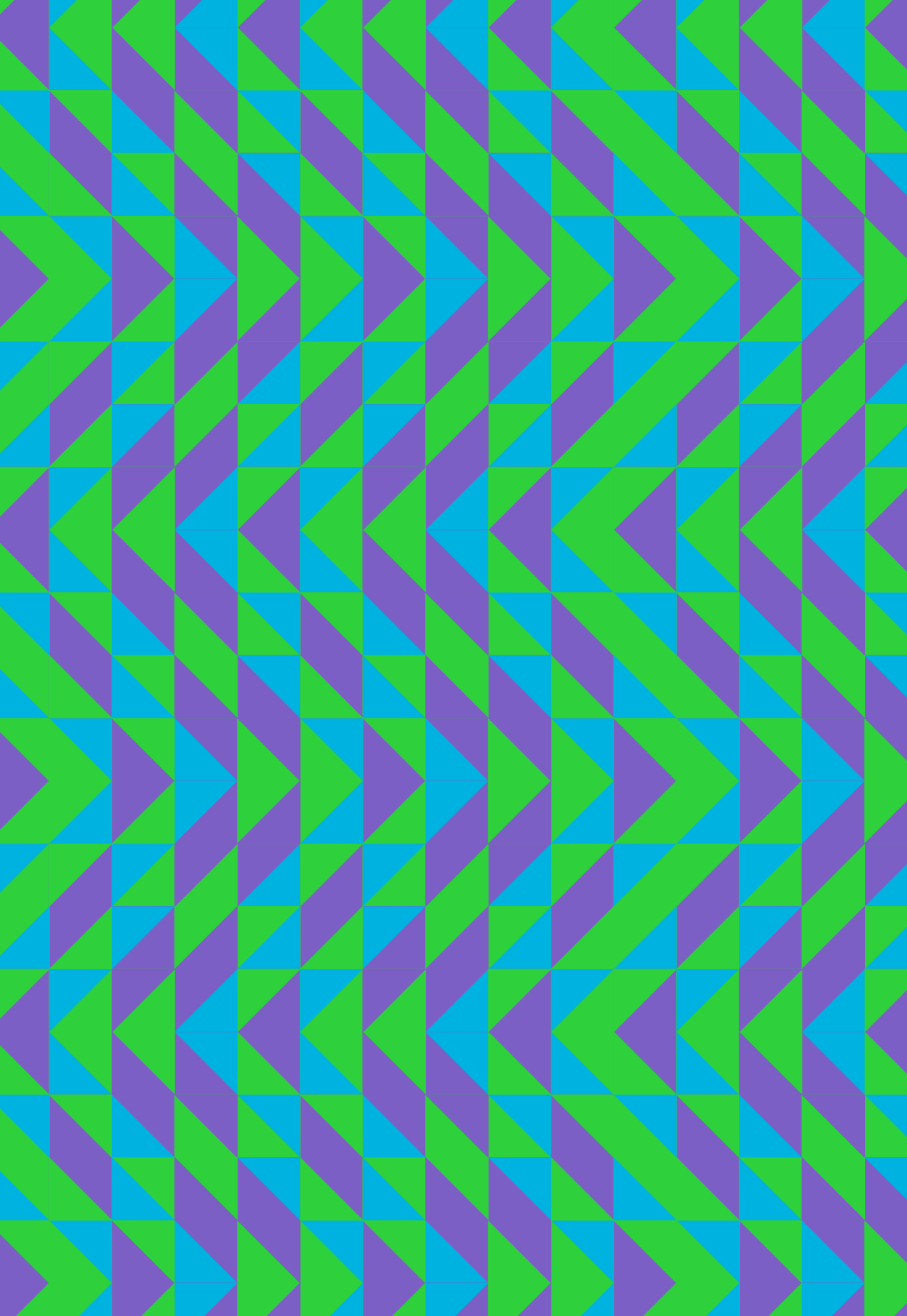




Open Educational Resources in Poland

Conditions and Chances for Development



Open Educational Resources in Poland

**Conditions and Chances
for Development**

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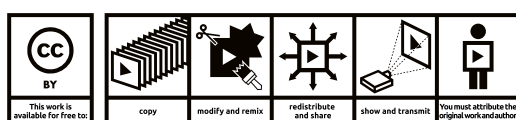
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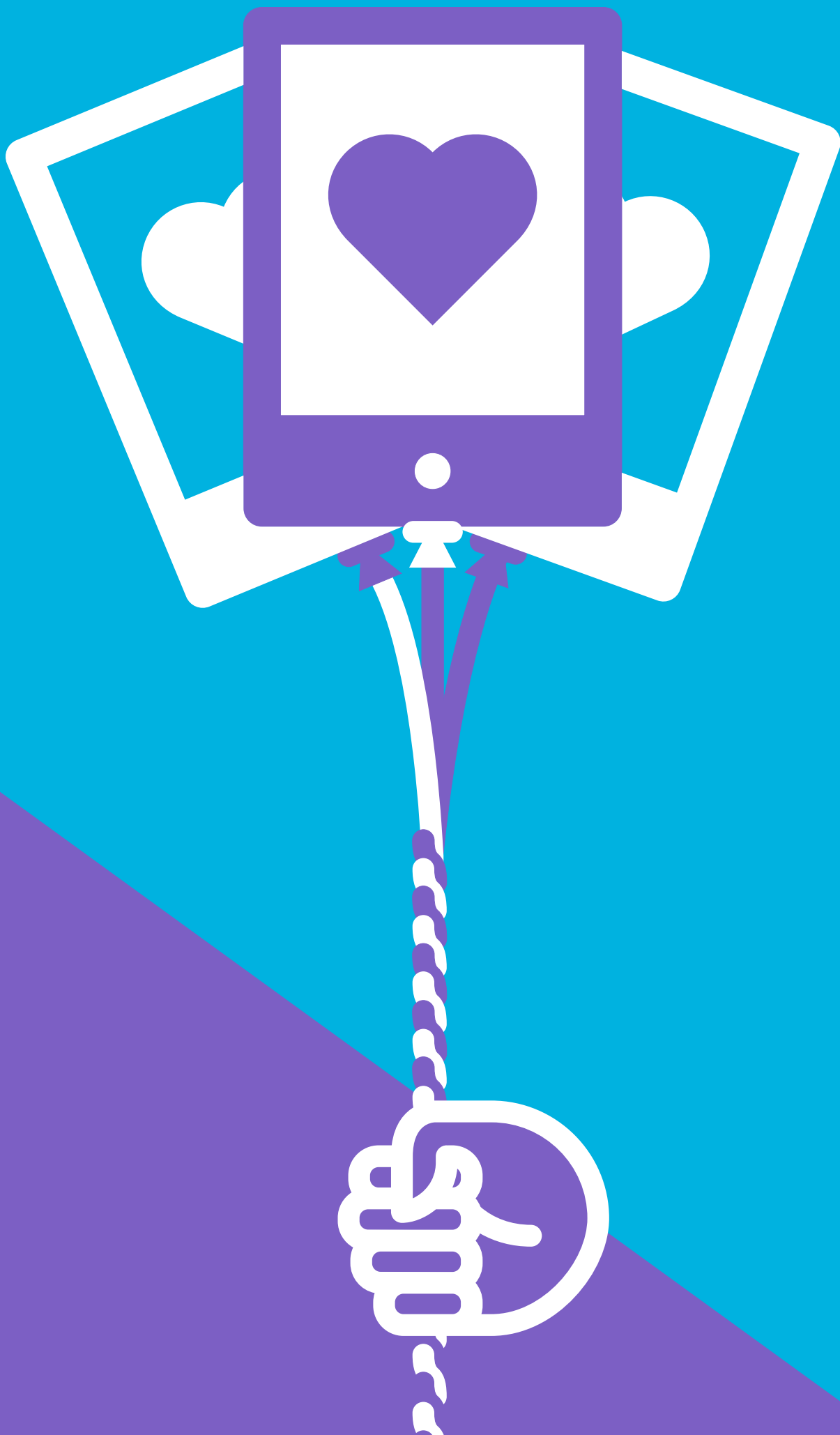


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Executive summary



Executive summary

The aim of this report is to present benefits coming from disseminating open educational resources (OER) and an analysis of conditions for their creation and development in the Polish education system, taking into account four dimensions: economic, legal, infrastructural and connected with the education system. The report presents recommendations - also divided into these areas - pointing to possible directions of changes giving higher priority to openness in education.

Open educational resources are all educational materials available freely and with no charge, with the possibility of unlimited modification and use. Open education influences pupils and teachers as well as parents, schools, educational institutions, expert groups, decision makers or business - publishers, technological and training firms. Opening a growing number of educational resources and their free dissemination in digital form is an answer to many needs of the groups listed above, bringing them specific benefits.

The contemporary vision of modernising education encompasses reflection on new pedagogical methods, at the same time pointing to gradual departure from the model in which the teacher has unquestionable authority, for the sake of building pupils' autonomy and responsibility for their learning process. Implementation of this vision is currently realised most fully with the use of information-communication technologies as one of the key factors of change. This vision relies also on teachers' expertise, educational resources and technological infrastructure, though an equally important element of this **concept is the assumption of educational resources' openness**. Recognising openness as a fundamental rule of digital school is indispensable to fully benefit from the potential of information-communication technologies in education.

The discussion on opportunities and limitations of openness in education shapes the perception of the role and essence of education, shifting the centre of gravity - similarly to the debate on new educational models - towards the pupil. Openness of education changes also educational practices, concentrating on cooperation, individualisation and personalisation of teaching, enabling also the pupil to create his/her own path of development and educational resources. Certainly, just the openness of resources itself will not ensure these changes unconditionally, since it must be coupled with increasing the level of users' expertise, with providing appropriate access to content and good



atmosphere and social acceptance for openness in creating and freedom in sharing. This way, the following mechanisms which support openness are created:

- **technological** – open code enables stable development and constant improvement in the technological environment and its integration with other IT systems,
- **content** – opening educational resources enables stable cyclical development and constant improvement and offers more opportunities in the area of teaching individualisation - open resources motivate to using new forms and methods of education responding to the challenges of the 21st century,
- **content** – openness increases accessibility of education, enables adapting educational resources to different kinds of dysfunction and also creating new branches in business, based on selling services, not content.

All the dimensions of openness mentioned above shape the optics on the benefits offered by creating and using open digital educational resources.

In the area connected with the education system we identify many obstacles for teachers' use of innovative methods, digital resources or modern tools. These obstacles are, among others:

- overload of administrative tasks, resulting in lack of time for development,
- clinging to traditional teaching methods,
- lack of mutual support, exchange of experience and information,
- ineffective system of promotion,
- lack of digital expertise.

We indicate that reducing factors connected with increasing bureaucracy of administrative processes related to teaching - while at the same time strengthening the systems motivating teachers to professional development - we add to greater use of open educational resources at school. What follows, we will increase the level of innovation, efficiency and quality of education. We recommend:

- preparing the curriculum and teacher professional training for creating open educational resources and using them,
- supporting teachers - experts in specific areas - in creating open educational

Executive summary

- resources in their specialisations,
- introducing teacher gratification system for creating open educational resources,
- designating time for teachers to work on educational materials to use at school and to publish as open educational resources,
- introducing programmes easily accessible for teachers to assess the quality of open educational resources.

The justification for the development of open educational resources is realising the right to education, guaranteed in the Universal Declaration of Human Rights. Creating open educational resources is based on international level documents: the UNESCO Paris Declaration on open educational resources, the Council of Europe recommendations, the European Commission announcements and resolutions of the European Parliament. The issues related to open educational resources are at the same time regulated by national legal acts – the Act on the Education System and the Act on Copyright and Neighbouring Rights.

The legal system formed by the two acts on the one hand guarantees access to key resources in the education system, on the other hand it enables relatively free use of any resources needed for education. It opens a wide range of options for schools but at the same time it leaves a few vague areas, not defined clearly by the legislator, like copyright issues in reference to material created by teachers or discretion in freeing materials created by public educational institutions. Thus, changes in the law which will ensure openness of publicly financed educational resources are necessary, and also precisising the scope of fair use and ownership of materials created by workers of the education system. Our recommendations encompass the following legal actions in this area:

- introducing an obligation of open licensing of educational content financed from public money and its dissemination through a central digital open educational resources repository,
- regulating the issue of sharing resources created by teachers,
- providing legal support for workers of the education system in the area of copyright,
- implementing rules of openness of educational resources in operational programmes,



- implementing rules of openness of educational resources for other sources of financing educational resources from public funds,
- obtaining copyright for key resources indispensable for teaching.

Analysing the issue of financing educational resources, we focus on changes connected with the "textbooks reform" from 2014. Creating e-textbooks financed from public funds has a big importance for achieving a new balance on the educational book market. From the economic point of view, one of the basic advantages of the project which results from these resources' openness is the fact that using them as their base, everyone can create and disseminate their own materials. Openness which allows commercial use potentially changes the character of e-textbooks as well, since they become not only competition but also the basis for creating added value by commercial subjects.

The project Digital School stood out among the earlier interventions – focused on equipment issues – by taking into account the issues of expertise and resources. Paradoxically, however, lack of proper infrastructure and equipment is the key obstacle in the development and use of e-textbooks. By definition, creating e-textbooks was supposed to be integrated with other components of the Digital School project. However, this has not happened. The programme of equipment investments for schools has not left its pilot phase and schools are less digitalised than individual households. Thus, infrastructural factors create a substantial obstacle which hinders the use of e-textbooks at schools. The problem is augmented by lack of guidelines outlining the way e-textbooks should be used in teaching as well as defining the necessary equipment. The existence of open educational resources can positively influence teachers' practices but it requires providing at least a minimum level of digital infrastructure. Thus, in this area, we recommend:

- providing adequate Internet infrastructure to all schools,
- providing teachers with basic digital equipment,
- creating a public Internet platform to publish open digital resources, developing platforms which allow integration of the existing open educational resources, publishing new ones and their easy combination,
- preparing an open standard for describing educational resources.

**What Does Open
Education Give
Theory of Cha**

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What Does Open Education Give? Theory of Change

In the 21st century we live in a society based on knowledge and increasingly shaped by dynamic technological changes, in which good education is the key element in the life opportunities for individuals as well as for development opportunities of the whole society. The pace and nature of changes require modernisation of the education system so that it can respond to the current challenges. At the same time information-communication technologies - if used appropriately - could become tools supporting modern education.

The concepts of e-school¹ or digital school² formulated five years ago are visions of modernising the school with the use of information-communication technologies as the key elements of this change. However, in the first decade of the 21st century the education system departed from the model of digitalisation of education based almost solely on buying equipment. Today, the vision of using new technologies at school rests on three pillars:

- **Teachers' Expertise** – popularising new teaching methods and providing digital expertise,
- **Educational Resources**³ – available in digital form and fully using the potential of information-communication technologies in their creation, storing, disseminating and developing,
- **Technological Infrastructure** – schools with high quality Internet access, information-communication infrastructure at schools, access to equipment for teachers and pupils, educational platforms, other educational Internet services.

An important element of these concepts is **the assumption about openness of open educational resources**. Open educational resources are freely available and with no

¹ *Kierunki działań w zakresie nauczania dzieci i młodzieży oraz funkcjonowania szkoły w społeczeństwie informacyjnym. Nowe technologie w edukacji*, The Council for IT and Media Education (Rada do spraw Edukacji Informatycznej i Medialnej) with the Minister of National Education, The Ministry of National Education, Warsaw 2010.

² *Rządowy program rozwijania kompetencji uczniów i nauczycieli w zakresie stosowania technologii informacyjno-komunikacyjnych – „Cyfrowa szkoła”*. Attachment to the Act of the Council of Ministers nr 40/2012 from 3rd April 2012, The Chancellery of the Prime Minister of Poland, Warsaw 2012.

³ The content used in the education process is alternately called educational resources or educational materials. The second term is used in the Act on the Education System, when defining the formal framework of using different content in education. In the discussion about openness the term educational resources has become widespread (from the English term “open educational resources”).



charge, for further unlimited use. Openness has an **economic** dimension (free access), a **technological** dimension (efficiency of access provided with the help of information-communication technologies) and a **legal** dimension (removing obstacles in use by providing resources under open licenses or in the public domain).

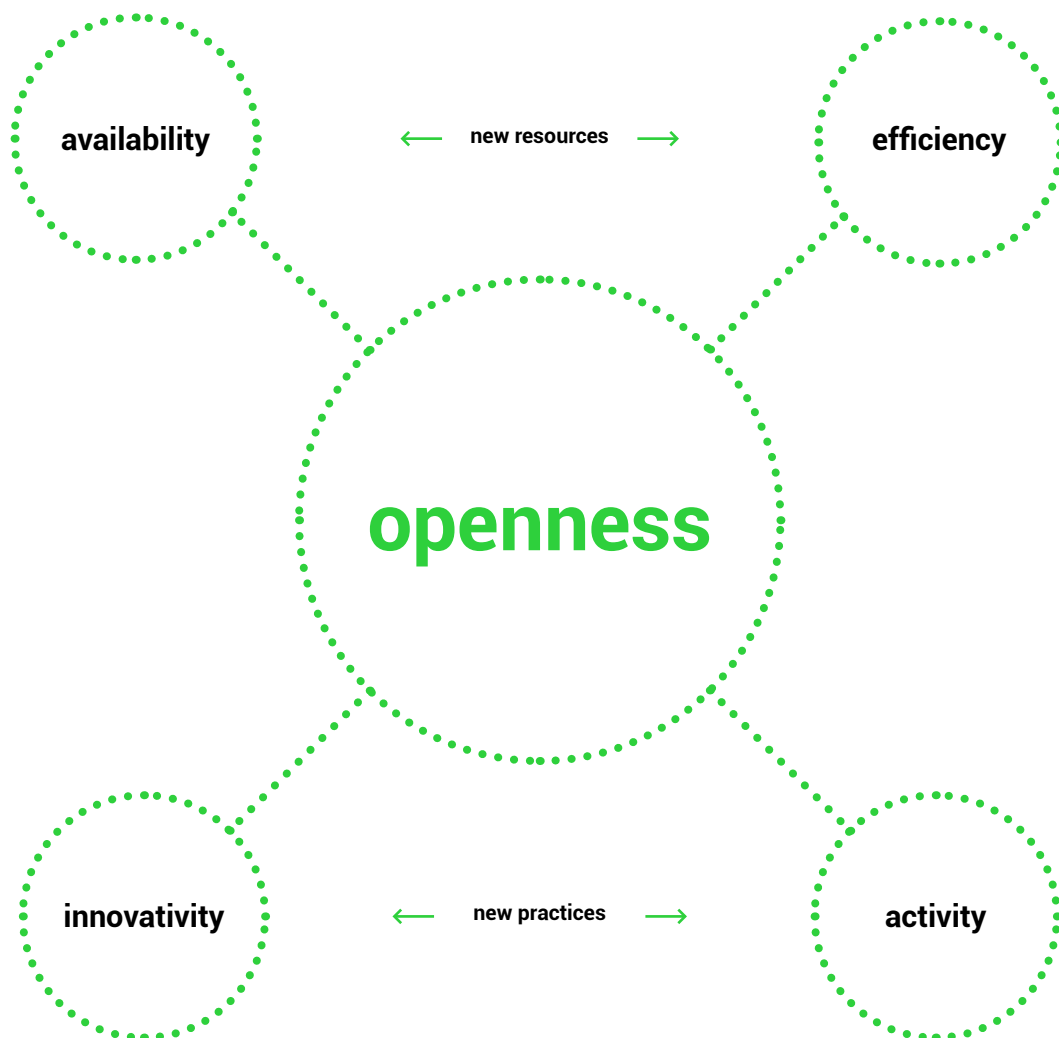
The issue of openness is often limited to the “free of charge” aspect, although implementing open educational resources into the education system is not only a matter of spending funds and the shape of the educational market. Realising the rule of openness leads to a new model of creating, disseminating and using educational resources, treated as the **common good**. The basic result of openness is not only **wider availability** of resources and **effective spending of public funds**, but also **greater innovation** in their use and **increased activity** of those teaching and learning in repurposing and creating their own resources. **Openness means access to high quality resources as well as an opportunity to change educational practices.**

New Resources/ New Practices/ Openness/ Accessibility/ Efficiency/ Innovation/ Activity

Implementing openness wouldn't be possible without using the potential of digitisation. The model in which pupils, teachers as well as parents and educational institutions are engaged in creating, reusing and distributing free educational resources, wouldn't exist without activating the potential of digital revolution and the support of modern information technologies. **At the same time, acknowledging openness as a fundamental principle of digital school is indispensable to fully profit from the potential of information-communication technologies in education.**

Since 2008 the idea of open educational resources has been implemented in many pioneering and model projects, realised by public institutions as well as non governmental organisations (we write more on the subject in the section *The Development of Open Educational Resources in Poland and the World*). There are also first instances of using

What Does Open Education Give? Theory of Change



Four dimensions of open education



open educational resources by commercial firms. The most important example of implementing such resources is the government project Digital School, which is a pilot of the earlier described vision of e-school. The concept present in this project of creating public, open e-textbooks is the first such initiative in the world and it could become not only a pioneering phenomenon but also a model to be recreated.

By the end of 2015 completing the project E-Textbooks for General Education allowed to share sixty four textbooks covering the core curriculum for all classes of primary, lower and upper secondary schools. We treat it as **symbolic closing of the first, pilot phase of implementing open educational resources in Poland**. With the availability of the e-textbooks – described in the legal Act as a key resource used in the education system – the stage of disseminating open educational resources in Poland begins. Full use of these resources' potential in teaching will not be possible without the **system's support**. Openness is a value which should be central in the whole process of digitalisation of education. To fully profit from the potential of the Digital School, and for Poland to continue on its course towards innovation, further **full opening of publicly financed educational resources** is necessary.

It means first of all introducing adequate **legal norms** and **technological solutions**, ensuring open access to public educational resources. It is also necessary to:

- **increase teachers' expertise** so that they can actively use the information-communication technologies, repurpose existing materials and create their own resources with their help,
- **provide adequate infrastructure** so that technological obstacles don't hinder the use of open educational resources,
- **create an expertise centre**, which will give direction to the process of digitalisation of education.

What Does Open Education Give? Theory of Change

Independently of introducing the obligation of resources openness, key decisions concern the scope of public financing of educational content, because it will determine how much content will be available freely and with no charge. It is also a question about the shape and condition of the educational materials market. Although these issues are independent of the implementation of openness, we favour a model in which the state supports coexistence and balance of public and commercial content. The basic factor defining the policy in this area should be fulfilling the needs of the key stakeholders – the people teaching and learning.

What will be the effects of guaranteeing openness of educational resources? Firstly, open educational resources will help overcome the existing practices, promote the use of different resources for teaching and departure from the textbook as the dominant educational resource. The group of teachers creating their own materials adapted to the needs of their learners will grow, and the number of teachers who teach unimaginatively, using only the available textbooks, will fall. It also means the growth of the community of teachers who create and share their materials. Secondly, open educational resources support the idea of lifelong learning, because the materials prepared within the education system can be used freely in informal or non formal education. Thirdly, openness of educational resources created publicly means higher efficiency of spending because the rule of openness means that all content has a bigger chance to be used.



What Are Open Education Resources?

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What Are Open Educational Resources?

Open Educational Resources (OER) are available for free and can be used freely. They include textbooks, *online* courses, lesson plans, tests, multimedia materials, computer programmes, which means everything that can be used in the teaching and learning processes. Open educational resources include materials created specially for the needs of a specific teaching programme as well as any other open resources which can be useful in the teaching process (for example from heritage collections or scientific work).

The term *open educational resources* was officially used for the first time during the UNESCO Forum on the Impact of Open Courseware for Higher Education in Developing Countries in 2002, whose participants declared willingness to create “a universal educational resource, accessible to all mankind [which] will mobilise the educators’ community in the world.”

The commonly used UNESCO definition describes open educational resources as “teaching, learning and research materials in any medium, digital or otherwise, that reside in the public domain or have been released under an open license that permits no-cost access, use, adaptation and redistribution by others with no or limited restrictions.”⁴

David Wiley⁵ proposes to look at the idea of open educational resources through the prism of five rights defining such use of content which guarantees its openness. An open educational resource is a resource which you can:

- **retain** – you have the right to make, own, and control copies of the content,
- **reuse** – you have the right to use the content in a wide range of ways (eg in a class, in a study group, on a website, in a video),
- **revise** – you have the right to adapt, adjust, modify, or alter the content itself (eg translate the content into another language),

⁴ Compare http://www.unesco.org/new/fileadmin/MULTIMEDIA/HQ/CI/CI/pdf/Events/Paris%20OER%20Declaration_01.pdf, p. 1.

⁵ Compare D. Wiley, Defining the ‘Open’ in Open Content – <http://opencontent.org/definition> [access: 2nd September 2015].



- **remix** – you have the right to combine the original or revised content with other open content to create something new (eg incorporate the content into an internet mashup),
- **redistribute** – the right to share copies of the original content, your revisions, or your remixes with others (eg give a copy of the content to a friend).

David Wiley's concept shows that we cannot think about educational resources independently of the means of their use, so we can increasingly hear about **open educational practices**, defined as each activity opening access to educational opportunities in the educational environment in which freely accessible content and educational services are the norm.

A wider perspective is also visible in the Cape Town Declaration of Open Education accepted in 2008, which constitutes one of the cornerstones of the movement in favour of open educational resources. In this declaration, the goals and actions of the movement in favour of open educational resources were defined as parts of these three pillars:

- Teachers and learners are engaged in creating, using, adapting to individual needs and improving open educational resources. Using these resources, they engage in open educational practices, based on cooperation, discovering and generating knowledge.
- Teachers, authors, publishers and institutions publish open educational resources under open licenses, in formats ensuring in practice the rights guaranteed by the licenses, and available on different technical platforms.
- The policy of open education – authorities and school and university managements should give open education the highest priority and implement the policy of openness of the resources financed from public funds.

According to the authors of the declaration, open education constitute open resources, open technologies (including platforms and educational repositories), open practices, cooperation, new – open – approach to accreditation, assessment and evaluation.

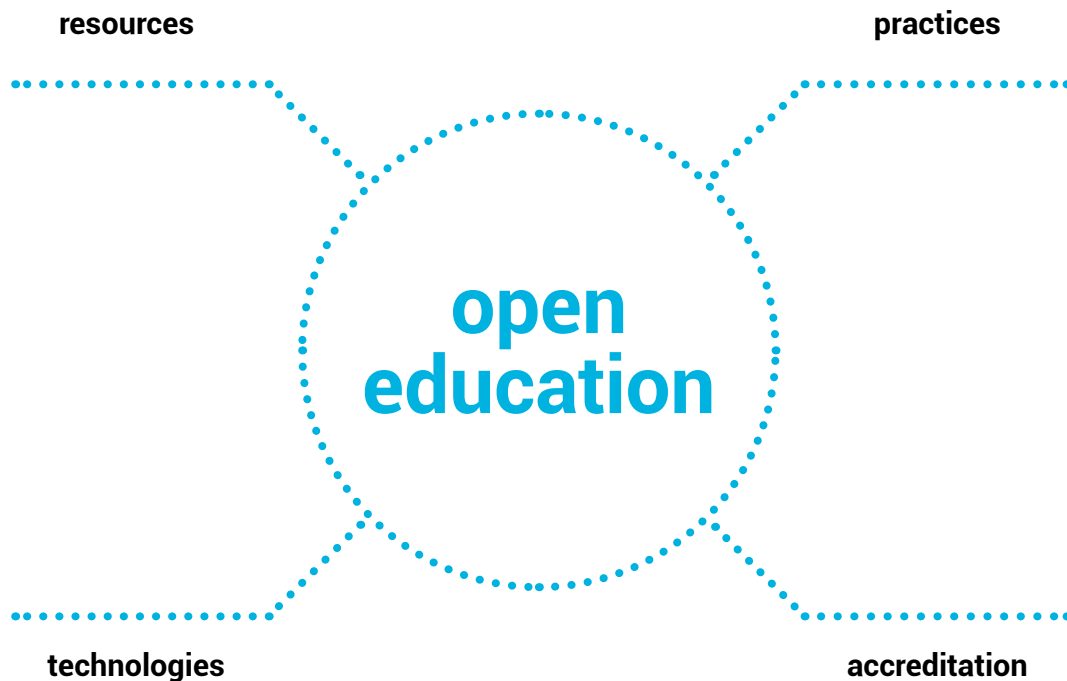
When Are Educational Resources Open?

Talking about a given resource's openness, we mean that it is easily accessible and can be used freely. Openness has a few dimensions:

- **economic openness** means lack of financial obstacles – resources are more open if they are cheaper (the most open resources are free),
- **technological openness** stems from the resource's presence on the Internet, which allows cheap and effective access to it. Open resources are publicly available without the need to log in – they can be freely saved and copied,
- **legal openness** means lack of limitations connected with copyright. Open resources are resources to which all copyright claims have expired or which were made available under an open license.

The definitions of open educational resources often underline the legal aspect of openness, seeing in it the foundation of the other dimensions of this phenomenon. We can describe as open educational resources different resources to which all proprietary copyright claims have expired (in Poland they usually expire seventy years after the author's death) and which belong to the public domain. However, most educational resources are automatically regulated by copyright which limits their use. For resources to become open, a person or institution holding the rights must issue a license for their free use.

Open licenses are legal tools which allow to share resources freely – with no or minimal limitations (which stem mostly from respect for personal copyright). To achieve this, the most often used licenses are the following two: Creative Commons: Attribution and Attribution – ShareAlike. There are also numerous other open licenses which fall under the accepted Open Definition or Definition of Free Cultural Works.



Four dimensions of open education

The William and Flora Hewlett Foundation – one of the first foundations supporting the development of open education – defines open educational resources beginning from the legal aspect as “serving learning, science and research, belonging to the public domain or available under a copyright licence allowing free use and modification [of the resource] by others.”

So defined open educational resources become a common resource which can be further used and developed by educators, businesses from the educational sector and learners.

The Standard of Public Resources Openness

In 2012, with the needs of the Digital School programme in mind, a standard of public resources openness – first of all e-textbooks – financed by the programme was prepared. Today, all over the world this standard is considered a model for openness requirements of educational resources financed from public funds. It encompasses not only legal and copyright issues but also technical standards, accessibility for people with special needs among them.

Copyrights: all educational resources created as part of the project which are works, subjects of neighbouring rights or data bases will be disseminated under Creative Commons Attribution license or another open license for unlimited, free and non exclusive use of resources or their potential modifications.

Technical Standards: all educational resources created as part of the project will be accessible in at least one open format, whose full specification is available to use without substantial technical or legal limitations.

Accessibility for People with Special Needs: in the case of educational resources created as part of the project to which access will be realised through the Internet, the access rules will follow the current guidelines on facilitating access to content published on the Internet – Web Content Accessibility Guidelines (WCAG).



Development of Educational Resources in F and in the Wor

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In 2002, when UNESCO used the term *open educational resources* for the first time, the content of Polish Wikipedia exceeded the limit of 1 million entries. The project of creating an open Internet encyclopaedia – which was the most popular educational website in Poland – began the open educational resources movement in the country.

A breakthrough moment for the development of open educational resources in Poland was the acceptance in 2008 of the **Cape Town Declaration of Open Education**. One of its creators was Jarosław Lipszyc from the Modern Poland Foundation (Fundacja Nowoczesna Polska). In the same year the **Coalition for Open Education** (Koalicja Otwartej Edukacji) was created thanks to an agreement of four national institutions from the field of education and science: the Modern Poland Foundation, the Interdisciplinary Centre for Modelling (Interdyscyplinarne Centrum Modelowania) at the University of Warsaw (representing the project Creative Commons Poland), The Association of Polish Librarians (Stowarzyszenie Bibliotekarzy Polskich) and the Wikimedia Poland Association.

From that time the coalition has been playing a key role in disseminating the concept of open educational resources and supporting other subjects in its implementation. An important aspect of the work of the Coalition for Open Education is also spokespersonship on the government level, serving the inclusion of open educational resources into the state educational policy. Currently, the coalition consists of 33 subjects, representing non governmental and state organisations, state and local cultural institutions, universities and libraries which realise projects based on the idea of openness and on open educational resources standards.

The development of open educational resources in Poland and in the world in the last fifteen years is presented in the infographics below.

legend:



global



government



non governmental



public

2002



The term “**open educational resources**” is used for the first time during the Forum on the Impact of Open Courseware for HE in Developing Countries with UNESCO.

2003



OpenCourseWare Consortium (currently Open Education Consortium) is created – a global community gathering universities and networks of practices for the development of open education.



Wikipedia – the Polish version of the free Internet encyclopaedia reached 1 million entries. Today it is one of the ten most often visited Internet websites in Poland.

The Wikimedia Poland Association

2004



Wikiquotes (Wikicytaty) – the Polish version of a free compendium of quotations, proverbs and maxims, compiled by all users.

The Wikimedia Poland Association

2005



Portal **Scholaris.pl** – starting a generally accessible platform containing free electronic educational resources adapted to all stages of education.

The Ministry of National Education

2006



The Digital Library Polona – digitalised resources of the Polish culture heritage in the public domain and under Creative Commons licenses.

The National Library



Free Textbooks (Wolne Podręczniki) – a collection of educational materials prepared by teachers volunteers in the form of digital textbooks. Project completed in 2012.

The Modern Poland Foundation

2007

P

The Internet Library Free Reading Assignments (Wolne Lektury) – school reading assignments from the public domain recommended for use by the Ministry of National Education.

The Modern Poland Foundation

2008



The Cape Town Open Education Declaration – the key document defining goals and methods of the open educational resources movement.



The Council of Europe Recommendation – using open educational resources and e-teaching to counteract digital exclusion and to equal educational opportunities.

P

The Open Education Coalition, is created, gathering organisations striving for openness in education, science and culture. Today the coalition has 34 member organisations.

2009

P

The Orange Academy – the obligation to introduce open licenses for the results of projects on cultural education financed from the Orange Foundation grants.

The Orange Foundation

P

The Digital Library of the KARTA Centre (Ośrodek KARTA) – over 7 thousand digitalised publications in subject collections, eg „«Solidarity» – “The Birth of the Movement and Jacek Kuroń Collection”, “Magazines of the Second Circulation.”

The KARTA Centre Foundation

2010



The European Union publishes the **Europe 2020** strategy.

G

The Programme **Cultural Education** – a recommendation to publish the results of the projects financed from the programme under open licenses, for contests realised from 2011.

The Ministry of Culture and National Heritage

P

Open AGH – the first repository of open educational resources for engineers. *AGH University of Science and Technology (Akademia Górniczo-Hutnicza)*

2010

P

Historical Timeline (Kalendarium Historyczne) – 00 notes, articles and interviews connected with historical events and their daily dates.

The Polish History Museum

G

Open educational resources were defined as one of the directions for the system of education development for 2010–2013 with a perspective until 2020.

The Ministry of National Education, The Council for IT and Media Education (Rada do spraw Edukacji Informatycznej i Medialnej)

2011

G

The Programme **Polish Developmental Aid** – the obligation to publish the results of the projects financed from the programme under the CC BY license.

The Ministry of Foreign Affairs

P

Si-Fun Lesson (Ściśle ciekawa lekcja) – educational materials, scenarios, video recordings for conducting lessons on science.

The Partners Poland Foundation

G

The Prime Minister **Donald Tusk** makes a promise that resources financed from public funds will become public property.

P

Fun Fair (Zabawnik) – a collection of 150 ideas, game scenarios and games for children (eg from chants, through board games, to theatre).

The Modern Poland Foundation

G

Switch On Poland (Włącz Polskę) – a portal with educational materials for Polish children learning abroad, available as ready sets and modules for individual assembly of textbooks.

The Ministry of National Education

P

The Base of Didactic Tools of the Educational Research Institute – collection of activities for Polish, history, maths, biology, chemistry, physics and geography lessons. Resources prepared for the Ministry of National Education.

The Educational Research Institute

P

Open Zachęta – a programme of opening resources and a portal with educational materials for cultural education and art history.

The National Art Gallery "Zachęta"



The European Commission Communication **Rethinking Education** – open educational resources as an aspect of using telecommunication technologies in education..



The Programme **Media Education – Research** – the obligation to publish the results of the projects financed from the programme under the CC BY license.
The Ministry of Culture and National Heritage



The **Digital School** project – computerisation of schools, raising teachers expertise level in information-communication technologies, preparing digital educational resources (didactic aids, open e-textbooks, multimedia).
The Ministry of National Education



The National Corpus of Polish – a collection of 250 million words, typical usage of words, constructions and information on their meaning and function.
The Institute of Computer Science Polish Academy of Science, The Institute of Polish Language PAS, The Polish Science Publishing (PWN), The Department of Computational and Corpus Linguistics of the Łódź University.



MediaLab Junior – scenarios of workshops for teenagers, combining new technologies and education.
The Culture Shock Foundation



The Paris Declaration – a strategic document concerning support for and development of open educational resources (co)financed from public money.



Open Monuments (Otwarte Zabytki) – catalogue of Polish monuments, created and developed by the community of Internet users.
The Digital Centre Project: Poland (Centrum Cyfrowe Projekt: Polska)



Physics and the Challenges of the 21st Century – academic scripts for science lectures and classes.
The Faculty of Physics University of Warsaw

2012

P

ABC of Sex in Pictures – rticles, comic book pictures and films on the subjects of sexual education.

The Social Aid (Pomoc Socjalna) Association, the Social Education Foundation

P

Art 24H – a base of open educational materials on modern art.

The Modern Art Gallery "Art Bunker" (Bunkier Sztuki)

P

Educational Portal of the University of Mikołaj Kopernik – ecordings of lectures and meetings at the university as well as e-learning courses and webinars.

The University of Mikołaj Kopernik

G

The Programme **Culture Observatory** – the obligation to publish the results of the projects financed from the programme under the CC BY license.

The Ministry of Culture and National Heritage

2013

G

The Programme **Cooperation with Polonia and Poles Abroad** – the obligation to publish the results of the projects financed from the programme under the CC BY license.

The Ministry of Foreign Affairs

G

The Programme **Global Education** – the obligation to publish the results of the projects financed from the programme under the CC BY license.

The Ministry of Foreign Affairs

P

Media Education – scenarios of classes, activities and materials for classes on media education at schools, culture centres and libraries.

The Modern Poland Foundation

P

The Sound Museum – ompendium of knowledge about twenty folk musical instruments (sound recordings, photos, descriptions) and lesson scenarios.

"Based in Warsaw" Association (Stowarzyszenie „Z Siedzibą w Warszawie")

P

Knowledge Centre (Wszechnica) – a base (audio and video) of lectures, meetings and debates in different culture and science institutions.

The Rural Development Foundation (Fundacja Wspomagania Wsi), Collegium Civitas

2013

P

The Programme RITA **Changes in the Region** – the obligation to publish the results of the projects financed from the programme under the CC BY-SA license.

The Polish-American Freedom Foundation

G

Portal **Scholaris.pl** – part of the resources is available under the open CC BY-SA license (including school reading assignments from the digital library Wolne Lektury).

The Ministry of National Education, The Education Development Centre



The strategy of the European Commission **Opening Up Education**, starting the Erasmus+ and Horizon 2020 programmes, creating structural funds of the European Union – the openness obligation for results of projects financed from the European Union.

P

The Digital Kit (Cyfrowa Wyprawa) – lesson scenarios and materials for teachers on the subject of safety and privacy protection on the Internet.

The Panoptykon Foundation

P

The Open Science Library – a platform of open scientific publications from the humanities.

The Digital Centre Project: Poland

P

Prof (Belfer) - Resources for History Teachers – lesson plans and scenarios, interactive maps, calendar of events, varied source texts.

The Polish History Museum

2014

G

The National Programme of Readership Development – the CC BY license as an option for publishing literary works, for which the Book Institute bought copyright.

The Ministry of Culture and National Heritage

P

The Programme Patriotism of Tomorrow – additional points at the stage of accepting project applications for publishing the projects' results under the CC BY license.

The Polish History Museum

2014

P

e-global – a base of scenarios, activities, visual materials, games for global education available as modules for independent assembly of e-manuals.

The Education for Democracy Foundation

G

Learning to Code (Uczymy kodować) – the obligation to publish the results of the projects financed from the programme under open licenses.

The Ministry of Administration and Digital Affairs

G

Our First Textbook (Nasz Elementarz) – free and partly open textbook for first classes of primary school financed from ministerial funds.

The Ministry of National Education

P

Open AGH E-Textbooks – the first pilot open e-textbooks for engineers (physics and mathematics).

AGH University of Science and Technology

2015

G

The Operational Programme Knowledge Education Development, priority III: cofinancing creating Open Educational Resources at universities.

The Ministry of Infrastructure and Development

P

The Digital Archive of Józef Buszta – audiovisual materials on the traditional culture of Poznań.

The Department of Ethnology and Cultural Anthropology UAM

P

Lublin - User's Manual – a multimedia educational platform on the history and heritage of Lublin.

"Grodzka Gate - NN Theatre" Centre (Ośrodek "Brama Grodzka – Teatr NN")

P

The Polish History Museum published the **Declaration of the Openness Policy** – the rules of open sharing of digital resources.

The Polish History Museum

P

Virtual Museums of Małopolska – digitalised exhibits from the region's museums (photos, 3d images, detailed descriptions supplemented with games, activities and expert interpretations of objects).

The Economic Development Department of The Marshal's Office of the Małopolska Region, The Culture Institute of Małopolska

Non Governmental Organisations' Initiatives

The first open initiatives by non governmental organisations appeared already in 2007, when the Modern Poland Foundation published the website **Free Reading Assignments** – an Internet library of school reading assignments and classic works of literature available in the public domain or under open licenses.

In 2009 the **Orange Foundation** started a grant programme - Orange Academy, in which grants were offered to non governmental organisations involved in cultural education. The foundation introduced an obligation to share all scenarios of materials created with the grant money under open licenses (CC BY 3.0 PL). It was the first grant programme in Poland in which the rule of openness was applied.

Today, the open educational resources model is implemented by many key educational organisations. **The Center for Citizenship Education Foundation** (Centrum Edukacji Obywatelskiej) shares its own resources under open licenses, it trains teachers in creating and using open educational resources and new media in education. A broad open repository has also the **KARTA Centre**, which gives free access to its archive, research and educational materials.

Two big collections of lesson scenarios available under Creative Commons licenses are offered by the **Panoptikon Foundation** (running the portal Digital Kit, on which scenarios of classes on the safe use of new technologies are available) and the **Modern Poland Foundation** (sharing through the Media Education service scenarios, activities and materials for classes on media education).



The next example is the portal **Knowledge Centre** (Wszechnica), which is a joint initiative of the Rural Development Foundation and Collegium Civitas. The service offers video and audio recordings of lectures, meetings, debates and interviews. The aim of the project is to give access to free high quality didactic materials to the inhabitants of small places and rural areas.

The Digital Centre Project: Poland realises the **Open Monuments** project, in which it moderates activities concerning heritage, mostly by running an open information service about monuments. All educational materials created in the project are available as open educational resources.

An interesting example of using open educational resources is the programme Coding Masters by **Samsung Polska**. Educational materials on learning to code in primary schools are available under an open license.

Public Institutions' Initiatives

Public institutions – besides non governmental organisations – are the second important group of subjects which makes open resources available. One of the first initiatives of this kind was **Polona** – a portal with heritage collections from the public domain - started in 2006 by the National Library. In the resources of the Polona service there are also materials under open licenses.

In 2010 The **Open AGH** was created at the AGH UST in Kraków, the first in Poland university repository of open educational resources on science. From March 2013 the university has been implementing the project Open AGH E-Textbooks, which is a collection of academic e-textbooks for engineers. Another university which is moving towards openness is the University of Mikołaj Kopernik in Toruń, which on its open resources portal shares recordings of lectures and meetings organised at the university under open

licenses, as well as e-learning courses and webinars. The University of Mikołaj Kopernik was also one of the first Polish universities which implemented an overall policy of openness. Open educational resources are also shared by other academic institutions in their digital libraries.

Open educational resources are increasingly more often created by cultural and heritage institutions as well. **Zachęta – The National Art Gallery in Warsaw** and **the Art Bunker in Kraków** decided to share open resources. The Open Zachęta portal presents works from the gallery collection, educational materials, documentations from exhibitions and selected texts from catalogues and newspapers accompanying exhibitions and films, while the educational portal **ART24H** (SZTUKA24H), run by the Art Bunker, published a base of educational materials on modern art on the Internet.

Licensing educational and training content under open licenses functions also in a few Polish departments. Already in 2006 the obligation to share publications under open licenses was introduced by the then Ministry of Regional Development, as part of the Common Initiative EQUAL. The Ministry of Foreign Affairs implemented openness in the Polish Aid (Polska pomoc) programme. The ministry also prepared – using open resources financed from grants – a module e-textbook **E-global**. The Ministry of Culture and National Heritage requires using open licenses in the programmes Cultural Education, Culture Observatory and Patriotism of Tomorrow. Creating open educational resources is supported also by the Ministry of Administration and Digital Affairs in its grant programme.

In 2015 the obligation of open licensing of educational resources was introduced for contests about digital expertise which will be realised by the Operational Programme Digital Poland (Program Operacyjny Polska Cyfrowa) in the coming years. We can assume that such rules will also be implemented in later contests by the OPDP. Even more important was accepting in 2015 by the Ministry of Infrastructure and Development “The Guidelines on Realisation of Projects with the Help from Resources of the European



Social Fund in the Area of Education for 2014-2020." There we read that the institution managing financial activities from the ESF must guarantee that the educational resources which are works „will be available under an open license giving the licensee at least the right to an unlimited use of the works for commercial and noncommercial purposes, to create and share copies of full works or their fragments and to make changes and share the modified works." The EFS guidelines cover activities realised as part of the **Operational Programme Knowledge Education Development** (Program Operacyjny Wiedza Edukacja Rozwój) with the total budget of 4.4 billion Euro. The ESF finances also the Regional Operational Programmes (Regionalne Programy Operacyjne) with the total value of 312 billion Euro – educational activities will be realised as their part. So far they are the most important example of the open educational resources policy implementation in relation to a public source of financing.

The basic problem is the lack of repositories which would ensure easy access to scattered resources – an exception and a good practice is here the E-global project.

The first project of the Ministry of National Education offering open educational resources was the portal for Polish schools abroad - **Switch On Poland**. This service, started in 2011, contains module fragments of lessons and tasks from which one can create their own textbook – available under an open license. The resources of Polish schools abroad (important as a symbolic support for Polish nationals living abroad, although not applicable to most schools in Poland) were a good test site in the process of implementing open educational resources into the national education system. The experiences of the Switch On Poland project turned out to be crucial when implementing the open educational resources component to the **Digital School** programme.

The portal **Scholaris.pl** is an attempt to build a repository of open resources. It was started in 2005 and is currently run by the Centre for Education Development (Ośrodek Rozwoju Edukacji). It was planned as a collection of multimedia materials for teachers. In 2010 the Council for Digitalisation of Education (Rada do spraw Informatyzacji

Edukacji) proposed to use the portal to prepare open educational resources for the needs of the education system. However, the creators of Scholaris.pl have not managed to achieve the position of an important educational service, able to compete with the Interkl@sa project or commercial services. Besides, it was as late as 2013 when the portal implemented open licensing, and again to a very limited extent, covering about 5% of resources. Most resources can only be used under fair use.

Government Project “Digital School”

In 2008 the government started work on a new programme of digitalisation of education. In the Chancellery of the Prime Minister a team was created whose job was to prepare a concept of “A Computer for Each Pupil” programme, foreseeing, among other things, providing a laptop for each pupil. In 2010 the concept of the programme evolved to the form of a complex intervention, encompassing equipping schools in computer equipment and digital didactic aids, providing equipment for pupils, raising teachers' expertise level and creating open educational resources. The project was accepted by the Act of the Council of Ministers nr 40/2012 from 3rd April 2012 as the long-term government project Digital School.

Within the programme, until the end of 2015 **sixty-four** e-textbooks were created (altogether over 5 thousand teaching hours) from **fourteen subjects**, forming the core curriculum for primary, lower and upper secondary schools. About 45 million Zloty were assigned for this purpose within the system project of Priority III of the Human Capital Operational Programme 2007–2013. Additional funds were given for producing 2.5 thousand additional educational materials (available on the Scholaris.pl portal) and educational films prepared by the Polish Television. **Digital School is thus the first government programme which finances open educational resources for the needs of the Polish education system.**



The Act of the Council of Ministers mentioned contains guidelines concerning openness of resources financed in the project, indicating that: “they will have an open character, which means general, unlimited and free access in any place and time, including access without limits or technical security measures, and freedom of use. In the case of resources which are works, subjects of neighbouring rights, openness of resources means dissemination under the Creative Commons Attribution (CC-BY 3.0) license or another open license for unlimited, free and non exclusive use of resources and its potential modifications, for both commercial and noncommercial purposes.”⁶. In addition, the act included obligations about using open formats and accessibility standards for online content for people with special needs. **The obligation for open licensing of e-textbooks can be treated as a model obligation, which should be applied in other projects connected with creating educational materials financed by public funds.**

What is important, for the needs of the project, a platform for publication of e-textbooks was established, providing accessibility to content in different formats and for different devices *online* and *offline*, a modular structure allowing to prepare individual versions of e-textbooks, tools for creating individual additional content. The open character of the platform and the e-textbooks available there is to ensure a wide further use of the published content. Especially teachers are to obtain possibility to develop the e-textbooks content, to adapt them to their own and their pupils' needs, personalising education. E-textbooks are to be a public resource, within which commercial firms can build their offer.

The innovative contest Wiki Loves E-Textbooks (Wiki lubi e-podręczniki), realised as part of the Digital School programme, is also worth mentioning. Its goal was obtaining – with the help of Wikipedia users – missing graphics and photos under open licenses, which were later used in e-textbooks.

⁶ Rządowy program rozwijania kompetencji uczniów i nauczycieli w zakresie stosowania technologii informacyjno-komunikacyjnych – „Cyfrowa szkoła”. Attachment to the Act of the Council of Ministers nr 40/2012 from 3rd April 2012, The Chancellery of the Prime Minister, Warsaw 2012.

Pilot versions of e-textbooks have been published since 2013 on the portal e-podreczniki.pl. On 1st September 2015 The Centre for Education Development shared nineteen e-textbooks, at the time of publishing our report three are still missing.

Government Project “Our First Textbook”

The second – besides the Digital School programme – undertaking in the field of open educational resources run by the Ministry of National Education is Our First Textbook. This project, realised since the beginning of 2014, aims to prepare and offer for free publicly financed **textbooks for grades I–III of primary school**. In the 2014/2015 school year, schools received textbooks for first grade, in 2015/2016 – textbooks for second grade. The introduction of government-provided printed textbooks was connected with the change in the education system Act, which introduced a new system of providing schools with manuals, based on free, printed textbooks from the Our First Textbook project, open e-textbooks and budget subsidies to buy commercial textbooks.

When the realisation of the Our First Textbook project began, the then minister Joanna Kluzik-Rostkowska declared that it will be available under an open license, like e-textbooks. **Formally, Our First Textbook was published under the Creative Commons – Attribution 3.0 Poland license but it is not a fully open resource**. In the manual for the second grade of primary school the majority of pages cannot be used freely, since they contain graphics not under open licenses. “Closed” resources are a small part of all photos and illustrations – it is only about 50 items in a richly illustrated book. However, the result is such that 25% of pages in the Polish language textbook and as many as 43% of pages in the mathematics manual cannot be used. The most surprising must seem restrictions on using eg a photo of a glass or an apple.

The Our First Textbook is thus problematic from the point of view of developing the idea of open educational resources in Poland. On the one hand, starting the project the MNE confirmed its will to openly license content which it creates from public funds. On the other hand, in practice, the resources proved to be flawed from the point of view of open



licensing of content. **The ministry describes its textbooks as free resources but at the same time it does not keep the previously defined standard.**

The open educational resources movement has been developing dynamically since 2008. Important projects in this field – undertaken by both public institutions and non governmental organisations – include creating, sharing and disseminating open educational resources. Many of these initiatives have a pilot character, and at the same time can also become a model, proving that the model of open educational resources works for a specific type of institutions or specific activity (for example grant contests financing educational initiatives).

At the same time the development of open educational resources in Poland encounters limitations, especially concerning the scale of projects – which is so far small. In the next part of this report we diagnose the chances and challenges connected with the shape of the education system, legal conditions and the market of educational content.

Open Education Resources - B at School and



Personal Benefits Outside It



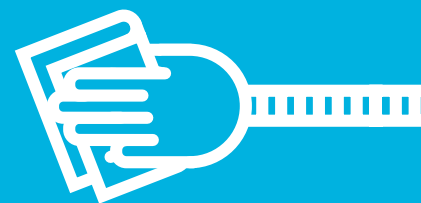
Open education has impact on pupils, teachers, as well as parents, educational institutions, expert groups, decision makers or business: publishers, technology and training companies. Opening a growing number of educational resources and their charge free dissemination in digital form, would be an answer to many needs of the groups listed above, bringing them measurable benefits.

At School

The place where the workings of open educational resources are visible most directly and clearly is, of course, the school. It is here that decisions about the choice of textbooks and extra materials used in the classroom are made. It is in educational practice that their quality and usefulness are verified. The school is the place where pupils, teachers, parents, management, administration and external partners all cooperate for mutual development. It is their expertise, knowledge, opportunities to access the right sources and the level of readiness to try out new solutions that defines whether and to what extent open educational resources will be used.

Open educational resources can bring specific benefits to different groups. For example, teachers obtain more scope for freedom and creativity when choosing materials for work with pupils. On the basis of open scenarios, publications and manual excerpts they can create their own materials, adjusted to the needs of their pupils. They can do it more cheaply and using the technologies available. Using, and especially reusing/repurposing open resources increases teachers' prestige as authors of educational materials, but mostly it supports their professional development and increases engagement in their work. Using open educational resources also encourages teachers' reflection on their own educational practice⁷. According to the research of the Boston Consulting Group, 40.6% of teachers state that when using open educational resources they employ more teaching methods, 37% reflect to a greater extent on how they teach others, 32.1% more regularly compare their teaching methods with other methods, 23.4% use

⁷ *OER Evidence Report 2013–2014. Building Understanding of Open Education*, The Open Educational Resources Research Hub (OER Research Hub), 2014, p. 21 – <https://oerresearchhub.files.wordpress.com/2014/11/oerrh-evidence-report-2014.pdf> [access: 25th October 2015].



open educational resources to develop their own teaching techniques. These results are also confirmed by publications of the Organisation of Economic Cooperation and Development (Organizacja Współpracy Gospodarczej i Rozwoju)⁸. specially the authors of the *Open Educational Resources - a catalyst for innovation* report stress the role of teachers' engagement from the perspective of the efficiency of teaching. Open educational resources contribute to raising the level of this engagement by giving teachers more influence on the content they teach and opportunities to adapt material to pupils needs⁹, they also create opportunities for teachers to prepare and modify content together, which allows them to exchange knowledge and experience¹⁰.

Next groups which benefit directly from using open educational resources are **pupils and parents**. Pupils obtain an opportunity to learn from a much richer and varied range of materials: films, photos, exercises, or foreign sources. What is even more important, open educational resources lead to a change of the teaching model. It constitutes moving from teaching based on acquiring content to teaching based on producing content and changing the pupil's role from passive to active¹¹. Open educational resources also play an important role when one is selecting a university and a discipline of study – 31.5% of pupils surveyed in the Open Educational Resources Research Hub project stated that open educational resources give them a chance to use university content before deciding about enrolling into a paid study course and that they would treat the content of these resources as complementary to the content used at the university (and in other areas which they find interesting)¹². Parents, in turn, can also become co-creators of their children's education by taking part in preparing educational content for the school community. Openness of education has a big importance for informal education as well. Parents involved in homeschooling can direct children to open educational resources, eg *online* courses, applications, self-study material or instructional films.

⁸ *Open Educational Resources: analysis of responses to the OECD country questionnaire*, "OECD Education Working Papers", no 76, 25th June 2012;

⁹ Orr, D., M. Rimini and D. Van Damme, *Open Educational Resources: A Catalyst for Innovation*, Educational Research and Innovation, OECD Publishing, Paris. 2015. <http://dx.doi.org/10.1787/9789264247543-en>, p. 14.

¹⁰ *Ibidem*, s. 20–21.

¹¹ *Ibidem*, s. 15–16.

¹² *OER Evidence Report 2013–2014. Building Understanding of Open Education*, op. cit., p. 5, 17.

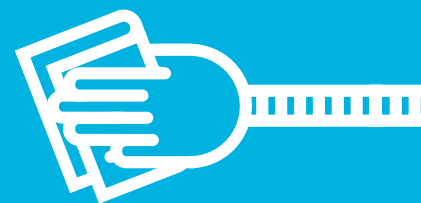
By encouraging teachers to use open educational resources, the **school management and administration** gain more motivated, competent and creative staff and increase the school's prestige. Not without significance is the possibility to build the school's own base of educational materials accessible to all interested groups, parents and pupils as well. From the technological point of view, introducing open standards applications and programmes allows for much cheaper exploitation of the information-communication infrastructure at school.

Outside School

The discussion on opportunities and limitations of openness in education shapes the perception of the role and essence of education, shifting the centre of gravity - similarly to the debate on new educational models - towards the pupil. Openness of education is a pretext to start a discussion and, through this, a reflection on the models, standards and educational processes. Openness of education changes also educational practices, focusing them on cooperation, individualisation and personalisation of teaching, enabling also the pupil to create his/her own path of development and educational resources. Certainly, just the openness of resources itself will not guarantee these changes unconditionally, since it must be coupled with increasing the level of users' expertise, with providing appropriate access to content and good atmosphere and social acceptance for openness in creating and freedom in sharing. This way, the following mechanisms which support openness are created:

- **technological** – the environment of creating and distribution of open educational resources (open code),
- **content** – educational content shared under a specific license (open content),
- **social** – creating content and the technological environment through constant social consultation and quality surveys (open creation).

The openness dimensions indicated shape the optics of looking at the benefits coming from the creation and use of open digital educational resources.



Technological Dimension

Open code enables stable development and improvement of the technological environment. Open standards – in the case of technological tools – allow to fully adapt a tool to specific needs of educational institutions (for example by adding or removing functionalities). Moreover, open code enables adding new functionalities or graphic, functional or organisational adaptations of open IT environments (open technological tools – for example applications, software, educational platforms).

Open code enables integration of the technological environment with other IT systems, and thus centralisation of management of such an environment. On the basis of open code new IT systems, IT environments, applications or software can be built. Also, the copyright structure of open educational resources allows for their low-cost modification for the needs of new technological solutions (for example converting an electronic manual into an application)¹³.

Content Dimension

Opening educational resources enables their constant cyclical development and improvement. Closed resources, due to legal regulations, have a long updating path. Open resources are updated much faster, because most often they are published directly by the author. However, the possibility of introducing changes in open educational resources simultaneously creates a risk that a person making changes does not have adequate

¹³ *Open Educational Resources: a catalyst for Innovation, op. cit, p. 15.*

technical or pedagogical skills, and the quality of the material could be lower after modification¹⁴. Verification of open educational resources quality is not made easier by the fact that many repositories still don't have reliable and clear assessment systems of materials by their users (or reviewers), some pages offer only simple marking systems, not allowing for detailed feedback. What is more, the assessment doesn't connect the author of open educational resources with the recipient. What, for the author, represents high quality, doesn't have to be such for the recipient (including for instance language difficulties or difficulties in learning)¹⁵.

Open educational resources motivate to using new forms and methods of education, responding to the challenges of the 21st century. Open educational resources – as tools enabling their adaptation to individual needs and dissemination, and sharing within a community – respond better to the challenges posed by the development of digital technologies¹⁶ and new didactic methods (for example WebQest, flipped classroom, gamification, projects method) and to the current needs to use the gained knowledge creatively, to adapt to the changing market needs and change of qualifications, to develop the ability to learn together with others¹⁷.

Openness of educational resources offers more opportunities to individualise teaching, create programmes and didactic processes based on unlimited educational resources coming from different sources. Preparing individual development paths for pupils, teachers gain much more freedom in using and repurposing different open resources and tools. The situation is the same for pupils, if they are prepared to independently map their individual development paths. It is confirmed by the UNESCO Survey on Governments' Open Educational Resources (OER) Policies report¹⁸, which gathers data from a questionnaire on the subject of open policies in education carried out among governments of 82 countries. Among benefits coming from the use of open educational

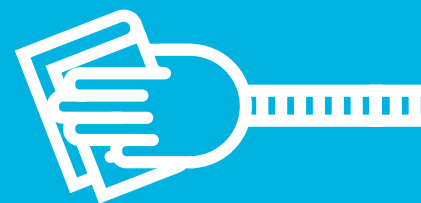
¹⁴ *Open Educational Resources: A Review of the Literature*, 2012, p. 17 – http://opencontent.org/docs/oer_literature_preprint.pdf [access: 25th October 2015].]

¹⁵ *Ibidem*.

¹⁶ *Open Educational Resources: a catalyst for innovation*, *op. cit.*, s. 14.

¹⁷ *Ibidem*, s. 15.

¹⁸ S. Hoosen, N. Butcher, *Survey on Governments' Open Educational Resources (OER) Policies*, Associates for the Commonwealth of Learning, UNESCO, June 2012 – http://www.unesco.org/new/fileadmin/MULTIMEDIA/HQ/CI/CI/pdf/themes/Survey_On_Government_OER_Policies.pdf [access: 25th October 2015].



resources, the publication lists “better efficiency and quality of educational resources” as well as “the potential for innovation.” The gathered data predictably show increasing the number of open educational resources, decreasing costs of education, raising the level of knowledge exchange and optimisation of efforts to create educational resources¹⁹ At the same time, it must be acknowledged that not all open resources will fulfil their promise. Some researchers point out²⁰ that it is the possibility to adapt open educational resources to the language and culture conditions or their readiness possibility that make some open resources incomparably more valuable and practical than others, and enable creative modifications made by the recipient to adapt open educational resources to individual needs.

Social Dimension

The universality of access to open educational resources builds social openness towards the use of new educational forms by different social, age and professional groups as well. This aspect concerns mainly *online* open resources, creation of communities online, exchange of knowledge, information and experience and in turn, through these activities - popularisation of the concept of openness in education. The universal access to education through using the wide scope of the open education opportunities – technology, models, tools and resources – increases social responsibility for creating quality of education and focuses attention on constructing a policy of educational quality which is based on openness (if I expect to find good quality open resources online, then I should also provide and share such ones). Openness of education allows also to counteract educational myths and stereotypes – if the direct actors of educational processes are responsible for creating standards, tools, resources and methods of work, then education becomes what it really is and not how it is presented by set clichés, replicated stereotypes or educational myths.

¹⁹ Ibidem, p. 18-20.

²⁰ *Open Educational Resources: A Review of the Literature*, op. cit., p. 17.

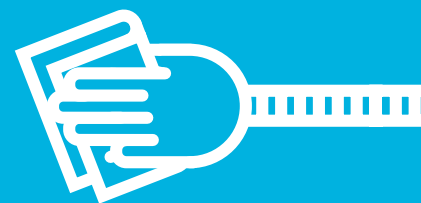
Most of all, however, **openness increases access to education**. Since a large majority of open educational resources is free of charge, they contribute to the fight with exclusion among the poorest social groups, who can't afford the costs connected with education, as well as among people who use open education to broaden and complement their knowledge and qualifications. Often, they come from smaller places and, to save time and minimise costs, they use different open educational materials and open forms of *online* education, eg trainings or webinars. This situation refers also to youth, students or adults who learn, work or study abroad or learn languages through using open educational resources *online*. What follows is the opportunity to use resources by an unlimited number of recipients – both organisational and individual ones. Resources, once published on the net, can be used by everybody who can access them (eg educational resources on websites or educational portals, resources on e-learning platforms). Also, each institution can, adequately to its needs, limit access to educational resources created for individual recipients, like its employees or students.

All this means that **openness ensures more options of use and adaptation of resources by different social, professional and age groups**. Each institution and individual person can create open educational resources for a specific group of recipients (eg preschoolers) or a defined professional group (eg accountants). Moreover, educational resources addressed to the general public can be adapted to specific needs of an age or professional group (eg a general *online* training in English at the A1 level can be adapted for lawyers by adding relevant vocabulary, case studies or discussion subjects).

Although open educational resources provide all these opportunities, research shows that, so far, most open resources are created at the academic level. According to the UNESCO questionnaire, on all continents under research the level of open educational resources use at specific stages of education (in the international standard education classification ISCED divided into levels from 0 to 6) is the lowest at lower stages and the highest at the higher ones. In other words, the most limited use of open educational resources is at the stage of pre-school, and the biggest – at university level²¹. It may be not without a reason. The William and Flora Hewlett Foundation²² report quotes data of

²¹ S. Hoosen, N. Butcher, *Survey on Governments' Open Educational Resources (OER) Policies*, op. cit., p. 4.

²² *White Paper: OPEN EDUCATIONAL RESOURCES. Breaking the Lockbox on Education*, The William and Flora Hewlett Foundation, November 2013 – http://www.hewlett.org/sites/default/files/OER%20White%20Paper%20Nov%2022%202013%20Final_0.pdf [access: 25th October 2015].



the British Council and IDP Australia, showing that, until the year 2025, 263 million people will be eligible to start higher education. To satisfy this demand, for the next fifteen years (from the date of the report's creation) every week four universities capable of admitting at least 30 thousand students should open. Open educational resources, which could provide higher education regardless of the country or financial means could be a solution to this predicament²³. Open educational resources can also be a solution to budget cuts which universities experienced in the era of economic crisis: in 35 American states subsidies for each student in 2013 were lower than in 2008 (before the economic crisis), and in 17 states they were lower by more than 10%. In 2013 (compared to 2008) subsidies in higher education decreased by 28% on average²⁴.

Another area influenced by open resources is the education of people with special needs. **Openness enables adaptation of educational resources to different types of dysfunction.** Once created, educational resources for a healthy user can be adapted for the needs of people with disabilities by using the WCAG 2.0 standard on a selected level and then adapted to specific needs of pupils with specific dysfunctions, for example by adding sign language translation for hearing impaired pupils or using an adequate colour palette for autistic pupils. This way, once prepared educational resource can be differently distributed, depending on pupils' individual needs. Thus, openness of education helps counteract exclusion connected with different types of dysfunction or disability by separating open educational resources from the time space dimension, which allows to equalise the recipients' chances in access to education²⁵. Moreover, the possibilities of adaptation and modification of open educational resources facilitate their customisation to the environment of people with special needs, for example the disabled or the poor, or living in places without proper infrastructure.

Many sources confirm that one of the biggest advantages of open educational resources is the flexibility of educational opportunities they offer²⁶. The report of the Economic Cooperation and Development Organisation quoted shows that unequal distribution of educational resources leads to lower efficiency and injustice. Open educational resources counter this through openness, which ensures wide accessibility of resources

²³ *Ibidem*, p. 6.

²⁴ *Ibidem*, p. 7.

²⁵ *Open Educational Resources: A Catalyst for Innovation*, op. cit., p. 14, 45–46.

²⁶ S. Hoosen, N. Butcher, *Survey on Governments' Open Educational Resources (OER) Policies*, op. cit., p. 18–20.

(eg online or in repositories) among different social circles, supporting for instance adult education²⁷. Open educational resources increase equal access to knowledge, because they can substitute expensive infrastructure (eg digital laboratories can substitute real ones), they can also fulfil the postulate of equal access by, among other things, exchange of resources among educational institutions²⁸, exchange of resources among countries or regions²⁹, transferring educational resources from formal to informal structures of education³⁰. These advantages of open education are also confirmed in a different document of the Economic Cooperation and Development Organisation – *Open Educational Resources: analysis of responses to the OECD country questionnaire* – stressing that among the main reasons given by countries for deciding to introduce a public policy in relation to open educational resources are: increasing accessibility of high quality educational materials, (the most commonly given reason), increasing access to online educational materials and equalising educational opportunities³¹.

Openness of education enables to create new branches of business, based on selling services, not content. The competition dimension of resources availability on the educational market also changes – new, shorter life cycles of an educational product are set. In the case of an open educational resource it can be said that the life cycle of the product lasts until a new educational resource is created on its basis, eg by modification (so it could be a few weeks, a few days or sometimes even a few hours or minutes). The Economic Cooperation and Development Organisation also draws attention to this matter, though defining the process as prolonging the life cycle of resources³², but *de facto* thinking about a similar mechanism – thanks to the possibility of modification, each open educational material in a sense lives longer.

Another issue important for business is the possibility of creating individual educational resources based on open educational resources (if the license allows for modifications). They can be an element of promotion for the sale of closed resources or the foundation for introducing paid services, for example a license payment for access to a platform

²⁷ *Open Educational Resources: A Catalyst for Innovation*, op. cit., p. 40

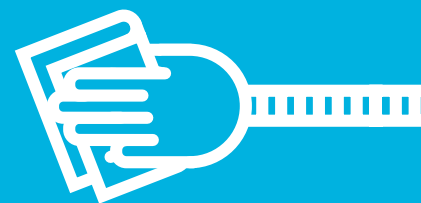
²⁸ *Ibidem*, p. 42–43.

²⁹ *Ibidem*, p. 43–44.

³⁰ *Ibidem*, p. 44.

³¹ *Open Educational Resources: analysis of responses to the OECD country questionnaire*, op. cit., p. 12.

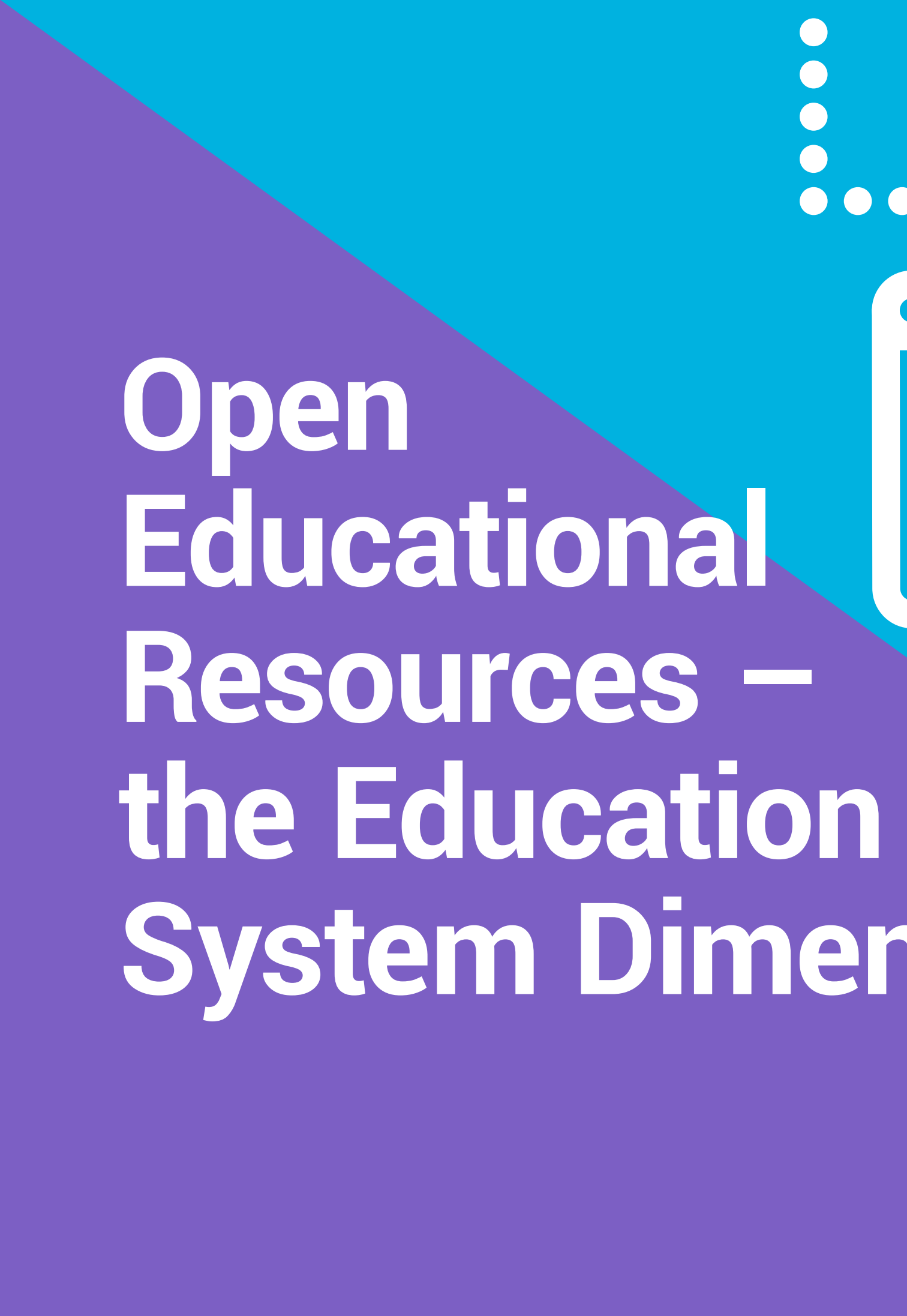
³² *Ibidem*.



with open educational resources, free access to educational resources after paying for the electronic register service, access to a base of open educational resources after buying a product (a computer or a tablet). Thus, creation of individual open educational resources by private subjects enables shaping and promoting closed branches of business, parallel to conducting business activity based on openness.

Open educational resources also mean big savings for educational institutions and pupils or students. They concern mostly textbooks (according to almost 74% of teachers and close to 80% of pupils surveyed by the Boston Consulting Group³³). Unequivocal proof that other kinds of open educational resources bring similar savings is missing. The value of savings on textbooks is easy to assess – pupils must buy textbooks (whether new or used) so open textbooks are the only free option of having direct access to the required textbooks.

³³ OER Evidence Report 2013–2014. *Building Understanding of Open Education*, op. cit., p. 23.



Open Educational Resources – the Education System Dimer



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In the Polish law the teacher – under the Teachers' Charter – is guaranteed “the right to use such methods of teaching and formation s/he deems the best from these recognised by the contemporary pedagogical science and to choose among the textbooks and teaching aids authorised for school use”³⁴. It means that teachers enjoy considerable freedom in the choice of materials used in class. Additionally, fair use allows them to use in lessons works, texts or multimedia under copyright. It can be said that there are practically no limitations to teachers' choice of materials and teaching aids. However, it only appears so, because in reality there are several **obstacles to teachers' using innovative methods, digital resources or modern tools**. These obstacles are, among others:

- overload of administrative tasks, resulting in lack of time for development,
- clinging to traditional teaching methods,
- lack of mutual support, exchange of experience and information,
- ineffective promotion system,
- lack of digital expertise.

Teachers' Professional Duties

Research conducted by the Kopernik Science Centre (Centrum Nauki Kopernik) among teachers of science shows that they must “seek balance between didactic work and administrative duties - paperwork. To an increasing extent, they are obliged to produce different types of reports and documentation. These duties [...] consume teachers' time and energy which they would prefer to use working with pupils”³⁵. Teachers are held responsible for properly completed reports and documents by the supervising institutions while the parents and the public opinion follow the results of their work (measured by the pupils' results in external exams). The contradiction, expressed in the official aspect of a teacher's work, lowers motivation to engage in pedagogical work.

Teachers declare that they have little time for professional development, especially

³⁴ Art. 12 pt 2 of Act from 26th January 1982 – Teachers' Charter (Journal of Laws from 1982, Nr 3, pos. 19 with changes).

³⁵ Ł. Krzyżanowska, M. Wiśnicka, *Wykorzystanie eksperymentów i metod aktywizujących w nauczaniu – problemy i wyzwania. Raport z badań*, The Kopernik Science Centre, Warsaw, 2009, p. 14.



because the activities not directly related to didactic work obstruct introducing innovation into the teaching process. In a study of the time and working conditions of teachers³⁶ a list of 55 activities carried out by teachers was created, divided into four groups: connected with didactic matters, connected with educational and care-taking matters, connected with professional development and connected with administrative tasks. Then, respondents were asked how often they engage in each type of activity. Almost all teachers participating in the survey indicated that they often search for didactic aids (computer programmes and additional materials) and try to get acquainted with them, which was qualified as an activity connected with professional development – so it would mean that teachers have time for it. However, participation in conferences, trainings and interschool systems of teachers development – which seems much more adequate as professional development and less as preparation to classes – the respondents described as activities undertaken “with average frequency”³⁷. It shows that **teachers willingly raise their level of expertise to make lessons more attractive (searching for new materials) but they lack time and space to do it systematically**. It also means that there is a huge potential for reaching teachers with open educational resources as an answer to their need for new didactic materials.

Traditional and Innovative Methods of Teaching

According to the evaluators of the Digital School programme, teachers' attachment to traditional methods of teaching is one of the factors which can cause a situation in which the use of modern technologies at school will be limited to “a basic level, on which ICT [information-communication technologies] will be just an attractive superficial addition to traditional teaching methods”³⁸. A substantial role in perpetuating this phenomenon play educational publishers, who offer multimedia packages accompanying textbooks, but very often in the form of so-called boxes, or sets of activities, extra

³⁶ *Czas pracy i warunki pracy w relacjach nauczycieli*, The Educational Research Institute, Warsaw 2013.

³⁷ *Liczą się nauczyciele. Raport o stanie edukacji 2013*, The Educational Research Institute, Warsaw 2014, p. 121.

materials, source texts and instructions for teachers, whose use doesn't require any additional work on the part of the teacher as he/she is in possession of ready scenarios for the realisation of the core curriculum for the whole school year³⁹. On the other hand, teachers are aware that using modern tools considerably increases the lessons' attractiveness, raises pupils' interest and engagement as well as motivation. Teachers also notice that the information-communication technologies bring best results when combined with traditional teaching methods⁴⁰. Thus teachers reach for activating methods and modern tools for the sake of the pupils, especially since they want to show them the connection between what they learn at school and the real life⁴¹. However, differences in using different educational materials by teachers of specific subjects must be noted. For instance, teachers of Polish use very different materials when planning lessons but "the factor hindering the use of technological aids during lessons is [...] the pressure of time connected with the need to realise the curriculum [...]. Thus, even the best equipment at school doesn't guarantee integration of the new media with the traditional didactic process, if teachers don't have ready ideas and enough expertise"⁴². Polish teachers admit also that in an ideal situation the teacher, using the textbook as an inspiration, prepares additional materials, adapting them to the needs and skills of pupils. History teachers – as the report of the Educational Research Institute shows – are also a group creating their own big collections of extra materials. Science teachers, in turn, especially mathematicians, place much more trust and hope in the authorised textbooks, which – in their opinion – best meet the requirements of the core curriculum. Analysing the needs and habits of teachers, one can efficiently plan how to support them and show them paths to open educational resources responding to their individual needs.

³⁸ *Evaluacja ex-post rządowego programu rozwijania kompetencji uczniów i nauczycieli w zakresie stosowania technologii informacyjno-komunikacyjnych – „Cyfrowa szkoła”*, The Educational Research Institute, Warsaw 2013, p. 7.

³⁹ More on the influence of such practices on the educational book market and dissemination of open educational resources – compare J. Komusińska, Ł. Maźnica, J. Strycharz, *Polska szkoła w dobie „darmowej” rewolucji*, The Digital Centre Project: Poland, Warsaw 2015.

⁴⁰ *Evaluacja ex-post rządowego programu rozwijania kompetencji uczniów i nauczycieli w zakresie stosowania technologii informacyjno-komunikacyjnych – „Cyfrowa szkoła”*, op. cit., p. 87.

⁴¹ *Wykorzystanie eksperymentów i metod aktywizujących w nauczaniu – problemy i wyzwania. Raport z badań*, op. cit., p. 24.

⁴² *Liczą się nauczyciele. Raport o stanie edukacji 2013*, op. cit., p. 165.



Exchange of Experience and Materials

Teachers' mutual support and exchange of didactic materials is, to a certain extent, connected with the subject they teach. For example mathematicians quite often "benefit from the knowledge and skills of other teachers of the same subject with whom they have direct contact. They exchange experiences [...] discuss difficulties connected with realisation of specific content and ways to overcome them. This type of cooperation was declared by 69% of the teachers [surveyed]"⁴³. Similarly, history teachers participating in the same study declare that cooperation among teachers makes their work easier⁴⁴. According to a report by the Educational Research Institute, 73% of respondents indicate that all or a majority of teachers borrow/lend didactic materials or books⁴⁵. It is worth noting, however, that most often such declarations are given by employees of the same school. Analyses show that **teachers willingly share self-prepared materials and experience but only within narrow groups** – usually in their own educational institution.

Several Polish non governmental organisations realise projects which support sharing didactic aids – for example the ROSE Association (the Regional E-learning Trainings Centre), gathering teachers round the *GeoGebra* programme or the Center for Citizenship Education (Centrum Edukacji Obywatelskiej), conducting many theme projects in which teachers raise the level of their expertise concerning modern teaching methods. Activities undertaken in closed groups organised by the teachers themselves (eg SuperTeachers (Superbelfrzy) belonging to a closed group on Facebook) also provide a safe space to present their practices but even they don't develop into wide networks of cooperation.

Also in other European countries, there are attempts to form networks of cooperation in different models. One example can be the Belgian project KlasCement, which is at the same time a repository of open resources and a quasi-social gamified portal, where teachers can cooperate. Although KlasCement is a national project with considerable

⁴³ *Ibidem*, p. 185–186.

⁴⁴ *Ibidem*, p. 236.

⁴⁵ *Ibidem*, p. 102.

public support and a huge reach, and its creators invest a lot of means and energy into motivating teachers to create and share resources, it meets with big resistance. The limitations are legal difficulties in sharing resources online as well as obstacles connected with the conditions of school work⁴⁶. The conclusions from the Digital School programme evaluation also show that attempts to create big networks of cooperation fail: "all desired values of all measured indicators of the programme's effects have been reached, with the exception of the indicator concerning teachers' engagement into networks of cooperation"⁴⁷. It probably happens because teachers, as a professional group, feel under exceptionally high pressure to perform to the highest of their ability and to be specialists in the widest possible scope. Moreover, their work is constantly under scrutiny and – due to the burden of bureaucracy – they feel that all they do is monitored. Thus, as can be seen from the interviews which we conducted with teachers and experts, they feel a considerable level of uncertainty when presenting the results of their work (eg lesson scenarios or other didactic materials) outside the circle of trusted people⁴⁸.

Professional Development System

Another obstacle on the path of teachers who would like to use other than traditional educational resources is – paradoxically – the system of professional development. Formally speaking, teachers who plan to pursue their career along the system's promotion path (from a trainee to a chartered teacher) should "undertake activities whose aim is improvement of their skills and methods of work, including developing skills of

⁴⁶ Ordinance of the Minister of National Education of 1st March 2013 on stages of professional promotion by teachers (Journal of Laws from 2013, pos. 393) indicates that a teacher pertaining to the level of a certified teacher should possess the skill of "sharing knowledge and experience with other teachers." It isn't, however, a requirement on creating and sharing resources but conducting open lessons for teachers. It might be worth considering to broaden the requirement to include sharing resources, not just pedagogical practice.

⁴⁷ *Ewaluacja ex-post rządowego programu rozwijania kompetencji uczniów i nauczycieli w zakresie stosowania technologii informacyjno-komunikacyjnych – „Cyfrowa szkoła”, op. cit., p. 9.*

⁴⁸ *The latest data on the subject of teachers sharing their own materials on the net come from the study Social Diagnosis (Diagnoza Społeczna) from 2007. Based on this data it can be supposed that around 6% of teachers use the Internet to publish their materials. Compare D. Batorski, Młodzi w sieci. Uczniowie, studenci i nauczyciele wobec nowych technologii, [w:] Szkoła w dobie Internetu, red. A. Nowak, K. Winkowska-Nowak, L. Rycielska, The Polish Scientific Publishing PWN, Warsaw 2009, p. 43.*



information-communication technologies use"⁴⁹. However, "as data from the educational information system from 2013 show, half of the teachers has already reached the highest level of promotion and over one fourth - the fourth level of an appointed teacher"⁵⁰. It means that motivating over half of Polish teachers to develop within the existing promotion system is very difficult. Thus, a different kind of support is necessary (eg in the area of creating their own resources) or including elements connected with open educational resources into the existing system. In the legislator's premise, the promotion system was supposed to define the profession's elite. However, it caused a situation in which motivation for development is almost solely financial and teachers see the reform as imposed on them and do not identify with its premises. "Possessing formal proof of professional development and not real expertise which can be used in everyday work becomes the career goal. Such attitude is visible especially in the case of [...] people whose professional situation has become destabilised by the system's change. They aim at participating in the highest possible number of professional development activities, becoming collectors of diplomas covering maximum qualifications and professional certificates in order to regain the lost stability"⁵¹. This diagnosis is confirmed by the report *Teachers' Professional Careers. Contexts – Patterns – Discourse Areas*, in which we can read that "the promotion, as a formal procedure imposed by career construction, is a utilitarian value, which has no place in the core of the altruistic values, characterising teachers' professionalism. [...] A good teacher achieves promotion as if against oneself, to regain the freedom of being a teacher, limited by the legislator's requirements"⁵².

⁴⁹ Par. 8.1 pkt 1 Ordinance of the Ministry of National Education of 1st March 2013 on stages of professional promotion by teachers.

⁵⁰ *Liczą się nauczyciele. Raport o stanie edukacji 2013*, op. cit., p. 133.

⁵¹ *Ibidem*, p. 137.

⁵² H. Kędzierska, *Kariery zawodowe nauczycieli. Konteksty – wzory – pola dyskursu*, Adam Marszałek Publishing, Warsaw 2012, p. 331.

Teachers' Digital Expertise

Open educational resources are to a great extent digital materials. Moreover, one of the biggest advantages of such resources – next to the lack of legal obstacles in their use – is the opportunity to modify and disseminate them. That is why a reflection on using open educational resources in the teaching process is often accompanied by the subject of digital expertise⁵³ of teachers and pupils, and their motivations for creating and sharing resources.

The level of digital expertise is to a large extent combined with experience in using new technologies. People who have been using information-communication technologies in teaching for longer than two years have a higher level of expertise than those who don't use new technologies in teaching at all. "Teachers' digital skills are to a large extent related to their age – those below 50 have a considerably higher level of expertise [...]. This level is not related to the size of the place where the teachers work, the school's results at the exams to lower secondary school and the school's type (private, state)"⁵⁴. 98% of teachers declare daily use of information-communication technologies for varied purposes outside school (the highest result in the group of the countries surveyed). At the same time, one out of ten of the teachers surveyed doesn't use computers in teaching at all and almost one out of four does it less frequently than once a month. Only 18% of teachers use new technologies for teaching on a daily basis⁵⁵. deeper analysis shows that "opportunities given by new media, aren't used very regularly. For instance, most teachers «at some lessons» use computer sources of information (70%), instructive or practice programmes (65%), text editors or programmes for making presentations (64%), programmes for communication (50%), interactive electronic educational resources (50%)"⁵⁶.

⁵³ The authors of the report *Analiza doświadczeń oraz identyfikacja dobrych praktyk w obszarze wspierania rozwoju kompetencji cyfrowych w kontekście przygotowywania szczegółowych zasad wdrażania PO Polska Cyfrowa na lata 2014–2020 oraz koordynacji celu tematycznego 2* (The Warsaw Institute of Economic Studies, The Digital Centre Project: Poland, Warsaw 2015) define digital expertise as "a harmonious collection of knowledge, skills and attitudes which allow to effectively use digital technologies in different areas of life." (p. 4) We will use this formula in the same broad sense.

⁵⁴ Kompetencje komputerowe i informacyjne młodzieży w Polsce. Raport z międzynarodowego badania kompetencji komputerowych i informacyjnych ICILS 2013, The Educational Research Institute, Warsaw 2014, p. 87.

⁵⁵ *Ibidem*, p. 85.

⁵⁶ *Ibidem*, p. 89.



Simplifying, it can be assumed that **teacher know how to use computers and the Internet**, they are probably also willing to undertake such activities more often than we could expect. However, for some reason, **they use modern technologies in class less frequently**. It could be because schools lack good speed Internet connections or teachers don't have access to work or private laptops which they could use in class. It is also important whether teachers can use new technologies and new media in teaching. **Thus, the issues of infrastructure as well as digital expertise are among the most vital factors in the development of open educational resources**, which are predominantly disseminated on the Internet and often use multimedia – films, podcasts, photos or graphics. Whether teachers possess tools for finding educational materials on the net, using and modifying them for individual purposes depends on the access to infrastructure and broadband Internet at school and the level of their expertise. In other words, raising teachers' level of digital expertise and ensuring more access to equipment at school, we indirectly promote popularisation of open educational resources.

However, if we want to engage fully into introduction of open educational resources to school practice, we must also popularise knowledge of such resources. A study by the International Computer and Information Literacy Study shows that Polish teachers – unlike teachers from the other countries surveyed – don't perceive lack of resources as an obstacle in using information-communication technologies at school⁵⁷. In Polish educational institutions the most common are equipment shortages – limited access to equipment and an unsatisfactory supply of software. It might mean that Polish teachers see the number of educational resources available as satisfactory but it is more likely that they reach for electronic didactic materials too rarely and that they don't have enough knowledge on their subject. What is more, in the same study 59% of school principals declared that they expect and require from teachers including Internet educational resources in the teaching process⁵⁸. This, however, wasn't confirmed by the number of teachers fulfilling the requirements. Thus, one of the postulates which we present in this report is supporting not only the improvement of teachers' digital expertise but also building and professional management of a public repository of open resources, which would considerably increase access to open educational resources.

⁵⁷ *Ibidem*, p. 71.

⁵⁸ *Ibidem*, p. 71.

Polish teachers are faced with different, often contradictory expectations. On the one hand, principals⁵⁹ and parents expect step by step realisation of the core curriculum and high grades at exams, which in turn gives a high position in rankings. At the same time, it must be supported with a great deal of reporting and activities of more administrative than content related character. On the other hand, teachers just want to do a good job, they care if lessons are interesting, engaging for pupils and if they relate to their interests. To do this, they need to develop, learn and improve.

Reducing factors connected with the bureaucratisation of administrative processes related to teaching – with simultaneous strengthening of the systems motivating teachers to professional development – we will add to greater use of open educational resources at school and, what follows – to increased innovation, efficiency and quality of education. We need to create favourable conditions for teachers' development, gradually removing obstacles and supporting them in raising their levels of expertise, gaining new knowledge and obtaining access to equipment and good quality materials.

⁵⁹ Especially in the case of ICT use at school, the principals' attitude plays the key role, since they take decisions about investing in equipment and participating in projects raising teachers' levels of expertise. *Compare Ewaluacja ex-post rządowego programu rozwijania kompetencji uczniów i nauczycieli w zakresie stosowania technologii informacyjno-komunikacyjnych – „Cyfrowa szkoła”, op. cit., p. 81.*



Open Education Resources – Legal Conditions

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The World

The Universal Declaration of Human Rights

The International Covenant on Economic Social and Cultural Rights

Paris UNESCO Declaration on Open Educational Resources

Europe

Convention on Human Rights and Fundamental Freedoms

Charter of Fundamental Rights of the European Union

Recommendation of the Council of Europe *Realising the full potential of e-learning for education and training*

Resolution of European Parliament on new technologies and open educational resources

Recommendation of the Council of European Union on validation of non- formal and informal learning

The European Commission Strategy *Europe 2020*

Communication of the European Commission *Rethinking Education*

Communication of the European Commission *Opening up Education*

Poland

Act on the Education System

Act on Copyright and Neighbouring Rights

Poland 2030. *"Long-term National Development Strategy." Third Wave of Modernity (Polska 2030. Trzecia fala nowoczesności. Długookresowa Strategia Rozwoju Kraju)*

Directions of Actions in Teaching Children and Youth and the Functioning of School in the Information Society. New Technologies in Education



International Dimension

The right to education is guaranteed by [The Universal Declaration of Human Rights from 1948](#), whose Art. 26 states: "Each person has the right to education. Education shall be free, at least in the elementary and fundamental stages. Elementary education shall be compulsory." This right was also confirmed by the [International Covenant on Economic Social and Cultural Rights from 1966](#).⁶⁰ As we can read in Art. 13 of the document: "The States Parties to the present Covenant recognize the right of everyone to education. They agree that education shall be directed to the full development of the human personality and the sense of its dignity, and shall strengthen the respect for human rights and fundamental freedoms. They further agree that education shall enable all persons to participate effectively in a free society."

In 2012 at the World Open Educational Resources (OER) Congress – held at the United Nations Educational, Scientific and Cultural Organization (UNESCO) Headquarters – during an expert meeting of governments representatives and individual experts the [Paris Open Educational Resources Declaration](#) was adopted. The declaration has a non binding character of an expert opinion for governments, which can, on its basis, take a decision about further engagement into open educational resources. Among its recommendations, the key points are: creating open resources from public funds, developing tools ensuring the resources' quality and certification, supporting public policies on open educational resources. The declaration underlines the connection between using open educational resources and increasing access to education – it could be treated as a suggestion to interpret the issue of openness of educational resources through the prism of the right to education.

[The principle of openness of educational resources can be treated as a means to reduce obstacles in realising the right to education and to help equalise opportunities in access to education.](#)

⁶⁰ Journal of Laws from 1977, Nr 38, pos. 169..



European Dimension

The right to education is also guaranteed in the European human rights protection system. Art. 2 of the Protocol nr 1 to the Convention on Human Rights and Fundamental Freedoms signed at Paris on 20th March 1952⁶¹ states: „No person shall be denied the right to education.” Art. 14 of the Charter of Fundamental Rights of the European Union⁶² states: „Everyone has the right to education and to have access to vocational and continuing training. This right includes the possibility to receive free compulsory education.”

Already in 2008 the Council of Europe in its **recommendation *Realising the full potential of e-learning for education and training*** advocated using open educational resources and e-learning as methods of counteracting digital exclusion and equalising educational opportunities⁶³. Open educational resources are considered by the Council of Europe as almost identical with e-learning tools, a vital dimension in counteracting digital exclusion. Open educational resources also serve the development of education systems, social capital and employment in Europe. In the Council of Europe recommendation we can find suggestions similar to those formulated in the Paris Declaration, most of all on the development of open educational resources.

The European Union has competence to support, coordinate and complement the actions of member countries on education⁶⁴. The issue of open educational resources appears then in key European documents on educational policy, including the strategy **Europe 2020** from 2010. In the **European Union Communication *Rethinking Education*** from 2012 the issue of open educational resources is presented as an important aspect of using telecommunication technologies in education. The document also underlines the need to support new, flexible forms of learning, treating access to open educational resources (combined with proper e-expertise) as a means to achieve this goal. The communication urges to increase the scale of access to and use of open educational

⁶¹ Journal of Laws from 1995, Nr 36, pos. 175.

⁶² Official Journal. UE 2012, C 326, p. 2.

⁶³ Compare <http://assembly.coe.int/nw/xml/XRef/Xref-XML2HTML-en.asp?fileid=17648&lang=en> [access: 2nd September 2015].

⁶⁴ Treaty on functioning of European Union (Official Journal UE 2008, C 115/01) including changes introduced by the protocol on correction to Lisbon Treaty (Official Journal UE 2009, C 290/01).

resources, supported with adequate standards of ensuring quality and mechanisms of validating the expertise gained through open educational resources.

Also the latest [educational strategy of the European Commission, presented in the communication *Opening up Education*](#) from 2013, recognises creating open educational resources as one of the pillars of education. The model of open educational resources ensures “high quality, innovative education, using new technologies and digital content.” The European Commission recommends creating open resources and preparing public institutions for new models of creating educational resources, advising member countries to support the policy of open access to educational resources financed from public funds, to encourage educational institutions to include open educational resources as recommended resources, to create high quality public educational resources. The model of open educational resources is also implemented through the European grant programme Erasmus+. According to the contest requirements, educational materials, documents and media created with the programme’s financing should be available online, free and under an open license.

It is also worthwhile to mention the [European Commission guidelines on recommended standard licenses, databases and fees for the reuse of documents](#)⁶⁵ (2014/C 240/01). Although they don't refer directly to educational resources – as they were formulated with the thought of a broad category of documents belonging to the public sector information – they indicate recommended ways of disseminating such documents for reuse. The key recommendation draws upon the use of open standard licenses, such as Creative Commons.

Using open educational resources is also included in the [European Union Council recommendation of 20th December 2012 on validation of non-formal and informal learning](#)⁶⁶ (2012/C 398/01), in which the resources were treated as considerable support in non-formal and informal learning, recognising them as materials of proper value to be used in the education process.

⁶⁵ Compare <https://ec.europa.eu/digital-agenda/en/news/commission-notice-guidelines-recommended-standard-licenses-datasets-and-charging-re-use> [access: 2nd September 2015].

⁶⁶ OJ C 398, 22nd December 2012, p. 1–5. Recommendations of the Council of European Union don't have to be implemented into national legislations, they don't have binding power for states or citizens.



In response to The European Commission communication *Opening up Education*, the European Parliament adopted the **resolution of 15th April 2014 on new technologies and open educational resources** (2013/2182(INI))⁶⁷. This document also combines open resources with digital education, treating open educational resources as a tool in broadening access to education and improving its quality. The European Parliament underlines that providing and verifying adequate quality of open educational resources as well as building systems of recognising the knowledge gained with their help, play an important role in increasing trust in open educational resources (and, what follows – their use). It also notices the vital function of harmonising the existing limitations and copyright exceptions for the needs of education, seeing in it a means connected with using open educational resources and distance teaching. The European Parliament urges the member countries to treat parents as partners in digital education and perceives the importance of investment in digital infrastructure providing access to open resources.

European institutions have a clear, cohesive policy on open educational resources and digital education. The Union's documents underline direct links among open educational resources, digital education (including distance education), the dynamically changing work market and the concept of lifelong learning.

National Dimension

The Constitution of the Republic of Poland in Art. 70 states: "1. Everyone shall have the right to education. Education to 18 years of age shall be compulsory. The manner of fulfillment of schooling obligations shall be specified by statute 2. Education in public schools shall be without payment. Statutes may allow for payments for certain services provided by public institutions of higher education. [...] 4. Public authorities shall

⁶⁷ Resolution of the European Parliament from 15th April 2014 on new technologies and open educational resources (2013/2182(INI)) – <http://www.europarl.europa.eu/sides/getDoc.do?type=TA&reference=P7-TA-2014-0395&language=PL&ring=A7-2014-0249> [access: 2nd September 2015].

ensure universal and equal access to education for citizens. To this end, they shall establish and support systems for individual financial and organizational assistance to pupils and students. The conditions for providing of such assistance shall be specified by statute." Moreover, in Art. 73 of the Constitution we can read: "The freedom of artistic creation and scientific research as well as dissemination of the fruits thereof, the freedom to teach and to enjoy the products of culture, shall be ensured to everyone."

Poland is a signatory of the previously mentioned international acts and conventions which guarantee the right to education, including the Paris Declaration on Open Educational Resources. As a member state of the European Union, Poland should also take into account the guidelines and recommendations of the Union's institutions, paying attention to their cohesion with the national system of education, most of all the will of parents in reference to this matter.

An important reference point is the document *Poland 2030. "Long-term National Development Strategy 2030." Third Wave of Modernity*⁶⁸, adapted in 2013, in which openness of resources – especially public – is considered one of the key factors influencing the creative and innovative potential of the economy. Disseminating public resources from the field of education as open educational resources is listed as a basic activity serving to achieve the fifth goal of the strategy – creating digital Poland.

In Poland, there is no strategic document wholly devoted to Polish education, including digital education. An attempt at some digital education strategy is the document *Directions of Actions in Teaching Children and Youth and the Functioning of School in the Information Society. New Technologies in Education*⁶⁹, prepared in 2010 by the Informatisation of Education Council (Rada Informatyzacji Edukacji) for the Ministry of National Education, which defines creating, collecting and developing open educational resources as one of the main goals in digital education.

A public debate on open educational resources has been present in Poland since 2009,

⁶⁸ Compare http://www.kigeit.org.pl/FTP/PRCIP/Literatura/002_Strategia_DSRK_PL2030_RM.pdf [access: 2nd September 2015].

⁶⁹ Compare <http://bip.men.gov.pl/wp-content/uploads/sites/2/2010/10/plandzialan.pdf> [access: 2nd September 2015].



when the Open Education Coalition organised a conference in the Parliament devoted to this subject⁷⁰. However, open educational resources still have not received statutory recognition. An attempt to regulate this issue was undertaken in 2013, as part of the **Act on Openness of Public Resources**, but work was stopped at the stage of preparation of the legal act's project.

An important reference point for introducing regulation of open educational resources in the Polish legal system are two acts – the Act on the Education System and the Act on Copyright and Neighbouring Rights.

The Act on the Education System⁷¹, amended in 2014, gives teachers full freedom in the choice of materials which serve to realise the curriculum. Thus, they can teach using a textbook (authorised for school use), other educational or practice material (complementing or replacing the textbook, in paper or electronic form) or not using materials listed in the categories defined in the act.

The act creates the legal basis for creating public textbooks by the education and culture departments, obliging the Ministry of National Education to equip primary schools with textbooks for grades I–III. The paper textbooks delivered by the Ministry of National Education – with the help of voivodes and education superintendents – become the property of schools, which lend them to pupils. The act defines also the complex system of financing the purchase of additional textbooks and exercise material in primary and lower secondary school. The system assumes parallel use of public paper textbooks (in grades I–III), public e-textbooks (in grades IV–VI) as well as commercial textbooks and exercise materials financed from budget funds.

According to the estimates of the Ministry of National Education presented in the assessment of the effects of the regulation to the project of the Act on changing the Act on the Education System and several other acts⁷², public e-textbooks should consist 20% of all materials used in education, and in grades IV–VI they are to be the basic teaching

⁷⁰ Compare <http://koed.org.pl/blog/2009/04/27/konferencja-otwarte-zasoby-edukacyjne-w-polsce-w-sejmie> [access: 2nd September 2015].

⁷¹ Journal of Laws from 2004, Nr 256, pos. 2572 with changes

⁷² Urgent government project of the Act to change the Act on the Education System and several other acts (druk sejmowy nr 2315).

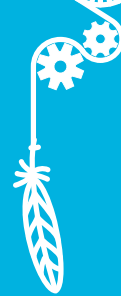
material, complemented with commercial textbooks and exercise books financed from the budget. As it was noticed in the opinion to the act's project prepared for the Bureau of Research Chancellery of the Sejm (Biuro Analiz Sejmowych), the changes introduced are closely linked to the previously started work on the development of open educational resources, including e-textbooks and the Scholaris.pl portal: "[...] the changes concern not only mechanisms of financing the cost of didactic aids from public funds but also stimulating the process of changes of the way schools and teachers work, consisting of wider use of different sources, including educational platforms and different types of materials (also those not officially authorised for school use)"⁷³.

Despite very detailed and casuistic provisions of the Act on the Education System which refer to textbooks, the legislator does not resolve the issue of licenses under which textbooks provided by the Ministry of National Education must be shared. The license issue is not regulated in the department documents which defined the realisation of the Our First Textbook project, which was the Ordinance of the Ministry of National Education of 7th July 2014 on designated subsidy on providing schools with textbooks, educational and exercise materials (Journal of Laws from 2014, pos. 902) and the Ordinance of the Ministry of National Education of 8th July 2014 on authorising textbooks for school use (Journal of Laws from 2014, pos. 909)⁷⁴.

The amendment of the Act on the Education System provides the legal framework for a profound reform of the way textbooks and educational materials are created, introducing a model of their public financing and publishing. However, from the point of view of the development of open educational resources in Poland, these changes are not sufficient, which seems to be confirmed by the difficulties in providing full openness of the resources in the publication of the Our First Textbook project. It used graphic materials unavailable under an open license, which makes free use of the textbook's content, as it is guaranteed by the open educational resources' principles, impossible. The problem could certainly be avoided if the act introduced an obligation of open licensing of

⁷³ J. Osiecka-Chojnacka, *Opinia merytoryczna do pilnego rządowego projektu ustawy o zmianie ustawy o systemie oświaty oraz niektórych innych ustaw* (druk 2315), Warsaw, 12th May 2014, The Bureau of Research Chancellery of the Sejm (BAS-WASGiPU – 915/14).

⁷⁴ Detailed conditions of using the textbook – compare <http://naszelementarz.men.gov.pl/warunki-korzystania-z-podrecznika> [access: 2nd September 2015].



public textbooks..

The Ministry of National Education is currently working on [assumptions to a project of an Act on the Integrated Qualifications System](#), which is vital for validation of knowledge, skills and expertise gained with the use of open educational resources. The aim of the planned act is to create an integrated system of qualifications. Since it is still under preparation, it cannot be determined whether the project maker will regulate fully the validation process of results obtained in non-formal and informal learning. Taking the validation process of learning results to statutory level could contribute to a wider use of open educational resources – for example by employees raising their level of expertise.

[The Act on Copyright and Neighbouring Rights](#)⁷⁵ regulates using resources at school – it describes rules of using textbooks and educational materials which are works protected by copyright, it also indicates who holds copyright to educational materials prepared by teachers. The copyright law envisages many limitations of the copyright monopoly to protect an important public interest, including access to knowledge, science and education. Regulations on educational exceptions to copyright are a necessary addition to the regulation on use of textbooks and other educational materials in teaching, included in the Act on the Education System. Without these regulations teachers would regularly break copyright law, which gives owners control over the rights to use the works.

Educational Exception in Polish and European Law

Educational exceptions is one of the forms of public use exceptions to copyright – a legal institution which enables using works without the copyright owner's permission. Educational exceptions allow teachers and educators to freely – and at the same time legally – use various content in class. It is not, however, a coherent legal construct but a concept which can be found in many regulations, often referring to different subjects and using different terminology. Together, they form a complicated and often opaque

⁷⁵ Journal of Laws from 2006, Nr 90, pos. 631 with changes.

system of freedoms for education..

The Scope of Educational Exception in Polish Law

Educational exception defined in Art. 27 of the Act on Copyright and Neighbouring Rights states that "scientific and educational institutions can, for didactic purposes or to carry out individual research, use works in their original form and translation as well as create for this purpose copies of work's fragments."

The term "use" must be understood very broadly since it concerns all fields of exploitation – multiplying, disseminating copies, playing, transmitting. The limitation here is the purpose of use which must be didactic, so it excludes the possibility to publish content on the Internet (as *online* access means loss of control over the published work, thus it could be used differently than the legislator intended).

In practice, this regulation allows for legal copying, scanning and recording on pen-drives educational materials for pupils. During lessons, you can use any legal sources, eg films on YouTube, music recordings or e-books. What is important, educational fair use allows to use such materials exclusively during lessons or other school activities. Amended regulations include *e-learning* into fair use.

Additional regulations allow schools to share copies of works and to multiply them in order to complete, preserve or protect their own collections. The right to quote (Art. 29 p. 1 of the Act on Copyright and Neighbouring Rights), which is the framework for free use of the work of others in scientific, didactic, journalistic and artistic activity, is also important for educational activity. Further regulations – Art. 31 of the Act – guarantee the possibility to publicly use works during school events.

In comparison to other countries, Poland guarantees a fairly wide scope of educational uses. Acting within its framework, most teachers don't concern themselves with copyright issues, using available resources freely



Educational Exception in European Union Law

The directive to harmonise some aspects of copyright and neighbouring rights in the information society from 2001 (2001/28/WE) defines the scope of educational exception. It is not, however, an obligatory exception, so its implementation to national legislations differs in almost every member country of the European Union⁷⁶. Some countries, like Cyprus, Greece or Bulgaria, introduced educational exception without subject limitations and the need to pay fees while France, Belgium or the Netherlands require a fee or equitable remuneration for using works for educational purposes.

Educational Exception in 2015 Copyright Amendment

In Poland, the issue of educational exception was precised in the amendment to the Act on Copyright and Neighbouring Rights, prepared during compiling this report. It details the object scope of the act, listing educational institutions (according to the provisions of the Act on the Education System) which can use works freely (small ones in their entirety, bigger ones in fragments) to illustrate didactic activity.

Works for Hire

According to the Act on Copyright and Neighbouring Rights, rights to works created in connection with employment pass to the employer with the moment of their taking over the work. In relation to employees of the education system, the interpretation is not straightforward. There are opinions that the regulation also relates to contracting, appointing and choice, so to appointed teachers⁷⁷. A different approach narrows the regulation to employment conditions, so for example to teachers in private schools. Regulating this issue is indispensable if materials created by teachers are to be shared as open educational resources. If the educational institution holds the copyright, it can share resources under an open license. In other cases, it is necessary to have a proper license agreement with teachers (or they themselves could give an open license).

⁷⁶ T. Nobre, *Educational resources development: Mapping Copyright Exceptions and Limitations in Europe*, Creative Commons Project Open Educational Resources Policy in Europe Working Paper, July 2014 – http://oerpolicy.eu/wp-content/uploads/2014/07/working_paper_140714.pdf [access: 2nd September 2015].

⁷⁷ *Prawo autorskie i prawa pokrewne – zarys wykładu*, red. M. Poźniak-Niedzielska, Branta Publishing (Oficyna Wydawnicza Branta), Bydgoszcz 2007.

There are several reasons why using open educational resources is beneficial, despite the existence of freedoms included in the copyright system:

- **educational exception doesn't include publishing content *online***, making impossible, among other things, conducting e-learning outside closed platforms or unlimited exchange of resources among teachers. Publishing content by teachers and pupils as part of media education classes is not possible, either,
- **the lack of clarity in interpreting the term “didactic purpose”** means that using content eg during after-class meetings may involve the necessity to pay additional license fees,
- **educational exception is limited in subject** and doesn't include institutions outside the education system, even if they have an important educational function. This refers mostly to libraries, museums and cultural institutions as well as non governmental organisations participating in non-formal and informal education.

Using open educational resources could be a solution to these problems because sharing works under an open license provides – transparently and securely – the opportunity to use resources freely, without object or subject limitations. It is obvious, however, that not all materials indispensable for teaching will always be open educational resources (for example commercial feature films are not shown in lessons). To introduce legal order to this issue, a wide framework for educational exception to copyright is necessary.



Direction of Changes in Poland and the European Union

We should also mention **the the assumptions to the Act on Openness of Public Resources** worked out in 2012, including especially public educational resources. The act's purpose was to regulate the issue of copyright of these works and the options of their use, treating as a reference point the regulations on access to and reuse of public information.

In recent years, in Poland as well as in the European Union regulations have been implemented which ensure unlimited use of the information created and collected by public institutions, especially public data (statistic or meteorological as well as geodata). There is a clear tendency to broaden the scope of these regulations. An amendment to the directive on reuse of information from the public sector (2003/98/WE) added in 2013 included libraries, archives and museums. What is important, the guidelines of the European Commission presented in 2014 advocate using open licenses in the case of the public sector information which is protected by copyright.

Celem tych przepisów jest uregulowanie zasad korzystania z różnego rodzaju dokumentów finansowanych ze środków publicznych – traktowanych jako dobro wspólne. Rozszerzenie regulacji z tego zakresu na sferę edukacji oznaczałoby wolne licencjonowanie wszystkich publicznie finansowanych zasobów edukacyjnych.

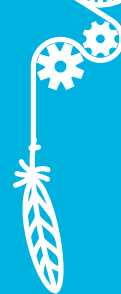
Summary

The Act on the Education System and the Act on Copyright and Neighbouring Rights

together create a complex legal basis which define the principles of financing and creating various educational content. This system, on the one hand, guarantees accessibility of key resources in the education system (so far only textbooks were considered to be such resources), on the other hand – enables relatively free use of any resources required for teaching. Still, changes in the Act on the Education System are necessary which will ensure openness of the publicly financed educational resources as well as precisising the scope of exceptions and copyright of works created by employees of the education system.

Moreover – if, while working on the Act on the Integrated Qualifications System, the department of education creates the framework for validation of expertise gained through informal and non-formal education – more and more widespread use of open educational resources will be possible, especially since broadening the rules on access and reuse of the public sector information onto the educational institutions would ensure clear rules of using publicly financed content.

The target system regulating the creation and use of publicly financed educational resources was presented in table 1.

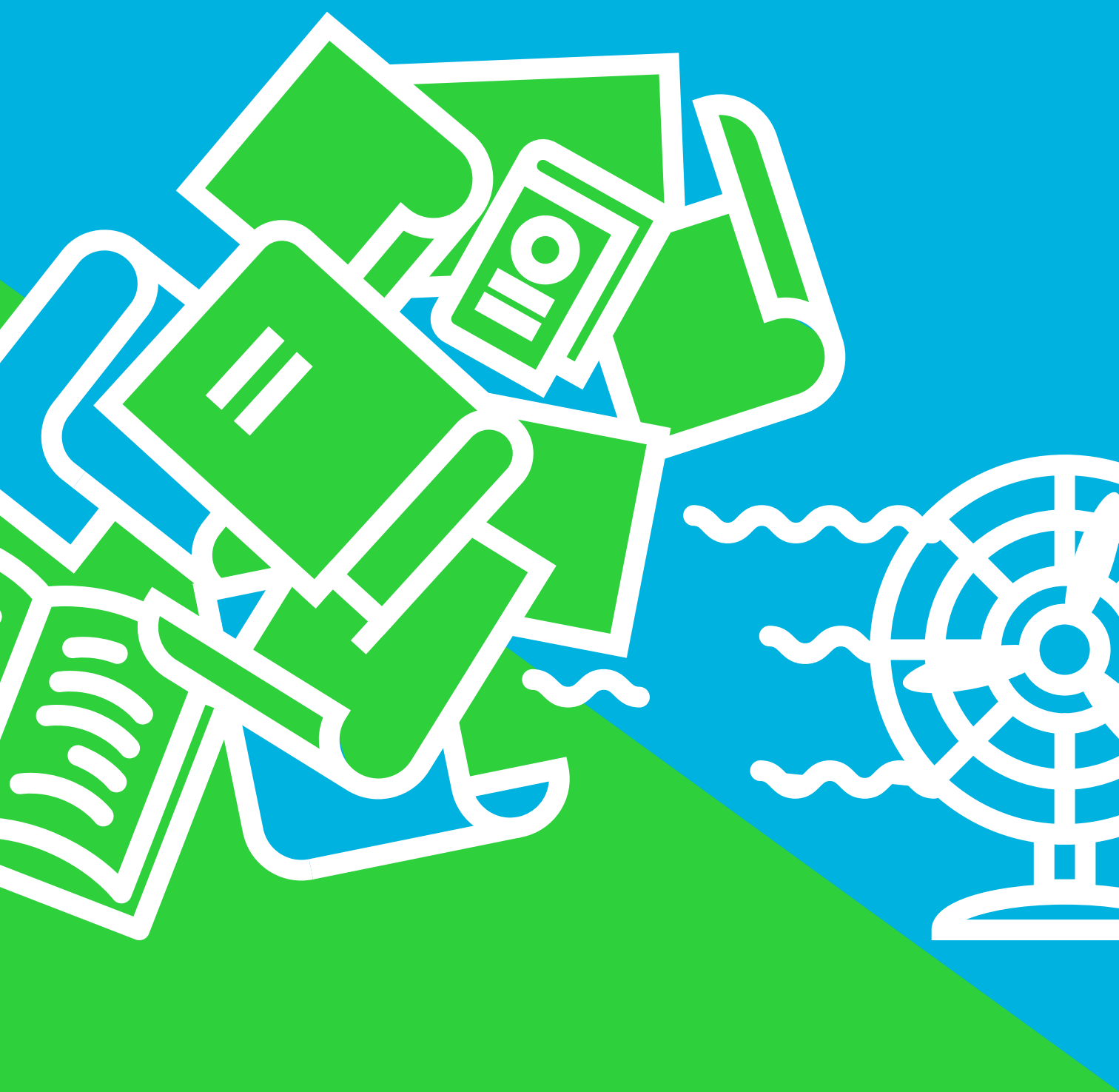


Legal Act	The Aim of Regulation	Description
The Act on the Education System	preparing, financing and choice of textbooks	the choice of textbooks and other educational materials by the teacher, regulation of the textbooks market and their public production, regulations on openness of open educational resources
The Act on Copyright and Neighbouring Rights	using and creating educational content at school	regulation of ownership materials created by teachers and freedom of use of various works treated as educational materials by the education system institutions
The Act on the Integrated Qualifications System	validation of expertise	creating legal framework for the validation process of expertise gained through formal and informal education with the use of open educational resources
The Act on the Access to Public Information	efficiency of public funds' spending	providing access and opportunities for reuse of certain public resources to increase efficiency of spending (the act doesn't cover content connected with educational activity)

Open Education Resources – Economic Dimension



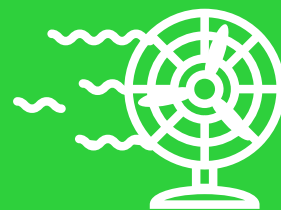
onal



A huge majority of Polish teachers uses textbooks as basic educational materials. There are no overall data on the subject but, for example, almost 91% of teachers of natural science use textbooks in every lesson⁷⁸. Until recently, market subjects – educational publishers – were the main producers of textbooks and activity books used at schools. However, in recent years the market has undergone considerable changes resulting from the change of the role of the Ministry of National Education. Until 2014 its function was limited to authorising for school use textbooks produced commercially and creating a very limited amount of content whose market production was not profitable: educational materials for ethnic minorities, people with special educational needs or for Polish schools abroad. Different additional materials were also financed from public funds (activity books, graphics, lesson scenarios) such as resources collected on the educational portal Scholaris.pl. In 2011 the Ministry of National Education decided to finance also e-textbooks for general education from public funds. These changes were introduced in 2014, together with the amendment to the Act on the Education System and providing schools with the first public textbook – Our First Textbook for first grade.

In 2014 the Ministry of National Education carried out a “textbooks reform” or led to an amendment of the Act on the Education System, at the same time starting work on a free first textbook (introduced at schools at the beginning of 2014/2015 school year). The reform changed the school book market a lot, since it aimed at solving three problems identified by the department of education: inflated prices of textbooks, publishers obstructing buying second-hand textbooks and excessive marketing.

⁷⁸ *Liczą się nauczyciele. Raport o stanie edukacji 2013*, The Educational Research Institute, Warsaw 2014.



The Textbooks Market in Poland Before the “Textbooks Reform”⁷⁹

In 2013 the market of new school textbooks was worth about 845 million Zloty for the publishers⁸⁰. The school book consisted over 31% of the whole Polish book market (whose value is estimated at 2.68 billion Zloty) and was the second biggest segment of the market, behind only scientific and specialised literature (36.5%). It is not a big area of economy – only about 0.5 promille of Polish GDP – however, the sum at stake is large enough to attract almost 80 publishing houses, which in 2013 competed for customers. At the same time, a considerable part of the school book segment is dominated by only two publishers – New Era (Nowa Era) and School and Pedagogical Publishing (Wydawnictwa Szkolne i Pedagogiczne), together controlling over 50% of its value. The group of the five biggest educational publishers includes also the Educational Group (Grupa Edukacyjna), the PWN School Publishing (Wydawnictwo Szkolne PWN) and Pearson Central Europe – together they control over 80% of this difficult market (the profitability level remained at about 7–8%, with the profitability index of the biggest publishers close to 10% while a growing number of smaller players balanced on the break-even line).

The deteriorating situation of smaller publishers is a symptom of stagnation on the textbooks market caused by, among other things, demographic processes which currently lead to a decreased number of pupils. At the same time, publishers have made huge investments. Thus, the ever smaller number of pupils forced a fall in the overall number of printed textbooks, while the publishers offered ever more textbooks, activity books and additional materials⁸¹. Gradually and almost imperceptibly the price of the publications grew, but, for the publishers, the cost participation in the final price of the products also grew, since the recipients received many elements of the offer for free (eg multimedia

⁷⁹ We quote data for 2013 – the last year before the “textbooks reform.”

⁸⁰ The corresponding market for parents was worth much more – around 1.2 billion Zloty. The difference between the two sums results from including the margins of intermediaries.

⁸¹ One of the basic sales strategies of educational publishers was increasing the number of activity books and such design of textbooks that first use made reselling the book after a year impossible or difficult.

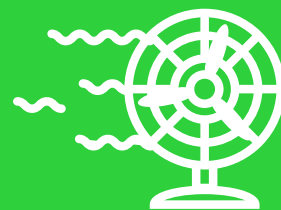
materials). Thus – despite the increase in the prices of particular books – the profit of the publishing houses hasn't increased in the last years in general terms.

The necessity to make big investments annually into the development of their market offer gave advantage to big publishers. Although the school book market began to show oligopolistic tendencies, many smaller subjects which specialised in books for one or a few subjects still functioned there. Some of them kept their dominant position in narrow specialisations, for example ZamKor (physics)⁸² or Krzysztof Pazdro Publishing (Oficina Wydawnicza Krzysztof Pazdro) (chemistry). Small players, acting as competition on the market, to a certain extent put pressure on big publishers, inducing them to update their offer and undertake innovative activities.

However, the big players still financed costly investments, like **buying electronic devices for schools** (overhead projectors, laptops, interactive boards). Offering such equipment was most of all a marketing ploy, since it usually involved obliging the school to use the educational materials of the given publisher. It was also an investment serving to create demand for multimedia and digital products in the coming years⁸³. Digital investments of the largest publishers weren't limited only to multimedia versions of the same textbooks but included support for teachers and pupils on special online platforms. As the Analyses Library (Biblioteka Analiz) indicates, most publishers declared **an increase in expenses on multimedia and digital productions by over 50% in 2013**. These investments can be seen as a market subject filling a gap created by insufficient equipment investment from public funds.

⁸² Deteriorating market perspectives and the legal change introducing the "free" textbook led to the takeover of the ZamKor venture by The School And Pedagogical Publishing in August 2014.

⁸³ Such practices, together with other marketing activities aimed at non content-related encouragement to use a publisher's offer, were largely limited in 2013 in the form of a self-regulation introduced by the Educational Publishers Section of the Polish Book Chamber (Sekcja Wydawców Edukacyjnych Polskiej Izby Książki) and subsequently banned by a relevant ordinance of the Minister of Education.



The Choice of Textbooks at School and Their Financing Before the “Textbooks Reform”

The system of textbooks production by publishers is connected with the system of choice and financing of textbooks used by teachers at schools. The main assumption remained unchanged regardless of the legal changes – teachers have full freedom in the choice of teaching materials (they can also resign from them completely).

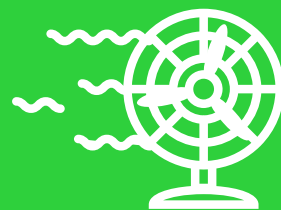
Before the reform from 2014 teachers informed pupils at the beginning of the school year which textbook they had chosen for them. Then, the financial responsibility for its purchase fell to parents, who either decided to buy a new copy or a used one. That process repeated every September. In this model, state help was limited to offering a one-time subsidy for textbooks, other educational materials and school aids for the poorest families.

The teachers – burdened by an increasing number of extra-didactic duties – became in this system almost exclusively content recipients and executors of lesson scenarios prepared by the publishers and, with time, grew dependent on their offer. Also, for many teachers, the publishers were the only available source of innovation in forms and methods of teaching. Those innovations were mostly limited to a wide distribution of interactive materials with the necessary infrastructure. This led to a situation where teachers felt that publishers, with their extra offer, met their needs and expectations – they praised the publishers' offer and the way their representatives cultivated their relationship. **It is crucial for the emotional dimension of the response to the textbooks offered to teachers by the Ministry of National Education**, which has not offered a similar quality contact and information on new regulations of textbooks' choice, placing itself from the very start on a - in teachers' eyes - lost position.

Similar conclusions are drawn from the study of the textbooks reform carried out by the National Consulting Network of Leaders (Krajowa Sieć Konsultacyjna Liderów): "An outstanding teacher does not need a textbook. S/he knows what s/he wants to use. A new textbook is an additional resource. A less competent teacher treats the textbook as the basis and the lack of choice as a limitation to her/his autonomy. There are also teachers who cannot work without a box, for whom the new textbook can thus be a big stress and too great a challenge"⁸⁴.

The teachers' dependence on publishers also led to overproduction of content and extravagance of form: activities were multiplied, expensive coated paper used to print the textbooks and the competition among firms was based on offering the most attractive and developed possible product range – from traditional textbooks, through free didactic materials for teachers, to increasingly more popular multimedia materials. It was treated as the necessary cost of the available offer's promotion but additional costs – connected for example with preparing didactic or multimedia materials – were calculated into the price of textbooks, paid by the parents. Teachers accepted those changes as they didn't feel the burden of adjusting to the publishers' policy themselves – it rested exclusively on parents. The market was thus distorted by separating the decision making (by teachers) from the actual paying customers (parents).

⁸⁴ Compare http://kskl.eu/wp-content/uploads/2015/02/Darmowy_podrecznik_internet.pdf, p. 13 [access: 24th April 2015].



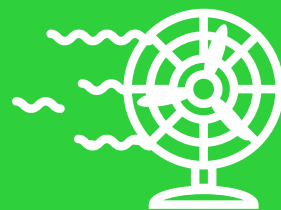
The Market of Textbooks in Poland After the “Textbooks Reform”

The reform introduced in 2014 created two new obligations for the Ministry of National Education – producing free paper textbooks for grades I-III and equipping primary school with them as well as subsidising the purchase of textbooks for grades IV–VI of primary school and grades I–III of lower secondary school. At the same, time limits were introduced on the prices of textbooks and activity books bought from subsidies and a ban on recommending the purchase of other paid educational materials to parents. The e-textbooks, which have been created since 2011 as part of the union project E-Textbooks for General Education, were indicated as a complementary material for books bought with the money from designated subsidies. The Ministry of National Education assumes that for the first ten years when the act will have been in force, the cost will amount to 3.2 billion Zloty in total, to be covered from the state budget.

The actions implemented constitute vital factors forcing a change in the sales policy conducted by the educational publishers. Previously, publishers operated under relatively free competition conditions, but on a market with a specific character, for example in reference to the level of general sale guaranteed by compulsory school education. As we have mentioned before - it was the teachers who decided about the choice of textbooks. They were the objects of marketing activity carried out by the publishers and at the same time a subject totally uninvolved in covering the costs of purchase. A higher or lower price of the final product was not any kind of stimulus for the teacher's decision making.

The new regulations generate different distribution of economic stimuli. According to the current act's regulations, each school receives a defined subsidy, dependent on the number of pupils, for the purchase of textbooks and practice materials. Teachers of specific subjects must reach an agreement and choose one of the textbooks available on the market. Having a list of preferred textbooks prepared by the teachers, the school management is faced with the task of verifying the possibility of purchasing these books with the money from the central subsidy. The central subsidy sum calculation assumes that publishers will resign from producing free didactic materials for teachers, though in the opinion of the majority of teachers their existence is necessary to ensure the quality of teaching. Thus, it cannot be ruled out, or even – in the light of signals coming from the publishers' market – it is very probable that the market price of all positions will exceed the sum of the subsidy. The school management will then be faced with the following choice: they can apply to the leading authority (commune) with a request for a subsidy to buy more expensive textbooks or they can ask teachers to suggest cheaper textbooks. It can be expected that in most cases the second scenario will be more realistic. Thus, the very fundament of the publishers' competition model changes. **Now, not just the quality will play the basic role, the price of the product will become incomparably more vital than it was in the past.**

The new situation puts a big question mark over the future of numerous small but recognised players specialising in selected areas of the textbooks' market. The amendment of the law additionally stimulates the process of **market concentration**, which already started before 2014. Smaller publishers go bankrupt (for instance the Publishing House "Żak") or they are incorporated by bigger players (for example the School and Pedagogical Publishing bought the ZamKor Publishing, and New Era bought from the PWN School Publishing copyright to publish textbooks for general subjects). It cannot be ruled out that, with the gradual implementation of the new law regulations, the strength of the two players mentioned will grow, which, in a short perspective, can lead to a negative phenomenon of duopolisation of the market. There are already signals from the market about plans of the offer packetisation by the biggest publishers. In such a model, a publisher offers a set of textbooks and practice materials at a preferential price (relevant



to the level of subsidy for one pupil). As a result, schools will not be able to select textbooks from different publishers' offers, which will lead to loss of market share or even disappearance of small players.

The reform will also affect the development of multimedia materials created by publishers, who think that they are unprofitable resources – generating considerable costs. In the previous competition model they were the extra offer variety and the loss they generated was compensated by the textbook's price. Today such a model is no longer possible. We cannot predict how the publishers will act in these circumstances. Possibly, the market is ready now to accept the resources on the Internet being available for a fee. An additional result of the new law could be publishers exploring more intensively new, unregulated areas of the market, like the sector of exam preparation aids.

E-Textbooks and the Educational Book Market

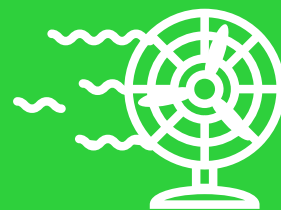
The risk and threat of the publishers' offer's duality could be lessened by the appearance of free e-textbooks financed from public funds. **They are open educational resources available under open Creative Commons licenses**. It must also be stressed that the results of the "textbooks reform" described above are not a result of the open character of the publicly created resources. The change results mostly from the start of the public financing process of the purchase and creation of educational materials which are competition for commercial content and, in the grades I–III of primary school segment, completely pushing the latter from the market. We should also remember that in 2011, during the e-textbooks' programme planning, the concept of the textbooks reform in the shape from 2014 - envisaging subsidies to buy commercial textbooks - didn't yet exist. At that time, it was assumed that free e-textbooks would compete with the commercial offer.

As a consequence of the reform, e-textbooks still enable creating an alternative to textbooks offered by commercial publishers. The choice of the free e-textbook by the teacher will make the amount of money for the remaining books bigger. So, if the e-textbooks on a few subjects proved really popular, it would allow the schools to spend more on traditional textbooks.

It is in fact one of the assumptions of the education law amendment. **The Ministry of National Education, in the assessment of the results of the Act on the Education System's amendment's regulation stipulated that from 2015 the proportion of the free e-textbooks provided by the department would be 20% of the textbooks used by teachers.** It is important, because all calculations made as an assessment of results and costs of the act's amendment's introduction are based on this assumption. It is a brave assumption, since currently dissemination of e-textbooks is burdened with numerous problems connected, for example, with the lack of proper infrastructure and equipment.

Thus, the e-textbooks project has a considerable potential and importance for the clarification of a new balance on the educational book market. A widespread use of e-textbooks could contribute to more money which could be offered to commercial publishers for their products, and – what follows – keeping up the competitiveness on the market and the quality of educational materials which depends on it.

Long-term, the implementation of e-textbooks can also influence teachers' practices, persuading them to freer and more creative choice of teaching content. An online platform which will enable teachers to make free modifications and complement the early versions of the e-textbooks is to serve this purpose. So far, however, there is a lack of activities serving to popularise this solution – apart from pilot trainings conducted in the Digital School programme. The Ministry of National Education, as the side which ordered the creation of e-textbooks, didn't exploit one of the main arguments in favour of the project, which is the fact that everybody – a teacher, parent or publisher – can, on their basis, create and share their own materials. Openness enabling commercial use



can also potentially change the character of e-textbooks, which become not only competition, but also the basis for creating added value by commercial subjects.

Scenarios for the Future

The reform started in 2014 signifies an important change on the textbooks and educational materials' market. At the level of grades I–III of primary school nationalisation took place through the introduction of one, state textbook. The area which still leaves scope for commercial publishers in this segment are exercise materials and language teaching textbooks. However, their value is relatively low. From grade IV of primary school to grade III of lower secondary school the act's amendment introduces regulated market with a maximum price which equals the amount of the subsidy. The introduction of this kind of regulation – with the maximum amount of the subsidy considerably lower than the current market price of a set of books – will result in shrinking and consolidation of the textbooks market. At the level of upper secondary education (general secondary, technical, vocational schools) no extensive change in the market conditions has been introduced – this market is still not regulated⁸⁵. The only alteration is introducing free e-textbooks in this segment.

It is too early to assess whether textbooks – both paper and electronic – created by the state will ensure similar or higher quality of education and whether they will play a similar role. These are key issues, which in the future will determine the assessment of the “textbooks reform” from 2014. Aspiring to make this assessment, it will be necessary to compare the quality of different kinds of textbooks and their influence on results in education. However, this will become possible in a few years' time at the soonest.

In the light of the available data, an unsettling diagnosis of the quality of the education regulated by the amended act can be given. Providing the publicly financed textbooks for grades I–III of primary school, introducing the subsidy regulating the maximum price

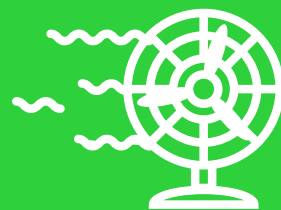
⁸⁵ In the understanding of administrative fixing the maximum price or other economic conditions. Looking broadly, it must be remembered that textbooks go through the sales admission process conducted by the Ministry of National Education and in this sense the market of secondary school level books is also regulated to a certain extent..

on educational materials for grades IV–VI of primary school and grades I–III of lower secondary school at a level considerably below market balance, as well as obstructing or blocking distribution of didactic aids in both these segments can directly harm the quality of commercially produced educational materials.

On the other hand, a positive change is also possible. It depends on two basic factors – the quality of the public textbooks and teachers' readiness to use innovative resources, such as e-textbooks or other additional open educational materials.

An indisputable effect of the textbooks reform is also lowering the costs of education for parents, who will pay for textbooks no sooner than at the upper secondary school level education. Although many costs connected with e-textbooks are still unknown (for example the costs of providing proper access infrastructure to online resources or the costs of its updates), open e-textbooks also mean a reduction of costs for the state, since, among other things, updating electronic materials is much cheaper than printing their equivalents.

It should be noted that the state – deciding to finance from public funds the creation of textbooks and other educational materials and their purchase from commercial publishers – could choose many different strategies. With an unaltered assumption to finance content purchase largely from public funds, different models of buying content on the market and financing the production of new resources from public funds are possible. The available data and first results of the changes introduced in 2014 suggest that the model selected may not be optimal. Thus, it is indispensable to carefully monitor the effects of the economic reforms and evaluate the quality of different content to assess the efficiency of spending on public resources. The key factor will also be using the opportunities given by the public resources created from public funds' openness – it can influence teachers' practices to a great extent, so, indirectly, also the market of textbooks and educational materials.



Open Educational Resources – Infrastructural Conditions and Accessibility for Pupils With Special Educational Needs



Infrastructural and Equipment Conditions

E-textbooks were by definition the element of the Digital School programme which – besides the “e-teacher” module – distinguished it from the earlier interventions based on equipment issues. Paradoxically, however, the lack of proper infrastructure and adequate equipment is the key obstacle in developing and using e-textbooks.

The data on access infrastructure were gathered by the Poznań Supercomputing and Networking Centre (Poznańskie Centrum Superkomputerowo-Sieciowe) – a technological partner of the “E-Textbooks for General Education” project. According to the situation from 2014,⁸⁶ out of 25,310 schools studied only 0.5% had a connection of over 100 Mb/s bandwidth, 12,8% – over 30 Mb/s. Slightly more than a half of schools possess connections of bandwidth from 2 Mb/s to 30 Mb/s, 36% schools still use archaic connections of bandwidth below 2 Mb/s.

The state of schools' access to infrastructure is thus very bad. It must be remembered that The European Digital Agenda (Europejska Agenda Cyfrowa) assumes universal access to the Internet of bandwidth of at least 30 MB/s until 2020. In 2014 – under pressure of the organisations participating in the consultations – the Ministry of Administration and Digital Affairs raised the minimum level of bandwidth for schools from 2 Mb/s to 30 Mb/s⁸⁷. It means, however, that 86% of Polish schools don't keep the ministry defined standard.

It is much harder to assess the availability of the necessary equipment. The lack of sufficient data has been a problem for a long time now. The System of Educational Information (System Informacji Oświatowej) contains incomplete data which, in addition, are not publicly available. The department of education has been inefficiently inventorying

⁸⁶ Compare <http://u3alina.epodreczniki.pl/map> [access: 25th October 2015].

⁸⁷ Compare <https://mac.gov.pl/aktualnosci/rozporzadzenie-dotyczace-przeplywnosci-lacza-dla-uslugi-szerokopasmowego-nie-wplynie-na> [access: 25th October 2015].



the equipment at schools for years. According to the data of the Educational Research Institute from 2013,⁸⁸ only 27% of teachers work in a classroom with a computer (or computers), the same number declare access to the Internet there. The authors of the ERI report underline that, although in almost every Polish school there is a computer and Internet connections, the teachers' access to them can be limited. It means that in many schools there can be no conditions to use e-textbooks in their basic interactive online version. There may also be a lack of equipment to let pupils use the publication in the offline version.

What is more, in the programme of creating e-textbooks, methodological guidelines for their use have not been prepared. Thus it is not clear on what equipment the e-textbooks should be used and how should using them on different devices (eg computers, tablets, OHPs with a screen or interactive boards) look like. A research project conducted by the Ministry of Administration and Digital Affairs as part of the Digital School programme ended in a fiasco, as it didn't allow to formulate guidelines on the preferred models of using information-communication technologies and digital resources at schools. In the expertise *The Influence of E-Manuals on the Pupils' Psychosomatic Development* (Wpływ e-podręczników na rozwój psychosomatyczny uczniów) professor Włodzimir Gogołek indicates a lack of such basic elements like a definition of the e-textbook (outlining its functionalities) or a defined aim of its use at school, underlining that e-textbooks should be "used mainly to create moderated network educational resources, a gradual modification of the paper notebook function, outlining well-informed ways of functional and technological synergy of e-books with books, the notebook with the keyboard"⁸⁹.

However, such a definition of aim and guidelines on equipment and methodology connected with it have not been prepared. In 2014 the Ministry of National Education published guidelines (recommendations) on the realisation of activities *Purchase of ICT Equipment Based on the Standards Defined in the Government Programme Digital School* (Zakup sprzętu ICT, wg standardów ujętych w programie rządowym

⁸⁸ *Liczą się nauczyciele. Raport o stanie edukacji 2013*, The Educational Research Institute, Warsaw 2014.

⁸⁹ W. Gogołek, *Wpływ e-podręczników na rozwój psychosomatyczny uczniów*, The Centre for Education Development, Warsaw 2013, p. 39..

„Cyfrowa szkoła”) and Developing Skills for Modern Technologies Use in Teaching All Subjects (Rozwijanie umiejętności wykorzystania nowoczesnych technologii w nauczaniu wszystkich przedmiotów). Although they set minimum technical requirements for schools, they have a general character and have been written rather from the perspective of the local authorities and school management and not teachers using e-textbooks.

By definition, creating e-textbooks was to be integrated with other components of the Digital School programme. However, this has not happened and the **equipment investment programme for schools has not left its pilot phase**. A problem is also lack of adequate broadband infrastructure, which is a result of the absence of a proper policy in the area and negligence in the recent years. Schools, which are the key institutions supporting the knowledge based society, are statistically worse digitised than individual households.

Both these factors create a considerable obstacle hindering the use of e-textbooks at schools. The problem is augmented by the lack of guidelines outlining the way of e-textbooks' use in teaching, together with indicating the equipment necessary for this purpose. As a result, in the nearest future e-textbooks cannot be used as a basic educational resource – according to the assumptions adopted in 2014 in the Act on the Education System. An alternative could be printing of the e-textbooks' content (which will go against the spirit of the “Manuals Reform”) or making them additional materials, used by pupils for instance at home.



Accessibility of Educational Resources

Pupils with disabilities have equal right to knowledge, education and learning like their able-bodied peers, at every level of education – including both compulsory education and self-education. This equality is guaranteed not only in the Polish Constitution but also in the, ratified by Poland, Convention of the United Nations on the Rights of Persons with Disabilities⁹⁰. According to the data of the Central Statistical Office (Główny Urząd Statystyczny), in the 2012/2013 school year in Poland there were 59.1 thousand pupils with disabilities in primary schools, in lower secondary schools – 50 thousand, in basic vocational schools – 15.8 thousand, in upper secondary technical schools – 0.4 thousand, in general education upper secondary schools – 5 thousand⁹¹. The level of education of people with disabilities correlates with their presence on the job market – the better their education the higher the index of professional activity and the employment index.

However, trying to create proper learning conditions for children with disabilities, so that they can gain knowledge at the same level like their peers without disabilities, relatively more effort must be made to prepare adequate didactic aids for them (on every level of education, exams are the same for pupils with and without disabilities). If the majority of pupils with only hearing, visual or movement impairment realises the same curriculum as pupils without disabilities, we must ensure that they have access to content adapted to their needs. The basis for effective education of pupils with disabilities is understanding the necessity to account for their several specific needs in the teaching process. These needs depend on the type of disability or the equipment of an individual child, or even the characteristic features of the particular dysfunction. We will impart knowledge and skills differently to visually impaired pupils, differently to the hearing impaired and differently still to children with both types of disability.

⁹⁰ Compare http://www.unic.un.org.pl/dokumenty/Konwencja_Praw_Osob_Niepełnosprawnych.pdf [access: 7th April 2015].

⁹¹ Compare <http://www.niepelnosprawni.gov.pl/niepelnosprawnosc-w-liczbach-/edukacja> [[access: 7th April 2015].

According to Art. 71 of the Act on the Education System, a visually impaired or blind pupil should receive textbooks adequate to his/her needs, financed from public funds. They must be adapted to a form which enables pupils with specific dysfunctions such as use which supports work with peers without disabilities.

The Centre for Education Development prepares textbooks adapted to pupils' special educational needs. Their content covers to a certain extent the material from all subjects and levels of education – from primary to upper secondary school⁹² – in accordance with the new core curriculum of the general education defined in the Regulation of the Minister of National Education from 23 December 2008 on the core curriculum for pre-school education and general education in different types of school (Journal of Laws from 2009, Nr 4, pos. 17). However, there are two limitations to this project. Firstly, there is only an absolute minimum of necessary materials – many maps, graphics, models of animals or landmarks are missing (eg the White House in Washington or the Royal Castle in Warsaw). **Thus, teachers must prepare additional materials by themselves.** Secondly, these materials are not accessible to all potential recipients (the principals of general and integration schools as well as special centres must register in the Centre for Education Development's service and complete an order form online, to receive ready files to be printed on special printers).

A considerable shortcoming in the access to these materials is the fact that not everybody can use them. Not just the principals should have access to this content because often for example blind parents have children who can see, so they could use the textbook in Braille to check the progress of their child, who uses the ordinary printed textbook. In the current situation, lack of universal access to educational materials adapted to the possibilities of pupils with special educational needs – based on an open license and prepared from public funds – practically excludes blind parents from having any control of the education process of their children who can see.

⁹² Compare <http://www.adaptacje.ore.edu.pl> [access: 7th April 2015].



Providing educational materials based on open licenses is vital and, in the case of pupils with special needs, can undoubtedly solve the quantity problem of the educational materials' accessibility.

It is the more important since, during the creation of the textbooks for grades I–III of primary school, an adaptation⁹³ was also prepared for pupils with special educational needs – pupils with disabilities having problems with learning and (or) communication, including deaf and hearing impaired pupils, pupils with intellectual disabilities, autism and aphasia. The adaptation consists of text and illustration modifications accounting for the communication and educational needs of the pupils in the groups listed above. It also includes versions for Braille print-outs or enlarged printing. The first textbook prepared by the Ministry of National Education is complemented by a teacher's book which describes differences in preparing lessons for pupils without disabilities and those with special educational needs (for example some activities or educational materials need different instructions or a given illustration must be omitted).

Works on adapting the first textbook resulted in the fact that teachers are not left to their own devices if they need to use the special versions. However, teaching children with special needs requires more creative thinking on the part of the teacher, more innovation and own work with the material than when working with a regular class. Let's imagine a situation when a teacher additionally adapts parts of the textbook to the needs of his/her pupils, finding such uses for the original (or even adapted) material which the authors have not envisaged. Let's assume also that the teacher - after having successfully used this material - wants to share it, putting the scenario on the Internet. However, this is not legally possible if the material contains a photo from a stock agency instead one under a Creative Commons license. If the first textbook – both basic and adapted versions – was truly under a Creative Commons license, there would be no obstacle to further adaptations.

⁹³ The adaptation is shared under the Creative Commons – Attribution 3.0 Poland license, with the exception of photos from photo agencies and the National Bank of Poland, and Picture Communication Symbols.

The situation looks different in the case of e-textbooks for higher grades of primary school and the next levels of education, since – differently than with the first textbook – there are no plans to prepare additional materials for pupils with special educational needs. Instead, the e-textbooks platform is to eventually observe the international WCAG 2.0 standard.⁹⁴

However, just preparing electronic educational materials in accordance with the WCAG 2.0 guidelines is insufficient when teaching for instance mathematics, foreign languages or geography. Based on only an alternative description, a blind pupil will not learn to read a map or the clock's face, or measure a triangle's angles. It is thus necessary to prepare additional materials adapted to the blind pupils' needs (print-outs in Braille) or the visually impaired ones (enlarged print), like it was done for the textbooks for grades I–III of primary school.

Thus, a key difference is revealed between the textbooks for grades I–III of primary school and the rest of government textbooks in the approach to the education of pupils with special needs. While in the case of the former the department acknowledged the need to prepare additional adapted versions of textbooks, in the case of e-textbooks it didn't envisage further adaptations. From the point of view of people with disabilities, adaptation of only electronic manuals is as important as that of the paper textbook. The method of licensing these materials becomes in this case a key element, which in the future will allow to open them for all users.

⁹⁴ The current version of the WCAG (2.0) document was published in 2008 by the W3C consortium, responsible for creating and unifying norms on electronic circulation of information in the world. These rules are included into Polish law in the Ordinance of the Council of Ministers from 12th April 2012 on the National Interoperability Framework (Krajowe Ramy Interoperacyjności), minimum requirements for public registers and exchange of electronic information, and minimum requirements for telematic systems (Journal of Laws from 2012, pos. 526). The norms referring to persons with disabilities were divided into four blocks of rules:

- Perceptibility – the information and user's interface components must be presented in a way accessible to the users' senses.
- Operability – the user's interface components and navigation must be operational.
- Understandability – the information and service of the user's interface must be understandable.
- Robustness – the content must be robustly published, so that it could be effectively interpreted by various software of the users, including supporting technologies.

All of the above rules contain guidelines (twelve in all) defining the general goals which the developers and editors of electronic content should achieve to provide access to it.

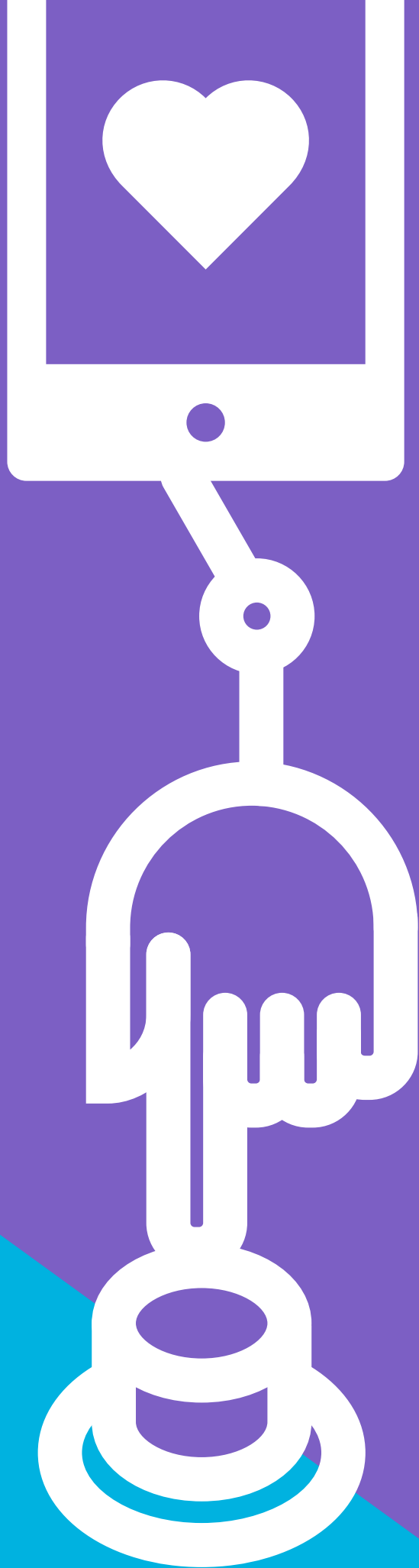


Using the Creative Commons open licenses, allowing to modify and further share educational materials can truly influence increased accessibility and universality of many such documents. Working with pupils – but also adults – with special educational needs requires enormous flexibility, invention and the will to experiment with materials which need to be adapted to the needs of specific groups of users. Open licenses offer here many more opportunities than traditional copyright solutions. However, it is hard to imagine a situation when all commercial subjects will share their materials for free and in the most liberal version of the Creative Commons license. That is why the most reasonable postulate is to propose that at least all projects subsidised from public funds should be obliged to share their products under a Creative Commons license.

Recommendations for Supporting Development and Use of Open Educational Resources

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The recommendations listed below were formulated on the basis of the diagnosis of the current state of the open educational resources development in Poland presented in the previous chapters. At the same time they were consulted at numerous expert workshops conducted with teachers, school principals and representatives of the teachers' professional development system as well as non governmental organisations working on the system of formal education and dissemination of open educational resources.

Recommendations on Legal Aspects and Financing of Open Educational Resources

In accordance with the Paris Declaration on open educational resources signed by Poland, member countries should ensure openness of open educational resources financed from public funds. The basis for such strategy should be open licensing of educational materials – so that they are open resources. The Polish and world experiences show that this is a model solution, whose widespread implementation - recommended below - ensures maximisation of the potential of both the public funds involved and the educational materials created.

We recommend:

- 1. Introducing an obligation of open licensing of educational content financed from public funds.** Ensuring openness of public educational resources is a necessary action, enabling full use of their potential. It also means simplicity of updates and adaptations (eg to the changing core curriculum) as well as making improvements. In each case legal obstacles hindering varied use of resources are reduced. We recommend implementing open licensing of content (under the Creative Commons – Attribution license or a similar one) by public institutions. Special care should be taken to ensure the possibility of commercial use of these resources. We advocate introducing these principles through a legal act, which will ensure uniform standard for all public educational institutions. A principle should be introduced obliging the



use of open licenses when sharing textbooks, educational and practice materials or didactic aids created by the ministry responsible for education and all its subordinate institutions (defined in the Act on the Education System). The same rules should apply to the content financed from public funds held by the institutions listed above. These rules should also apply to the Europeans funds, especially regional operational programmes. The obligation to share content under an open licence should be supplemented with standards which guarantee technological openness of content (eg by using adequate file formats) and accessibility for people with special needs. The legal regulations should also guarantee that these resources will be shared on an open educational resources platform (described in the infrastructural recommendations). It should be stressed that the above regulations wouldn't apply to public institutions other than educational institutions and those under the authority of the Ministry of National Education, even if the resources created by them had educational use. These regulations wouldn't apply to content created by teachers, either.

- 2. Regulation of the issue of sharing resources created by teachers.** The system of education should support teachers creating their own resources, so that they can share them and benefit from them. The concept of such actions is presented in the recommendations on the education system. At the same time, on the legal level, the legal issues concerning these resources must be regulated. In our opinion, currently they are not open resources, so it is not advisable to include them in the obligation of open sharing. However, the education system should clearly define the issue of their copyright and support teachers who want to share them – for example by popularising open licensing.
- 3. Providing legal support on copyright for the education system workers.** Teachers have a low level of knowledge of the copyright law, including regulations applying directly to their work (eg educational exception). They should be provided with basic knowledge on the copyright law and support in how the regulations work in practice. This support should include courses conducted as part of teachers professional training and a specially designated unit responsible for information and educational activities in this area.

- 4. Implementing rules of openness of educational resources in operational programmes.** In 2015 *The Guidelines on Realisation of Projects in Education with the Participation of Funds from the European Social Fund for 2014–2020* were implemented. One of the requirements concerns ensuring openness of educational resources created in projects financed from the European Social Fund. The guidelines will ensure openness of resources financed to a large extent from funds for education from operational programmes. Additionally, similar requirements have been included in the contests announced so far for digitisation and development of e-expertise, financed by the Operational Programme Digital Poland. We recommend introducing proper guidelines and requirements in relation to all financing from operational programmes which will serve to create educational resources. Such regulations can be included on the level of a detailed description of priorities, the rules of specific contests prepared by supervising institutions or in the templates of agreements with beneficiaries. Additionally, support should be provided to grantees in the area of using open licenses and open educational resources.
- 5. Implementing rules of openness of educational resources for other sources of financing educational resources from public funds.** Almost anything which can be used in the learning process can be an educational material. Working out good practices referring to other educational resources financed from public funds by other institutions (eg scientific institutions or culture and heritage institutions) should be a supplement to legal regulations proposed for a closed catalogue of institutions and resources. Such resources are created for example as part of grant contests financed from budgets of departments. A good practice here are rules implemented by, among others, the Ministry of Culture and National Heritage, The Ministry of Foreign Affairs or the Ministry of Administration and Digital Affairs.
- 6. Obtaining copyrights to key resources indispensable in teaching.** The collections of recent heritage are an example of resources indispensable in teaching, which are still under copyright law. These resources are not available under open licenses and their replacements cannot be easily created. In the case of such resources, a systematic process of obtaining proprietary copyright to the works with the aim of sharing them under open rules should be carried out. Such a solution was implemented as a



pilot solution in the programme Disseminating Written Texts (Udostępnianie piśmiennictwa), realised by the National Programme of Readership Development by the Book Institute (Narodowy Program Rozwoju Czytelnictwa przez Instytut Książki). The collections shared in this way have been used in manuals and other educational materials as multimedia materials.

7. Providing stable financing for the open educational resources created so far.

W ramach projektu „Cyfrowa szkoła” powstał ogromny i cenny zasób otwartych materiałów edukacyjnych w formie internetowej platformy epodreczniki.pl. Jak dotąd, nie ma jednak jednoznacznego planu jej utrzymania i rozwoju. Rząd powinien niezwłocznie wypracować taki plan i zapewnić finansowanie platformy epodreczniki.pl. Należy także zapewnić dalsze i trwałe finansowanie rozwojowi tej platformy i istniejących zasobów oraz tworzeniu nowych otwartych zasobów edukacyjnych. W tym celu należy wykorzystać środki dostępne między innymi w ramach Programu Operacyjnego Wiedza Edukacja Rozwój oraz zagwarantować długofalowe finansowanie otwartych zasobów edukacyjnych ze środków budżetowych.

8. Revision of the Model of Financing and Creating Textbooks. Supporting the creation of open textbooks, the government should make sure there is competition on the market of educational materials. The model of financing these resources – both commercial and created with public money – should be consulted by the government with the key stakeholders (organisations which represent parents, teachers and publishers among them). Financing open educational resources should be conducted in the form of open grant contests, providing access to the biggest possible group of subjects creating educational resources.

Infrastructural Recommendations

Open educational resources are most of all digital resources, thus the main economic benefits connected with them depend on providing teachers and pupils with adequate infrastructure and proper equipment. It is an issue of not only special solutions, like the net platform for sharing open educational resources, but also equipment and access infrastructure for schools.

We recommend:

- 1. Providing all schools with proper Internet infrastructure.** Lack of adequate infrastructure is a considerable obstacle limiting education digitisation and thus full use of open educational resources. It is indispensable to provide all schools (and other institutions of education system) with broadband access with an adequate bandwidth standard. Fiber-optic connections of minimum bandwidth of 100 MB/s and target bandwidth of 1 GB/s should be provided at schools. These investments should be financed from the first axis of the Operational Programme Digital Poland. Adequate infrastructure of the interschool network should also be taken care of. Infrastructural activity should be supported with training the school management on technological needs' identification and providing schools with technical support on the level of local authorities units, which would service groups or networks of schools.
- 2. Providing basic digital equipment for teachers.** Universal use of open educational resources in the education system depends to a large extent on individual teachers. Each of them should be provided with basic equipment which allows the use of digital resources in teaching, including open educational resources. A minimum standard should be defined by the Ministry of National Education and include, as a minimum, a portable computer (compatible with a multimedia OHP available in each classroom).
- 3. Creating a national Internet platform to publish open educational resources and developing platforms enabling integration of existing open educational resources, publication of new ones and their easy combination.** One of the key limitations in using open educational resources is low level of knowledge of sources where such



resources can be found, difficulties in searching and discovering them. A solution to this problem is creating a universally accessible free platform (a repository) facilitating the use of open educational resources and sharing one's own material. Such a repository should be built based on the existing platform epodreczniki.pl, which was created in 2015, by adding next open educational resources to it. Such a platform should enable storing content as well as aggregating and searching (with the help of metadata) for content shared in other educational services, and also unlimited content modifications and publishing resources of individual users. The use of the platform should be compulsory for subjects supervised by the Ministry of National Education or those which use its financing. In the case of other public institutions, the use of the platform should be a recommended good practice.ykq.

4. **Preparing an open standard of describing educational resources.** Aggregation of open educational resources on the platform presented above requires describing resources with standardised metadata. Preparing such a standard of resources' description would enable publishers, non governmental organisations and individual authors to share open resources in way which ensures convenience in searching for and aggregating them. Adequate metadata would also facilitate adapting resources to individual needs, especially by combining different resources, which would automatically keep copyright information. The starting point for working out such metadata could be the Core Curriculum Dictionary Service prepared for the E-Manuals for General Education programme and the international project Learning Resource Metadata Initiative.

Recommendations on Education System

The recommendations on financing open educational resources as well as legal and infrastructural aspects presented above concern primarily the issue of creating and sharing open resources. Recommendations for the education system, connected with the use of open resources in education are their indispensable supplement. The actions recommended serve removing obstacles in reaching teachers with the open educational resources offer as well as increasing teachers' motivation to wider use, modification and further dissemination of open educational resources.

We recommend:

- 1. Preparing the programme of teaching and teachers' professional development devoted to creating open educational resources and using them.** Currently – despite a few programmes and projects creating open educational resources or supporting their creation which are realised by the government – teachers still lack systematic knowledge on their subject. Thus, it is necessary to define a catalogue of types of expertise and then implement it into the process of pedagogical education and professional development of teachers. Such a catalogue should include: theoretical basic knowledge on copyright and using open licenses, technical skills on effective publication of resources, and expertise allowing individual assessment of their quality and adaptation of open resources to the pupils' needs. The programme should be an element of a wider action on raising the level of teachers' digital expertise. Although implementing activities can already be undertaken within the teachers' professional development system, universities educating students in pedagogical departments will require support, such as a network of qualified trainers and an online course offer directed to academic teachers and students of pedagogics.
- 2. Supporting teachers experts in specific fields in creating open educational resources for their specialisations.** Expecting teachers to be experts on all aspects of their subject is not only unrealistic but also ineffective from the perspective of using



their talents as creators of educational materials and teaching methods. Supporting teachers in their endeavours to achieve a field and methodological expert position in a specific scope will help create original, interesting, high quality resources which – if open – can be the basis and an encouragement for other teachers to share their passions with others. Such a solution can result in raising prestige and enhancing teachers' public image.

- 3. Introducing a gratification system for teachers, for creating open educational resources.** Today, preparing open educational resources by teachers is not rewarded in any way. Formal recognition and rewarding for creating open educational resources (for example by giving points for professional promotion) could speed up the implementation of such materials as well as their preparation (or opening the existing ones). This change would also require modification of the promotion system into a constant one, in which a teacher's work and promotion perspective are cyclically evaluated. Gratification could also be based on a financial model in which creating resources would be rewarded by the state, for example in the form of open contests.
- 4. Providing teachers extra time for work on educational materials to use at school and their publication as open educational resources.** Teachers create or adapt educational materials to their own needs all year round but they rarely have time to prepare them with wider distribution in mind. The reason is not only concern about how the materials will be assessed outside the circle of colleagues but also uncertainty about how the resource should be prepared for its quality to satisfy potential recipients. Time of work devoted specifically to the exchange of experience and creation of open educational resources would allow to prepare materials satisfying the needs of practitioners – other teachers, while authors would gain work comfort, indispensable for creating high quality content. Special time of work should be combined with creating adequate work positions – from physical space up to animation of local groups and (or) groups of authors, eg from one subject.

5. Introducing programmes of assessment of open educational resources' quality easily accessible for teachers. An obstacle in open educational resources' development is the lack of possibility of their easy assessment. Creating a network of public quality assessment programmes (for example by the Centre for Education Development and regional teacher development centres) whose job would be to verify the existing open educational resources and to assess new ones, should be an important element of all system projects on open educational resources. Quality assessment programmes should be easily accessible to teachers (independent of their workplace), for example in the form of an online consultation, and function on the level of pedagogical teaching as well as professional development.



CENTRUM
CYFROWE

projekt:pcdskw

Digital Centre (Centrum Cyfrowe) works for social change and increasing civic involvement, using the digital tools' potential and models of cooperation based on sharing resources and knowledge. Together with other non governmental organisations, we work for introduction openness models in the third sector activities and culture institutions. Disseminating the Creative Commons licenses, we strive to create openness standards based on a culture of sharing resources, knowledge and output. The common principle of our projects is **openness** – meaning accessibility of resources and propagating cooperation models using open resources w. For this reason we are an institutional partner of the **Creative Commons Poland** project.



Otwórzmy
cyfrową
edukację

In the field of education, we work directly with teachers and school management during trainings or workshops, offering them our materials and guidebooks. We run a campaign **Let's Open Digital Education**, whose aim is to increase the quality of Polish education through propagating the idea of universal and free access to open and digital educational resources. As a member of the **Coalition for Open Education**, we engage expert circles in the consultation processes of law creation, we also try to influence the public opinion by publishing views and analyses, and participation in conferences and workshops in the world. We also signal to the decision makers the need for a legal reform towards giving higher priority to the issue of openness. We get involved into spokespersonship, promoting such a model of education policy which allows for full openness of publicly financed educational resources and their digitisation as well as free universal dissemination under the Creative Commons licenses.

Authors of the Report



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