ASSESSMENT OF OPEN EDUCATIONAL RESOURCES (OER) POLICIES IN ROMANIA

prepared by Piroska Hugyecz
February 2018

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Warsaw 2018

CENTRUM
CYFROWE
projekt:polska®

The publication is available online at:
http://oerpolicy.eu

CONTENTS

1. INTRODUCTION

The purpose of this assessment is to provide an overview of the state open education and Open Educational (OER) Policies in Romania to the request of Centrum Cyfrowe[1] with the goal to provide a better understanding of the context in which such policies are and can be developed in the countries of the Eastern European region. These countries show many commonalities in their historical, economic, social and political situation. This assessment examines the development and the environment of OER and open education policies rather than the concrete policies and their implementation which have just begun to emerge and concretized. The assessment considers the broader and narrower policy contexts, the opportunities and barriers of policy development, the role and the capacity of key and potential actors in this space. Beyond studying the information and data available in English (listed in References), I have interviewed ten professionals online or in person in Bucharest during April and May of 2017 and added updates at the beginning of 2018.

After providing basic introduction to Romania and its education system, I list the main actors and analyze their role in the policy development process including their advocacy, grassroots and professional work. Then I discuss relevant national policies that directly relate to the current state of OER policy: intellectual property rights, national digital, education and open data policies. I also describe briefly the state of other open movements, projects that have relevance in providing tools and content for educational purposes (open source technology, open culture, open science) as well as the currently existing service providers of online content, courses and trainings. This is followed by presenting the level of awareness and capacity available for potential policy implementation focusing on for teachers, learners, educators.
I would like to thank for all those who devoted the time to speak to me or provided input in any other way:

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[1] Centrum Cyfrowe Projekt:Polska (https://centrumcyfrowe.pl/) works towards social change and enhancing citizens' participation through the use of digital technologies and open, cooperative models based on sharing knowledge and other resource. Centrum Cyfrowe is an institutional partner of Creative Commons Poland, founding member of the Communia Association, founding member of the Polish Coalition for Open Education and member of the Copyright for Creativity coalition.

- Daniel Bőjte (daniel.bojte@medu.edu.ro on ICT in Education, including Open Educational Resources.
- Nicolaie Constantinescu - Manager of the Kosson Initiative, national coordinator of OpenAire+ project in Romania, member of the National Association of Libraries and Librarians.
- Bianca Floarea - Former manager of OSF Romania on Open Culture. Now National Contact Point for Creative Europe, at the Ministry of Culture.
- Cosmin Herman () Manager of Moodle Community from Moodle Romania. He is based in Arad.
- Carmen Holotescu - Professor, Dean, Director Center for Open Education, University of Timisoara, representative of POERUP project for Romania.
- Bogdan Manolea - Manager of the Association for Technology and Internet (ApTI), national contact point for Creative Commons.
- Emil Onea - Former teacher, the founder and admin of , the Vice-president of Romanian Computer Science Teachers Association (UPIR)
- Valentina Pavel - Manager at the Association for Technology and Internet (ApTI), national contact point for Creative Commons.
- Ovidiu Voicu - (ovidiu.voicu@inovarepublica.ro) Director of Center for Public Innovation, former Manager of Foundation or an Open Society in Romania (FOS Romania)

2. ABOUT ROMANIA

Romania is a country located in Southeastern Europe (SEE) bordering on the Black Sea. It shares borders with five countries, with Hungary and Serbia to the west, Ukraine and the Republic of Moldova to the northeast, and Bulgaria to the south. There is a special cultural, language connection and often political between Romania and the Republic of Moldova. Romania has the 9th largest territory and the 7th largest population (with 21.5 million people) among the European Union member states.

Since December 1989, when the Berlin Wall fell, Romania has pursued a policy of strengthening relations with the West in general, more specifically with the United States and the European Union. It joined the North Atlantic Treaty Organization (NATO) in 2004, the European Union (EU) in 2007.

Its capital and largest city is Bucharest (Romanian: Bucureşti), the 6th largest city in the EU with a population of 1.9 million. Romania is a semi-presidential unitary state, where the president is elected by popular vote.

3. EDUCATION SYSTEM IN ROMANIA

Since the collapse of communism in 1989 the Romanian educational system has been in a continuous reforming process and experienced both progresses and setbacks. The education system is regulated by the Ministry of Education, Research, Youth and Sport. The latest Law on National Education was adopted in 2011 with a few minor amendments added later.

The pre-university system includes the following levels:
- early childhood education including ante-preschool (0-3 years) and preschool (3-6 years)
- primary education including the preparatory class and grades 1-4;

- secondary education including 1) lower secondary education (classes 5-9); 2) secondary education including 10-12/13 classes with the following optional directions: general, vocational and technical

Vocational education can last from 6 months to 2 years.

The general education system (K12) is highly centralized. The Ministry of Education decides on the curriculum, content and the employment of teachers. There are County Inspectorates who oversee all localities in a County. Municipalities provide infrastructural services only. The tertiary education includes post-secondary education.

The Teacher Training Colleges ("Houses of Teaching Staff"), County Centers for Pedagogical and Psychological Assistance, Logopedic Centers, School Inspectorates belong to the pre-university higher education system, so their operations are centralized.

Romania has a large higher education sector with 54 public universities and 40 accredited private universities. The public universities receive state funding per capita and enjoy a broad autonomy of operation. The state funding is dependent on the type of university and the results of the ranking of their study programs.

The Romanian higher education system is in line with the Bologna Agreement: Bachelor programs take three years to complete, except for a few technical fields, medicine and architecture. Master Programs take two years after completing the Bachelor's degree. Master Programs are a prerequisite for admission to Ph.D. programs. Ph.D. programs usually take three years to complete and may be extended with one-two years. The current university classification system (introduced in 2011) has three types of education: Bachelor, Master, Doctoral Degrees.

There also exists a semi-legal, informal private tutoring system used mostly during secondary school years to prepare pupils for higher education.

Within the framework of the national curriculum, currently, the teachers enjoy relatively big freedom in choosing between the textbooks produced by the private publishers within the framework of the national curriculum. Each student receives one free copy of a textbook from the state for each subject. The teachers select which textbook they will use from the available offer. The state centralizes the orders and pay them directly to the publishers. About 6 books are available per grade per subject in K12.

There exist digital repositories maintained by the state, private companies, NGOs, but they do not consider clarifying copyright issues or use public or open licenses. The available Open Educational Resources (OER) are mostly the outcomes of EU-funded projects which must apply open licensing.

4. KEY ACTORS

In Romania, it is the OER Coalition that gathers the most important actors working and promoting Open Educational Resources and open education. Apart from the Ministry of Education and Sciences, the key players listed below are all members of the Coalition. The number of organizations and individuals for promoting or using OER outside the Coalition is scarce. The leader of the coalition is the Center for Public Innovation (CPI).

4.1. Ministry of National Education and Scientific Research (MENCS)

The Ministry of Education (MoE) included OER related commitments in several national strategies in the past few years but the real chance for developing a concrete policy to introduce open textbooks emerged only in April 2017 - which developed into a Bill in December 2017 and it is now under Parliamentary debates. The Ministry began to support more explicitly the idea of open textbooks when the OER Coalition started to work with a new Advisor to the Ministry of Education on ICT in education, Daniel Bőjte in 2016. The proposal was that the free copy of the textbook would be produced by a state-owned company instead of outsourcing the acquisition to the free market. Alternative textbooks would be provided by the private publishers but they will no longer subsidized by the state.

4.2. The Open Educational Resources (OER) Coalition Romania

The OER Coalition2 in Romania was launched in October 2013 in Bucharest by four NGOs with the aim to gather those organizations and individuals interested to promote Open Education, Open Access and Open Educational Resources in the country. The Foundation for an Open Society (FOS) Romania, then a spun-off unit of the foundation called Center for Public Innovation (CPI) has led the Coalition since then. The total number of member organizations was 26 in 2017. The Coalition involves mostly NGOs, a few university departments and service providers, and four individual teachers. (Schools cannot participate in the coalition for administrative reasons.) [3] Out of 26 members, basically four NGOs working at the level of general education are the most active, the rest provides and contributes on an ad hoc basis and they are rather passive.

The Coalition has been the most active and successful at the level of general (K12) education where it is easier to pursue high-level national advocacy for policy development due to the centralized governance of primary and secondary education. The Coalition has been providing advice and make recommendations on open policies, OERs and open education in general, and recently concretely on open textbooks to policy-makers. They have mainly focused on advocating for the opening up of the repository of the National Digital Textbook Project. The Coalition organized a number of public events, wrote up policy briefs. While the Coalition has conducted persistent and consistent advocacy with the high-level representatives of governments, ministries, the frequent changes of governments and policy-makers made it difficult to commit them to open education for years.

Despite these setbacks, the Coalition efforts led to important results by 2017. In April 2017, the Ministry of Education prepared **a** draft policy to adopt open textbooks in primary and secondary education with the aim to launch a central OER repository based on the already existing National Digital Textbook Database which had offered free, but technically and legally closed

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[2] http://www.inovarepublica.ro/educatie-deschisa-romania/
[3] See Annex 1 for a detailed list.

digital resources. This policy developed into a Textbook Bill by December 2017 (discussed in detail later).

Beyond advocacy, the Coalition have conducted considerable awareness raising activities on open education through grassroots activities such as campaigns and trainings. While they could not reach the critical level of awareness in the public, or in the professional circles, they found it important to keep the topic of open education on the public agenda and at high-level policy-making continuously.

In higher education, there is much less openness to open education concepts or creation or use of OERs due to the generally conservative attitude of the academic staff in copyright issues. In addition, the universities enjoy broad autonomy so central national policies do not apply directly if they do not agree. At this level, the Coalition does not advocate at national level. The few advocates such as Carmen Holotescu and Diana Andone from the Politehnica University of Timisoara has been raising awareness through their professional work. The rest of the university department members of the OER Coalition are mostly passive.

As schools cannot be members of such coalition, only four teachers are involved directly as individual members. They provide connection to their teachers' communities. As Ovidiu Voicu, from CPIE, states the Coalition plans to expand its membership to include NGOs and professional teachers' associations from general education. (They do not regard unions as partners due to their political and economic foci.)

The Coalition operates informally and not as a registered federation. There was thinking around making the cooperation formal, but a formal operation would not seem cost-effective. Geographically, most activities are carried out in Bucharest, and at the Politehnica University of Timisoara. The Coalition has a web presence embedded in the larger Open Access community, as well as on social media.

4.3. Center for Public Innovation (CPI)

Since 2013, the Foundation for an Open Society (FOS) – Romania then its relevant spun-off organization, the CPI[4] has played a substantial role in introducing the concept of OER and open education on the public agenda in Romania since 2013. They served as the leader of the OER Coalition. They focus on national policy advocacy mostly in general education and public awareness raising on open education led by Ovidiu Voicu.

The main direction of CPIE's advocacy work in open education has been to foster the opening up of the resources of the National Digital Textbook Database (see details later in this document under the Education Policy chapter). In 2016, they worked hard on the successful inclusion of the open education in the Romanian Open Government Partnership (OGP) Action Plan (More information on this can be found in the chapter on OGP below.)

Before 2013, there was little public reference to open education and OER in Romania (apart from some Open Access work at the University of Timisoara), and now the concept is known and present in public policy debates. FOS Romania translated relevant OER documents to Romanian; published a brochure about the intellectual property rights and licensing (including Creative Commons licenses); and pushed for the introduction of OER concept in the main strategic documents. They wrote up the report on Open Education in the Pre-university Education System in Romania which was the third in the Open Society Reports series. [5]

4.4. Association for Technology and Internet (ApTI) and Creative Commons Romania

ApTI is an NGO aiming to support and promote free and open Internet, digital civil rights, data protection, improve digital policies and practices. They advocate for respect of digital civil

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[4] In 2015, the unit working on open education spun off from FOS Romania into a newly established NGO, called Center for Public Innovation. The unit has been supported financially by the Open Society Foundations' Information Program since 2013.

[5] The rest included other topics the Foundation is engaged in: open government, transparent public-private contracts, open educational resources, open public budgets and open culture. http://datedeschise.fundatia.ro/publicatii/

rights, non-discrimination of Internet services as compared to other mass media services and the openness of Internet related legislation. They also play a watchdog role by operating a public policy observatory on Privacy, Intellectual Property Rights and Internet Governance which is a project financed by the European Union through the 7th Framework Program.

In relation to OER, ApTI plays a crucial role in providing Internet-related education for Internet users and professional groups; promoting Netiquette and self-regulation, publishing recommendations for certain Internet services. They have carried out OER related trainings for librarians and higher education staff which include awareness campaigns and practical hands-on workshops on open licenses and open educational resources from Creative Commons funding.

The Romanian Chapter of Creative Commons is hosted by ApTI represented by Bogdan Manolea and Valentina Pavel. Their activities mostly coincides with the the organization's relevant work on copyright and open licensing for educational purposes. (For more on their activities, please see the chapter on Intellectual Property Rights)

4.5. Kosson

Kosson[6] is a platform for librarians, archivists, museums where they share news and good open practices from Romania and internationally. It is an important hub of the open education and open access advocates and offers connection to similar international initiatives. Kosson's Nicolaie Constantinescu has been an active trainer on copyright and open licensing as well as developing open technological solutions.

4.6. University of Timisoara

At the Politehnica University of Timisoara, Carmen Holotescu (lately Professor, Dean, the Director of the Center for Open Education at "Ioan Slavici" University of Timisoara) and Diana Andone (Director at eLearning Center at "Politehnica" University of Timisoara) have been actively promoting OER for many years. In 2007, as an expert in the Knowledge based Economy

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[6] http://www.kosson.ro

Project (KEP), Carmen Holotescu formulated the first proposals related to Open Educational Resources and Practices at government level7 Also, Holotescu participated in the European POERUP project8 from Romania. They are pioneers in designing courses and studying the state of open education, open access, OER and MOOCs in Romania. They are active members of the Coalition from the higher education sector unlike most other universities.

4.7. Moodle Romania

Moodle Romania[9] is a significant service provider for e-learning for more than 15 years. They claim to cover the 80% of the Romanian e-learning market at all levels of education. The offer services related to teaching, learning and assessment. They provide technical solutions, resources and training opportunities for e-learning in Romania for various target groups, including teachers, students, administrators and even companies. They have been the Romanian branch of the Moodle for more than 15 years. (For more on their work, please see the Open Software chapter.) Cosmin Herman, the leader of Moodle Romania, is an active advocate of the development of e-learning.

4.8. Evaluation

The OER Coalition's main strategy to maintain the high-level advocacy for introducing the open policies in general education where education policy-making and governance are more centralized proved to be efficient and is expected to remain in the center of their activities. Having the most knowledge and expertise in the OER field, the Coalition's advice and recommendations are crucial for the national policy-makers. The MoE relies on the advice and support from the Coalition and the international OER network in the implementation of open education policy.

The Coalition's role is expected to remain important in the implementation phase as well. As part of successful policy implementation, the Coalition should extend its work and engage

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[7]https://www.scribd.com/document/189255399/Recommendations-for-Ministry-of-Education-related-to-Open-Educational-Resources-and-Practices.
[8] http://poerup.referata.com/wiki/Romania
[9] https://edu.moodle.ro

teachers' and educators' professional associations, parents and pupils which is on their to-do-list already. The Coalition intends to expand the coalition with these stakeholders whose professional and practical input can reinforce professional and social support for the implementation of the open education policy in the education system. The Coalition plans to continue the grassroots work for awareness raising and engage a core group of innovator teachers, educators or education NGOs who can efficiently represent the openness in their professional circles. Their capacity building in copyright and licenses among teachers would also be essential.

The international community and a regional cooperation can effectively help the Romanian OER Coalition (and others in the region) for sharing expertise, organizing high-quality capacity-building events directly for a core group of open educators, practitioners and engage them in the OER movement.

5. POLICY CONTEXT

This chapter assesses the state of relevant national policies that provides the context for the development of OER and open education policies.

5.1. Intellectual Property Rights (IPR)

The current copyright law in Romania was created in 1996 and represented a traditionalist approach of retaining the copyright for authors. There have been several amendments which mostly followed the changes in the European legislation and mainly addressed the illegal use of copyrighted materials and regime for collective societies.

A new draft EU Copyright in the Digital Single Market Directive10 is expected to worsen the legal copyright environment for educators. So ApTI (also the Romanian Creative Commons chapter) advocates are supporting the international campaign against the proposed changes in the European copyright legislation because the copyright exceptions in the new directive make

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[10] https://ec.europa.eu/digital-single-market/en/copyright

it possible to access, share and reuse some parts of the resources for educational purposes, but they are limited by requiring their use in a secure network or formal environment.

According to ApTI, there are important public information repositories that could be freely accessible and open to the public (e.g. the text of laws that are currently charged for by private service providers). There seems to be a demand to open up the archives of old traditional public media (radio, TV, newspapers) for educational and research purposes.

As for textbook publishing, in Romania private publishers produce all textbooks for general education (approximately 6 per grade per subject) and sell the user rights for massive amounts to the state11. The state receives a static digital and printed form of the textbooks and distributes them to the pupils for free. Since 2013 a few interactive versions of the textbooks have been available published on http://manuale.edu.ro. The access used to be password protected but now free of charge. However, the copyright remains with the editors. The inflexible format of textbooks does not allow for easy and quick updates which depends on the permission of the private publishers as the copyright holders and they charge for them.

5.2. National Digital Policies

5.2.1. State of digitalization and digital skills

According to the Digital Economy and Society Index 2015, the level of connectivity in Romania is similar to the EU countries. However, in reality, half of the Romanian population still have no access to fast broadband Internet connection. The mobile internet connection is spreading very fast though which is very similar to the trends in the developing countries.

Earlier, there were huge investments in digital infrastructure in schools (see the digitalization programs below), so educational institutions are regarded to have adequate digital infrastructure, but they are often not upgraded properly. Teachers and students tended to use their own devices with the latest, or at least newer technologies, so the BYOD (Bring Your Own

Device) phenomenon is widespread unofficially. Recently, government programs have been launched to mitigate the problems of digital infrastructure problems. (See details below)

5.2.2. National Digital Programs

The Educational Information System (SEI) and Advanced e-Learning (AeL) projects were huge investments of over $200 million in ICT in education12 between 2000 and 2010 which aimed to overcome the typical problems of IT infrastructure, educational digital resources and developing ICT competencies in education. The project equipped all schools with IT labs and education software but these remained hugely underutilized due to the low digital skills of teachers and learners and computers have become in time outdated. (As one expert described one of his school visits: they were covered with nicely ornamented spreads to protect them from dust.)

Within AeL project, private publishers developed relatively good-quality digital applications for all subjects for secondary education (distributed on CDs at that time), but these did not become open sources, or openly licensed, or public access. So digital educational resources were produced from public money – originally from World Bank loan - remained the publishers' property. The state did not consider about making them open which is regarded as an significant "lost opportunity" by the OER advocates. According to Ovidiu Voicu, only around less than 10% of the teachers have been actually using AeL resources so far.

The Romanian government included references to OER and the integration of IT methods for learning in its strategic national governmental plan for 2013-2016. The strategic plan stated that the Romanian Government, together with the Ministry of Education, will "support innovative methods for integrating web 2.0 educational resources and open educational resources in the learning process". This governmental plan was backed up conceptually by the European Open Data initiative and Romania's membership in the Open Government Partnership Initiative. Within this framework, the first steps in using an open license model were taken in Open Data policies. The Online Services and Design Department (DSOD) of the

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12 http://www.advancedelearning.com/index.php/articles/c32

Chancellery of the Prime Minister developed an open license model for the national Open Data portal based on Creative Commons models. This database includes openly accessible content, but these are only data type of resources.

In 2015 the Government approved the National Strategy for the Digital Agenda for Romania 2020 which included explicit references to Open Educational Resources under the Education and ICT Chapter by considering the usage of OER and Web 2.0 in formal and life-long learning education as strategic lines of development for ICT in education.13 The Agenda defines a framework for an institutional structure that will provide a unified vision as well as centrally and cooperatively manage all aspects of digitalization of public services and achieve interoperability at European level. The strategy sets out a total investment of around 2.4 billion EUR for the full implementation of the strategic vision of the ICT sector in Romania and the direct and indirect impact on the economy is expected a GDP growth of 13%, and an increase in the number of jobs by 11% and cut in administration costs by 12% during 2014-2020.

A new project, financed from the Digital Agenda strategy began in 2017 with the aim to bring Internet connection to the classroom level, pilot the provision of tablets for all pupils and training teachers at county level. Another projects focus on developing the Virtual Library (OER Repository) and a national e-learning platform (discussed in detail below).

5.3. National Education Policies

5.3.1. State of education

In 2009 the analysis of the Romanian President's Office was woeful on the state of education:

„To keep the current education system in Romania is to jeopardize the country's competitiveness and prosperity. This system has four main problems: it is inefficient, irrelevant, unequal and of poor quality."

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[13] https://www.comunicatii.gov.ro/wp-content/uploads/2016/02/Strategia-Nationala-Agenda-Digitala-pentru-Romania-2020-aprobata-feb-2015.doc

This refers to systemic ongoing problems of education that Romania suffers from. The educational system is undergoing a constant change after the adoption of a new education law in 2011 which has been amended at least once a year until now.

As a result of this statement, the President launched a national educational program titled "Educated Romania" which aims to modernize education in Romania by the end of 2018. This provided the latest opportunity for the inclusion of openness in the system.

5.3.2. The National Education Law of 2011

The National Education Law in 2011 mentions a Virtual Library and an e-Learning platform but until now there have been no concrete policies or implementation plans attached. The Law included the launch of a virtual library as a central library of digital resources, but the resources were not meant to be openly or publicly accessible. The OER coalition has worked heavily to convince policy- and decision-makers that open education can be easily integrated in the reform process and would not involve extra major costs, rather savings. According to the recent calculations of the OER Coalition, the costs of open textbooks would cost half of the total costs of the current system in which the state purchases the licenses of textbooks from the private publishers' textbooks. [14]

The OER Coalition have been conducting information campaigns at higher levels to promoting the switch of the Virtual Library to an OER repository. The success of this activity was limited for the first few years until the Romanian government decided in 2017 to update the curriculum of the secondary education. This has opened the opportunity to start discussion about new textbooks and finally led to a breakthrough in the Ministry's approach in 2017 (as discussed above).

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[14] Appr. 10 million EUR per year.

5.3.3. The National Digital Textbook Project

The government launched the National Digital Textbook Project15 in 2013. The school textbooks were digitalized by the private publishers, they are free in printed and digital format for the users, but they remained closed both from legal, technical, publishing and educational perspective.

Technically, the Ministry only bought the applications from suppliers, not their source code. This made it impossible for a teacher or a student to extract and improve parts of the digital textbook. This also made impossible for the Ministry to change or update any content in the textbooks (e.g. following changes in the curriculum) without the publisher's consent to providing the source code for compensation.

The textbooks remained closed from legal perspective, too. The public authority has never seriously tackled the issue of Intellectual Property Rights (IPR) during the procurement and contracting process. Neither the specifications in the procurement calls, nor the clauses of the purchasing contracts or the website included any reference to copyright or licensing issues. Under these circumstances, the legal provisions according to which the whole content is protected will apply. Consequently, a teacher who would like to re-use parts of the digital textbooks would break the law as the rights are with the publisher. This could have been easily prevented if the Ministry had bought the property rights and had published the textbooks under an open license. This would have meant initial higher costs for the Ministry, but later would have become cost-efficient owing to free and open use.

This project highlighted that they did understand the importance of digitalization of textbooks but not the open principles. This made it clear that there is a poor understanding of intellectual properties rights in the public sector and showed the need for more work on awareness raising for national policy-makers.

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15 https://www.manuale.edu.ro

5.3.4. The "Educated Romania" Presidential Program in 2016

In 2016, the Romanian President16 announced the Educated Romania (România Educată) program17 with the aim to propose a new national vision on education in two years' time, by the end of 2018. Throughout 2016, the OER Coalition participated in relevant policy debates and also hosted an event to promote the concepts related to open education, including OERs18. In 2017, the process included the analysis of data and draft the policy. By the end 2017, a new draft bill of national education is expected to come out. The Romanian OER Coalition have provided input about the significance of opening up education which was acknowledged and was finally included in the draft policy.

5.3.5. The Policy and the Textbook Bill to Introduce Open Textbooks

In the fall of 2017, the Ministry of Education announced a draft policy to introduce open textbooks and replace the existing digital textbook database of private publishers' textbooks with state textbooks. According to the current practice, the state purchases digital and printed textbooks private publishers and distribute them for free to the learners, but the copyright remains with the private publishers. According to the new policy, the open textbooks will be published by a state-owned professional education institute under public license (two per year per grade per subject) and they will be made freely and openly accessible online. The current practice is that the state buys the digital and printed versions of textbooks from private publishers and distribute them for free of charge to the learners.

In December 2017, the draft policy evolved into the Textbooks Bill, which was adopted by the Government and submitted to the Parliament. It is currently under debate in the Parliament.[19] The MoE plans to establish a professional education research institution which would be responsible for the textbook development and quality assurance. The OER Coalition supports this step with the condition that this institution remain politically independent.

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[16] Romania has a semi-presidential system which allows for President's own initiatives independent of the government.
[17] https://presidency.ro/ro/romania-educata
[18] http://www.presidency.ro/ro/angajamente/detalii-romania-educata/?y=2016&m=2&d=11
[19] https://www.senat.ro/legis/lista.aspx?nr_cls=L1&an_cls=2018

5.4. National Open Data Policies

5.4.1. OER commitment in the Open Government Partnership (July 2016)

In 2015, a new opportunity emerged to foster the development of the Virtual Library into an open resource. In November 2015, after a wave of street protests, the Romanian Government resigned due to corruption issues. The political parties, at the initiative of the President, agreed to set up an interim technocratic government for one year until the next elections to be held at the end of 2016. One of the main objectives of the interim Cabinet was to increase transparency and accountability through more openness. This provided a space for action for the OER Coalition to advocate for the inclusion of an OER commitment for education in the National Action Plan of Open Government Partnerships agreement of Romania. In July 2016, Romania adopted its 3rd OGP National Action Plan 20 which includes a commitment to create a national OER Repository (called the Virtual Library) and adopt a national OER policy. It is the first official national strategy that includes such references.

In short, the commitment has two components: 1) to tur the content of Virtual School Library to OERs and 2) to define a national policy for creating open educational content from textbooks (through consultations with publishers on purchasing the copyright of textbooks or applying open licenses), outputs of EU funded programs and resources created by teachers. According to the OER Coalition, the deadlines are too ambitious and will be difficult to meet, but despite the expected delays, however, these commitments are important to foster implementation.

While a commitment for open education was included in the latest OGP Action Plan, there was an unfortunate withdrawal of the Open Access (OA) commitment which was formed part of the previous (second) Action Plan. The OA commitment has been opposed by conservative academic circles backed up by the National Agency of Higher Education and Research. This shows the difficulties of the adoption of Open Access concepts in research and higher education. OER Coalition member, Kosson plans to work out hands-on technical solutions and

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[20] http://ogp.gov.ro/wp-content/uploads/2016/11/NAP_2016-2018-EN.docx

awareness trainings for promoting Open Access in a more practical way for researchers and higher education staff - instead of higher level advocacy work which did not prove successful to convince them. As Nicolaie Constantinescu from Kosson pointed out: "high-level advocacy and communication do need seem to have reached the desired change of attitudes among researchers and universities, there should be concrete projects to show them the feasibility and the usefulness of Open Access in their work".

5.5. Evaluation

The progress on easing **copyright** restrictions for educational purposes in Romania is slow and largely dependent on European processes. Romanian Creative Commons advocates have joined to oppose the recently proposed changes in the European Copyright Directive.

In the past two decades, Romania has followed the typically inefficient strategy of **digitalization** in education: they invested in large scale ICT infrastructure and content development projects mostly sponsored from EU funds. These did not bring about the desired progressive changes in education such as the effective use of digital tools and resources for better teaching and learning experiences and results. According to one of the experts, this was due to the insufficient time allotted to the teacher training program and disregard of the very low level of digital skills, motivation, time and compensation of teachers, learners, educators for the extra effort they would have needed to invest.

In order to remedy the very low level of **ICT skills** of teachers, the government is going to implement a huge EU funded program in teacher training, according to the latest news from the OER Coalition. This can provide an opportunity for the inclusion of copyright trainings and open licenses. The current trainers of the OER Coalition (from Kosson and ApTI/Creative Commons) can have a role in ensuring that a professional and consistent teacher training program includes education on copyright and licenses which remains after the EU funding is over as without this, the implementation of OER policies, including the introduction of open textbooks may be at risk.

The national digital programs did not include measures for providing public or open access of the digitalized educational materials. A few valuable educational resources were developed in these projects, but the copyright remained with the publishers. This was regarded a big lost opportunity according to open education advocates, which they consider as lessons learnt and recognized later in 2016 by the MoE.

The **textbooks** are currently free and (mostly) digitally accessible in Romania for learners in all grades and subjects in general education. However, the state does not publish textbooks, it has to purchase the digital and printed textbooks for huge amounts of public money from private publishers who retain the copyright. As the high costs appear on the state budget side, the advocacy of the OER Coalition was directed towards the state rather than the end-users of the textbooks, the pupils, students and their parents who receive the textbooks for free and does no experience the costs of the textbooks directly. The restrictions on copyright also make it difficult to update the textbooks in due time, which turned out to become a quality issue in regard with the textbook content. The difficulty of updating of textbooks is also an important issue that public access can solve.

After years of uncertainties, planning and political battles, Romania now introduces a new curriculum in 2018 which provide an opportunity for introducing new and open textbooks. The MoE prepared a draft policy which evolved into a Textbook Bill in December 2017 which supports the introduction of **open textbooks** in general education. This is a significant step on market where only private publishers have been present so far and who are expected to oppose the introduction of the open textbook policy.

Grabbing the opportunity in 2015 to advocate for the inclusion of open education commitment in the **OGP Action Plan** with the government was a significant and timely step from the Coalition. The implementation of the commitment can be easily followed and documented at the end of each period which provides transparency. However, a commitment can be withdrawn any time unilaterally as it happened with the Open Access commitment due to the pressure of conservative academic circles on the government and no substantial coalition supporting it. The risk with OER commitment seems manageable as long as the MoE continues

to support the policy and the OER Coalition provides professional and a social base for it. However, the lobbying of private publishers against open textbooks and the opening up of other educational resources are expected which may need further negotiations.

6. OER IN EU FUNDED PROGRAMS AND PROJECTS

There are agreements and program papers that define the general framework for developing new programs in education between Romania and EU. The Partnership Agreement between Romania and EU 2014-2020 includes references to OER as priority in education. The Agreement serves as the framework for Romania to spend the allocated EU funds during the budgetary period. The strategic document for the Operation Program Human Capital includes a similar reference.

6.1. Evaluation

In general, the outcomes of many EU funded projects must be open educational resources, but the actual opening up of these resources often do not happen due to the fact, among others, that the relevant authorities do not have the capacity to monitor if this rule it is actually respected. Also, the resources are not managed and stored in a systemic way, they are often difficult to find, so the awareness about them remains unfortunately low.

7. OTHER OPEN MOVEMENTS AND PROJECTS

7.1. Open Source Technology

The interest and use of open source software by teachers, pupils, and students in Romania are very important, but there are mainly institutional, group and personal initiatives. Many Linux and LAMP users are active in user groups, building online communities, with online support, discussions forums, and hold personal meetings. The Romanian Linux distributions were

developed by teams formed by young students. Numerous workshops and conferences with participation of educators happened.

7.2. Open Culture

In Romania, we cannot talk about a broad open culture movement, rather the dedicated work of a few individuals and organizations advocating on opening up the licenses for art and culture products, the content of libraries, archives and museums. Their theory of change is to promote the audience development, and the interaction with the object or product and the cultural education which will make awareness more.

The policies, practices or projects have been mainly encouraged by the relevant 2006 EU directive, less due to the initiative of people, institutions where there is still resistance especially in the reuse of the art and culture works and products. The Directive (revised in 2011) for digitalization and opening up data of the public sector demanded a quota for content each country should open up. The adoption has started but the implementation is slow. Now there is some improvement expected as in 2015 the Romanian government committed to implement the directive and included the cultural heritage as well.

One of the most important projects in the field is the Romanian contribution to the Europeana[21], the open repository of European heritage. Romania created a data aggregator to collect the data for Europeana. Technically, the system is ready but there is need to encourage contributors to send more content.

7.3. Open Science

OER Coalition also has a good outreach to the researchers, librarians and archivist community. One of the outstanding projects its members are involved is OpenAIRE2020 funded from Horizon 2020 EC funds. Kosson's Nicolae Constantinescu operates a National Open Access Desk Romania for OpenAIRE2020 project, which orientate researchers to expand their

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[21] https://www.europeana.eu/portal/hu

research findings, and advocates for datasets to become open. The other project in the field is developing the portal Kosson.ro[22] which is an open platform for librarians, archivists, museums where they share news and good practices.

7.4. Evaluation

There are relatively few committed advocates of openness on other fields such as technology, culture or science and they are mostly embedded in and funded by international, EU projects. There exists open software and technology solutions and promoters that help to develop new open resources, though. A few promising initiatives and enthusiastic advocates can be found in the field of open culture, but the opening up of art and culture works are very slow. The open science advocates are working in engaging researchers and university staff to share more in its early phase. There are projects that produce open resources in these fields, but they are scattered enough not to be easily discoverable for educational purposes. One way would be to place them in national open repositories as Bianca Florea, open culture advocate suggested.

8. POLICY IMPLEMENTATION IN EDUCATION

In this chapter, I am discussing the state of conditions that may determine the process of policy implementation in education.

8.1. The State of E-Learning

8.1.2 MOOCs

According to Carmen Holotescu, Professor at the „Ioan Slavici" University of Timisoara, a long time open education advocate, the development of MOOCs is slow mainly due to the rigid policies in formal education related to curricular systems and assessment practices, and the lack

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[22] http://www.kosson.ro

of possibility to officially accredit online courses. There are many institutional and inter-institutional initiatives related to MOOCs initiated by the researchers and teaching staff, the development of MOOCs but its official accreditation has been progressing very slowly in Romania. The courses can only be used in a blended approach in formal education. The only official accreditation of MOOCs happened in 2016 at the University Polytechnics of Timisoara which could give two credits for students taking the course in "Digital Marketing" MOOCs offered by Google. (The course supported entrepreneurial skills development.)

There is little interest and knowledge at MoE's to consider the use of online courses in education at the moment, as several interviewees mentioned. The lack of good digital skills of educators and the lack of proper incentives to acquire them also contribute to little motivation and time for exploring, understanding, evaluating and using new technologies and MOOCs in teaching and learning processes.

8.1.2 Digital repositories and resources

There are several virtual communities, repositories and online trainings available for teachers and educators in Romania, mostly maintained by private companies. These are open or closed communities with various types of resources and trainings:

- Moodle Romania

Moodle Romania is the member of the OER Coalition. They are a service provider in e-learning and is committed for certain openness in their work. E.g. the resources that teachers create and upload to the Moodle platform become openly licensed at the end of the year. The training materials that they have provided are available freely, but the certificates upon the completion of the courses are provided for a fee. They also included copyright and open licensing awareness component in their trainings. They are a potential service provider for the upcoming open textbook project of the Ministry.

- Didactic.ro

Didactica.ro is a huge (maybe the largest) repository of online educational resource. It was launched in 2003 and has over 800,000 members: teachers, students, parents. Its operates the

biggest network of teachers in Romania and Republic of Moldova. The teachers post their resources for free sharing and the resources are open in technical sense, but they do not use an open license and they do not refer to copyright attribution. The owner and sustainer of this huge platform is the company Intuitext[23]. Emil Onea who launched the platform now is the moderator of the community and takes care of the teachers' resources used in teaching.

On this collaborative platform the teachers put together over 300,000 teaching materials including planning, testing, forms, presentations, lessons. There are special resources developed by Intuitext specialists, also there is a platform for teacher training. The company also have a textbook publishing arm.

The quality of the resources is measured by their popularity and peer evaluation, no special evaluation procedure or quality assurance mechanisms are in place and according to some of the experts, also there is more administrative type of information shared by teachers rather than professional content.

The quality of the resources varies according to educational experts. According to some opinions, one issue is that teachers do not follow the latest curriculum so the information is often not updated.

- iTeach

iTeach as a private company offers a closed professional virtual environment for professional development of teachers with web 2.0 tools, resources and trainings. A number of online courses are available on their platform aimed at developing pedagogical skills and specialization. They offer one core ICT training for teachers developed by Intel. The services are payable on the platform.

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[23] www.intuitext.ro is an educational software developer company, part of the Softwin (antivirus developer company)

- Digitaliada

A new resource has emerged recently: http//www. digitaliada.ro. It is contest and a platform maintained by Orange Foundation of the Orange Telecom company which hosts and rewards digital educational resources. The access is free but not open.

- The Romanian Computer Science Association

UPIR[24] is an NGO with over 1200 computer science teacher members who work in the secondary education of Romania (gymnasia and high-schools). The goal of organization is to stimulate the teaching of coding and ICT, to develop digital competences of educators in the education system. UPIR also hold presentations in coding and ICT. They organize two National Contests for young students: the InfoEducatie[25], a contest for over 200 students in Software, Robots and Multimedia and the AcadNet[26] which is a contest in networking and programming with over 800 students. For the promotion and development of learning and teaching computer science in Romanian schools, UPIR has developed a community[27] for sharing free resources and materials created by over 550 teachers as Emil Onea informed who is the vice-president of UPIR.

8.1.3 Evaluation

Much of the formal and non-formal digital educational content service provision seem to be in the hands of domestic private companies or international corporate foundations in Romania. They are strong either in outreach, networking and/or professionalism. Their business interest in publishing may easily lead to opposing the open textbook project.

As several private publishers produce high quality textbooks and resources, the state must ensure similar high quality of the new (open) textbooks and educational resources to be produced by a state-run educational institute through efficient quality assurance system.

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[24] www.upir.ro
[25] www.infoeducatie.ro
[26] www.acadnet.ro
[27] www.infogim.ro

8.2. Teacher training

8.2.1 State of ICT skills and competences

As mentioned above, the level of ICT skills and competences are very low in general in Romania. Romania ranked the last on the list of EU countries on the Digital Economy and Society Index 2015[28].

In Romania, there are 180,000 teachers whose ICT skills are of relatively low level. This was also confirmed by by the experiences of the trainers of the OER Coalition, Valentina Pavel, Bodgan Manolea and Nicolae Constantinescu.

According to the findings of a recent study29 only 13% of teachers use the latest digital resources collection at least once a week, 42% use them once a month or less and 45% never use them, so their impact is close to nothing. Teachers in Romania underutilize even the available, closed digital resources for educational purposes.

While the current learners of general education are digitally native, there is an issue of access to Internet for those in disadvantaged regions. The ones with access have low level of skills for using learning resources efficiently for educational purposes, but also lack proper skills for safe Internet use, digital media literacy. The teaching of Information Science is reduced to basic programming and use of (MS) applications. The integration of these skill developments would need more systematic approach in education policies, but currently these are not in the focus.

8.2.2 ICT skills and competences trainings

In Romania the national digital education programs have all included teacher training programs for developing ICT skills of teachers. These programs were funded mostly from EU funds, and typically stopped or became very low-key after the funding was over. This task is usually

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[28] DESI 2015 https://ec.europa.eu/digital-single-market/en/desi

provided by private companies or international IT related foundations such as MS, Gates, Oracle and Intel.30

The National E-Twinning Center also played an important role to produce content, teacher communities and international exchanges. It was the Center for Innovation in Education, in partnership with the Institute of Education Sciences which coordinated program implementation in Romania.

The state provides ICT skill development trainings in the public education system both in initial and further teacher training, but their quality is regarded rather low. The curriculum for initial teacher training includes one course on ICT skill developments. Teachers also must participate at a certain number of further training courses to fulfill the requirements of national professional career development program. The training events which include ICT skill development courses as well happen at the county-level "Houses of Teacher Training". Beyond the quality concerns, the motivation of teachers usually does not extend beyond obtaining the necessary certificates. This situation makes space for the private service providers on the market who can provide more professional training services.

In 2007, beyond controlling for providing mentoring, supervising trainings, the inspectorates were given more roles: now they oversee the operations of the Houses of Teacher Trainings. The OER Coalition has plans to outreach to these inspectorates in order to provide them professional input on copyright and licensing.

As a partial remedy to the poor ICT skills in education, the Government is planning a huge EU funded program on the development of teacher training, as described earlier.

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[30] We should add here that the Gates Foundation also sponsored a program for ICT skills for librarians together with the National Association of Libraries and Librarians called Biblionet which contributed a lot to the improvement of their skills and some of the librarians became trainers themselves.

8.2.3 Copyright and open licensing training

In Romania, the teacher training programs do not include education of copyright or open licensing, and even the ICT skills development training is of low level in the relevant institutions. To date, copyright or open licensing have not been part of the training curriculum for initial and further training provided by the state or private service providers. In the upcoming teacher trainings, there seems to be space for including copyright and open licensing issues in the curriculum of teachers' further trainings according to OER Coalition.

OER coalition members, ApTI and Creative Commons have been conducting trainings on copyright and open licensing for librarians and higher education staff as part of their grassroots awareness work. In some cases, these happened to requests in other cases they were proactive in offering the trainings. They covered the country's major cities in recent years. While many participants lacked the basic knowledge of IPR, and it was hard for them to conceive the information they received,[31] Valentina Pavel, Bogdan Manoa from CC and Nicolaie Constantinescu believe that that a few of the trained participants have the capacity to become trainers in their community.

8.2.4 Evaluation

While acknowledging the role of private service providers and international foundations in providing quality teacher training on ICT skills and competences, this task should be elevated in quality within the public teacher training or made it available for all teachers. This would be in opportunity to instill copyright and open licensing in the curriculum of the nationwide ICT skills development teacher training program funded by the EU. The inspectorates working on a district can be allies in this endeavor, and they seem to be open, according to the OER Coalition.

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[31] Two interesting lessons learnt were that 1) having been enlightened about the complexity of copyrights issues, several participants became more afraid of using resources 2) due to the large amount if new information they faced about copyright, they had difficulties in focusing on open licenses.

Nicolaie Constantinescu raised the potential of training younger pupils who are already digitally native (in contrast with the teachers and parents) for the use of the online public and open resources, copyright and open licensing – which is an interesting idea to explore.

9. CONCLUSION

The road to the OER and open education policy development in Romania has been a mixture of progress and setbacks since 2013. While open education and OERs were mentioned in several national digital and education strategies, the progress of the relevant policy development has been slow, mainly due to the general poor understanding and disinterest by the frequently changing governments, education ministers and ministry officials. Ensuring the commitment of high-level policy and decision-makers at the Ministry of Education in 2016 brought about the breakthrough.

The OER Coalition successfully advocated for the inclusion of an open education commitment in its 3rd OGP National Action Plan 32 in July 2016 which includes tasks to create a national OER Repository (called the Virtual Library) and adopt a national OER policy. This was the first official strategy that included references to a national OER policy.

If we look at the current state of OER and open education policies in Romania, we can conclude that two important milestones have been reached in 2017. First, in the fall of 2017 the Ministry of Education first announced a draft policy for introducing open textbooks in general education. Second, in December 2017 when the draft policy evolved into the Textbook Bill and now it is in front of the Parliament under debate. Romania introduces a new curriculum in 2018 which provided a good opportunity for introducing new textbooks which could be now published public and open. The MoE plans to establish a state-owned professional educational research institution which would be responsible for the textbook development and quality assurance. The currently existing Virtual Library of digital educational resources will be turned into a

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[32] http://ogp.gov.ro/wp-content/uploads/2016/11/NAP_2016-2018-EN.docx

central OER repository. The development of the open textbook policy shows a significant step in opening up the resources for educational purposes on a market where only private publishers have been present until now who are expected to oppose these changes.

There are around a dozen of fully committed advocates of open education and OERs I have met in Romania who are all members of the OER Coalition which continues to be the key player in leading the advocacy and awareness raising in the field. The OER Coalition led by the Center for Public Innovation (CPI) has followed a complex approach in promoting OER policies by ensuring OER and open education policies by advocating for relevant digital, educational and open data policies since 2013 as well as has conducted consistent awareness raising on the concepts of open education and OER in Romania. The advocacy has focused on the creation and development of a Virtual OER Library for general education and introduction of the open textbooks. Their persistent and consistent work yielded important results such as the inclusion of OER concepts in digital, educational and open data strategies in Romania.

The OER Coalition have developed plans for future: they would like to continue the high-level advocacy to make sure the full implementation of open textbook policy in Romania complemented by building a stronger basis of stakeholders who will become supporters and users of OERs and open education. The Coalition plans to mobilize its less active members, especially in higher education, and also initiate new relationships with other educational stakeholders in order to strengthen the professional and social base.

The next steps for ensuring the conditions for policy implementation include Improvements in the fields of:
- the internet connection and the digital infrastructure
- the level of ICT skills and competences of teachers, pupils, students, educators
- the level of understanding copyright and licensing issues

The governments have prepared national strategies and programs for the improvements of all these fields, but their proper implementation should be closely watched from "openness" point of view by the advocates.

In higher education, the digitalization of resources, the emerging of online courses, not to speak about creating, sharing, reusing open resources are progressing very slowly due to the conservative academic circles who regard openness as a threat to their author rights and revenues and who have rather low level of ICT skills and competences. This group has efficiently advocated to withdraw the Open Access commitment from the latest Action Plan of the Open Government Partnership. Here, the Coalition could extend its awareness raising and competence development of teachers', students', librarians' competence in copyright and licenses at grassroots level through informational campaign, more practical open access projects may help.

The latest developments in open data and education policies show the big opportunity to introduce open textbooks and establish a national OER repository for general education in Romania. The accomplishment of this goal would be a significant step in establishing the foundations of open education in Romania. The next few years will probably decide whether this can continue and thus, accelerate the emergence of other open policies.

REFERENCES:

Romanian National Educational System

http://en.wikipedia.org/wiki/Romanian_educational_system

National Education Law 2011 http://www.edu.ro/index.php/legaldocs/14847)

POERUP Project Romania http://poerup.referata.com/wiki/Romania

OER Coalition Romania http://www.inovarepublica.ro/educatie-deschisa-romania

Carmen Holotescu http://tinyurl.com/cholotescu

MOOCs Initiatives in Romania by Carmen Holotescu

https://www.slideshare.net/cami13/mooc-initiatives-in-romania

Educated Romania conference organized by CPI:

 http://www.presidency.ro/ro/angajamente/detalii-romania-educata/?y=2016&m=2&d=11

National Strategy on the Digital Agenda for Romania 2020

http://gov.ro/en/government/cabinet-meeting/national-strategy-on-the-digital-agenda-for-romania-2020

http://www.demsoc.org/wp-content/uploads/2016/12/Demsoc.OSEPI_.EUOpenGovModel.pdf

Copyright Directive https://ec.europa.eu/digital-single-market/en/desi

AeL project: http://www.advancedelearning.com/index.php/articles/c32)

https://presidency.ro/ro/romania-educata

The National Digital Textbook Project: https://www.manuale.edu.ro/

Kosson: www.kosson.ro

ANNEX 1. OER COALITION MEMBERS

NGOs

1. Foundation for an Open Society
2. Center for Public Innovation
3. Association for Technology and Internet
4. Association MediaWise Society
5. Kosson Initiative
6. Stiricism.ro
7. Association MetruCub – resources for culture
8. Moodle Romania – moodle.ro
9. SmartCity Association
10. Association geo-spatial.org
11. ROSEdu Association
12. Romanian Quantitative Studies Association

Universities, Libraries and research institutions (public)

1. Institute of Sociology, Bucharest
2. Center for Democracy Studies, Babes-Bolyai University, Cluj-Napoca
3. eLearning Center, Politehnica University, Timisoara
4. Brasov County Library
5. West University, Timisoara

Companies (private)

1. TimSoft
2. eLearning & Software SRL
3. Simplon Romania

Individuals

1. Gabriela Traistaru, Teacher
2. Teodora Chicioreanu, Professor
3. Marcela Dobre, Teacher
4. Maria Georgescu, Teacher

ANNEX 2: OPEN DIGITAL REPOSITORIES, PROJECTS AND COLLECTIONS IN ROMANIA (WIKIPEDIA)

Open materials (especially for the pre-university system) and discussions for validation/ improving them in the online communities:

- http://forum.portal.edu.ro
- http://didactic.ro
- http://e-scoala.ro
- http://www.dascali.ro
- http://educatie.inmures.ro

The University of Agronomic Sciences and Veterinary Medicine Bucharest http://en.usamv.ro

Organic.Edunet http://portal.organic-edunet.eu

a learning portal that provides access to OER on Organic Agriculture and Agroecology.

iTeach http://iteach.ro - online community of over 8500 teachers, sharing educational resources and practices

iTeach's open journal http://iteach.ro/experientedidactice

http://www.oer-quality.org/iteach-a-teacher-training-programme-for-the-xxi-century

The Centre for Innovation in Education (TEHNE Romania) http://www.tehne.ro

supports educational initiatives through projects and programs covering areas of e-learning, ICT in education, curriculum development, education for democratic citizenship, lifelong learning, and in-service teacher training.

Cirip.eu http://cirip.eu is an educational multimedia microblogging platform, hosting online / blended courses on new educational technologies, open to SM platforms for using/sharing/creating/recreating (little) OER, gathering an educational community around learning scenarios.

Siveco http://siveco.ro and **Unisoft** http://unisoft.ro

are two Romanian software companies participating in the project Open Discovery Space: A socially-powered and multilingual open learning infrastructure to boost the adoption of eLearning resources http://opendiscoveryspace.eu

The Romanian Open Access community portal http://www.acces-deschis.ro/en includes Open Access publishing model.

Kosson http://kosson.ro

is a portal about open access and new techniques and technologies for data communication and management, published under a CC license, and is dedicated to Romanian specialists in the field of information science (documentary, archives, library, museum curators, etc.)

Libraries which have signed the Agreement of Open Access

- http://startad.kosson.ro/
- http://www.kosson.ro/acces-deschis/50-despre-promovare-acces-deschis/650-accesul-deschis-si-bibliotecile
- http://www.slideshare.net/kosson/valorificarea-cercetarii-europene

Math lessons: http://profesorultau.ro (only some are free), http://math-pdr.com

Romanian Encyclopedia http://enciclopediaromaniei.ro is published under a CC license.

Veioza Arte http://veiozaarte.ro: video sharing platform, an open source production house for the Romanian cultural scene.

Sound Supradose http://www.soundsupradose.com (audio collection)

Local Records http://www.localrec.ro (audio collection)

Brașov Creative Commons Film Festival http://bvccfilmfest.tumblr.com

City Projects http://cityprojects.ro: projects for local communities/ smart cities, based on open data.

Sex vs Stork http://www.sexulvsbarza.ro is the first online platform for sex education with video content in Romanian.

 Information about copyright issues, open licenses and OER:

 http://copy-me.org, http://dreptuldeautor.noisieu.ro/creative-commons.

Other projects under CC licenses can be found at http://ro.creativecommons.org.

ANNEX 3: UPDATE ON POLICY DEVELOPMENT BY OVIDIU VOICU, CENTER FOR PUBLIC INNOVATION, DECEMBER 2017

1) In late 2017, the new Romanian Government has shown solid commitment to opening the resources funded from public funds which constitutes the majority of educational resources in the country. On December 14, 2017 the Government adopted the Textbooks Bill which states that textbooks are open educational resources. In Romania the state provides free textbooks, online and in print, for all subject and for the entire duration of pre-university education (13 years) and there are over 150 titles offered to around 2.5 million students yearly The bill will go to the Parliament for debate and decision but according to the OER Coalition there is a good chance that the majority will vote for it.

2) the Ministry of Education has taken concrete steps for creating an infrastructure to collect and publish, under open license, resources created by teachers and other stakeholders. As of November 2017, each County School Inspectorate was asked to open an OER section on its own website and take measures to populate it with resources. The content will be hosted in a national OER repository for which the Ministry has allocated funds.

The Ministry aims to train around 60.000 teachers to use new methods and a new curriculum during the next four years. The overall value of the project is around 40 million euro, and the Ministry committed that all resources created in the project, at minimum 7.200, will be published on the above-mentioned repository. The source of funding comes from the European Union.