the way of distribution and carriers of information:

- as Web-based applications;
- distributed on flash drives, CD and/or DVD;
- as applications for Hand Held devices;
- as doc, docx, pdf, txt, html, epub, AZW, AZW1, AZW2 files.

Classification according to the purpose:

- school actions intending to raise the teachers' level of qualification – educational courses, seminars, lectures, training sessions, practices, participation in monitored project visitations, participation in national and international conferences;

- during national seminars on tour – helping just hired teachers and ones with little experience, leading open teaching practices, sharing good examples in methodical unions, interactive training, discussions, thematic methodical gatherings, sharing positive experience, periodical acquaintance with the Pre-School and School Education Act, discussing the latest tendencies, making use of innovative technologies, professional methodical and psychological training;
- for students or teachers who would like to step up their qualification.

## 4. CONCLUSIONS

On the first encounter the e-book was not accepted by the public unreservedly. Back then the only way to read an e-book was on a PC, and we can all imagine how uncomfortable that must be: sitting on the chair, the eyes get tired and red due to the long time spent staring at the screen, you are not mobile, and you cannot read in bed. Furthermore, the psychological aspects also affect you – no scent of paper nor rustling when you turn the pages. The modern e-book finds a solution to all of the described, resulting in a gradual change of the attitude. Solutions like – mobility and way to read thousands of books on a portable readers, easier access to the data and more effective way of presenting, links to lots of outside sources, low price.

For the users there will be even more data available. The making and the use of an e-book will be within the power of public structures, commercial companies and even the average client. The possibilities to present information in an effective and abstract way will be extended. The new online media will make room for this invention, which meets the expectations and needs of modern society as to receiving information and knowledge.

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## REFERENCES

1. Stoyanov, YR 2011, ‘Opportunities to use social networks in IT training - integrating Web applications into the Facebook interface’, *Annual University Scientific Conference 23-24.06.2011,* University Publishing House Vasil Levski NMU, ISSN 1314-1937, V. Tarnovo, Bulgaria, pp. 112-6.
2. Stoyanov, YR 2013, ‘Software packages for viewing office documents via tablets’, *Annual University Scientific Conference 27-28.06.2013,* University Publishing House Vasil Levski NMU, ISSN 1314-1937, V. Tarnovo, Bulgaria, pp. 96-5.
3. Screencast, 2018, *Official Web Page,* viewed 17 March 2018, <http://www.screencast.com>.
4. Dox, 2018, *Official Web Page,* viewed 17 March 2018, <http://dox.bg>.
5. Mega, 2018, *Official Web Page,* viewed 18 March 2018, < https://mega.nz/>.
6. Google Drive, 2018, *Official Web Page,* viewed 19 March 2018, <http://drive.google.com>.
7. DropBox, 2018, *Official Web Page,* viewed 20 March 2018, <https://www.dropbox.com>.
8. Sugar Sync, 2018, *Official Web Page,* viewed 20 March 2018, <https://www.sugarsync.com>.
9. Just cloud, 2018, *Official Web Page,* viewed 22 March 2018, <http://www.justcloud.com>.
10. ADrive, 2018, *Official Web Page,* viewed 22 March 2018, <http://wwwadrive.com>.
11. YouSendIt, 2018, *Official Web Page,* viewed 22 March 2018, <https://www.yousendit.com>.

12. Stoyanov, YR 2013, 'Web services for global sharing of learning resources', *Annual University Scientific Conference,* University Publishing House Vasil Levski NMU, ISSN 1314-1937, V. Tarnovo, Bulgaria, pp. 91-5.
13. Owncloud, 2018, *Official Web Page,* viewed 26 March 2018, <https://owncloud.org>.
14. Amazon, 2018, *Official Web Page,* viewed 20 June 2018, < https://www.amazon.com/>.
15. Stoyanov, YR 2013, 'Opportunities to use Amazon Kindle in learning', *Annual University Scientific Conference,* University Publishing House Vasil Levski NMU, ISSN 1314-1937, V. Tarnovo, Bulgaria, pp. 101-7.
16. Calibre, 2018, *Official Web Page,* viewed 20 February 2018, < https://calibre-ebook.com//>.
17. Stoyanov, YR 2011, 'Development of human resources in BG Army through mobile learning', *CIO-Chief Information Officer,* ICT Media, September, p.50.
18. Stoyanov, YR 2012, *Computer Communications*, DVD, University Publishing House Vasil Levski NMU, DVD ISBN 978-954-753-087-4, V. Tarnovo, Bulgaria.
19. Stoyanov, YR 2013, *Organizing a tablet class for distance learning*, DVD, University Publishing House Vasil Levski NMU, DVD ISBN 978-954-753-103-1, V. Tarnovo, Bulgaria.
20. Wordpress, 2018, *Official Web Page,* viewed 06 January 2018, <https://wordpress.org>.
21. Stoyanov, YR 2018, 'New ways to present information and data on the WEB', *International Scientific journal INDUSTRY 4.0,* Scientific Technical UNION of mechanical engineering, ISSN (WEB) 2534-997X, ISSN (PRINT) 2534-8582, Year III ISSUE 3/2018, pp.124-125.
22. Stoyanov, YR 2014, 'Using Wordpress as a distance learning environment', *Annual University Scientific Conference,* University Publishing House Vasil Levski NMU, ISSN 1314-1937, V. Tarnovo, Bulgaria, pp. 85-7.
23. PrestaShop, 2018, *Official Web Page,* viewed 12 July 2018, <https://www.prestashop.com>.
24. Magento, 2018, *Official Web Page,* viewed 12 July 2018, <https://magento.com>.
25. Open Card, 2018, *Official Web Page,* viewed 12 July 2018, <https://www.opencart.com/>.
26. WooComers, 2018, *Official Web Page,* viewed 12 July 2018, <https://woocommerce.com/>.
27. Stoyanov, YR 2018, 'SMS micro payments in WEB', *Annual University Scientific Conference with International Participation 14-15.06.2018,* University Publishing House Vasil Levski NMU, ISSN 1314-1937, V. Tarnovo, Bulgaria, pp. 120-5.
28. Stoyanov, YR 2012, 'cFTP capabilities for client-oriented file transfer in training', *10th Jubilee Scientific Conference on the 10th anniversary of the foundation of the Vasil Levski NMU,* University Publishing House Vasil Levski NMU, ISBN 978-954-753-095-9, V. Tarnovo, Bulgaria, pp. 9-4.
29. Stoyanov, YR 2003, 'Design of Web Content with educational Content', *The Bulgarian Way to NATO - Prospects and Priorities,* University Publishing House Vasil Levski NMU, ISSN 0861-0312, V. Tarnovo, Bulgaria, pp. 430-6.
30. Apache server, 2018, *The Apache HTTP Server Project - Official Web Page,* viewed 15 May 2018, <https://httpd.apache.org/>.