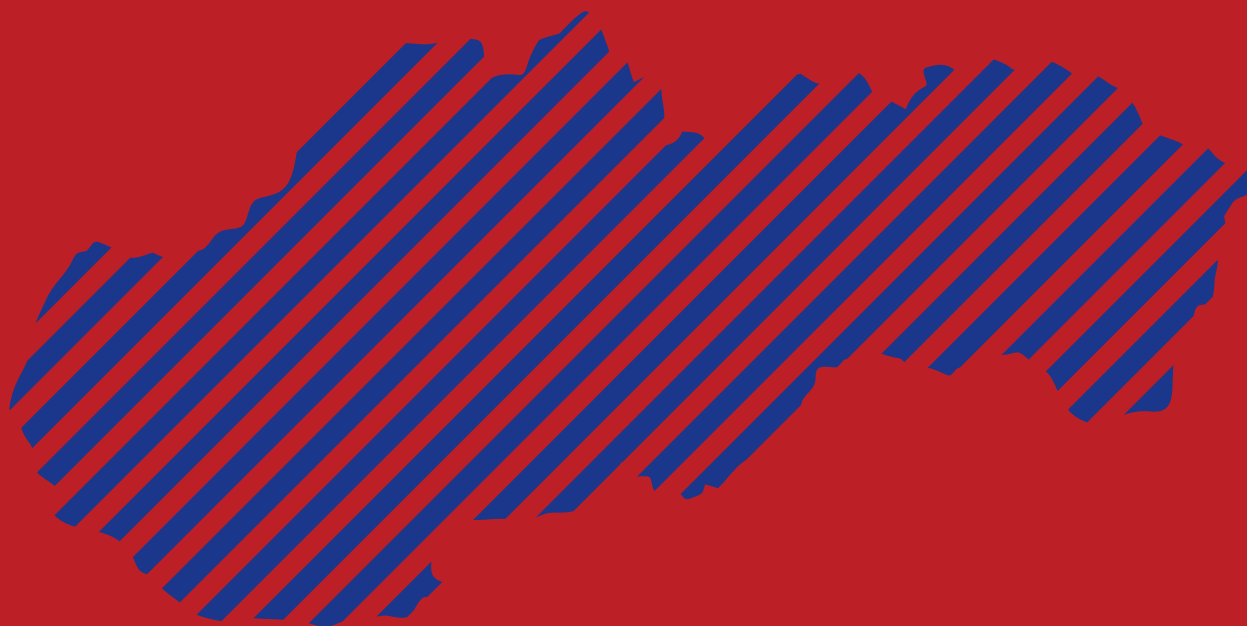


ASSESSMENT OF OPEN EDUCATIONAL RESOURCES (OER) POLICIES IN THE SLOVAK REPUBLIC



*prepared by Piroska Hugyecz
February 2018*

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1. INTRODUCTION

The purpose of this assessment is to provide an overview of the state of open education and Open Educational (OER) Policies in the Slovak Republic to the request of for Centrum Cyfrowe 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 available information and data in English, I have interviewed seven professionals online during October and November 2017.

After providing introduction to Slovakia 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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- **Lucia Bernátová**, Policy Advisor, Office of the Plenipotentiary of the Government of the Slovak Republic for the Development of the Civil Society - Ministry of Interior of the Slovak Republic

2. ABOUT SLOVAKIA

The Slovak Republic lies in Central Eastern Europe bordered by the Czech Republic and Austria to the west, Poland to the north, Ukraine to the east and Hungary to the south. Slovakia is a relatively small country with 49,000 square kilometers (19,000 sqm), mostly mountainous landscapes. The population is around 5 million and consists of Slovaks, Hungarians, Roma, Czechs, Rusyns.¹ The capital is Bratislava in the western part of the country, very close to Vienna, Austria. and largest city is Bratislava. The official language is Slovak, but there are minority languages, e.g. Hungarian in the southern regions. Due to the common past of Slovak and Czech history during the existence of Czechoslovakia (1918-1989 with a short period of independence during the Second World War). In 1989 the Velvet Revolution ended Communist rule in Czechoslovakia. Slovakia became an independent state on 1 January 1993 after the peaceful dissolution of Czechoslovakia. Czech (which is close to the Slovak language) is widely spoken, and the economic, social and cultural connections are still very tight between the two countries.

The country has recently produced faster economic growth mostly due to car industry investments. The economic and social division remains, even increased between the richer western and the poorer Eastern regions which has a higher proportion of (mostly poor) Roma habitants.

The country joined the European Union in 2004 and the Eurozone on 1 January, 2009. Slovakia is also a member of the Schengen Area and the Visegrád Four Group, which is a collaboration platform of four Central Eastern European countries: Czech Republic, Hungary, Poland, Slovakia.² Slovakia is a member state of OECD.

¹ https://en.wikipedia.org/wiki/Demographics_of_Slovakia

² <https://www.britannica.com/place/Slovakia/Government-and-society>.

3. EDUCATION SYSTEM IN THE SLOVAK REPUBLIC

The Slovak constitution guarantees free public education at the primary and secondary levels for all citizens. There are also a number of private and church-affiliated schools. Kindergartens are available for children aged 3-6. Slovakia has ten years of compulsory education which starts at the age of six. General secondary schools offer preparation for entering universities and colleges. Vocational secondary schools provide training in technical and administrative fields and the service industries.³

The significant Hungarian minority in Slovakia (8.5% of the population) has been provided with schooling opportunities in primary, secondary, and vocational education. The Hungarian schoolteachers are trained in special classes at universities in Bratislava and Nitra. For the first time, a Hungarian-language university opened in 2004 in Komárno. Other national minorities have right to learn in their languages too (Ukrainian, Rusyn, Romani).

3.1. Primary and secondary education

The primary and secondary school system consists of:

- kindergarten (3-6 years of age)
- primary schools: Level 1 (Junior): 1st-4th grade, and Level 2 (Middle: 5th-9th grade)
- secondary schools include general and vocational education
- higher vocational training includes further general education and advanced specialist vocational training in technical, educational, artistic and other disciplines
- tertiary education: post-secondary courses which provide additional general education and occupational and vocational training to obtain higher professional qualifications.⁴

³<http://www.slovak-republic.org/education/>

⁴https://en.wikipedia.org/wiki/Education_in_Slovakia

Entrance exams are held where the number of applicants exceeds the number of available places before entering secondary education (including 8-year gymnasium).

According to the 2016 EC Report on Education and Training⁵, the quality of teacher profession and their competences need improvements in general, but the lack of qualified teachers is most relevant in the science and IT subjects and in socio-economically disadvantaged schools and in rural areas. The PISA 2012 survey⁶ highlighted teacher training needs in teaching students with special needs and developing ICT skills. (The latter was addressed by programs as discussed later in this paper.) The survey also refers to the lack of teachers in schools.

Statistics shows that the educational performance and outcomes of the pupils are highly dependent on their socioeconomic background (PISA 2012, EC Report on Education and Training 2016). While the national early school-leaving rate remains low compared to other EU countries, it is particularly high in the Eastern regions, especially among the Roma. This shows that one of the burning issues is the need to increase the participation of Roma in the mainstream education and develop the capacity of early childhood education and care.

3.2. Higher education, tertiary education

In Slovakia most universities and colleges are maintained and run by the state. Slovakia follows the Bologna system in higher education. There are 20 public, 12 private and 3 state universities and colleges.⁷ The largest is Comenius University in Bratislava, founded in 1919. The other significant universities are the Slovak University of Technology, the University of Economics, and Arts Academies. Košice, the center of the Eastern part of the country also has a few universities and a School of Veterinary Medicine. Since independence new colleges and universities have opened all over the country in Trnava, Banská Bystrica, Nitra, Prešov, Zvolen, and Trenčín. There is a Roman Catholic university in Ružomberok.

⁵ https://ec.europa.eu/education/sites/education/files/monitor2016-sk_en.pdf

⁶ <https://www.oecd.org/pisa/keyfindings/pisa-2012-results-overview.pdf>

⁷ <https://www.portalvs.sk/sk/informacie-o-vysokych-skolach>

For PhDs, there has been significant growth since 2000 as the Economist states: “Between 1998 and 2006 the number of doctorates handed out in all OECD countries grew by 40%, compared with 22% for America. PhD production sped up most dramatically in Mexico, Portugal, Italy and Slovakia.”⁸

According to the 2016 EC Report on Education and Training⁹, the higher education sector needs a wide reform covering accreditation, funding, cooperation with employers and diversifying the social composition of the student population. Interesting phenomenon that I learned during the interviews that many students prefer to continue their higher education studies in the Czech Republic. This tendency might contribute to the slow development of the higher education system in the country which several interviewees mentioned.

Attendance rate in tertiary education in Slovakia is similar to other CEE countries which close to the average level in OECD countries¹⁰, overall, the economy would need more of this type of education according to the teachers I spoke.

3.3. Governance and financing

While the education system is relatively decentralized, the central evaluation framework is being strengthened with the adoption of new national tests at different educational levels.

All state-run educational institutions have suffered from a lack of funding since the fall of communism, the early 1990s. Plans for introducing school fees for higher education have been often on the agenda, and now tuition fees are charged for some of the studies¹¹ e.g. external (distance) studies, regular (“full time”) study e.g. if you exceed the regular length of study, or study for two degrees at once, or study a program in English (instead of Slovak) language.

⁸ <http://www.economist.com/node/17723223>

⁹ https://ec.europa.eu/education/sites/education/files/monitor2016-sk_en.pdf

¹⁰ https://en.wikipedia.org/wiki/List_of_countries_by_tertiary_education_attainment,
http://ec.europa.eu/eurostat/statistics-explained/index.php/Tertiary_education_statistics

¹¹ <https://www.portalvs.sk/en/poplatky>

3.4. Evaluation

The Slovak education system faces problems due to the lack of modernizing the curriculum, of the teacher training and the educational resources which is affected negatively by the huge regional inequalities in access to quality education. In general education, there is a need for more qualified teachers (mostly in ICT, IT, sciences and in the education of children with special needs), development of good-quality new textbooks and digital educational materials. The tertiary education opportunities should be strengthened as it is underused while badly needed for the economy. The higher education sector needs a significant reform in accreditation, funding, and, in general, should adapt better to the market needs. Another issue to be solved is to diversify the social composition of the student population including more minorities and special needs children.¹² In 2016, Slovakia (similarly to Hungary and the Czech Republic) has been called upon by the European Commission to end segregation and lessen the drop-out rate of the Roma children in education.

In brief, the Slovak education system is in need for a new strategy as suggested by the EC Education and Training report in 2016. The Slovak governments usually prepare strategies as needed but they often go slow and inefficiently due to administrative and professional barriers in national policy and decision-making mostly due to the frequently changing of Ministers of Education.¹³

4. KEY ACTORS

4.1. The Office of Plenipotentiary of the Government

The Office of Plenipotentiary to the Government which is administratively supervised by the Ministry of Interior is assigned to draft the policies related to the participation of Slovakia in the Open Government Partnership where, at the time of the writing of this assessment, Ms. Iveta

¹² https://ec.europa.eu/education/sites/education/files/monitor2016-sk_en.pdf

¹³ Slovakia had 8 Ministers of Education in the last 10 years.

https://sk.wikipedia.org/wiki/Zoznam_ministrov_%C5%A1kolstva,_vedy,_v%C3%BDskumu_a_%C5%A1portu_Slove nskej_republiky

Fercikova supervised the field and Skarlet Ondrejčakova was and continued to be responsible for managing the open education field of work directly as main officer together with Lucie Bernatova, Policy Officer. They have been committed, understand and promote the importance of the Open Education Commitment of the OGP Action Plans and consider it as part of the education development in Slovakia. The local Creative Commons group has been in direct contact with the Office for years on a continuous basis. Iveta Ferčíková, Skarlet Ondrejčáková, Zuzana Adamová, Ján Gondol' have been members of the Working Group which advised on the drafting of the Open Education Commitment for the 2017-19 Action Plan of OGP Slovakia.

4.2. The Ministry of Education

The Ministry of Education, Science, Research and Sport of the Slovak Republic (MoE) has launched several digital education projects, but these have not produced publicly available educational resources. The projects have not included references to public and open licenses until recently. The MoE is responsible for procuring the textbooks for general education which are produced by private publishers. The procurement process of the textbooks raised transparency questions, and as a result, the second OGP Action Plan included a commitment to clarify the process. MoE is responsible for the implementation of the Open Education Commitment in the Open Government Partnership Action Plans. While local OER advocates and even the Office of Plenipotentiary have worried about the level of commitment, interest and the potential of the MoE to implement the Open Education Commitment in a consistent and efficient way due to often changing ministers, officials, the MoE remains to be the key implementer of open education policies, so it seems important to maintain continuous advocacy and contact with the relevant MoE officials which can help to keep the topic on the agenda and reinforces implementation as much as possible.

4.3. Coalition building over OER

In Slovakia, we cannot talk about a formally organized group, alliance or coalition which promotes OER and open education, rather there is a loose group of like-minded individuals and a few organizations that are engaged in the promotion of policies and implementation. It was the Creative Commons Slovakia that embraced the open education and OER policy advocacy in

Slovakia for the first time in 2015¹⁴. They have built close partnership with Wikimedia Slovakia, but experienced difficulties to settle strong engagement of other civil society organizations or educational institutions in the grassroots coalition building. However, they managed to identify and establish contact with those most interested and knowledgeable in digital and open education and now there is a well-defined group of individuals committed to open education. They have built strong connection with the well-organized Czech OER Coalition to which they often reached out for advice and information and exchanged ideas.¹⁵

4.4. Creative Commons Slovakia, Law Faculty of Trnava University

In Slovakia, it is the Creative Commons Slovakia hosted by the Faculty of Law at the University of Trnava that has coordinated the awareness raising and partnership building on open education and OER in a more organized way in 2015-16.

Before 2015, the focus of the CC Slovakia team had been the adoption and translation of CC licenses and awareness raising activities mostly as a response to the need for open licenses in the creative and cultural sector. CC also worked on the official translation of the CC 4.0 including CC0 to Slovak language which also helped the cultural and heritage institutions and the creative industry (galleries, libraries, archives, museums, musicians and all members of creative industry).

The six-member team of CC Slovakia is led by Zuzana Adamová, University Professor at the University of Trnava and Richard Bednárík, Director of the Department of Informatization at the National Centre of Culture and Further Education. The team includes seven people including legal, PR, communication and fundraising experts, thus representing a mix of different experiences of legal, cultural, free culture, educational nature.

Their dedicated OER and open education activities started in early 2015 by identifying the potentials and benefits of the use of OER in Slovakia. They prepared an outline of an educational program and an information brochure for teachers on OER and open education. Throughout 2016,

¹⁴ The project was supported by the Open Society Foundations' Education Support Program (OSF-ESP)

¹⁵ The similarities of their language and long common history between the two countries provides a good basis for close cooperation.

they hold a dozen of local workshops to inform teachers in primary and secondary education on copyright issues including open licenses which was well-received by many progressive teachers.¹⁶ This activity continues but has become limited due to the lack of funding in 2017.

As part of their awareness raising, they launched the first comprehensive OER website in Slovakia¹⁷ by providing comprehensive information on OER and open education. They organized informal but regular meetings (called Open Cafés) with advocates and policy-makers throughout 2015-16. As Ján Gondol puts it, these were very useful brainstorming events for the advocates where they could exchange ideas and also maintain important contacts with each other. This activity stopped to be organized on a regular basis due to the lack of funding in 2017, but the advocates keep on meeting with each other on an ad hoc basis and online.

The members of CC Slovakia, especially Zuzana Adamová and Richard Bednárík participated actively in the preparation of Slovakia's OGP National Action Plans for 2015-16 and 2017-2019. During the creation of the 2015-2016 Action Plan, one of the current advocates, Ján Gondol, served as a Consultant to the Ministry of Interior that oversees the work of the Office of the Plenipotentiary which is the authority responsible for Slovakia's participation in the OGP process. He directly contributed to the wording of the Commitment on Open Education. Though his contract had ended in 2015, he and CC Slovakia team managed to stay in touch directly with the Office of the Plenipotentiary - despite the switching officials. Zuzana Adamová, Richard Bednárík, Ján Gondol participated on the Working Group on the Open Education Commitment of the 2017-19 OGP Action Plan.

4.5. The Society for Open Information Technologies (SOIT)

The open source and technology community is very active in Slovakia: this is one of the most organized groups of committed advocates of openness. The Society for Open Information Technology (SOIT) is an association of volunteers who support the use of open technologies in different areas of life. They have been contributing to awareness raising of open technology for

¹⁶ <http://www.otvorenevzdelavanie.sk/v1/aktuality/>

¹⁷ <http://www.otvorenevzdelavanie.sk>

many years as individuals or groups. SOIT brings together not only IT professionals but also regular users or potential users of open source software and open content.

4.6. The Centre of Scientific and Technical Information (CVTI)¹⁸

CVTI is a subsidiary public organization to the Ministry of Education, Science, Research and Sport of the Slovak Republic. The institution was established in 1938 to serve as the technical library of Slovakia as newly independent state then. It has always been among the pioneers of new library, information and research services. CVTI provides access to electronic information resources: database collections of technical and scientific literature for the Slovak R&D sector through an extensive network of academic and scientific libraries in Slovakia. It is also responsible for coordinating interdisciplinary RD activities, including EU's HORIZON 2020 projects such as Open Air or SCOAP3¹⁹ and recently the national IT Akademia project (see later). It is also responsible for the processing and provision of comprehensive information for education (primary, secondary and higher education) such as on financing, evaluation. It does not engage in the development of educational resources or textbooks for general or higher education apart from the relevant project outputs, though.

In October 2017 the SCSTI created a Working Group for Open Access to advise on the implementation of the Open Access Commitment. Zuzana Adamová from CC Slovakia is a member of this Working Group.²⁰

4.7. Individual teachers

Martin Sechný

Is an IT professional and trainer, occasional teacher, member of The Society for Open Information Technologies (SOIT). He wrote several educational materials for IT instruction. He has been teaching pupils and teachers on IT and writing several educational materials for IT instruction. He is an advocate of free software. He participated in several projects on the development of IT skills

¹⁸ http://www.cvtisr.sk/en.html?page_id=58

¹⁹ <https://scoap3.org/>

²⁰ Find list of members: <http://openaccess.cvtisr.sk/o-nas/kontaktna-kancelaria-pre-open-access-cvti-sr/>

development of teachers such as the recent *IT Akademia* in which he participated on behalf of the UPJS University of Kosice. He has been advocating for including CC licenses for the upcoming educational materials created within this program and display them at least in a .pdf format online, but he received no confirmation about that. He found this such large EU-funded project too bureaucratic, inefficient, so there are doubts whether the open licensing remains on the agenda for this current project. He created new resources for high school teachers of Informatics which included information on public license and open technologies.

Roman Baranovič

Is currently a school principal of an elementary school specialized in IT in Bratislava. Around 2012 he was working for the Ministry of Education which as he says had ambitious plans to develop and digitize education, including the development of digital textbooks. In this project, Roman has been advocating for the introduction of open textbooks which seemed to get the support of the ministry, but it came to a halt with the upcoming change of government resulted in the halt of the project. The outcome of the project was the online publishing of the textbooks in simple .pdf format in the E-Aktovka²¹ online repository, but these textbooks are regarded now outdated and not good quality. Roman has a very clear understanding of what an open textbook is as he developed a strategy for their introduction earlier without labelling them open textbooks as such. He is interested in the promotion of the open textbooks in his work.

4.8. Evaluation

As Ján Gondol, Zuzana Adamová mentioned that while there is a varying degree of consistency and depth of the commitment from the side of MoE regarding open education which makes the implementation harder, they expect the Office of Plenipotentiary to remain a key and committed partner in policy-making.

The number of individual activists and supporting organizations did not increase in the last three years, there is no sign for natural growth of the coalition. The advocates do not work in a formal or

²¹ <http://www.eAktovka.sk>

informal coalition, but they act like a common communication platform, a voice which brings the topic of open education in the public sphere. This form of policy advocacy has been enough so far due to the close engagement of OER advocates in high-level advocacy in the OGP process and Ministry of Education.

The SCSTI, the National Information Center for Science, Technology, Innovation and Education is a key player in digital, information, library and education services. As a MoE affiliate, responsible for European open science and access projects, their engagement could be beneficial in these fields and could play an important role in promoting open education in higher education and research circles.

There is a scarce number of educators who have been aware and familiar with public or open licenses. The two knowledgeable teachers we identified (Martin Šechný, Roman Baranovič) are teachers of IT who advocated for the application on open information technologies and public licenses in their work, but they found disinterest and ignorance both on the levels of education policy-makers and the teachers. They find the developments through OGP promising, though, and expresses interest to support the OER advocacy and implementation work as much as they can.

5. POLICY CONTEXT

5.1. Intellectual Property Rights (IPR) in Slovakia

5.1.1. Copyright Act

As Zuzana Adamová from the CC Slovakia puts it, the ideas of free culture and freely licensed content was not an unfamiliar concept in Slovakia, especially in the creative sector. Educational, cultural and heritage institutions needed a simple-to-use framework for legal use of open, freely licensed and public domain content. The possibility of applying CC licenses in the Slovak Republic was a long-awaited answer to this need.

The widespread use of CC licenses was hindered, though, due to the fact that the licensing agreement had to be recorded in written format and the parties to the contract had to be “identifiable” subjects. This approach followed the general Civil Law regulation which says that the

contract is concluded when the proposal for signing the contract meets the approval of the other party. This legal contradiction was resolved by the 2013 amendment of the previous Copyright Act, which now allows the license agreements to be concluded both in oral and written format, and it introduced the possibility of using public licenses in general.

The previous Slovak Copyright Act contained Article 28, which recognized free and fair use of works for educational purposes, but this was only allowed in the premises of the school (the scope of this exception was limited to “educational purposes at school”). This was limited to the school buildings and excluded not only the pupils' homes or private companies, but also the schools' own dormitories as well as its other properties.

In 2016, the new Copyright Act²² came out. The local CC group participated in the relevant working group, but the act finally did not bring about any significant changes. On the positive side, it strengthened the scope of some exceptions and limitations. Regarding the educational exception, there is new Article 44 in the Slovak Copyright Act²³ which broadens the scope of the original exception, which now allows using the work for educational purposes and research. The exception does not contain the space limitation. However, you can use the work for illustration purposes during education or research only.

The scope of the Copyright Act actually just follows the relevant European Directives; there are no any significant local judicial decisions around it.

5.1.2. Textbook production

Currently in Slovakia, the textbook production for the elementary and secondary schools is fully financed by the state and the textbooks are provided by private publishers. One commitment in the 2015-16 Open Government Partnership National Action Plan (OGP-NAP) included the need for mapping the textbook procurement system which later showed that the process of the procurement is not transparent enough e.g. the contracts made between the MoE and the publishers do not include a detailed list of cost items, just a lump sum for all the costs. This allowed

²² <http://www.culture.gov.sk/legislation-1ce.html>

²³ <http://www.zakonypreludi.sk/zz/2015-185>,
<https://www.slov-lex.sk/pravne-predpisy/SK/ZZ/2015/185/20160701>

the publishers basically to enter just one figure in a contract, so the costs of licensing, printing, dissemination etc. were obscure. This showed a lack of transparency in these contracts, and uncontrollable tracking of the really occurring expenses.

In general, there is a lack of enough good-quality educational materials, textbooks, as well as of digital educational resources in Slovakia. The use of the available digital resources is seriously restricted by the copyright system which strongly protects the publishers' rights. According to several interviewees, the main problem is that educational resources are often obsolete and outdated as updating the content needs the authorization of the publisher which is a slow, inflexible and costly system.

5.1.3. Evaluation

The copyright system in Slovakia strongly protects the author's copyright. the educational exception. The latest changes in the Slovak Copyright Act²⁴ in 2016 which broadens the scope of the original exception, which now allows using the work for educational purposes and research and there is no space limitation for the school buildings, but the content can be used only for illustration purposes during education or research and this is still far from a free and open content sharing for educational purposes.

The Slovak Copyright Act mainly follows the European Copyright Directives, so any development here are expected only when changes happen in the European copyright legislation.

The private publishers who produce the textbooks for education protect their rights and lobby at the MoE level to hinder the introduction of public, open licences both on former and upcoming textbooks and educational materials. According to a general opinion of the interviewees, the quality of many textbooks produced by the private publishers are not good, cannot be smoothly and cost effectively updated in time and this can strengthen the interest of the stakeholders in introducing new and open textbooks and educational materials in Slovakia.

²⁴<http://www.zakonypreludi.sk/zz/2015-185>,
<https://www.slov-lex.sk/pravne-predpisy/SK/ZZ/2015/185/20160701>

5.2. National Digital Policies, Strategies and Programs

5.2.1. Digital literacy in Slovakia

The demand for online services and activities are quite high in Slovakia, however, there are still connectivity problems. The main challenge for the Slovak Digital Economy according to the DESI 2015 survey²⁵ was the inadequate coverage by fixed broadband networks, as 15% of Slovakian households were still not covered by fixed broadband in 2014. The failure in providing the necessary connection was due to the inefficient absorption of resources from the Operational Program Information Society in the previous programming period (2007-2014). The coverage has improved in the last few years, but there are still badly covered areas.

5.2.2. National Digital Programs

A few digital programs have been introduced in the recent years to remedy this situation. *Infovek - Computers and Internet for Schools Program*²⁶ was the first big step in the provision of IT infrastructure for schools in Slovakia after 1989. Infovek was followed by Interactive Board projects and tablets for schools.²⁷ One non-profit internet connectivity provider is SANET²⁸ which efficiently provides connection for many schools. *Digiskola*²⁹ was another project but it mainly improved administrative and infrastructure services of the schools.

5.2.3. Evaluation

We can identify a strong demand side and weaker supply side in the digital services provision both in private and public sector in Slovakia. Beyond the connectivity problems in some part of the country still, there is a lack of enough digital resources and services in public education - as most of the interviewees pointed out.

In Slovakia, the national digital strategies, similar to many countries, mostly included the development of IT infrastructure and less of the resources, services, including those in education.

²⁵ <https://ec.europa.eu/digital-single-market/en/news/desi-2015-country-profiles>

²⁶ <https://infovek.sk/>

²⁷ <http://www.skolanadotyky.sk>

²⁸ <http://www.sanet.sk/en/index.shtm>

²⁹ <http://www.digiskola.sk/>

5.3. National education policies, strategies and programs

5.3.1. Primary and secondary education

In past, the Slovak governments initiated various programs to develop the IT skills of teachers, as well as develop digital resources, but these were not successfully implemented neither in terms of access or awareness. These projects focused on the development of digital resources in the teaching of IT and ICT rather than other subjects or topics and did not produce open or public resources.

ASIT Digital education projects – developing digital skills in secondary technical schools (2009)

There have been projects to initiate the education of more IT professionals such as Information and Network Technologies (IST) project³⁰ which aimed to produce a new experimental curriculum for secondary technical schools specialized in IT and they transformed it into a new educational program. Martin Šechný who worked in this project as a teacher and an author of textbooks regards this as the best IT curriculum for secondary schools for IT specialization in Slovakia. Up to now, however, only few schools use this curriculum. This project did not apply a proper copyright/license apart from his textbooks which have CC-BY/CC-BY-SA license³¹.

DVUI³²(2009)

This program was part of further education of teachers of general schools who wanted better specialization in IT. This project did not have public license on the created educational resources.

The concept of digital and open textbooks (2012)

In 2011-12, a MoE strategy aimed to improve digitalization in education, including textbooks and educational resources. Roman Baranovič who played a leading role in developing a strategy for the introduction of new and really open textbooks reported that there had been a good chance to

30 <http://www.asitsk.com/index.php?page=IT-sektor>

31 His most popular textbook about GNU/Linux operating system: <http://www.shenk.sk/skola/informatika/operacne-systemy-gnu-linux.pdf>

32 <http://dvui.ccv.upjs.sk/>, <http://www.statpedu.sk/clanky/projekty/projekt-dalsie-vzdelavanie-ucitelov-zakladnych-strednych-skol-v-predmete-informatika/>

advance with the project but it was finally cut by the new government. The outcome of the project was the online publishing of the textbooks³³ in simple pdf format, but these textbooks are regarded now outdated and not good quality.

2015 Action Plan of Digital Education Content Development

The Ministry introduced this action plan which aimed to design a national repository to host not only publishers' content but also teachers' contributions. There was little attention paid to technical and copyright issues. While the repository was created, no real progress was made in content development. So far this has been the largest repository called Planet of Knowledge³⁴ which cost around 10 million EUR, but the resources are not publicly accessible, awareness about it is low, and teachers do not use it. It did not prove to be successful.

2016 National Reform Program

The Slovak Government issued the 2016 National Reform Program which included plans to remedy the main issues in education as a response to the needs mentioned above. Among others, the government manifesto³⁵ plans to improve the supply and choice of textbooks and digital learning products, but it did not mention open or publicly licensed resources.

IT Akademia- Education for the 21st Century (2016-2020)

The national EU-funded "IT Akademia" project aims to make innovative educational resources for school subjects. The project is coordinated by CVTI (Center for Scientific and Technical Information of the Slovak Republic). Now they do not consider applying public, open licenses or settle the copyright issues for easier access and reuse.

33 <http://www.eKatovka.sk>

34 <http://planetavedomosti.iedu.sk/>

35 https://web.archive.org/web/20170912095633/http://www.vlada.gov.sk/data/files/6483_programove-vyhlasenie-vlady-slovenskej-republiky.pdf

Learning Slovakia – Strategy of the MoE (2017)

At the MoE in Slovakia the digital education strategies are managed by the IT directorates as they are regarded as digital rather than educational projects. As a latest development, the Ministry is planning to make the .pdf versions of textbooks available for teachers. While this is a step forward to no having the digital versions of textbooks accessible, this access will not be public, they will be available only to the registered teacher users. The digital access will be expectedly a static .pdf file with no options for edit or reuse.

The program aims to develop an online repository of digital open educational resources. The IT infrastructure of the repository are expected to be developed soon, but there are questions around the future content of the repository. Currently, there is no content available for this database as they are all closed, the textbooks and other educational resources are not publicly or openly accessible. The MoE also plans to conduct a new study for writing up a strategy for opening up education data. This platform would host both open and non-open data as part of a data consolidation process.

The “Learning Slovakia” (Uč iace sa Slovensko) strategy includes references to the development of OER Resources, they are the adoptions of the OGP Action Plan’s open education recommendations: 1-12.07 and 1.12-08.³⁶

The recommendations have been put on for public online discussion (I have included links to the comments under the citations.)

1-12.07. The Ministry of Education will improve the conditions for the creation and use of digital content and will stimulate the creation of digital learning materials and resources that will be secured with free distribution licenses. The Ministry shall establish and operate a central repository of such digital educational content and will give schools free access to it. Public comments: <http://uciacesaslovensko.minedu.sk/kategoria/105>

³⁶ https://www.minedu.sk/data/files/6987_uciace_sa_slovensko.pdf

1-12.08 Ensure that all textbooks and teaching texts exclusively devoted to the state have exclusively free distribution license. The Ministry of Education will create legal and financial conditions for making all textbooks and instructional texts paid from public sources were licensed for free distribution (free license) and were therefore public available. Public comments: <http://uciacesaslovensko.minedu.sk/kategoria/106>

5.3.2. Higher education

In addition to ensuring the publication of educational resources under public license in primary and secondary education, it would be also necessary to address the issue at the level of university education. In Slovakian higher education, there is practically very little awareness on OERs apart from the participants of open access and open science projects. As CC Slovakia unit is located in the University of Trnava, students there are more aware of the open licenses. CC Slovakia thinks it is important to focus its efforts on working with the institutions of higher education and libraries more. CC Slovakia plan to investigate ways of creating frameworks for publishing OERs. The 2017-19 OPG AP includes a commitment on launching a pilot program, a new model for publishing university textbooks, teaching and educational materials that would apply Creative Commons Attribution (CC BY) public license.

5.3.3. Evaluation

National education policies in Slovakia have not mentioned public or open licenses or open education until recently in the “Learning Slovakia” national educational program of the MoE. The national digital education projects focused mostly on developing educational digital resources (discussed more in the section on national repositories) with no consideration of using open, public licenses or information about copyright. The resources have been of closed nature resulting from the applicable restrictive copyright of the authors, and also the content of these projects have not been of high quality so far, either. Teachers share their educational resources with students without proper licensing and there are very few exceptions like Martin Sechny who are aware and use public license.

In higher education, there is no much sign of awareness in OERs. As a promising first step, CC Slovakia has successfully advocated for the inclusion of a higher education commitment in the OGP Action Plan 2017-19 for launching a pilot OER project.

5.4. Open Data Policies, Strategies and Programs

5.4.1. Open Education Commitment in the Action Plans of OGP Slovakia

The Slovak Republic began participating in OGP in September 2011.³⁷ The Office of the Plenipotentiary of the Government of the Slovak Republic has been coordinating the OGP work since the beginning. The consultations around the OGP commitment have always been accompanied by public and professional consultations. The civil society kept on stressing the need for more government accountability and openness in key policies. The fact that OGP related responsibilities have been clearly assigned to this office ensures continuity and stability at least in the policy making level.

Slovakia has included open education commitments in two Action Plans: 2015-16 and 2017-19. These are the most outstanding and concrete policy statements in Slovakia about open education and OER. For open education commitment, the policy-making level is assigned to the Office of Plenipotentiary of the Government under the Ministry of Interior plays the role of the policy maker and most of the expected implementation belongs to the MoE. MoE's role is regarded as crucial both by the OER advocates and the Office of the Plenipotentiary staff. One of the top recommendations of the current Action Plan calls for:

The Ministry of Education should assume ownership of the open education agenda. It could assign a unit to be responsible for all open education and research related tasks and evaluate its performance regularly.

5.4.2. The 2015-16 OGP Action Plan

In the 2015 OGP Action Plan, the main commitments and their progress³⁸ were the followings:

- Map, identify repositories managed by the MOE or its affiliated organizations and their applicability to become a repository of open educational resources. The MoE has completed this task and concluded that 1) none of the repositories of textbooks or educational resources are ready for hosting open educational resources 2) there is a need to develop a new central OER repository.

³⁷ <https://www.opengovpartnership.org/countries/slovak-republic>

³⁸ The official evaluation of OGP AP can be found here in Slovak:

https://www.minv.sk/swift_data/source/rozvoj_obcianskej_spolocnosti/rada_vlady_pre_mno/rokovania/2016/11_r okovanie/RV-MNO_Hodnotiaca-sprava-AP-OGP-2015_2016-03-17.pdf

- Analyze the process of procurement of educational resources, textbooks in primary and secondary education and design a new process to insert the open license requirement in the process, and launch a pilot project for procuring two open textbooks. After investigating the procurement process, a few changes were made for bigger transparency, but the procurement call did not include the public or open license requirement.
- Raise awareness of teachers and other teaching staff about open learning resources, find a mechanism to motivate the creation of open educational resources by teachers, other pedagogical staff and professional staff in primary and secondary education, as well as engagement of pupils and students. The MoE identified the program of further education as the most appropriate level for this and entrusted the Methodological Pedagogical Center³⁹ with its implementation.
- Participate in international events.

5.4.3. The 2017-19 OGP Action Plan

The latest Action Plan aims to build on the findings of the previous Action Plans. These list the commitments and their progress:

- Establish and operate a repository of educational resources maintained by the MoE suitable for the storage, long-term archiving and access to educational resources. The most challenging task here is the provision and production of enough good/quality open educational content for the repository. For already existing textbooks and educational materials (published after 2008), the MoE is expected to agree with the publishers of educational resources about making their resources publicly or openly available for the repository. This will be challenging as during the negotiations between the MOE and the publishers it has become clear that the private publishers of textbooks and educational resources strongly oppose the introduction of the public or open licenses on both the older and upcoming textbooks. There is a risk that the MoE is not able to obtain the copyright of textbooks or force the publishers to apply public or open licenses. The way out would be to develop new educational resources - not necessarily textbooks.

³⁹ <http://www.noveskolstvo.sk/article.php?551>

- Further on, the contracts for the creation of publicly funded educational resources will include a condition for the use of publicly licensed Creative Commons by CC BY. Here there is halt due to the opposition of the private publishers. For other resources, it would be important to raise awareness of the authors, creators of projects to use public or open licenses.
- Translation and adaption of foreign language educational resources (mainly videos and short films). As an intermediary solution for providing new educational resources, the adoption and translation of already existing resources by the MoE could solve the problem temporarily.
- Launch a pilot project for creating academic textbooks, a script, and scientific journals of universities under the MoE. According to OER advocates, the first step in this area could be to change the current license conditions in order to make the theses, dissertations and their reviews available under CC BY license.
- Submit a legislative proposal to the Cabinet to introduce specific rules for open publishing and the obligation to provide free access to selected types of publications financed from public sources. Creative Commons advocates think this will be a difficult task due to the general unawareness, and publishers' interest.

The Working Group of Open Education that developed the Open Education commitment of the latest action Plan included OER advocates from CC Slovakia, Ján Gondoľ, Martin Šechný. Their participation ensured that the commitment reflects a clear understanding of open education and open educational resources.

5.4.2. New Strategy for Open Data (2017)

The MoE started a new strategy in September 2017 with the aim to promote the use and study of education related data by making them open. This could contribute to the planned education data consolidation that is much needed.

5.4.3. Evaluation

The Open Education Commitments of the OGP Action Plans are the most outstanding and precise official policy statements in Slovakia about open education and OER. In short, the recent AP aims

to include the use of public license CC-BY for all new educational resources, change license for older educational resources, create new repository for open educational resources, and create a new repository for open access for research and science⁴⁰. The plans are ambitious and enjoys the support of the Office of Plenipotentiary, but there are questions around the commitment, the capacity and the strength of the MoE in the implementation. There is a need for a change of mindset in MoE for more understanding and commitment to the issue in which the work of the Office of Plenipotentiary and the consistent advocacy work of OER advocates.

The best progress of OGP initiative is now in the field of open data⁴¹ and central register of contracts with public sector⁴². In the former case, the latest initiative of the MoE to open up education related data may be a step forward.

5.5. Other open movements and projects

5.5.1. Open Source Technology

The communities of open source technologies have existed in Slovakia for many years with promoting the idea of sharing and producing open educational content for programming (e.g. Slovak Python/SPy, The Society for Open Information Technologies, and Slovensko.Digital).

The Society for Open Information Technologies (SOIT)

There is a well-organized group of volunteers, the Society for Open Information Technology (SOIT)⁴³ which is an association of people who promote the use of open technologies and have been raising awareness for many years. The association includes not only IT professionals but also regular or potential users of open source software and open content. SOIT is also engaged in open licensing, and member of the CC Slovakia. Martin Sechny is also a member of SOIT.

SPy/Slovak Python

⁴⁰ http://www.minv.sk/?ros_ovz.

⁴¹ <https://data.gov.sk/en/>

⁴² <https://www.crz.gov.sk/index.php?ID=114372>

⁴³ <http://www.soit.sk/sk/in-english/who-we-are>

The Slovak Python (SPy) association was founded in 2015 and organized two PyCon (Python programming language) conferences, in 2016 and 2017. Its bylaws explicitly mention open education and it uses public licenses as a default for its publication outputs. In 2017, PyConSK conference included an education track to promote programming in the Python programming language, which in itself is open source. Ján Gondol is one of the founding members.

Slovensko.Digital

This civic association is probably the most visible in media, both in the IT sector and the mainstream. It strives for more efficient IT in the public sector and it is a strong proponent of open data, open APIs, open content and open source software.

Corporate initiatives

Microsoft supports education through its MSDNA license program where they provide free or inexpensive licenses of MS Windows, MS Office and other MS software for students and teachers. Microsoft's engagement is finally costly, though, for the public sector (including education) which pays millions of USD each year for their licenses. According to open technology advocates, this public policy is problematic, ineffective, expensive and not transparent. In general, Slovak teachers are mostly unaware and uninterested.

5.5.2. Open Culture

Wikimedia is one of the major players in the promotion of open culture in Slovakia. The Slovak branch of Wikimedia is a citizen association called Wikimedia Slovak Republic which was established in late 2011 and has carried out several successful projects such as organizing contests for article submissions or producing own articles. Its volunteers build partnerships with galleries, libraries, museums and other organizations and promote to make their collections available. E.g. In cooperation with Wikimedia, the Slovak National Gallery⁴⁴ has worked on creating a collection of thousands of valuable free works. Other organizations of the Wikimedia movement focus on

⁴⁴ <https://www.sng.sk/en>

particular subjects such as Esperanto and Slobodná vedomost group which gathers editors using the international language Esperanto, including Slovakia.

The Creative Commons Slovakia group, especially Richard Bednárík, the Director of the Department of Informatization at the National Centre of Culture and Further Education, has been active in cooperating with cultural and heritage institutions (galleries, libraries, archives, museums) for many years in promoting the use of public and CC licenses. They also helped these organizations in the adoption and enforcement of licenses, organized, co-organized and participated in public events where they explained the use of CC licenses. CC Slovakia also focuses on computer games and gaming culture through hackers' communities. CC has worked on the official translation of the CC 4.0 including CC0 to Slovak language to be suitable for the cultural and heritage institutions and the creative industry (galleries, libraries, archives, museums, musicians and all members of creative industry).

The Ministry of Culture also has plans to make those cultural objects accessible that are already legally available in digital format. E.g. All the books that appeared in Slovak and legally "clean" have been digitized and will be made accessible for the public for a monthly subscription at a low cost. While this is promising direction, it is expected by OER advocates that that this will apply mostly to those products where their legal use is already less problematic (they expired, or less popular or important) rather than opening up those that are the important but legally not accessible.

5.5.3. Open Science

As for Open Science, Slovakia takes part in the relevant European Horizon 2020 projects such as the OpenAire EU Horizon 2020+project or SCOAP3⁴⁵. These projects connect the knowledge and networks of researchers and libraries within the EU. The main coordinator of these projects is the Centre of Scientific and Technical Information (CVTI) under the MoE.

⁴⁵ <https://scoap3.org/>

5.5.4. Open Access

In October 2016, CVTI created a Working Group for Open Access where Zuzana Adamová the member of CC Slovakia was invited to participate.⁴⁶ As a result of a commitment in the 2017-2019 Action Plan of the OGP Partnership, CVTI set up an Open Access Contact Office⁴⁷ in October 2017 as part of their Specialized Scientific Library on its premises. The role of office is to coordinate open access and open science work in Slovakia at national level, organize collaborations and professional trainings for librarians and researchers at universities and research institutes for more awareness raising and also to establish a repository for open publications.

5.5.5. Evaluation

In Slovakia, it is the open source and technology community that is the most organized among the movements of openness. They have been consistently promoting the idea of sharing and have produced content, but mostly in IT and ICT fields. The open culture movement is concentrated at Wikipedia and Creative Commons which have achieved a few results such as the inclusion of the concept of CC licenses in the copyright law educational exceptions. The Open Access and Science work is mostly operated through the European projects by the central government office, CVTI where the local CC is represented, too.

6. POLICY IMPLEMENTATION

6.1. E-learning

According to the teachers I spoke, e-learning in Slovakia is happening on a personal level mostly and are mostly used in the more progressive schools. E-learning in Slovakia is mostly offered through Moodle CMS, but very few courses are open.

While digital resources are available, primary schools do not often use e-learning because teachers oppose e-learning of young children. The teachers use interactive-board presentations instead.

⁴⁶ Find list of members: <http://openaccess.cvtisr.sk/o-nas/kontaktna-kancelaria-pre-open-access-cvti-sr/>

Secondary and high schools use e-learning as school platform for supplementary educational resources because there is a long-term lack of printed textbooks in Slovakia. Such Moodle courses are typically only lists of HTML links and PDF/DOC files without interactivity. Some teachers prefer to use cloud web services instead, such as Google Docs, MS OneDrive, Dropbox. Universities use e-learning more intensively. Some courses contain quite static information such as lists of the literature, while others are more sophisticated.

Companies use e-learning as platform for self-study and self-examination in corporate rules and policy, e.g. security, fire alerts, health service, organization structure, operation manuals.

6.2. National repositories

6.2.1. Digital repositories

The Ministry of Education, Science, Research and Sports has implemented a few projects which produced digital content for education: eAktovka, Planet of Knowledge, DVUI, ITAkademia.- These resources are not open and do not qualify as OER.

E-Aktovka includes technically old and content wise outdated digital textbooks that are accessible through portal but their free legal use is still hindered by the copyright of the publishers. The use of these resources in the educational process, or their simple dissemination between teachers, pupils and students, or the ways for updating are not legally safe and technically smooth process. This project was supposed to produce open textbook in the next phase but a change in the government stopped it.

SIOV⁴⁸ the state institute for vocational training have produced educational resources but most of them are not open or in obsolete formats. SIOV has restrictive copyright/license policy and the quality of the materials are not good.

IST⁴⁹ was a project to produce a new experimental curriculum for secondary technical schools specialized in IT and they transformed it into to a new educational program. Martin Šechný regards

⁴⁸ <http://www9.siov.sk/projekty-zzf/24501s>

⁴⁹ <http://www.asitsk.com/index.php?page=IT-sektor>

this as the best IT curriculum for secondary schools for IT specialization in Slovakia, but up to now, only few schools have used this curriculum. The IST project did not apply a proper copyright or license apart from his textbooks which were written for this project have CC-BY/CC-BY-SA license.

The Planet of Knowledge⁵⁰ is a recently created big portal which provides access to more than 30,000 educational materials from mathematics, physics, chemistry, biology and natural sciences. However, the rights of these resources remain with the commercial publishers, so students are not able to download, disseminate, or re-use freely or legally. The information system vendor cannot be changed, either. The MOE has no right to freely use the educational resources it paid for as the publishers retained the copyright and did not provide licenses for the Ministry for further free dissemination or reuse. The Planet of Knowledge has been criticized widely for being expensive, technically problematic, and publicly not accessible. While it has been technically improved lately, and some of the educational content was opened, most resources remained legally closed.

DVUI⁵¹ is a national program for the further training of teachers of Informatics in primary and secondary schools. In the framework of this program, there was a good chance to start using open or public licenses for educational materials, but it did not happen.

"IT Academia - the education for the 21st century"⁵² is a new national project running until 2020 in Slovakia. The project aims to reform the school subjects. The new educational resources are just being created now, but apparently, copyright issues are not considered. Martin Šechný suggested some new themes about open information technologies, open data and use of public license for all new educational resources as a product of the project.

The three most popular repositories are (two have been discussed above):

www.eAktovka.sk – portal where school textbooks are available in static PDF format

www.zborovna.sk – a platform for teachers to share their work

⁵⁰ <http://planetavedomosti.iedu.sk/>

⁵¹ <http://dvui.ccv.upjs.sk/>, <http://www.statpedu.sk/clanky/projekty/projekt-dalsie-vzdelavanie-ucitelov-zakladnych-strednych-skol-v-predmete-informatika/>

⁵² <http://itakademia.sk>

<https://planetavedomosti.iedu.sk> – the official portal for educational content maintained by MoE

The latest repositories are the

- <https://anglictina.iedu.sk/> which is a new project of MoE with resources for teaching English
- www.lepsiageografia.sk is a project of an individual teacher with resources designed mostly for geography teachers.

There is a commercial online repository maintained by a private publisher: <https://www.datakabinet.sk/sk/Vzdelavacie-materialy.html>

6.2.2. Creation of a national central OER repository

In 2016, as part of the preparations for the next Action Plans of OGP Slovakia, the Ministry of Education (MoE) mapped the existing repositories and examined the content produced by its directly managed organizations, and the assessment showed that currently there is no repository at the moment in such a shape that would fit to become a central and open database of open educational resources. As Ján Gondol informed us in October 2017. There is a decision already 1) to extend the existing repository, the Planet of Knowledge, with the necessary features to be able to host open educational resources and 2) fill it up with new digital OER content by mid-2018. It is the IT Directorate that is assigned to lead the national digital repository development as they regard it as an “IT project”.

Due to the long common history of the Czech and the Slovaks, Slovaks see it as an opportunity to use Czech language educational resources which could contribute to ease the lack of certain educational resources in Slovakia.

6.2.3. Evaluation

So far, it seems that none of the national or regional projects or repositories have settled the copyright issues or have applied public or open license for the educational resources. This means that none of the projects' educational resources is truly open for public use. This is officially stated in the OGP Action Plan's latest assessment which encouraged the MoE to start think about appointing one repository to serve as a basis for a national OER database (ref)

As for other resources, only a few small projects of teachers produced OER, but there are no concrete figures available.

As currently there is no technically, professionally and legally appropriate national repository in Slovakia that could become an OER repository, the Slovak government has undertaken the commitment to develop one by redesigning one of the existing repositories. The implementation is currently regarded more as an IT project at the MoE and the question is more about what content will go there for various reasons:

- the current textbooks and educational materials are closed legally and the publishers oppose the transferring the rights to the state, or application of open license
- here is a general lack of printed and digital educational materials
- the creation of new resources needs more coordination of MoE.

The role of MoE seems to be crucial in this process which could be encouraged by consistent advocacy and engagement of OER advocates.

6.3. Teacher training

6.3.1. State of digital skills

The DESI 2015 Index⁵³ does not include any information on the ICT levels of teachers. There are self-assessing projects of digital skills of Slovak teachers and pupils, but these are not representative and available only in Slovak.

The level of digital skills varies in Slovakia according to Martin Šechný who provides IT training in further education. While there is a broader group of teachers having the basic IT skills, the group of teachers having strong digital skills are small. He would find it more important to develop the skills of the IT teachers to a higher level instead of developing the skills of the wider group of teachers who have low digital skills, or at least think over the selection of the target group of these further trainings.

⁵³ <https://ec.europa.eu/digital-single-market/en/news/digital-economy-and-society-index-desi-2017>

6.3.2. ICT skill trainings

The lack of teachers and the quality of their competences and skills have been a major issue in Slovak education – reinforced by the assessments of PISA 2012 and the 2016 EC Report on Education and Training⁵⁴. There is a significant lack of qualified teachers in the science and IT subjects, and in general in the socio-economically disadvantaged schools and those in the rural areas. The latest national policies and programs aimed to address the problems but managed to provide only partial and not too efficient answers.

There has been recently a special focus on developing the competences of ICT and IT teachers in a national program called IT Akademia. The IT Akademia⁵⁵ aimed to develop the competence of teachers in teaching IT by providing trainings and produce textbooks. The project is implemented through support from the European Social Fund and the European Regional Development Fund under the Human Resources Operational Program and coordinated by the Center for Scientific and Technical Information of the Slovak Republic (stronger connections) The project does not include the reference to open or public licensing or any copyright issue. ... or any copyright issue, so the educational resources are settled so they are not open and freely accessible. The focus on the target group of the program were IT teachers with very low skills and this approach is criticized by those who would have preferred focusing on the professional development of more capable teachers and teaching students to get better trained for the market. The program now faces difficulties and their activities admittedly slowed down due to understaffing – as shown on their website.

DVUI⁵⁶

There is a lack of qualified IT teachers in Slovakia all the time, this further education program aimed to develop the ICT skills of teachers of elementary and high schools to get a better specialization in IT. As Martin Sechny puts out the DVUI was good step for under-qualified

⁵⁴ https://ec.europa.eu/education/sites/education/files/monitor2016-sk_en.pdf

⁵⁵ <http://itakademia.sk/sk/aktivity/aktivity-1/1-2-vzdelavanie-ucitelov-informatiky-matematiky-prirodovednych-a-technickych-predmetov-zs-a-ss/>

⁵⁶ <http://dvui.ccv.upjs.sk/>

teachers. The DVUI project did not apply public or open licenses for the created resources, so they cannot be used freely.

6.3.3. Copyright and licenses trainings

Copyright and licenses are not part of the usual teacher training in Slovakia. Awareness and interests are low among teachers, limited to only a few IT teachers. However, as there is strong need for more good-quality educational resources for all levels of education, so the importance of “free access” to educational resources come up in conversations as Creative Commons advocates reports.

Creative Commons Slovakia conducted 12 copyright workshops including sessions on open/public licensing in Slovakia in 2016 for primary and secondary school teachers.⁵⁷ The interest about the copyright as a topic for education varied, but the need for accessing educational resources were high, many participants apparently did not connect the two as relational concepts.

6.3.4. Evaluation

The level of digital skills of teachers varies in Slovakia. Many of the older teachers have little interests and low skills in IT. There have been government programs to develop the teachers’ ICT skills, but these were not consistent and well targeted enough to be able to increase the number of well-trained teachers considerably. With this state of low level of digital skills of teachers, and it is difficult to instill the information on copyright and open licenses for more awareness. The CC Slovakia teams hold copyright and licensing workshops for educators throughout the country in 2016 where they were able to target a few dozens of interested teachers. It would be useful to continue this work and reach out to more teachers to develop their competence in using open educational resources.

⁵⁷ <http://www.prievidza.sk/spravodajstvo/cc-by-nc-nd-ci-sa-poznate/>

7. CONCLUSION

In Slovakia, the Open Government Partnership Action Plan's Open Education Commitment includes the most apparent and clear policy related to OER. The Commitment set forth the establishment of an OER repository as well as using the public licenses for publicly funded educational resources. While there is already a concrete strategy for establishing a repository by the Ministry of Education, there are doubts about the realization of the application of public or open licenses for the content due to the resistance of the private publishers to transfer author rights or agree to use open license on older and upcoming textbooks and educational materials. The role of the Ministry of Education in implementation is highly important. OER advocates can help in reinforcing the MoE's commitment in the implementation of the open education commitments.

The national education and digital strategies have not mentioned OER, open licenses or open education until the recent "Learning Slovakia" national educational program of MoE (2017) which undertakes the implementation of the OGP AP open education commitment. While there were national projects to develop digital resources and repositories, these mostly failed both in terms of producing enough quality digital educational resources that are useful for teachers, not to speak about opening up them to the public.

As for the context for the potentials of policy implementation, there is a need for developing the interest and skills needed for the effective use of digital resources among educational stakeholders, especially teachers, librarians as well as students and parents. This capacity building should include relevant copyright and licensing trainings. For more awareness raising, the engagement of offline and online media on the promotion of the need, the existence and use of Open Educational Resources is recommended.

The key actors promoting open education and OER has remained the same in the past few years: the Creative Commons Slovakia group at the Faculty of the University of Trnava, and Wikimedia. The advocates do not work in form of an organized coalition or alliance, they act more like a communication platform. The advocates have pursued successful high-level advocacy at the Office of Plenipotentiary of the Government of Slovakia, Ministry of Education, worked in relevant

working groups which drafted the open education and open access commitments of the OGP Action Plans. Beyond the high-level advocacy, it would be beneficial to continue to reach out to the education stakeholders, especially teachers, in order to foster the implementation process. CC Slovakia started this work by providing informative workshops for secondary school teachers throughout Slovakia in 2016, but this stopped due to lack of funding.

The CVTI, the National Information Center for Science, Technology, Innovation and Education is a key player in digital, information, library and education services. As a MoE institution, CVTI are responsible for European open science and access projects, their engagement and commitment could be beneficial in these fields and they could play an important role in promoting open education in higher education and research circles.

There is a scarce number of educators who have been aware about, familiar with or use open licenses. These teachers of IT who have been using or advocating for the application on open or public licenses in their work found disinterest both on the levels of education policy-makers and the teachers. They find the developments through OGP promising, though, and expressed interest to support the OER advocacy and implementation work.