NATIONAL AGENCY for European Educational Programmes and Mobility

"Integrating E-Learning and Open Educational Resources into Classroom" – iOERc

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"E-Learning Tutorial for High School Teachers on ICT in classroom"

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"E-Learning Tutorial for High School Teachers on ICT in classroom"

Authors:

Zoran Zdravev - Goce Delcev University, Stip, Macedonia
Biljana Zlatanovska - Goce Delcev University, Stip, Macedonia
Aleksandar Krstev - Goce Delcev University, Stip, Macedonia
Igor Stojanovik - Goce Delcev University, Stip, Macedonia
Kiril Barbareev - Goce Delcev University, Stip, Macedonia

Lecturer:

Vesna Ristova

Content

1. Introduction

In the course of this project, information were gathered on the current level of ICT implementation in the high schools participating in the project (Stoyanova L. et al, 2016). The gatehered information were focused on the current use of e-learning and OER (a tag that will be used further in the document for open educational resources) and the level of their interaction and implementation in teaching. The gathered information as past experience was presented at the joint meetings conducted with the participants of the project. The representatives of UGD and TUS made a comprehensive analysis and systematization of the findings in order to develop recommendations for integration of e-learning and OER. Analysis and systematization were made and as pdf publications [1] were posted online and were made available for use by the general public, not only for the teachers and schools that are partners in this project.

Then recommendations for integrating e-learning and OER, by means of specific measures and action plan, were made. The recommendations were tailored to their specific requirements (together with an action plan). The previously identified best practices were defined and a plan was developed to be implemented in all schools within the project. The fact is that technology is changing rapidly, so the current technologies and the latest scientific achievements were taken into account. This document identified the teaching subjects: mathematics, physics and arts, which are common to the secondary schools participating in the project and for which digital learning content was developed. The digital educational content for these subjects was developed by teachers in the final phase of the project. The recommendations were presented at the joint meetings held with the project participants, which were organized in the member countries of the project. According to what has been done so far in the project, attention needs to be paid to other aspects related to OERs in the classroom. For this part of the project, pdf publication [2] was made and was published online and available for use by the wider public, not only for the teachers and schools that are partners in this project.

This document covers several aspects of OERs related to classroom education. The first is the need to share resources from OERs in classroom education by reviewing and comparing the resources used in the classroom in the past and today by highlighting the benefits of sharing resources covered by global OERs. When it comes to sharing educational resources, it is necessary to mention licensing them through the copyright protection of their creators and the benefits of them. Furthermore, guidanance was given to finding and remixing e-learning and OER in classroom teachimg, in the end focusing on the tools that are available to us and that can be used to share resources from OERs. These aspects were presented at an event organized within the project in the presence of representatives of the project partners. The document was published online as a pdf publication available to the general public. It will provide benefits for teachers, students and the wider scientific community.

2. The need for sharing resources from OERs in education

The need for sharing OER in education is enormous and will be discussed here through the need for global sharing and the need to share in schools which have the greatest need for such resources.

Education as a collection of educational content is a process of changing the personality in the desired direction, by transferring already existing knowledge, experiences, skills and values from generation to generation. Education in the past, but also today, takes place in classrooms, where educators use different materials with contents that students should master, learn and apply in their later life. In the past, materials in the form of commercial textbooks and books were used in the education process, which required the allocation of a significant amount of financial resources as costs required for their writing, printing, replication and sharing. It was also the main reason why, in the distant past, education was a privilege only of the rich. Later, with the strengthening of the state and its need for a larger number of educated people as drivers of development and acquisition of a greater number of resources that gave the country's elite numerous privileges, poorer but promising children were given the opportunity to study as the benefits from them were greater than the cost for educating them. Thus, access to schools as main places for education became affordable for larger number of people as children from poorer families were allowed to attend schools. The vast distance between people, people from different parts of the world and their mixing, mthe mixing of different cultures, led to large transport costs, using huge human resources, and therefore, sharing of educational materials was difficult and almost impossible, especially for financially weaker countries. Thus, each state had its own education system and its own educational materials, which were very rarely shared and exchanged with other people in the neighbouring countries, and it was absolutely impossible to share and exchange educational materials with people from different parts of the world. Thus, sharing of knowledge, experiences, skills and values through the education process was limited and each state was a closed system that by definition is not comprehensive and limiting in every sense of human life. This, on the other hand, slows the development of society and limits the resources of the state, not to mention the modernization and facilitation of human life, the possibility of its upgrading, the penetration into the mechanisms of nature and its subordination to the needs of man, increasing the human life span and finding a greater meaning in life.

With the development of ICT, the global image of the education process is changing. The use of the Internet worldwide is becoming a top priority for schools, educators, and even for every individual. It becomes the main source of information, knowledge, skills and values among different nations, cultures, religions, and a globally acceptable way of sharing them. The

distance between people and states is no longer a problem. People from anywhere in the world have never been so close to each other as today.

Modern ICT and its general acceptance at every level in the country enabled the creation and use of OERs (open educational resources) universally supported by universities around the world. OERs has many definitions, but it all comes down to learning materials that are freely available online for everyone to use them independently whether it's an educator, a student, a learner, in the form of courses, programs, games, lectures, assignments, text, audio, video, multimedia, or combinations of them. They can be focused on learning a lesson, a target module, an entire course, or a study program. They can also use a specific learning methodology or a specific access methodology.

A great advantage of using and sharing OERs is its financial dimension and the ability to learn, inform, exchange and share without any financial implication for users, whichmakes it generally acceptable for each individual, for each educator, for each student or learner. Thus, the financial implications that were necessary for the use and sharing of commercial textbooks and books are now redundant and unnecessary. OERs can be shared with others without permission and without being paid. OERs improve the quality of teaching and learning by sharing open content between educators and students at local, national and global level. Thus, the open content that is shared can differ in form, structure or approach, but in the process they undergo a variety of upgrades, quality improvements, a blend of different considerations by educators coming from schools and universities on local level or globally. However, they all have a common feature: open content provides greater flexibility in use, reuse and adaptation of materials at different levels and in different learning environments.

Therefore, we can generally conclude that the global sharing of OER nowadays is a necessity, it requires and covers many segments of today's education, which does not take place only in the classroom, but also outside of it. However, the need to share OERs in the process of classroom education is not only a necessity, but also without it the educational process can not be imagined. The need for sharing OER in education is discussed at the highest level among education ministers, senior policy makers, practitioners, researchers and relevant stakeholders from all over the world at the OER World Congress (UNESCO 2012) [3]. The Harvard Professor Dr. Lawrence Lessing emphasized the need and importance of sharing open educational content from academic medical research. Mr. Daniel Daniel as Project Director for encouraging government support for global OER as key priorities of the Congress said that it was necessary for all countries (not only developed ones) to make a contribution to OERs and to allow OERs to be shared in all languages for better accessibility for nations worldwide. Regarding the need to share resources from OERs in education, we discuss in [8].

Generalizing the previous, together with [3], [8], we can say with certainty that today the need to share OERs in education on a global scale is based on the following reasons:

• Free access without any financial implications, requesting or obtaining any permissions to use OERs globally;

• Acquiring new knowledge, skills and experiences from every part of the world and their application and adaptation in different learning environments;

• Getting acquainted with new methodologies for education are aimed at improving the quality of teaching and adapting the teaching material to the needs of students;

• Enrich the existing material by inserting new material, modeling and filtering the existing one to be better known or more accessible;

• Each content can be formatted, remixed and made more suitable for use on various devices (for example, mobile phones, tablets);

• Each content can be formatted, remixed and adjusted for different age of students in the education process;

• The content can be combined from different sources and different experiences on the same issue can be exchanged;

• It is permitted to translat content into different languages and to be used locally, depending on the needs of users and as such to be re-shared;

• When solving problems, one can use existing solutions that have been proved as a successful story. They should be adapted to current problems and, if necessary, upgraded for greater efficiency. Finally, they can be shared with others;

• Improvement of the quality of shared content that can be accessed by highly educated staff from various disciplines and from universities around the world. Thus, OERs become a relevant source for education;

• With global sharing of OERs, unnecessary duplication of the same content will be avoided;

• Global sharing of OERs is constantly updated and upgraded;

• Using existing OERs for educators is always a better option than creating new OERs, as they can upgrade and adjust content to their learning environment.

3. Licensing

The term licensing of educational content refers to their patenting, ie the acquisition of copyrights over them in order to prohibit copying and sharing without the permission of their holder. Traditional licensing in the past for commercial content like textbooks, books, magazines, etc. was done via publishing houses that bought them from the creators, and the authors became exclusive copyright holders. By owning copyrights they had the exclusivity to allow their sharing and copying on the basis of earning income from them. Obtaining such permits took place slowly and depended on the desire of the publishing house. Normally, the greatest benefit to the financial implications and promotion was not to the creator of the educational content as an author, but to the publishing house as copyright holder.

The first form of copyright law appeared in the United Kingdom. There copyright law is evaluated by the "Statute of Queen Anne" known as the Copyright Act dating from 1710 adopted in the form of an Act of Parliament in the UK, [4]. Later, in Britain, this law was changed and upgraded in the direction of better copyright protection of original creators. Other developed counties were working on that, as well.

Nowadays, as in the past, there are commercial publishers for commercial content that contain technical measures for protection with the so-called "digital locks" [6]. Commercial publishers control how, when, where and by what certain brands will reach users. Basically according to [6], we can name the restrictions as:

• Availability to only one format and only one device;

• Prohibiting certain options such as adding new content, banning printing, banning sharing with third parties, etc .;

• A ban on the use of audio and video applications by those with audio or visual disturbances;

• Geographical restrictions on the use of resources outside a particular region;

• Deletion of the contents after the expiration of the period for paid use or expiration of the license for use thereof;

• Accepting the change of license upon the issuer's request;

• Possibility of the author to have access to the user's device's content with an option to change what the user can use or restrictions of use, etc.

With OERs we do not have such technical limitations and therefore OERs are very convenient for use and sharing in the education process. Today, having in mind the type, use and free access of OER, the question of how licensing and protection of the creators' copyrights over the constantly changing contents in the process of sharing by third parties is regulated. Creators become authors whose copyrights should be protected.

The copyright law differs from country to country, but in every country it should provide legal protection of original works. Thus, regarding legal aspects of OERs, in order to protect its content, it is necessary for anyone who creates, to consult a legal expert or the legal department of the institution where he/she works and under which authority the original is created, so that the content with protected copyright is distributed and shared as part of the global OERs.

The definition of OER given by William and Flora Hewlett Foundation [7] defines OERs as learning and research resources placed in a public domain or free in accordance with some international licenses, which allow their free use and remixing with a new content. So, OER are author licensed materials in open-source format freely available for teaching, learning and research, and allow teachers, students and self-learners to re-use and adapt to their needs and goals.

At the world congress of OER (UNESCO 2012), [3] a declaration has been adopted that is a historic moment for the development and sharing of OERs globally with an appeal to governments around the world to license the open and publicly financed educational materials for open use, through a public domain (an example of such educational content [10]) or an open license to use in terms of access, use and redistribution without any costs or limiting resources. According to them, OERs are usually accompanied by a digital copyright license to be used for their purposes and to share learning resources. Thus, the network of future OERs developers can be without limits and without any restrictions.

According to [6], OERs should be placed within a licensed system where it is possible open content to be customized and shared with others. Creative Commons (CC) are being mentioned in this context where it is clear how the materials can be used, customized and shared with others.

As a good option of licensing content as part of global OER are the so-called open licenses. They appear as an option in the strive to protect copyright in environments where particularly digital content can be easily copied without permission. They require copying and sharing content to remain in the legal framework for maintaining the copyright status. These copyright permissions are more flexible in the use of content from OER than the commercial contents with traditional copyrights. It is interesting that they allow not only the use of existing content that is authorized, but also their adjustment and upgrade to the needs of future users. In any case, the author retains the copyright and the merit is exclusevly his own without giving it to a publisher. This is good for individual and institutional marketing internationally.

As a tool for obtaining an open license for his/her work, a "License for Your Work" from the Creative Commons (CC) site can be used, through which each educator can make sure that his work is secure and copyrighted. As they say on their site, [9]: "CC helps you legally share your knowledge and creativity to build a more equitable, more accessible and innovative world - freeing up the full potential of the internet to take us to a new era of development, growth and productivity. "In other words, the CC license through their site, [9] gives educators

or their institutions copyright over their resources when used by third parties. With the authors, ie the creators of the OER, the CC provides:

• their name in the form of "specified source" remains when third parties open and use their content they created;

• their content remains in its original form (although this restriction is not ideal for education, as other teachers want to make changes of the resources for their adaptation);

• any change to the content must also be openly licensed;

• content can not be used for commercial purposes without permission, etc.

The process of licensing one's own materials goes in the following way. Before licensing one's own educational content included in the global OER, copyrighted content that is required to obtain a license to use was also used. If it's about parts of textbooks, pictures from magazines, etc. which fall into the so-called commercially published resources and because of the publishers' desire to be exclusive copyright holders in terms of receiving royalties, it is unlikely that a positive response can be obtained. Therefore, such content should be replaced with content that already exists in global OERs and which already has an open license. In order to obtain an open license, it is necessary to contact those who have the right to issue such a license, such as CC, specifying the type of content that will be included in the global OER to issue a license for use, as well as their upgrade in the sharing process. Normally, you should wait for their response on copyright license issuing, and if there is no response, it should not be understood that the copyright permission has been obtained. Such example of open licenses are YouTube video clips where students can create their own videos by remixing the existing ones into their classroom.

OERs require that the institutions, in particular the educational ones, continuously invest in the development of courses and other educational content as part of global OER, adaptation of existing educational content and licensing negotiations for the acquisition of copyrights if they are not already openly licensed, with the aim of improving the quality of teaching.

OER strive to precisely determine what contents and materials that are of public educational interest, to separate thems from purely commercial content and to facilitate access to them, and at the same time to protect the rights of authors from various abuses. Furthermore, those contents that are defined as of a public interest in education, previously taxed, should become completely free for further use and distribution.

During the 20th century, many "open" philosophies and models emerged that shared the desire for free sharing, preventing the creation of duplicates, avoiding restrictive copyrights, promoting economic efficiency, and increasing access to stakeholders.

4. "Creative Commons" and Open Educational Resources

World experiences show that with gradual legal improvements and adjustments it is possible to reconcile and coordinate these two seemingly irreconcilable poles, i.e. free distribution and copyright protection. An example of one of the most successful formulas is the licensing system, edited by Creative Commons (http://www.creativecommons.org), which is also applicable in Macedonia (http://cc.org.mk) . The "Creative Commons", in turn, covers the free use of the so-called Creative Commons licenses by artists, authors, developers who want to keep some of their copyrights for themselves, and partly to leave it to the audience, thus stimulating greater promotion and usefulness of partially protected works. Thus, the link between the philosophy on which OER and the Creative Commons are based is clear. They not only conceptually come closer, but also cooperate with each other.

Creators of educational content often use Creative Commons licenses to make them public. But "Creative Commons" is more than that. The licenses that characterize this brand are intended for sharing all kinds of creative works that can be published on the Internet, from prose, research and music to entire blogs or websites that advocate the free reuse of everything that is published within their framework .

Creative Commons licenses come between fully protected copyright and public domain, which includes works that can be used without any restrictions or conditions. Being somewhere in the middle, these licenses allow the protection of copyright works against unwanted uses, while at the same time encouraging collaboration, upgrading the knowledge, creativity, and the volume of available content on the Internet. Thus, both those who share and those for whom the content is shared, benefit.

If you are an author of a work and want to publish it under the Creative Commons license, you should go to creativecommons.org/choose and answer the short questionnaire, on the basis of which a code will be generated, which you then need to embed in your site, presentation, document, etc. The entire procedure takes place on the Internet and takes a few minutes.

The license obtained corresponds to the conditions that you accepted or refused when replying to the questionnaire, but in order to fully understand what you are giving and what is prohibited to others, it's good to distinguish between the six types of Creative Commons licenses:

• Attribution
• Attribution – Share alike
• Attribution – No derivatives

»» Attribution – Non-commercial
»» Attribution - Noncommercial - Share alike
»» Attribution - Noncommercial-No derivatives

As can be noted, the basic requirement in each license is to cite a source to the original work when it is reused by someone else. This makes it possible to give credit to the authors of the original works while using and disseminating them.
When determining the conditions, the author may require the sharing of the works is done under the same or similar conditions with those he has cited. Simplified, "if my work is under the Creative Commons license, you will have to use the same one when you publish your work that is derived from my own."
The third condition limits the use of works only as they are, that is, it is prohibited to make any changes. The author may prohibit the use of his works for commercial purposes, as well as to combine all of these conditions to set a higher degree of protection.

In all cases, those who come across a work published under "Creative Commons" have the right to copy, distribute and publicly display it.

Creative Commons licenses are legal documents that are subject to copyright law. If someone violates the terms prescribed in the author's license, appropriate measures may be applied to him as provided in the law.

In Macedonia, only limited reproduction of educational materials is legally allowed, and the materials that are financed by citizens' taxes are commonly paid by the final beneficiaries, students, students, researchers, etc.:

"It is legally allowed to reproduce in textbooks, workbooks and other publications of a similar nature, copyright works in parts or in whole when it comes to short copyright works and works in the field of photography, fine arts and applied art, architecture, design and cartography, solely for illustration in non-commercial purposes.

Creative Commons are easy to use and are based on the following:

1. the Legal Code, that is the dense legal "fine print" license document;

2. the Commons Deed, that is, a simple, plain-English summary of the license, together with the relevant icon/s that indicates the cope of permitted use;

3. the Digital Code, that is, metadata that highlights what license is attached to the content.

Creative Commons licenses are based on the following components:

1. Attribution: original creator/author credit
2. Share alike: when a derivative work has been created of another work, it may be distributed under conditions/license identical to that covering the original work
3. Non-commercial: it is prohibited to use the work for commercial purposes
4. No derivative works: free access but no derivative works can be based upon it

Based on the above-mentioned 4 criterias, Creative Commons distinguishes 6 types of licenses:

 Attribution-CC BY	This is the most acommodating of the licenses offered, in terms of what others can d with your work. It lets others copy, distribute, re-useand build upon your work, even commercially, as long as they credit you for the original creation.
 Attribution-ShareAlike CC BY-SA	This license lets others re-use and build upon your work even for commercial purposes, as long as they credit you and license any derivative works under identical terms. This license is often compared to "copyleft" free and open software licenses. All new works based on yours carry the same license, so that all derivates will be allowed for commercial use. This license is used by Wikipedia, and recommended for materials that will benefit by incorporating content on Wikipedia and similarly licensed projects.
 Attribution-NoDerivs CC BY-ND	This license allows use of a work in its current form for both commercial and no commercial purposes, as long as it is not changed in any way or used to make derivati works, and credit is given to the original author.
 Attribution-NonCommercial-ShareAlike CC BY-NC-SA	This license lets others re-use and build upon your work, as long as it is for no commercial purposes, they credit you and they license their new creations under identical terms.
 Attribution-NonCommercial CC BY-NC	This license lets others copy, dstribute, re-use and build upon your work, as lo as it is not for commercial purposes and they credit you as the original author.
 Attribution-NonCommercial-NoDerivs CC BY-NC-ND	This is the most restrictive of the six core licenses. It is often called the "advertising" license because it only allows a work to be copied and shared with others in its original form, and only for non-commercial purposes and where credit is provided to the oiginal author. This license does not allow the creation of derivative works, or the use of the work for commercial purposes.

Selecting the right license

Creative commons gives you the opportunity to choose the appropriate license, which allows you to decide in the context of the sharing of the adapted material and its commercial exploitation. Based on this, the tool gives the opportunity to choose the most appropriate license. It also gives you the ability to add metadata to your resource for easier tracking and then allows you to insert a set of code (s) to attach to any digital resource as a frame of it.

The terms of the licenses also limit the possibility that a work may be used and remixed in other publications. By using CC licenses, it is important to note that the remixing rule is in compliance with the terms of the license.

Creative commons gives you the opportunity to choose the appropriate license according to the given diagram - table:

Compatibility scheme		Terms under which a Derivative Work or adjustment can be used						
		BY	BY-NC	BY-NC-ND	BY-NC-SA	BY-ND	BY-SA	PD
Status of the original work	PD							
	BY							
	BY-NC							
	BY-NC-ND							
	BY-NC-SA							
	BY-ND							
	BY-SA							

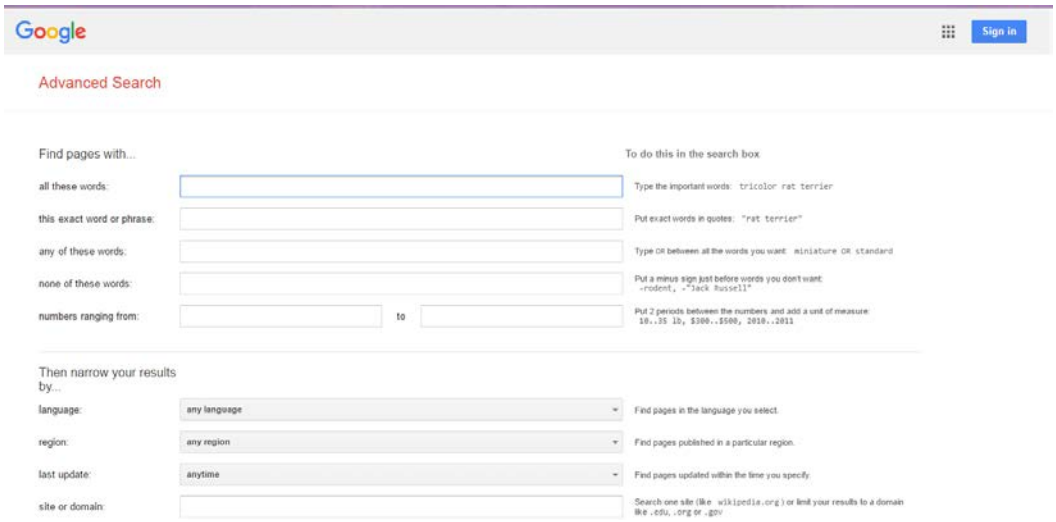
Original work	**Commercial collection**	**Non-commercial collection**
PD		
BY		
BY-NC		
BY-NC-ND		
BY-NC-SA		
BY-ND		
BY-SA		

5. Finding and remixing content from OERs

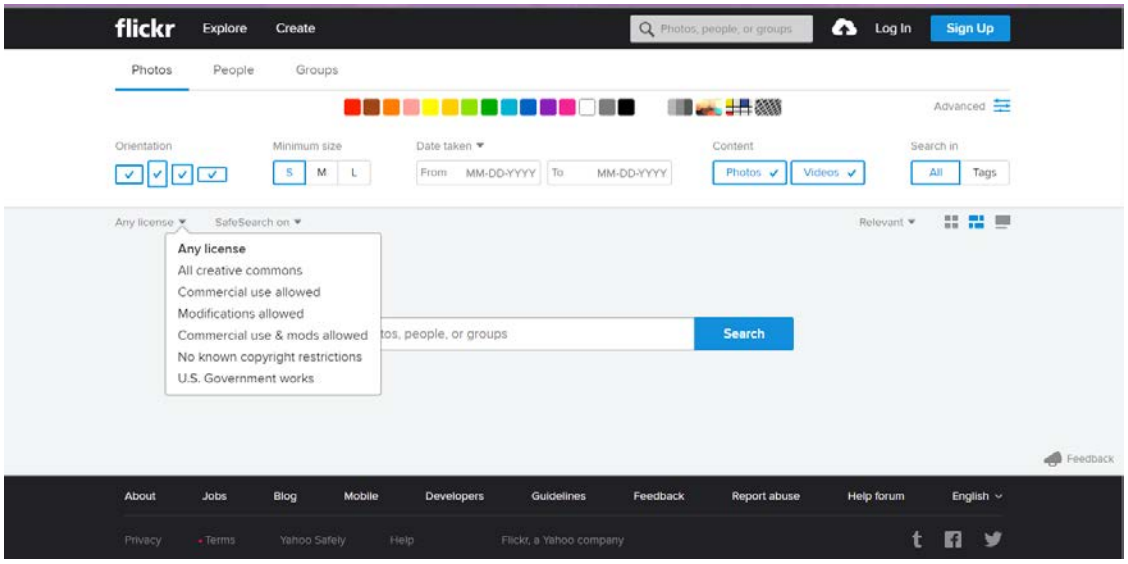
In order to be able to use the contents of the OER, to change it, to adapt it for the educators' needs, as well as to use it as an idea for creating their own original content, the first step is always to find, but also to see what type of open license they have. With some open licenses, the content can be downloaded and used without changing and adapting it, but for some it is allowed to download, change and adapt to the educator's own needs (see section 3). Today there are too much content on the Internet that everyone has access to, and in the education process and it is good to use openly licensed educational content.

Finding OERs across the global Internet network is very easy when you use CC open licenses as they give more flexible permissions for finding and reusing resources. Openly licensed CC resources can be found with already known search engines and web sites.

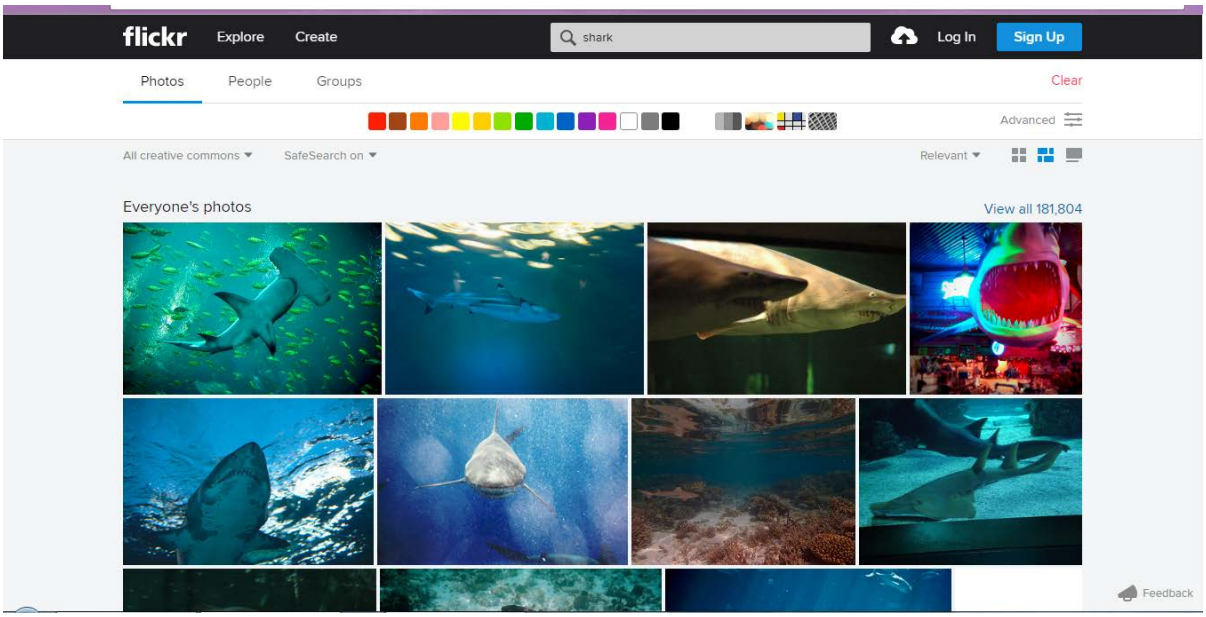
For example, the GOOGLE search engine has advanced search for the use of content that has an open license to use and share, and using the link http://www.google.com/advanced_search we use this advanced search that gives us:



With the Flickr website that links to https://www.flickr.com/search/advanced/, images can be shared by using CC open licensed content

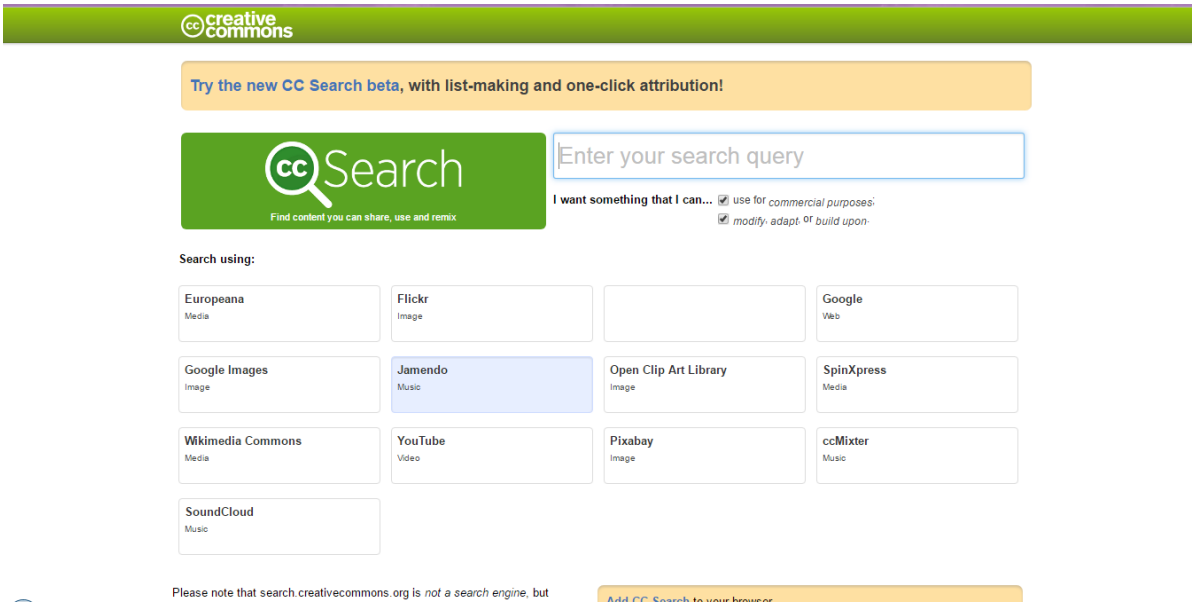


For example, if with CC open licenses we search with the keyword "shark" – we get 181 804 images of sharks that are in original form, not modified and as such available to be used by educators and students. The first few images are given with the following picture:



But this web site allows us to use other open licenses, and with them we get 1 279 319 original shark images ready for use by educators and students.

The CC system for the open licenses for OERs itself has a link https://search.creativecommons.org/ which after opening looks like this:



It provides access to various search engines and web sites that come with CC open licensed content that includes text, music and images.

Web sites with OERs content are used for specific content or specific subject. These web sites provide a school level of resources. According to [14], such web sites are:

• ORBIT with the link http://oer.educ.cam.ac.uk/ is a web-site at the School of Education at Cambridge University and abounds with many materials intended for teaching mathematics and science in primary and secondary schools that use ICT in teaching.

• DigiLit Leicester project with the link http://digilitleicester.com focuses on digital literacy in schools and assists teachers. The range of activities in the project was created by a team that had CC-free licenses. As part of this project, Skype collaboration was also involved with the live coverage of children from South Africa.

• PHET with the link http://phet.colorado.edu/ abounds in educational simulations for the following school subjects: physics, chemistry, biology and earth science.

•Virtual Genetics Education Center with link http://www2.le.ac.uk/departments/genetics/vgec offers teaching resources and content with a CC open license.

• Open Education Europa with the link http://openeducationeuropa.eu/ is a great web site that, in addition to offering resources, offers links to other resources containing resources and covering different educational areas for primary and secondary schools with different open licenses, normally with CC open licenses.

• Digital Futures and Teacher Education with the link http://www.digitalfutures.org/ contains resources for the professional development of teachers with new pedagogical content that facilitates the work of teachers by using digital technology and new social media for learning.

If the content found has an open license to download, change and adapt the content then each educator can do so (see section 3). But many educators often do not know what the word "adaptation" means and what can and what can not be done to the found and downloaded content so that it to be considered as adapted. Therefore, before making any changes or adjustments to a given content that is allowed to change and adaptation, it is best for each educator to ask the question: What is meant by the word "adaptation"? According to [14], while modification and adaptation of the found and downloaded content the following rules should be taken into consideration:

1. Changing an image obtained from another image by cutting is adaptation;

2. Translating a short story from one language to another is adaptation;

3. Photoshop of an image with additions or change of its original elements is adaptation;

4. Creation of a new song by having as an example another already known song is adaptation;

5. Adding a song as a tone record when creating a new original video is adaptation.

But there are also interventions on the found and downloaded content that are not considered to be changing and adaptation. Thats all:

1. Including a short story in a set of short stories;

2. Use of non-licensed (unlicensed) video as a live concert background;

3. Reproduction of a non-licensed (unlicensed) image on a web site or document (applies only to a word or a power point document).

Very often, educators find and download some content and change it and adapt it for their own needs (normally, if it is allowed with the open license of the given content), and there is a need for them to cross it with some other content they find and download with permission (that can or cannot be changed and adapted with permission). Such an interlacing of content while creating a new educational content is called a process of remixing educational content from OER. The remixing process (according to [14]) dates back to 1980 as a process that occured in music, when musicians began to mix, ie to remix different styles of music such as jazz, blues and reggae by adding their own rapes, and in doing so created a new sound like hip-hop as a new style in music. Such experiments were made by thousands of musicians later, and extremely rich music was created.

Since culture has always been based on the past, connecting the experience and the achievements of the past with creations of the present, a richer and more original culture is obtained. The same thing is happening in other areas of human life, as in science where scientists' research is the focus. Educators do not lag behind. All of them, learning from achievements and scientific discoveries in the past and remixing them with their own ideas and creations, come to new scientific discoveries. Especially with the emergence of the Internet, the range of materials with such content available from all over the world allow remixing of new ideas and creations of other people worldwide. In our digital era, it is much easier for everyone, including students, to reach new innovative things, which becomes an extra motivation for their creativity and creation of new content for education, new art, new music, new films, etc. Thus, lending, adapting and remixing content is a part of a creative process.

However, finding, borrowing, adapting and remixing content from the OERs has some rules under which these processes take place and no one should replace them by creating their own rules of the game.

Earlier we mentioned that CC provides easier search for educational content from OERs that can be used, processed and enriched with the creativity of educators and as such to share them with other educators through different internet networks around the world. According to [14], there are five rules that regulate this segment and they are:

Rule 1: When using CC openly licensed materials, it is always necessary to mark them in the newly created text as a used source in the creation of the new one. This rule includes the following four things when using such content:

1. Title of the content used;

2. Specifying the URL or web address from which the content is taken as educational content or for the creation of new educational content;

3. Name of the author who created the educational content;

4. Provide the CC open license with the web address for the availability of educational content.

For example, the image below was adapted by cutting of the first page of the content with the following download data:

1. Title: Free to mix

2. Web address of download: http://resources.creativecommons.org.nz/Free-to-mix/

3. Name of the author who created it: Creative Commons Aotearoa NZ Resources

4.Availability of CC open license with its web address: https://creativecommons.org/licenses/by/3.0/

This process of referring to the given resource allows avoiding of the accusations of the so-called "plagiarism", which protects the creative ideas of the authors. It is morally correct to identify and give merit to the author / authors for the borrowed content. But not always, educators are people of moral and therefore this segment is also regulated by a copyright law, which is part of every country's legislation. This law contains provisions according to which

the plagiarism carries certain sanctions in the career of the educator, and but also has financial implications for him.

Rule 2: Content from CC open licensed OERs can be used without any changes or adaptations for as long as educators need them as such, and as long as they comply with Rule 1 and until they are used commercially. Such content can be found and the following actions are allowed:

1. Copying lessons or copying educational plans that will later be used for education (for example, downloading and copying of an already prepared educational plan for a school subject);

2. Sharing of such content with other educators who need them to educate students (for example, an educational plan for a school subject is needed by several teachers who teach the same subject to different students and it has already been prepared, when found can be downloaded and shared);

3. Sharing school web sites for more successful education (for example, for a particular subject, the teacher, apart from the basic material, gives students additional content from OERs with open CC licenses with the same contents that are covered by the curriculum and sharing program for more successful education);

4. Such contents can be used in the course of an educational process (for example, music can be taken for choreography for an educational play);

5. Educational contents can be taken and inserted in other documents that serve for education, but not for commercial use (for example, when making a presentation, original downloaded images or graphs are included in order to increase the educational value of the presentation).

These five points are permitted only under conditions if educators, when implementing such a process, adhere to Rule 1 and the downloaded content is strictly non-commercial, but exclusevly for education.

Rule 3: Content from OER with SS open license can be freely used, adapted and changed with new creative ideas as long as they are used for non-commercial purposes.

This rule applies only on condition that rule 1 is respected, in which all freely used educational content is to be labeled as used content.

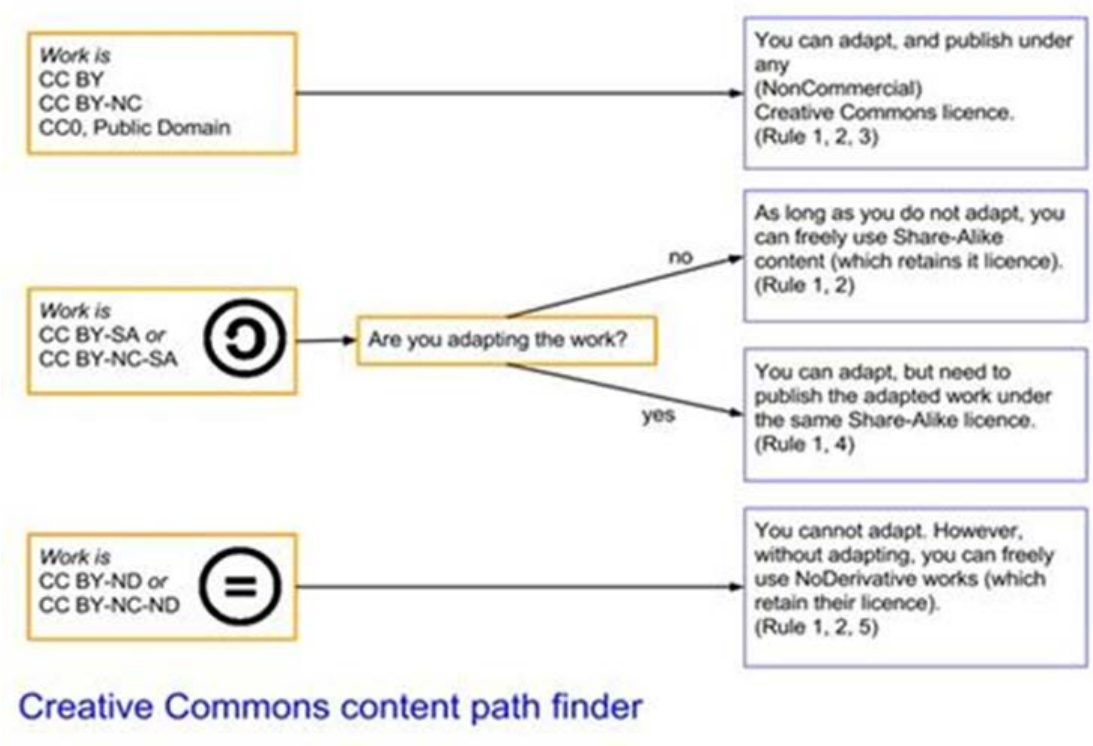
Rule 4: Content from OER with CC open license for which sharing is allowed can be adapted while using new original educational content or a new adapted version that will also have an CC open license.

The conditions and the way to request an open SS license is given in section 2.

Rule 5: The contents from OERs with CC open license for which no modifications and adaptations are permitted can be used only by complying with Rule 2.

When using content from OER in CC openly licensed, it is necessary to study the license properly and see if that license allows changes and adaptations. If it is not allowed, it should not be done and it is only necessary to use them according to Rule 2.

From the given so far, regarding the conditions for finding and downloading educational content from OER with CC open license, and the permitted creation of new educational content through changing in the process of adaptation, as well as remixing with other educational content into new educational content and the conditions under which such content will be treated, as OER content through the sharing process, a single diagram has been created, which can serve as a guide for students and educators. That diagram according to [14] is:



6. Sharing content from OERs

After the process of finding and downloading of the existing content from OERs with open licenses, as well as content that can be changed with permission, by adapting with remixing with other content, new educational contents are created with intention to be shared with students or with other educators via the Internet. There are rules for sharing such content. Globally ([14]) there are two basic rules:

1. If you share your own educational content at a course of another educator then you need to have permission from the owner of the course at which the sharing takes place.
2. If the your content integrates educational content from other authors then you need to have permission from the authors or, if the contents are with open licenses as part of the OERs, then such content must be stated as borrowed content.

It should be noted that the copyrights of created educational content as work tasks within the position schoolteacher belong to the school, but educational content created out of educator's work task belongs only to the creator. The educator, in order to share educational resources from OERs on school's website, regardless of whether he has created them or downloaded them from an open license web site as part of his/her tasks, will always have to get permission from the managing authority in the school. Therefore, each school should have defined a precise procedure for finding educational content from available OERs with open licenses that allow downloading and use, as well as modification by adaptation and remixing with other appropriate content. The precise procedure should include a permit whereby employees would share content by uploading on school web sites, for educating, school promotion, building relationships with other educators and other educational organizations, noting that the new content should be licensed with open license under the open licensing procedure. Procedures should be based on professional norms already globally accepted, and they must be simple and quick to implement, without obstacles and time-wasting steps, in order to leave educators time to complete their job professionally.

Each newly created educational content such as text, picture, diagram, video, etc. intended for sharing needs to be licensed with an open license, usually with a CC open license. If there are more colleagues or students involved in it, then all of them have to agree and support licensing and sharing. The content licensed with open licenses and then shared should not incorporate other content without permission from all authors, content that is not openly licensed or content that is not part of any publishing domain.

In order to share content from OERs with an open license that allows adaptation, an important component is their format. The format should be adapted so that other authors can access it, open it, take extracts from it, and include it as part in their work. OpenOffice and Microsoft Office application provide such formats, and as an example of a format that is not

recommended is the PDF format.
Nowadays the Internet offers more ways and tools for sharing educational content than OERs with open licenses. Some of the ways to share educational content are:

1. Directly: via e-mail and via USB

Educational content can be shared with students and other educators directly by sending content via e-mail and by using an external USB storage. However, this way is not so practical because we need direct contact with the person with whom we want to share. Nowadays, we need more often to share with people with whom we cannot make a face-to-face contact.

2. Web pages or blogs (they can be individual or they can belong to the school)

Educators can also create their own web pages and blogs through which they will share educational content with students and colleagues. They do not need permission from the school's governing body and they have more freedom to share with others. Sharing on the school's website is a more sophisticated process because it is based on a procedure that is recommended by the school and should be followed. Usually, more general things that address students, teachers from the whole school, are shared there, and most often, it is used to promote the school.

3. Learning platform such as Moodle

This platform is applied in schools and universities as an e-learning platform and teachers share their lectures and additional educational content to help students prepare themselves for tests and examinations. It offers the possibilitye to make tests, quizzes, etc., to evaluate students' knowledge. It is also possible for students to share homework, seminar papers and other educational documents.

4. Publishing Platforms as Repositories.

Publishing platforms such as repositories refer to the sharing of educational content through publishing. Such are:
- UGD repository with the link http://eprints.ugd.edu.mk/;
- Common Content with the link http://www.commoncontent.org/;
- Wikiversity with the link http://en.wikiversity.org;
- Connexions with the link http://cnx.org/;
- OER Commons with the Link http://www.oercommons.org/, and so on.

5. OERs projects and initiatives

OERs projects initiate and deepen collaboration, stimulate creation of new educational content through joint meetings, presentations and sharing of the content through their official

web sites where all joint materials and creative works are posted. An example of such project is this project with a website (http://ioerc.mk/).

6. Sharing specific OERs, including Evernote

Evernote is a cross-platform app designed for note taking, organizing, and archiving. It is developed by the Evernote Corporation, a private company headquartered in Redwood City, California. The app allows users to create a "note" which can be a piece of formatted text, a full webpage or webpage excerpt, a photograph, a voice memo, or a handwritten "ink" note. Notes can also have file attachments. Notebooks can be added to a stack while notes can be sorted into a notebook, tagged, annotated, edited, given comments, searched, and exported as part of a notebook.

Evernote supports the majority of popular operating system platforms (including macOS, iOS, Chrome OS, Android, Microsoft Windows, Windows Phone, BlackBerry 10, and webOS) and offers online synchronization and backup services.

7. YouTube

YouTube is a popular video sharing site where users can upload, view, rate and evaluate videos of a different type. To set up video content, registration is required while for viewing it is not (unless the material is prohibited for younger than 18). According to the policies for use, users can upload their own videos or videos for which they have the permission by the copyright owner, and it is forbidden to post pornographic material, materials with violence, content that supports crime, and so on. YouTube reserves the right to use, process and delete the material.

8. Conclusion

Open educational resources have emerged as one of the most innovative teaching and learning tools, as an effective mechanism to improve the quality of educational contributions by optimizing the use of available resources. Educational resources are different means and materials that are used in the educational process and in the process of knowledge acquisition. They can include textbooks, workbooks, manuals, various types of dictionaries, professional literature, research, catalogues, as well as computer programs, Internet services and platforms, diverse software, digital databases and data, that is, everything that can be uses in learning and research.

The very concept of OER relies on the notion of David Wiley for "open content" 1 promoted in the 80s and 90s of the 20th century. This compound term extends the idea that there is a link between the open source movement and the movement that advocates open content and usage, especially in education. Wiley actively participated in the creation of the widely accepted open content license "Open Publication License", which facilitates the availability of materials and content.

Although the OERs have an academic and research background, their principles are most precisely defined by the UN and UNESCO, aiming to broaden the advantages and benefits of them. The aim is to facilitate access to education resources and to overcome the gap between rich and poor countries and between classes in the countries themselves. The right to education and access to the means of education is one of the most important human rights, thus, societies have to take care about that. Apart from the United Nations and UNESCO, some of the major supporters of the activities in favor of OER are the Organization for Economic Development and Cooperation (OECD), a number of prestigious universities, among them MIT and many others.

In Europe, the European Union (EU) has the main role in this process through its Open eLearning Content Observatory Services (OLCOS) project as part of the EU eLearning program. The purpose of this project is to create an information online center that will promote OERs concepts, their creation and use, especially open digital educational content (ODOS).

Finally, the very idea of OERs is most preconditioned by the will and enthusiasm of workers in education and the scientific process. Their energy and willingness to connect, facilitate the process of gaining knowledge, find ways to motivate and organize learners, stimulate the desire for knowledge and education among young people, as well as all who believe that learning is a lifelong process. OER belong to the participants in the educational process and their commitment to open education.

Open educational resources have universal significance, that is, they are important for all societies and countries, regardless of the level of their development and the height of the standard of living. In all of them, OERs can significantly contribute to more open and easier education. However, for undeveloped countries, developing countries and societies in transition, free access to educational means has greater significance. We can say that for them the free access to educational resources affects the opportunities for development and prosperity of the society.

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9. Project partners:

"Goce Delchev" University, Stip, Macedonia (Project Coordinator)

Technical University, Sofia, Bulgaria

Curt Nicolin Gymnasiet AB, Finspang, Sweden

SGGUGS "Zdravko Cvetkovski", Skopje, Macedonia

2ELS "Thomas Jefferson", Sofia, Bulgaria

SOU Dobri Daskalov, Kavadarci, Macedonia