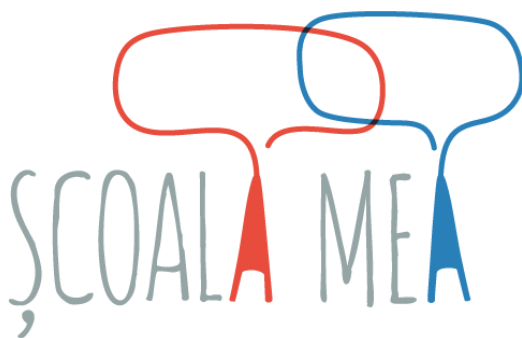


OPEN DATA READINESS ASSESSMENT IN EDUCATION



Social accountability for the education reform in Moldova.
Evaluation for 2018.

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■ Introduction

Open data readiness assessment is carried out as part of “*Scoala Mea - Empowered citizens enhancing accountability of the education reform and quality of education in Moldova*” Project. The main goal of the project is to encourage Moldovan citizens to engage with local, regional and national authorities in evidence-based policy and budget dialogue regarding the reform of educational sector, the quality of educational services and the development priorities of primary, lower secondary and upper secondary schools, and to create an environment where the social accountability initiatives could develop. In this context, the data opening in educational system is both a condition and a factor in the development of the social audit of schools. Thus, taking into account the crucial importance of the data opening in the social audit of schools, the aim of this assessment is to present a complex picture of the availability of open data in education, which could be used first of all to foster development of social audit in schools.

This assessment was conducted on the basis of the methodology developed by the World Bank for the assessment of open data at the Government level. Thus, the assessment was performed on eight dimensions: (i) Leadership, (ii) Policy and legal framework, (iii) Institutional framework, responsibilities and skills of the staff, (iv) Data of the Ministry of Education, Culture and Research, (v) Demand for Open Data, (vi) Open Data Ecosystem, (vii) Financing, (viii) National ICT infrastructure and skills.

Each analysed dimension is presented in three sections: (i) evidence, (ii) assessment, (iii) recommendations. The evidence of open data availability was identified based on the available information and the opinions of the Government officials and stakeholders. Each evidence has been marked with the symbol (+) if it is positive or (-) if it is negative for data opening. In their turn, evidences are grouped in sub-dimensions which describe the respective dimension. The assessment of each dimension is presented in one of three colours:

- **Green (G)** - denotes a condition that facilitates significantly the open data;
- **Yellow (Y)** - represents a situation in which evidences do not indicate crucial obstacles, but neither favour the opening of data (with some improvements it could facilitate it);
- **Red (R)** - evidences denote critical obstacles in the process of data opening.

Recommendations for each dimension are formulated in terms of removing obstacles and achieving a favourable situation as regards data opening.

At the end of the assessment, constraints related to the use of open data for social audits in schools are presented.

Until the moment, four assessments were performed, in 2014, in 2015, in 2016 and in 2017. The fifth report, for 2018, which is the last in this project, includes: recorded progress during the year, assessment of how recommendations were implemented, as well as new recommendations.

1 The World Bank's Open Government Data Working Group has developed an 'Open Data Readiness Assessment' (ODRA) methodological tool for conducting an action-oriented assessment of the readiness of a government - or even an individual agency - to evaluate, design and implement an open data initiative, http://opendatatoolkit.worldbank.org/docs/odra/odra_v3.1_methodology-en.pdf

■ Assessment of open data in education

By the Government Order No 4 of 29 April 2011² to ensure “transparency of the decision-making process and citizens’ participation in the governance, as well as the access of citizens and businesses to government public data”, the www.date.gov.md portal was launched. The Electronic Governance Agency, subordinated to the State Chancellery, was appointed as responsible for portal maintenance, coordination of activities for its development and provision of the necessary methodological support to the public authorities. Subsequently, this initiative was included as a basic pillar in the Strategic Program for Technological Modernization of the Governance (e-Transformation)³.

Furthermore, the Republic of Moldova has joined in April 2012 the global initiative for Open Government Partnership (OGP) in the second group of countries, following the development process of the Government e-Transformation Initiative related to “transparency, access to public sector information, accountability, citizen’s involvement, fighting corruption and provision of high-quality public services”⁴. In the OGP context, the open data are regarded as a tool that ensures the right to information, contributing to transparency and accountability⁵. According to the Republic of Moldova agenda in the OGP, the Government approves periodically Open Government action plans⁶.

At the same time, data opening in education depends not only on the general policies initiated by the Government on this subject, but also on those of the ministry responsible for educational policies, as well as on factors that are not under direct control of authorities. Development of civil society, mass media, Information and Communication Technology (ICT) sector and IT skills is not less important in shaping the supply and demand of open data. Thus, the success of opening data in education is defined by all these factors, which can change their importance and contribution in opening data at the different stages of the of Open Government concept implementation.

In order to cover the whole range of factors that determine or influence the opening data in education, the assessment was carried out on all of eight dimensions based on the above-mentioned methodology developed by the World Bank. While assessing the impact of factors on each dimension, it was taken into account their importance for the availability of open data in education. Thus, **three levels of importance** were set: “*very important*”, “*fairly important*” and “*important*”, which were taken into account when formulating recommendations and conclusions on the availability of open data.

² Government Order No 43 of April 29, 2011, <http://lex.justice.md/index.php?action=view&view=doc&lang=1&id=338417>

³ Strategic Program for Technological Modernization of Governance (e-Transformation), approved by Government Decision No 710 of 20 September 2011, <http://lex.justice.md/index.php?action=view&view=doc&lang=1&id=340301>

⁴ Information on the Republic of Moldova in the OGP, <http://www.opengovpartnership.org/country/moldova>

⁵ „Open Government Partnership = Access to information as a right + Transparency and accountability as a public policy + Open data as an instrument.”, European Public Sector Information Platform: Topic Report no 2013/10, The influence of the Open Government Partnership (OGP) on the Open Data discussions, Bogdan Manolea, Veronica Cretu.

⁶ Open Government Action Plan for 2016-2018 is approved by the Government Decision No 1432 of 29 December 2016. The draft Government decision on approval of the Open Government Action Plan for 2019-2020 is prepared to be approved in the next Government sessions.

1. LEADERSHIP

Importance: Very high

Context: Open Data Programs require the implementation of change - often including legal, institutional, technological and cultural changes - and may affect stakeholders both inside and outside government. Focused, strong, sustained, political/senior leadership is therefore critical to help a government overcome resistance and inertia of all kinds, to help incentivize actors to make the necessary changes in a timely and effective manner and to achieve the desired objectives and benefits of an Open Data Program.

Evidence 1.1 Is there a visible leadership at the level of MoECR on data opening?

2018	(-)	No public statement (in the Government sessions or during public events) of the minister on the commitment to open data was identified, although this could be considered an important signal of support.
2017	(-)	
2016	(-)	
2015	(-)	
2014	(-)	

2018	(-)	Along with the institutional reorganization of the ministry, the order which indicates expressly the responsible persons for opening data process, for filling documents with open data and publishing open data on www.data.gov.md was not updated. ⁷ At the same time, it should be mentioned that in orders approved periodically to update the Education Management Informational System (EMIS) are designated responsible persons for managing this system - Information and Communication Technologies Centre in Education is responsible for good functioning of EMIS, as a national administrator, and the General State Secretary of Ministry of Education, Culture and Research (MoECR) is responsible for controlling the implementation of those orders. Coordinator of EMIS project is the former head of the ICT Service within MoECR, which, beginning January 2018, is contracted within the framework of the World Bank "Education Reform Project", in order to ensure the continuity in developing EMIS.
2017	(-)	
2016	(+)	
2015	(+)	
2014	(-)	

2018	(-)	There are no public documents and interventions identified for 2018 that the minister/ministry is supportive of open data concept in a proactive way.
2017	(-)	
2016	(-)	
2015	(+)	
2014	(+)	

2018	(-)	There are no provisions in the normative acts drafted and promoted by the ministry during 2018 that contain commitment to the principles of open governance.
2017	(-)	
2016	(-)	
2015	(+)	
2014	(+)	

2018	(+)	
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⁷ Order of the ME no.96 of 26 February 2015 "Regarding the Open Data Catalogue and infrastructure for filling Open Data documents".

⁸ Order of the MoECR no. 52 of 23.01.2018, Order of the MoECR no. 433 of 04.04.2018 and Order of the MoECR no. 1190 of 03.08.2018 "On the updating the data in EMIS"

2017 (+)	Although no activity reports for the year 2018 were identified on the official website of the MoECR, some activities carried out according to the provisions of the MoECR Activity Plan for 2018 aimed at improving the information system and opening data - "Implementing an Educational Management Informational System, which will include the school, pupils and teachers register, based on the school census, and ensuring regular and accurate data collection in schools" and "Developing community and family motivation mechanisms to participate in the decision-making process and in solving school problems by placing the data set on www.date.gov.md ".
2016 (-)	
2015 (+)	
2014 (-)	

Evidence 1.2 Is there any open data management (organizational) structure that would be responsible for development and implementation of open data/open governance initiatives in all institutions within the ministry?

2018 (-)	Along with the institutional reorganization of the ministry, order which indicates expressly the responsible persons for opening data process, for filling documents with open data and publishing open data on www.data.gov.md became obsolete as it refers to the previous structure of the ministry ⁹ . According to its functions, the ICT Unit is the division responsible for opening data, but it consists of three units of personnel, out of which only one is filled, and has under responsibility all domains of the Ministry, not only education.
2017 (-)	
2016 (+)	
2015 (+)	
2014 (-)	
2018 (+)	ICT Unit within the ministry is responsible for coordination of educational policies drafting, monitoring and evaluation as regards ICT implementation and didactic support, provision of methodological support and strengthening of the strategic planning capacity concerning ICT and educational records. It also coordinates the ICT implementation in subordinated institutions, rayon / municipal departments for education, youth and sports.
2017 (+)	
2016 (+)	
2015 (+)	
2014 (+)	
2018 (+)	No interest groups or individuals who would be against the open data initiative are identified in the MoECR. Rather, due to problems related to the personnel turn-over and institutional memory, especially of that which is directly responsible for process coordination, technical and operational constraints appear in the management and development of open government initiatives within the ministry.
2017 (+)	
2016 (+)	
2015 (+)	
2014 (+)	

Evidence 1.3 Are there any promotional activities, implementation plans on open data?

2018 (+)	During the year, the modernized version of EMIS was promoted by the MoECR in various events, including at the local level, EMIS was updated by approving three actions for specific periods during the year. ¹⁰ At the same time, in the annual work plan of the MoECR for 2018 ¹¹ there are action regarding open data and EMIS modernization.
2017 (+)	
2016 (+)	
2015 (+)	
2014 (-)	
2018 (+)	Within the <i>Strengthening capacity - EMIS</i> Project, implemented with the World Bank support, the Open Data Portal in Education - www.sime.md - was upgraded, updated and is in the process of extension for other educational levels. The portal grants access for public to the
2017 (+)	
2016 (+)	

⁹ Order of the ME no.96 of 26 February 2015 "Regarding the Open Data Catalogue and infrastructure for filling Open Data documents".

¹⁰ Order of the MoECR no. 52 of 23.01.2018, Order of the MoECR no. 433 of 04.04.2018 and Order of the MoECR no. 1190 of 03.08.2018

¹¹ https://mecc.gov.md/sites/default/files/planul_de_activitate_al_mecc_pentru_anul_2018.pdf

2015 (+)	statistics regarding educational institutions, their staff and pupils, as well to individual institutional files, which contain information about pupils' cohort, qualifications of teaching staff, execution of the budget, results of tests and national exams. Modernized version of EMIS was promoted by the MoECR within various events. At the same time, within "Scoala mea" project, implemented by Expert-Grup, several events were organized at the local and national level to discuss the importance of community involvement in educational reform, the topic on data opening in education being also tackled.
2014 (-)	
2018 (+)	The ministry is supporting the initiative of opening data in schools, as part of "Strengthening capacity - EMIS" and "Empowered Citizens Enhancing Accountability of the Education Reform and Quality of Education in Moldova" Projects. According to the Order of the Ministry of Education no 1201 of 28 November 2014, educational institutions display on mandatory basis on informative boards and web-pages, if available, school files which contains data on students, qualification of teachers, annual budgets and results of tests on completion of primary education, of national exams on graduation of secondary education and baccalaureate exams.
2017 (+)	
2016 (+)	
2015 (+)	
2014 (+)	

Evidence 1.4 Is there a political context at the Government level that facilitates the opening of data at the MoECR?

2018 (+)	There is plenary support and firm commitment to implement the open data and open governance concept at the Prime Minister's level. The Government public data portal www.date.gov.md was launched by the Prime Minister's Provision No 43 of 29 April 2011.
2017 (+)	
2016 (+)	
2015 (+)	
2014 (+)	
2018 (+)	There is Electronic Governance Agency at the central level, subordinated to the State Chancellery, which is directly responsible under the open data component for creating and maintaining the open data portal and providing necessary support to authorities in order to open their data. In April 2018, the Economic Governance Agency conducted a "pilgrimage" to central public authorities to promote and update open government data. MoECR was among the first authorities involved in this action.
2017 (+)	
2016 (+)	
2015 (+)	
2014 (+)	
2018 (+)	According to the Government Decision No 710 of 20 September 2011 regarding the approval of the Strategic Program for Technological Modernization of the Governance (e-Transformation), the Government approved the Action Plan on Open Government for 2016-2018 ¹² . The draft Government decision on approval of the Open Government Action Plan for 2019-2020 is prepared to be approved in the next Government sessions. At the same time, e-Government initiatives are included in the Action Plan of the Government for 2016-2018 ¹³ .
2017 (+)	
2016 (+)	
2015 (+)	
2014 (+)	

¹² Government Decision No 1432 of 29 December 2016

¹³ Government Decision No 890 of 20 July 2016

2018	(+)	At the level central public authorities there was a certain reluctant during the years to open owned data. But, according the statistics, in 2018 the number of updated and newly published sets of public data on www.data.gov.md increased significantly. ¹⁴
2017	(-)	
2016	(-)	
2015	(-)	
2014	(-)	
2018	(+)	At the ministry level, there is awareness of the relation between open governance as a driving force for other objectives, such as transparency and accountability, economic growth and improvement of public services quality.
2017	(+)	
2016	(+)	
2015	(+)	
2014	(-)	
2018	(-)	No parliamentary group that would rise awareness and really promote openness and transparency in governance was identified.
2017	(-)	
2016	(-)	
2015	(-)	
2014	(-)	
2018	(-)	In 2017 new members of the National Participation Council was approved for the mandate 2017-2019 but there is not a thematic working group aimed at monitoring the reforms related to e-Governance, compared to previous mandate.
2017	(-)	
2016	(-)	
2015	(-)	
2014	(+)	
2018	(+)	There are capacities at the society level to perform an independent assessment of data opening.
2017	(+)	
2016	(+)	
2015	(+)	
2014	(+)	
2018	(+)	National Bureau of Statistics (NBS) has the capacities to support open data policy, is publishing its open data catalogue on date.gov.md portal and is updating data regularly, being on the first place considering the number of updated data from total (129 of updated data sets from 130). During 2017 NBS updated all 10 data sets in education on the portal.
2017	(+)	
2016	(+)	
2015	(+)	
2014	(+)	

CONCLUSIONS

In 2018 limited progress was recorded in the *Leadership* dimension, most of recommendations remaining unimplemented. Thus, orders to update data in the educational management informational system were approved, but the order which indicates expressly the responsible persons for opening data process, for filling documents with open data and publishing open data on www.data.gov.md was not updated. It is worth mentioning that no declaration at the level of ministry was identified on firm commitment to open data and no

¹⁴

http://data.gov.md/ro/stats/yearly/%22http%3A/date.gov.md/ckan/base/images/bg.png%22?field_organization_tid=All&date_filter%5Bvalue%5D%5Byear%5D=

document, normative acts and public declarations were identified which would demonstrate attachment to open data and to open government.

ASSESSMENT of leadership

Table 1. Assessment of leadership

Evidence area	Importance	Assessment	
		R/Y/G	Comments
Leadership (MoECR)	Very high	Yellow	The spirit of openness for open data initiatives is supported by the ministry through the actions to organize and support the process, but neither pro-active attitude exists, nor public declarations are issued in this regard
Management structure	High	Red	After the reorganisation of the ministry, the order by which the ICT Unit is designated as responsible for opening data process in education was not updated. Moreover, after the reorganisation, the Unit is responsible for all domains of the MoECR, not only education, and out of three positions, only one is filled.
Open data promotion	High	Yellow	Actions to promote open data are planned, but not reported as implemented
Context	High	Green	The existence of the Electronic Governance Agency and date.gov.md portal facilitates a lot data opening at the ministry
PER TOTAL	Very high	Yellow	

RECOMMENDATIONS on leadership

Table 2. Recommendations on leadership

Actions	In charge	Comments
1. Promotion of opening data in education concept in public statements	Minister, State General Secretary, State Secretary in education domain	Status: Stated in 2015. Not completed.
2. Update documents of the MoECR on appointing responsible persons for opening data within the ministry	State General Secretary	Status: Stated in 2015. Not completed.
3. Full involvement of the State Secretary of the MoECR responsible for education domain in managing the opening data process in education	State General Secretary	Status: Stated in 2015. Not completed.
4. Inclusion of actions regarding data promotion / opening in the planning documents of the MoECR for the next period (working plan, Strategic Development Program, sectoral expenditure strategy)	ICTU, PAMED	Status: Stated in 2015. Partially completed. Some activities were included in the activity plan of the ministry for 2017.

2. LEGAL AND POLICY FRAMEWORK

Importance: High

Context: The long-term success and sustainability of an Open Data Program depends greatly on the enabling policy and legal framework. Open Data requires that a range of policy and legal issues be addressed – for example, with respect to the licensing and reuse of data, ensuring privacy and data protection, and anonymizing personal and personally identifiable data. It is important to identify at an early stage the existing policies, laws and regulations with respect to a core set of issues, and to identify actual or perceived obstacles in order that policy or legal change can be initiated early if essential.

Evidence 2.1. Are there any policies on open data, (re)use of public sector information?

2018 (+)	The policy framework at the Government level serves as a driving force for data opening in education - Law No 305 of 26 December 2012, on re-use of public sector information (the law is enforcing the Directive 2003/98/CE of the European Parliament and of the Council of 17 November 2013 on re-use of public sector information) and Government Decision No 886 of 8 November 2013 approving Methodological Norms to enforce this Law, Government Decision No 700 of 25 August 2014 approving the Conception on principles of governmental open data, Government Decision No 701 of 25 August 2014 approving the Methodology on publishing governmental open data.
2017 (+)	
2016 (+)	
2015 (+)	
2014 (+)	
2018 (+)	The document can be re-used, according to the Government Decision No 886 of 8 November 2013, by: <i>reproduction, copying, publication and submittal under the relevant legislation; dissemination and redistribution; adaptation, modification, transformation and extraction of data from the document with the purpose to create derived documents; exploitation for commercial purpose</i> , provided that the source of the document is confirmed, including any statement of assignment specified by public authority or institution that posted the document on the single governmental open data portal and, if possible, to provide a “link” to these Terms.
2017 (+)	
2016 (+)	
2015 (+)	
2014 (+)	
2018 (+)	Re-using of data in non-commercial purposes is free of charge, according to the Law No 305 of 26 December 2012. However, certain fees may be established for re-use of data for commercial purposes, as well as for services of copying documents requested in writing.
2017 (+)	
2016 (+)	
2015 (+)	
2014 (+)	
2018 (-)	The term “Commercial purpose” is not exhaustively defined in normative acts, situation which could lead to unjustified fees for access to information. It should be noted that methodological norms on re-use of public sector information includes only examples of data usage for commercial purposes - by combining with other documents or by including the document in own product or application. However, it should be noted that the use of information by non-commercial organizations is not considered as re-use for commercial purposes.
2017 (-)	
2016 (-)	
2015 (-)	
2014 (-)	
2018 (-)	By the Order of the MoE No 665 of 26 July 2017 (only its annexes are available on the website of the ministry, at the compartment <i>Statistics</i>), the list of educational indicators and the revised version of the open data catalogue in education was approved. However, only the version of the catalogue of March 2015 remains published on www.date.gov.md . At the same time, annual report on re-use of data still is not drafted and published on the web page of the
2017 (-)	
2016 (-)	
2015 (+)	
2014 (-)	

ministry (according to points 21 and 22 of Methodological Norms to enforce the Law No 305 of 26 December 2012 on re-use of public sector information).

2018	(+)	By the commitment to modernize and update EMIS, as well to extend the platform for other levels of education, it could be considered that MoECR started a pro-active policy in opening data, even if a legal framework was not promoted in this purpose.
2017	(-)	
2016	(-)	
2015	(-)	
2014	(-)	

2018	(+)	There is a favourable organizational and technical framework for the MoECR to develop and implement its own policies on open data.
2017	(+)	
2016	(+)	
2015	(+)	
2014	(+)	

2018	(-)	Data controller bears responsibility for personal data protection (Articles 29 and 30 of Law No 133 of 8 July 2011 on personal data protection). Concurrently, according to the Terms of accessing and reusing public sector information, specified in the Annex No 1 of Methodological Norms for the implementation of the Law No 305, the re-user is accountable for any irregularities ¹⁵ . Thus, according to the current wording it can be interpreted that re-user will be responsible, including for a potential disclose of personal data, even if they are taken from a source which by definition is "open", therefore it should not contain personal data.
2017	(-)	
2016	(-)	
2015	(-)	
2014	(-)	

Evidence 2.2 What are the policies / laws on state secrets and access to information?

2018	(+)	There is a legal framework that can be characterized as favourable to the development of the open governance concept, including open data. The main acts underlying the legal and regulatory framework on the access to information and on the development of concept on open data are:
2017	(+)	
2016	(+)	
2015	(+)	
2014	(+)	
		<ol style="list-style-type: none"> 1. Law No 171 of 6 July 1994 on Commercial Secret; 2. Law No 982 of 11 May 2000 on Access to Information; 3. Law No 1069 of 22 June 2000 on Computer Science; 4. Law No 467 of 21 November 2003 on Computerization and State Information Resources; 5. Law No 245 of 27 November 2008 on State Secret; 6. Law No 133 of 8 July 2011 on Personal Data Protection; 7. Law No 305 of 26 December 2012, on re-use of public sector information; 8. Law No 91 of 27 June 2014 on digital signature and electronic document; 9. Government Decision No 1123 of 14 December 2010 on approval of Requirements to security of personal data while processing them in informational system on personal data;

¹⁵ Excerpt from the Annex 1 of Methodological Norms for the implementation of Law No 305, approved by GD No 886 of 08 November 2013, "The holders shall guarantee that the document is available for free, according to the clauses envisaged by these Terms, but they do not guarantee that the document does not contain any error or irregularity, nor that they will provide documents on a continuous basis. The holders are not responsible for the loss, injury or damage of any kind caused by third parties, resulting from the re-use of documents. The re-user is the only responsible for documents re-use. He/she shall not mislead third parties or distort the content of the documents, their source and data on last update."

		10. Government Decision No 710 of 20 December 2011 on approval of the Strategic Program for Technological Modernization of the Government (e-Transformation);
		11. Government Decision No 857 of 31 October 2013 on the National Strategy for the Information Society Development "Digital Moldova 2020";
		12. Government Decision No 886 of 8 November 2013 on approval of Methodological norms for the enforcement of Law No 305 of 26 December 2012 on re-use of public sector information;
		13. Government Decision No 700 of 25 August 2014 on approval of the Conception on open government data principles;
		14. Government Decision No 701 of 25 August 2014 on approval of the Methodology for publishing open government data.
2018	(+)	The Conception on open government data principles, approved by the Government Decision No 700 of 25 August 2014, provides basic guiding principles that should be followed by the public authorities on data publishing.
2017	(+)	
2016	(+)	
2015	(+)	
2014	(+)	

Evidence 2.3 What policies / laws help or hinder the civil society and the public to use information?

2018	(+)	The Parliament of the Republic of Moldova has aligned relevant legislation to the European Union law, by adopting the Law No 305 of 26 December 2012 on re-use of public sector information, and subsequently the approved Government Decision No 886 of 8 November 2013 on approval of the Methodological norms to enforce this Law.
2017	(+)	
2016	(+)	
2015	(+)	
2014	(+)	
2018	(-)	Even if such cases were not identified at the MoECR, in other public institutions it is a common practice not to reveal data to the public invoking the lack of some mechanisms to "isolate" personal data (or commercially sensitive data) from the rest of the document (or information). Thus, under the pretext of protecting personal or commercial data, the access to the public interest information is often limited. ¹⁶
2017	(-)	
2016	(-)	
2015	(-)	
2014	(-)	
2018	(+)	Methodological norms to enforce the Law No 305 of 26 December 2012 on re-use of public sector information, approved by Government Decision No 886 of 8 November 2013 force the central public administrative authorities to publish annually reports on documents re-use, even if there are singular cases of publishing such reports.
2017	(+)	
2016	(+)	
2015	(+)	
2014	(+)	

CONCLUSIONS

There was some progress on *Legal and policy framework* dimension. In particular, by developing and extending EMIS, it could be considered that MoECR started a policy which foster data opening. At the same time, at the general level, the legal and policy framework is favourable for data opening. A general problem is opening public interest data by isolating data which include personal information.

¹⁶ <https://anticoruptie.md/ro/stiri/datele-cu-caracter-personal-intre-protectia-demnitarilor-si-limitarea-accesului-la-informatie-expert-actuala-guvernare-are-interesul-ca-jurnalistii-sa-fie-hartuiti-prin-instante>

ASSESSMENT of legal and policy framework

Table 3. Assessment of legal and policy framework

Evidence area	Importance	Assessment	
		R/Y/G	Comments
Policies on open data	Very high	Yellow	General legal framework is favourable, but the educational policy framework needs to be developed
Policies on access to information	High	Green	The general legal framework fosters data opening in education
Use of open data	Very high	Yellow	Data security policies are the bottleneck
PER TOTAL	High	Yellow	

RECOMMENDATIONS on legal and policy framework

Table 4. Recommendations on legal and policy framework

Actions	In charge	Comments
1. Develop and include vision, priorities and activities concerning data opening in education in the strategic planning documents of the MoECR	ICTU, PAMED	Status: Stated in 2015. Not completed.
2. Update the open data catalogue and corresponding data on date.gov.md portal	ICTU, PAMED	Status: New action.
3. Draft and post on the MoECR web page the annual report on re-use of documents	State Secretary in education domain, ICTU	Status: Stated in 2015. Not completed.

3. INSTITUTIONAL FRAMEWORK, RESPONSIBILITIES AND SKILLS

Importance: High

Context: As well as political and senior leadership, middle management level skills and leadership are important to success: creating an Open Data Program requires agencies to manage their data assets with a transparent, organized process for data gathering, security, quality control and release. To effectively carry out these responsibilities, agencies need to have (or develop) clear business processes for data management as well as staff with adequate ICT skills and technical understanding of data (e.g., formats, metadata, APIs, databases). Engagement among agencies and at all levels of government to set common standards and remove impediments to data interoperability and exchange is also vital and requires mechanisms for inter-agency collaboration.

In addition to handling the “supply side” of creating an Open Data Program, agencies need the structures and capabilities to engage with communities that reuse Open Data including developers, companies, non-governmental organizations, other agencies and individual citizens.

Evidence 3.1 Is there an Agency that has the mandate, required technical skills and experience to manage the Open Data portal?

2018	(+)	Electronic Governance Agency, which is a public institutions founded by the State Chancellery, is administrating the single open data governmental portal www.data.gov.md , where open central public institution publish open data . The institution has a significant political support of the Prime Minister and the Secretary General of the Government. As of August 2015, the executive director of the Electronic Governance Agency has the status of Prime Minister adviser for electronic government issues. ¹⁷
2017	(+)	
2016	(+)	
2015	(+)	
2014	(+)	
2018	(+)	The Agency was created in 2010 and thanks to effective knowledge management and strategic partnerships with countries and institutions with relevant expertise, the Centre have a strong position in leadership and Open Data management. In May 2018, as a result of measures taken to consolidate data centres in the public sector and to rationalize the administration of the state informational systems by the Government, the name of the Public Institution "E-Government Centre" was changed to the Public Institution "Electronic Governance Agency".
2017	(+)	
2016	(+)	
2015	(+)	
2014	(+)	
2018	(+)	Electronic Governance Agency is responsible to implement Open Data in central administration authorities, offering full organizational, methodological and technical support.
2017	(+)	
2016	(+)	
2015	(+)	
2014	(+)	
2018	(+)	Electronic Governance Agency has the role of main promoter of Open Data portal for beneficiaries and authorities. In April 2018, the Economic Governance Agency conducted a "pilgrimage" to central public authorities to promote and update open government data. MoECR was among the first authorities involved in this action.
2017	(+)	
2016	(+)	
2015	(+)	
2014	(+)	

¹⁷ <http://lex.justice.md/md/335746/>, art. 41.

Evidence 3.2 Does the MoECR have a structure dedicated to data management in education?

2018	(-)	According to the new structure of the Ministry of Education, Culture and Research, there is ICT Unit which is responsible for coordination of the drafting, monitoring and evaluation of policies related to ICT implementation, provision of methodological support and strengthening of the strategic planning capacity on ICT and informational records, not only in education but as well in other domains under the competence of MoECR. But, the orders which would confirm the responsibility of the Unit in opening data in education were not updated. Moreover, the Unit is not even mentioned in the orders which were approved during the year in order to update the system. As well, it should be considered that at the moment the Unit is staffed with one person out of three positions, being responsible for all domains under the responsibility of the MoECD, not only education.
2017	(+)	
2016	(+)	
2015	(+)	
2014	(+)	
2018	(-)	ICT Unit within the MoECR is formed by three units of personnel, which could be insufficient for the promotion and coordination of open data in education policies. At the moment, only one unit of staff is hired, at the position of consultant.
2017	(-)	
2016	(+)	
2015	(-)	
2014	(-)	

Evidence 3.3 Does the MoECR have informational systems (system) and/or other viable and effective mechanisms for data collection and management?

2018	(+)	Educational Management Information System (EMIS) ¹⁸ is used for primary, lower secondary and upper secondary schools mapping. With the support of Soros Foundation Moldova, EMIS was developed to grant access for public to School files, which contain information about pupils' cohort, qualifications of teaching staff, execution of the budget, results of tests and national exams for all general education institutions. Having the purpose to strengthen the quality, openness and use of education statistics to better inform the ongoing education reforms, the World Bank is granting 365 thousand USD beginning 2016 to (i) strengthen statistical and analytical capacity of the MoECR, the Centre for Information and Communication Technologies in Education, local authorities and schools in using EMIS, (ii) improve quality and reliability of data collected through EMIS and (iii) to open data in education sector. Thus, in August 2017, a new version of EMIS, according to the provisions of the Education Code, was launched, being at the moment populated with data. The platform is to be extended to other levels of education, such as pre-school education and technical education institutions.
2017	(+)	
2016	(+)	
2015	(+)	
2014	(+)	
2018	(+)	There is Information and Communication Technologies Centre in Education subordinated to the MoECR, which is responsible for ICT management in education, including EMIS. At the same time, due to low level of salary, it is problematically to maintain persons responsible to administer and to develop SIME in the position for the long run.
2017	(+)	
2016	(+)	
2015	(+)	
2014	(+)	

¹⁸ According to the Government Decision no. 270 of 13.04.2007 on approval of the Conception of the Educational Informational System.

2018 (-)	Still, there is no integrated informational system or systems with a high level of interoperability. The information produced in other ministries, e.g. Ministry of Finance, Ministry of Health, Labour and Social Protection and Ministry of Internal Affairs, are not integrated with data in education. The MoECR has developed a draft Government decision on approval the Conception of Automated Information System in Education according to the new Education Code, which was launched for public consultations in October 2015, but the process did not advanced. At the same time, EMIS is still not developed to allow combination of various sets of data, aggregation and totalling of data and generation of reports on particular request. Rather it offers access on separate series of data and indicators, mostly at the level of institution.
2017 (-)	
2016 (-)	
2015 (-)	
2014 (-)	

2018 (+)	The existence of a large number of IT-skilled people allows relatively easy to organize data collection and production in the educational system. At the same time, due to the reform of the Government and foreseen local administration reform, as well as low level of salary in public institution, the fluctuation of people is high, the continuity and sustainability of the process being thus at risk.
2017 (+)	
2016 (+)	
2015 (+)	
2014 (+)	

Evidence 3.4 Is there any process to assess the quality of the provided services?

2018 (+)	There are processes at the national level to evaluate the quality of service provided in relation to open data at the national level. Evaluations are performed by experts or independent organizations. This topic is also addressed through Independent Reporting Mechanism under the Open Government Partnership. At the same time, some evaluations by the Electronic Governance Agency, as a component of the e-Governance progress.
2017 (+)	
2016 (+)	
2015 (+)	
2014 (+)	

2018 (+)	Beginning with 2017, the ICTCE uses an online survey, published on its page, to assess the quality of the reports generated by the system, as well the level of user' satisfaction. ¹⁹
2017 (+)	
2016 (-)	
2015 (-)	
2014 (-)	

Evidence 3.5 Is it clear who is responsible for what data in the MoECR and in the educational system?

2018 (+)	By the Government Decision No 899 of 27 October 2014 on approval of the Regulation regarding mapping system of primary, secondary and high schools, the subject of legal relations this system creation and functioning were defined.
2017 (+)	
2016 (+)	
2015 (+)	
2014 (+)	

CONCLUSIONS

There are some achievements on *Institutional framework, responsibilities and skills* dimension, especially as regards the development of EMIS, open data in education and enhance institutional capacity with the World Bank support. However, a major shortcoming is the lack of explicit provision regarding the state secretary and responsible unit to open data in education at the level of the MoECR, as well insufficient capacity of the ICT Unit to coordinate MoECR policy in opening data in education. A problem that lasts could be considered the

¹⁹ <https://docs.google.com/forms/d/e/1FAIpQLSeTWqgshKcnZg24BelprMNRWZ3nYSd47ZI-o51MuSnIU2veDw/viewform>

lack of evaluation of the quality of provided services, related to open data, as well as lack of integration of relevant data produced by other authorities with educational data.

ASSESSMENT of institutional framework, responsibilities and skills

Table 5. Assessment of institutional framework, responsibilities and skills

Evidence area	Importance	Assessment	
		R/Y/G	Comments
Existence/role of government Agency responsible for data opening	High	Green	Electronic Governance Agency provides open data infrastructure and methodologically coordinates the opening data process
Unit responsible for data in the MoECR	Medium	Red	The state secretary and the unit responsible of opening data is no designated by order. Within the Unit, which was traditionally responsible for opening data, has only one position out of three.
Informational infrastructure	Very high	Yellow	EMIS is going to be extended for other levels of education and for other types of institutions, but still the integration with informational systems, managed by other authorities, is not envisaged.
Assessment of services quality	Medium	Yellow	MoECR does not perform such an assessment
Distribution of duties	Medium	Green	There are government decisions and orders of the MoECR which describe legal relations and those responsible for the process
PER TOTAL	High	Yellow	

RECOMMENDATIONS on institutional framework, responsibilities and skills

Table 6. Recommendations on institutional framework, responsibilities and skills

Actions	In charge	Comments
1. Designate the state secretary and the unit which is responsible for policy coordination regarding open data in education	State General Secretary, ICTU	Status: New action.
2. Analyse options to connect EMIS to other relevant platform for educational process (for instance, BOOST) and to extend the options to work with data	State General Secretary, ICTU	Status: New action.
3. Setup internal evaluation (within the MoECR) of the quality of services related to data opening	State General Secretary, ICTU	Status: Stated in 2014. Not completed.

4. DATA OF THE MINISTRY RESPONSIBLE FOR EDUCATIONAL POLICIES

Importance: High

Context: Open Data programs can build on established digital data sources and information management procedures within government where they already exist. Where data is only available in paper form it will be hard to release as Open Data and in reusable format quickly and cheaply. Conversely, good existing information management practices within government can make it much easier to find data and associated metadata and documentation, identify business ownership, assess what needs to be done to release it as Open Data and put processes in place that make the release of data a sustainable, business-as-usual, downstream process as part of day-to-day information management.

Evidence 4.1 What are the policies on the management of education information?

2018	(-)	At the level of entire educational system there is not any comprehensive policy on collection, storage and use of data. At the same time, the Education Management Informational System (EMIS), which is intended to automate the processes of collecting, updating and storing data on general education in the Republic of Moldova, will be extended for the other levels and types of institutions of the educational system, in this respect a project being initiated, and financial sources being planned beginning 2016.
2017	(-)	
2016	(-)	
2015	(-)	
2014	(-)	
2018	(-)	Open data in educational system are posted on www.date.gov.md and on www.sime.md by the MoE and the NBS, but the information on public expenditures in educational system is managed by the Ministry of Finance (in BOOST, published with delay). At the same time, other authorities produce data that could be relevant for the educational system. Thus, there is no holistic view of the all these.
2017	(-)	
2016	(-)	
2015	(-)	
2014	(-)	
2018	(+)	To protect personal data, there is in place general legal and institutional framework necessary to ensure protection of personal data.
2017	(+)	
2016	(+)	
2015	(+)	
2014	(+)	
2018	(+)	By Order of the MoE No 1056 of 10 October 2014, the Regulation on ensuring security of personal data processed by the Ministry of Education while using the Mapping system of primary, lower secondary and upper secondary schools, in order to implement de provisions of the Law No 133 of 8 July 2001 on personal data protection was approved. At the same time, the National Centre for Personal Data Protection has registered the operator of personal data and/or or personal data recording system, by Decision No DD-1415710498630 of 11 November 2014, and personal data processing activities were authorised by Decision No DA-1415710116318 of 11 November 2014.
2017	(+)	
2016	(+)	
2015	(+)	
2014	(-)	
2018	(+)	Procedures to control, standardize and archive EMIS data are part of the system. At the same time, NBS data are delivered according to data production procedures established at the level of the NBS.
2017	(+)	
2016	(+)	
2015	(+)	
2014	(+)	

2018	(-)	For the rest of data (except EMIS and NBS provided data), no processes to ensure data quality and their archiving were identified. There are visible incomplete data in some data sets that reveals problems in ensuring the authenticity of the published data.
2017	(-)	
2016	(-)	
2015	(-)	
2014	(-)	

Evidence 4.2 Does the MoECR have a coherent image of the data and information that it owns, collects and distributes in education?

2018	(+)	In April 2015, Open Data Catalogue of the Ministry of Education was published on date.gov.md portal, which specifies necessary elements for their management (responsible person, owner, updating frequency, sharing method, etc.). In July 2017, the MoECR reviewed the catalogue of open data in education, but it is published only on the official website of the ministry ²⁰ , not on the governmental open data portal.
2017	(+)	
2016	(+)	
2015	(+)	
2014	(-)	

2018	(+)	There are systems which ensure data management (included in these systems) in order to meet own and beneficiaries' needs, but a regulation that would state their interaction when providing open data is needed.
2017	(+)	
2016	(+)	
2015	(+)	
2014	(+)	

2018	(+)	The fact that EMIS is in place, which covers general educational sector, is an opportunity because it can be extended on all areas of education, completed with an application on management of educational institutions (central office and subordinated institutions), becoming thus the only integrated system for the sector. At the same time, EMIS is still not developed to allow combination of various sets of data, aggregation and totalling of data and generation of reports on particular request. Rather it offers access on separate series of data and indicators, mostly at the level of institution.
2017	(+)	
2016	(+)	
2015	(+)	
2014	(+)	

Evidence 4.3 Data storage and level of digitization

2018	(-)	There is no assessment of the amount of digital data. Concurrently, considering the existence of EMIS for the general education sector, without comprising other data that are related to preschool, extracurricular, specialized, higher education, etc. it can be assumed that the amount of digital data is about 40% -50%.
2017	(-)	
2016	(-)	
2015	(-)	
2014	(-)	

2018	(-)	The information before 2012 is even less digitized, because EMIS data are introduced beginning 2012.
2017	(-)	
2016	(-)	
2015	(-)	
2014	(-)	

²⁰ https://mecc.gov.md/sites/default/files/anexa_3.pdf

2018	(+)	In May 2017, EMIS moved to MCloud governmental platform, which allow the MoECR to improve the efficiency of spending for IT services and to reduce the risk to lose data, storing EMIS in a secured virtual space, without the need to dedicated separate servers and storage rooms. At the same time, the platform offers an opportunity to interconnect data systems of the same or of different institutions.
2017	(+)	
2016	(+)	
2015	(+)	
2014	(+)	
2018	(+)	ICTCE, the national administrator of EMIS, is subordinated to the MoECR.
2017	(+)	
2016	(+)	
2015	(+)	
2014	(+)	

Evidence 4.4 What data are already open?

2018	(+)	According to the information on the date.gov.md portal, so far (28 October 2018) 67 sets of data have been opened by the MoECR and 10 by the NBS in the education sector. At the same time, there is mapping system of primary, lower secondary and upper secondary schools at the level of the ministry – EMIS, but at the level of NBS there is statistical databank in education. Also, the Ministry of Finance has a database BOOST, where disaggregated data are open regarding expenses in the public sector, including in education.
2017	(+)	
2016	(+)	
2015	(+)	
2014	(+)	
2018	(+)	The information presented by MoECR, in the .csv, .xlsx and .docx format, can be previewed and is available as well through API ²¹ . The information can be downloaded free of charge. The information presented by NBS can be downloaded in various formats and can be formatted on user queries.
2017	(+)	
2016	(+)	
2015	(+)	
2014	(+)	
2018	(-)	Compared to previous years, a part of the information presented by the MoECR is updated for the years 2017/2018, 25 sets out of 67, but nevertheless only partially. An important part of data is not updated according to data description, thus being available only for the 2009-2012 academic years.
2017	(-)	
2016	(-)	
2015	(-)	
2014	(-)	
2018	(-)	Regardless the modernization of EMIS, a big part of data sets presented by MoECR are not fully completed, published with delays and in a non-readable format.
2017	(-)	
2016	(-)	
2015	(-)	
2014	(-)	
2018	(-)	The MoECR data have no metadata description which would be easy to access, especially for the Open Data portal – date.gov.md . Thus, it is difficult to understand what some indicators represent, which are data sources, collection methodology etc. This limits a lot the proper use
2017	(-)	
2016	(-)	

²¹ API (Application Programming Interface) is an interface between software and facilitates their interaction, IT Dictionary, <http://www.it-area.ro/dictionar/API>

2015 (-)	of data, makes it difficult to use data from multiple sources and their combination. At the same time, on the web page of ICTCE, training materials regarding data quality for the school year 2018/2019 are published ²² , where some metadata from EMIS platform are presented.
2014 (-)	
2018 (+)	The NBS data are described, presenting methodology and explanatory information, they can be accessed on user queries, and most of them are updated in accordance with the description of the data.
2017 (+)	
2016 (+)	
2015 (+)	
2014 (+)	

Evidence 4.5 Are there any capacities at the ministerial level or outside it with sufficient skills in “data management” that could serve as leadership for new initiatives on open data?

2018 (+)	At the MoECR and at the national level, there are capacities (NBS, ICTCE, IT teaching staff, Electronic Governance Agency) that could facilitate data collection, transmission of informational flows, information analysis and publishing. At the same time, to achieve qualitatively this goal, punctual and periodical trainings are needed.
2017 (+)	
2016 (+)	
2015 (+)	
2014 (+)	
2018 (-)	Data collection by persons who do not have direct responsibilities stated in job descriptions concerning data collection (or management), do not have a financial support and diminishes data quality. At the moment, data are introduced by IT teaching staff, even if they do not have such responsibilities. Each educational institution and rayon department for education should designate responsible persons for statistical data collection and systematization.
2017 (-)	
2016 (-)	
2015 (-)	
2014 (-)	

CONCLUSIONS

On *Data in education* dimension, there is progress registered due to modernization of EMIS platform. Thus, data are complete and almost half of data sets from www.data.gov.md are updated. However, there are numerous shortcomings regarding the assessment of data volume, description, vision regarding the interaction of informational system that contain data which are relevant for education, data updating and their quality.

ASSESSMENT of data opened by the ministry responsible for educational policies

Table 7. Assessment of data opened by the ministry responsible for educational policies

Evidence area	Importance	Assessment	
		R/Y/G	Comments
Policies on data management	Very high	Red	It is necessary to formulate a holistic vision on data collection, stocking and use at the level of educational system, ensuring the quality of data
Clarity on data ownership	Medium	Green	There is an Open Data Catalogue of the Ministry of Education, which contains necessary elements for data management
Data digitization	Very high	Yellow	Small amount of digitized data
Data already opened	High	Yellow	A large part of information is not updated, without description cannot be used with other sources

²² https://drive.google.com/open?id=1lxxqsW3j_3wvDcv6EdmfqyuwMuNy81xt

Capacity, skills	High	Yellow	There is potential, but the clarity on training and remuneration of some persons is lacking
PER TOTAL	High	Yellow	

RECOMMENDATIONS on data opened by the ministry responsible for educational policies

Table 8. Recommendations on data opened by the ministry responsible for educational policies

Actions	In charge	Comments
1. Draft a comprehensive policy on collection, storage, quality assurance and use of data in education, which will include the responsibility and interaction among institutions which hold such data, first of all NBS and MoECR	State Secretary in the education domain, ICTU	Status: Stated in 2014. Not completed. The user should receive a coherent information on the sector, no matter what institution submit data
2. Take an inventory of the data held in the educational system	State Secretary in educational domain, ICTU	Status: Stated in 2014. Not completed.
3. Data updating according to their description	ICTU	Status: Stated in 2015. Not completed.
4. Extend categories of collected data and increasing their protection level, especially in the case of pupils with disabilities and of data regarding social and economic status of parents	State Secretary in educational domain, ICTU	Status: Stated in 2015. Not completed Changing the Order of the MoE No 1056 of 10 October 2014
5. Publish annual (or biannual) reports on open data, at least in the form provided by the Annex 7 of GD No 886 of 08 November 2013	State Secretary in educational domain,	Status: Stated in 2014. Not completed. It is a legal obligation
6. Inclusion of modules on open data in education in the teacher training programs	ICTU	Status: Stated in 2015. Not completed.

5. DEMAND FOR OPEN DATA

Importance: Very High

Context: The value of data is in its use. A strong demand-side “pull” of data is important not only in creating and maintaining pressure on government to release data but also in ensuring that the wider Open Data Ecosystem develops, and that Open Data is turned into economically or socially valuable services for citizens. The “pull” can come from civil society, the private sector, international organizations, donors and individual citizens, and from the government itself.

Evidence 5.1 What is the level and nature of demand for data in the civil society and media?

2018 (+)	There are (although few) Non-Government Organizations that monitor and analyse educational sector. Institute for Public Policy even created a Portal of the civil society in education – www.educatia.md . At the same time, the existing demand level is reduced. This is primarily could be explained, in the first instance, with the fact that social audit in general, and in educational domain in special, is not a developed practice.
2017 (+)	
2016 (+)	
2015 (+)	
2014 (+)	
2018 (+)	Education is a popular topic that enjoys the press attention, but the level of analysis and depth is moderate to low. The most common topics are: Baccalaureate, reorganization of schools, teachers' salaries, and topics related to educational curricula, expenses related to school.
2017 (+)	
2016 (+)	
2015 (+)	
2014 (+)	
2018 (-)	The information presented on the open data portal does not contain comprehensive and easily interpreted data so that journalists and/or citizens could draw conclusions, monitor, react or participate in the decision-making in education.
2017 (-)	
2016 (-)	
2015 (-)	
2014 (-)	
2018 (+)	Along with the implementation of “My School - Social Accountability for the Education Reform in Moldova” project (Expert-Grup), making publicly available “school file” for general education institutions within the “Strengthening education policy and increasing its support among direct and indirect beneficiaries”, „Strengthening society effort to affirm an open, participatory, performance-based education” and „Civil society monitoring of reforms in education sector” projects (Soros Foundation Moldova) and creating the Portal of the civil society in educational domain within „Strengthening school collectives: increasing the role of parents and communities in the governance of education” project (Soros Foundation-Moldova) a stable demand for social audit in education could be created.
2017 (+)	
2016 (+)	
2015 (+)	
2014 (+)	
2018 (+)	By “My School” and “BudgetStories.md” projects - Expert-Grup uses actively and visibly open data in education. The Institute of Public Policies also uses the open data for the development of the Portal of the civil society in the education domain.
2017 (+)	
2016 (+)	
2015 (+)	
2014 (+)	

Evidence 5.2 What is the level and nature of demand for data in business/private sector?

2018	(-)	No structured demand from the private sector concerning education data was identified. Business sector does not understand its own benefits of open data in education. At the same time, there were requests from the CSOs that were/are interested in developing various applications (including websites) dedicated to data (information) in education.
2017	(-)	
2016	(-)	
2015	(-)	
2014	(-)	
2018	(-)	There are insufficient examples of data used for commercial purposes, neither in other sectors.
2017	(-)	
2016	(-)	
2015	(-)	
2014	(-)	
2018	(+)	At the same time, there is a relatively developed IT sector, which under favourable conditions would be able to develop products based on open data in education.
2017	(+)	
2016	(+)	
2015	(+)	
2014	(+)	

Evidence 5.3 What is the level of presence and involvement of MoECR in social media and other digital channels?

2018	(+)	Facebook, Odnoklassniki and Twitter are the main social media platforms used in Moldova. The Ministry of Education, Culture and Research has only a Facebook profiles. The page of the Ministry of Education, Culture and Research, created on former Ministry of Culture page has 7.529 likes and 7.708 followers, but the page of the former Ministry of Education, which is also administrated at the moment, has 20.756 likes and 20.645 followers.
2017	(+)	
2016	(+)	
2015	(+)	
2014	(+)	
2018	(-)	No policy of the MoECR on its presence on 'social media' or on other digital platforms was identified. At the same time, "Guidelines on the use of social networks in the public sector", which was developed at the level of the Government, could be used to draft policy at the ministry level.
2017	(-)	
2016	(-)	
2015	(-)	
2014	(-)	
2018	(+)	The level of citizens' participation on digital platforms, especially of young persons, is increasing, digital platforms and digital access being the most dynamic as a form of citizen involvement.
2017	(+)	
2016	(+)	
2015	(+)	
2014	(+)	
2018	(-)	No analysis of the MoE was identified on topics that are most interesting to the public and on who are the data beneficiaries, even if the e-Transformation Division has expressed its intention to develop a module on this subject for the official web page of the ministry.
2017	(-)	
2016	(-)	
2015	(-)	
2014	(-)	

Evidence 5.4 What is the level of demand for data among MoECR and other Government institutions and among institutions in the education sector?

2018 (+)	There is at least one potential demand for open data from other ministries, central administrative authorities and LPA. At the same time, the exchange of information among institutions mostly occurs on official request, although the interoperability platform is in the development process, which aims to facilitate the electronic exchange of data between public authorities.
2017 (+)	
2016 (+)	
2015 (+)	
2014 (+)	
2018 (-)	No policy on analysis of request of data coming from other institutions was identified. As a rule, requests for permanent data are sent to the National Bureau of Statistics.
2017 (-)	
2016 (-)	
2015 (-)	
2014 (-)	
2018 (-)	Provision of information within the educational sector and in relation to other public institutions does not have an integrated character. For example, financial data are insufficient to analyse the situation of a school and, to fill in the gaps, it is necessary to address at least the Ministry of Finance.
2017 (-)	
2016 (-)	
2015 (-)	
2014 (-)	

Evidence 5.5 How responsive is the MoECR to requests for data?

2018 (+)	The most common opinion is that the MoECR is open to requests for information, especially when requests are approved by the management of the institution.
2017 (+)	
2016 (+)	
2015 (+)	
2014 (+)	
2018 (-)	No analyses or processes related to the demand and supply of the data in the education sector exist, therefore there is no mechanism to meet effectively and efficiently requirements.
2017 (-)	
2016 (-)	
2015 (-)	
2014 (-)	

CONCLUSIONS

On *Demand for open data* dimensions, no progress was recorded. Open data in education are used mostly by non-government institutions to monitor and to analyse educational sector, but there are no evidences about their use in the private sector. At the same time, there is no analysis of demand and use of data by public authorities in the public policy cycle.

ASSESSMENT of demand for open data

Table 9. Assessment of demand for open data

Evidence area	Importance	Assessment	
		R/Y/G	Comments
Demand from the civil society and media	Very high	Yellow	There is a nascent demand, related especially to the social audit
Demand from the business sector	High	Red	There are no evidences, but it is not an obstacle to open data
Involvement of the MoECR in 'social media' and other digital channels	High	Yellow	Has a positive dynamic, but a policy in this sense was not identified
Inter-sector demand and among the MoECR and other Government sectors	Medium	Yellow	Informational relations among sectors and the MoECR, and among educational institutions do not traditionally occur through open data
MoECR responsiveness to request for data	Very high	Yellow	'Responsiveness' of the MoECR should be based on policies and instruments, rather than on will of the administration
PER TOTAL	High	Yellow	

RECOMMENDATION on demand for open data

Table 10. Recommendations on demand for open data

Actions	In charge	Comments
1. Perform analysis of demand for open data from civil society, media and citizens, private sector	ICTU	Status: Stated in 2014. Not completed. Necessary to cover demand for open data and MoECR objectives
2. Develop tools for monitoring, evaluation and identification of the demand for open data from civil society, media and citizens, private sector	ICTU	Status: Stated in 2014. Not completed. At the moment some steps have been taken in this direction, but they do not have a systemic approach, due to which cannot achieve necessary effects
3. Analysis and explanation of data for which there is high interest from citizens, media and civil society, as well as presentation of information in a comprehensive form using this basis	Subdivisions of the MoECR, ICTU	Status: Stated in 2015. Not completed.
4. Develop a concept on the presence in 'social media' and other digital channels	Information and communication to mass-media Unit, ICTU	Status: Stated in 2014. Not completed. It is a fast-evolving domain. This would enhance the efficiency and effectiveness of MoECR communication
5. Develop an identification and record keeping mechanism of demand for open data from authorities, including those from education	ICTU	Status: Stated in 2014. Not completed. It is an action to present complex information, when data from many public institutions are needed to have a clear image about the activity of an educational institution

6. OPEN DATA ECOSYSTEM

Importance: High

Context: Experience among leading governments has demonstrated that Open Data initiatives are more sustainable and high-impact when Open Data efforts use an “ecosystem” approach – meaning governments invest not only in supplying data but also address the policy/legal framework, institutional readiness, capacity building (for government and infomediaries), citizen engagement, innovation financing and technology infrastructure. Governments need to play a multi-dimensional role in an Open Data ecosystem and create new types of partnerships with a wide range of stakeholders.

Evidence 6.1 Are there any media institutions or journalists that have necessary skills to use open data in order to formulate useful information, easily understood by the wide public?

2018	(+)	There are some journalists and media institutions, it is true that not so many, which are concerned with the public sector. Education, as a sector, is interesting for the press, but interventions are mainly based on the politicians' statements on reforms, wage level and education quality, rather than on open data analyses.
2017	(+)	
2016	(+)	
2015	(+)	
2014	(+)	

2018	(+)	Private media is dominant on the market. There are functional and active media associations.
2017	(+)	
2016	(+)	
2015	(+)	
2014	(+)	

2018	(-)	Concurrently, according to Freedom House, Freedom of the Press Report of 2018 ²³ , Moldovan press is “partly free”, and according to the World Press Freedom Index for 2018 ²⁴ , Moldova lost one position compared to last year, ranking 81 out of 180 countries.
2017	(-)	
2016	(-)	
2015	(-)	
2014	(-)	

2018	(+)	The electronic media is ascending and along with it the number of information sources is increasing as well, including the publications of nongovernmental sector.
2017	(+)	
2016	(+)	
2015	(+)	
2014	(+)	

Evidence 6.2 Is the MoECR involved in promoting data re-use activities?

2018	(-)	No activities of the MoECR that would involve software developers in the use and re-use of open data in education were identified.
2017	(-)	
2016	(-)	

²³ <https://freedomhouse.org/report/freedom-world/2018/moldova>

²⁴ <https://rsf.org/en/ranking#>

ASSESSMENT REPORT - 2017

2015	(-)	
2014	(-)	
2018	(+)	Promotional activities were organized by the Electronic Governance Agency regarding all data held by the Government. For example, in 2018 the Agency has organized an informational campaign on open data „Do you know what your government is doing?”
2017	(+)	
2016	(+)	
2015	(+)	
2014	(+)	
2018	(-)	No records exist on (re)use of MoECR open data by other Government agencies.
2017	(-)	
2016	(-)	
2015	(-)	
2014	(-)	

Evidence 6.3 Is there a software development industry?

2018	(+)	There is a relatively well-developed ICT sector in the Republic of Moldova.
2017	(+)	
2016	(+)	
2015	(+)	
2014	(+)	
2018	(-)	Generally, the use of software based on open data is low, being even lower in education.
2017	(-)	
2016	(-)	
2015	(-)	
2014	(-)	

Evidence 6.4 Is there a community of educational and/or research institutions that has persons trained in data analysis and provide trainings in this area?

2018	(+)	There is a basis of high education that can be used to improve technical skill needed to analyse data.
2017	(+)	
2016	(+)	
2015	(+)	
2014	(+)	
2018	(+)	IT courses are included in the high school curricula and some universities offers advanced statistics programs.
2017	(+)	
2016	(+)	
2015	(+)	
2014	(+)	
2018	(-)	At the same time, there are few people from the public and non-government sector that are sufficiently trained to analyse educational data.
2017	(-)	

ASSESSMENT REPORT - 2017

2016	(-)
2015	(-)
2014	(-)

2018	(+)	The MoECR can count on computer science teachers regarding its policies and activities in this opening data.
2017	(+)	
2016	(+)	
2015	(+)	
2014	(+)	

CONCLUSIONS

On *Open Data Ecosystem* dimension, no progress was registered. Although there are media institutions which have a certain interest towards education sector, their interventions are limited to the declarations of political decision makers. Analysis of open data in education and formulation of conclusions regarding the impact of educational policies has a sporadic character, since there are no activities to accelerate open data reuse and the capacities to analyse data are almost lacking.

ASSESSMENT of open data ecosystem

Table 11. Assessment of open data ecosystem

Evidence area	Importance	Assessment	
		R/Y/G	Comments
Media institutions	High	Yellow	Media sector is not well developed in terms of open data use
Promotion of the MoECR data reuse	High	Red	MoECR does not have a pro-active attitude in promoting (re)use of open data
Software industry	Medium	Yellow	It is not very innovative, but the existing skills cover the existing demand
Academic / research community	Medium	Green	Even if the situation in this respect is not very hopeful in general, the existing conditions are good enough to facilitate data opening
PER TOTAL	Medium	Yellow	

RECOMMENDATIONS on open data ecosystem

Table 12. Recommendations on open data ecosystem

Actions	In charge	Comments
1. Develop measures to facilitate development of some communities of journalists, IT professionals, analysts for open data development	ICTU, Information and communication to mass-media Unit	Status: Stated in 2014. Not completed. It could be done with the support of the existing professional associations, initiative groups. Strengthening IT professionals and analysis of education data (e.g. creation of a forum for computer teachers)
2. Develop measures for a better adaptation of the IT and other related domain curricula to the existing demand and competition conditions	ICTU	Status: Stated in 2014. Not completed. This recommendation is mentioned as well in the White Book of ICT and other documents

7. FUNDING OF OPEN DATA INITIATIVES

Importance: Medium High

Context: Funding with respect to both the “supply side” and “demand side” of Open Data is important to ensure that the objectives of an Open Data Program are met.

Evidence 7.1 Existence of resources for the early stage of open data initiative

2018	(+)	At the central level, funding is provided to implement open data initiative as part of e-Government initiative to maintain open data portal operational.
2017	(+)	
2016	(+)	
2015	(+)	
2014	(+)	
2018	(+)	At the level of the MoECR, the World Bank projects - <i>Strengthening capacity - EMIS Project (2016-2017)</i> and <i>Education Reform Project (launched in 2018)</i> , which are focused on the strengthening the quality, openness and use of education statistics to better inform the ongoing education reforms in Moldova, are supporting the initiatives to open data in education by upgrading EMIS portal.
2017	(+)	
2016	(-)	
2015	(-)	
2014	(-)	

Evidence 7.2 Existence of financial resources to finance the development of various software that will use open data.

2018	(-)	No such resources were identified at the MoECR or sectoral level, but even no request was made in this respect.
2017	(-)	
2016	(-)	
2015	(-)	
2014	(-)	
2018	(+)	There were and still are many donors' initiatives (the World Bank, Soros-Moldova Foundation) regarding the development of different software for open data use.
2017	(+)	
2016	(+)	
2015	(+)	
2014	(+)	

Evidence 7.3 Are there sufficient financial resources to develop the IT infrastructure and expenses for the management of initiatives on open data in education?

2018	(+)	At the level of the MoECR, the World Bank projects - <i>Strengthening capacity - EMIS Project (2016-2017)</i> and <i>Education Reform Project (launched in 2018)</i> , are supporting financially the ministry to upgrade the EMIS platform and to train users of the platform.
2017	(+)	
2016	(-)	
2015	(-)	
2014	(-)	

2018	(+)	The MoECR budgets resources to ensure implementation of existing ICT platforms, including the open data initiative. However, due to the lack of a clear policy on open data developed at the level of the ministry, there is no clarity on whether these resources are sufficient to ensure enough well-trained staff to meet the requirements.
2017	(+)	
2016	(+)	
2015	(+)	
2014	(+)	

2018	(+)	The World Bank provided financial assistance to the MoECR to develop the Education Information System. Already developed or still under development information systems were developed mainly with the support of external partners.
2017	(+)	
2016	(+)	
2015	(+)	
2014	(+)	

Evidence 7.4 Does the Government or the MoECR have funds for innovation?

2018	(+)	There are several opportunities to finance innovation software. These facilities can be accessed through programs that support SMEs and innovations at the Academy of Sciences.
2017	(+)	
2016	(+)	
2015	(+)	
2014	(+)	

2018	(+)	There are sufficient opportunities to access resources for a more active involvement of CSOs in development of data use software, promotion of transparency and accountability.
2017	(+)	
2016	(+)	
2015	(+)	
2014	(+)	

2018	(-)	No government funds have been identified to implement innovative projects in education.
2017	(-)	
2016	(-)	
2015	(-)	
2014	(-)	

2018	(+)	Public-private partnerships in ICT is a relatively known and discussed topic in the IT sector. At the Government and at the Ministry of Economy and Infrastructure level, several events (workshops) have been organized, including with external support.
2017	(+)	
2016	(+)	
2015	(+)	
2014	(+)	

CONCLUSIONS

On *Funding of open data initiatives* dimension, the recorded some progress. There is funding at the central level, mostly from foreign sources, to promote e-Government initiatives. At the sector level, informational systems were developed with the support of the World Bank, but the funding as well as demand for funding to develop software which would use open data is lacking.

ASSESSMENT of funding of open data initiatives

Table 13. Assessment of funding of open data initiatives

Evidence area	Importance	Assessment	
		R/Y/G	Comments
Funding of open data initiatives	Very high	Green	There is funding to maintain open data portal operational (and resources to implement initiatives in the sector (WB)
Funding of education software	High	Yellow	No resources have been identified, but there is a potential donors' support
Funding of IT infrastructure in education	High	Yellow	Important projects are funded with external assistance
Funding of innovations	Medium	Yellow	There are several funding opportunities at the Government level, but this is not sufficient and is difficult to access
PER TOTAL	High	Yellow	

RECOMMENDATIONS on funding of open data initiatives

Table 14. Recommendations on funding of open data initiatives

Actions	In charge	Comments
1. Assess the cost of activities related to open data, ICT infrastructure, software promotion and draft a financial plan to cover this cost	ITCU	Status: Stated in 2014. Not completed. Most of the expenses for IT infrastructure and other expenses of the educational system will be included in the budgetary subprogram "Policies and Management in Education", and the part of the current expenses - to the respective subprograms of the educational sectors
2. Create partnerships and develop necessary public conditions for the civil society to establish these partnerships with the MoECR or with subordinated institutions	ITCU, Information and communication to mass-media Unit	Status: Stated in 2014. Not completed. This would facilitate fundraising for CSOs which use open data in education

8. NATIONAL INFRASTRUCTURE OF TECHNOLOGIES AND SKILLS

Importance: High

Context: In very practical ways, Open Data Programs normally rely for their success at least in part on the national technology infrastructure, in terms of technology and communications services and the ICT skills among officials, infomediaries and the general public.

Evidence 8.1 Existence of physical access and accessible price to Internet infrastructure

2018 (+)	There is a well-developed infrastructure of access to Internet, which covers the majority of the population, provided by cable and/or mobile networks. Download speed for mobile internet and broadband fixed internet is high ²⁵ , ranking Moldova the 37 and, respectively, 39 In the world. ICT Development Index for Moldova reach 6.45 points out of 10, ranking our country on 59 th place out of 176 countries and 7.56 points on sub-index on access to infrastructure, ranking on 42 nd place ²⁶ . 49% of households from the Republic of Moldova have access to broadband internet ²⁷ . In the second trimester of 2018, the penetration rate of mobile telephony was 101,1%. ²⁸
2017 (+)	
2016 (+)	
2015 (+)	
2014 (+)	
2018 (+)	The number of users is quite high and has a dynamic of high growth, but mainly in Chisinau. According to the National Regulatory Agency for Electronic Communications and Information Technology, about 84% of households in Chisinau had broadband Internet access at the end of 2017, while this indicator varies from 24 to 54% in majority territorial-administrative units. The number of subscribers to broadband fixed Internet increased by 4.3% compared to 2015, while the number of broadband mobile Internet users increased by 28.3% ²⁹ . Broadband Internet connection services are affordable, Moldova being ranked 38 th according to The Global Information Technology Report 2016 ³⁰ .
2017 (+)	
2016 (+)	
2015 (+)	
2014 (+)	
2018 (+)	There is free Internet access in public spaces such as landscaped parks and squares, university campuses, cafes, airport, bus stations (for subscribers of one operator), public transportation etc. In general, there is a trend of extending the Internet access in public places.
2017 (+)	
2016 (+)	
2015 (+)	
2014 (+)	

Evidence 8.2 Does the Government use services and infrastructure shared by several institutions?

2018 (+)	As Electronic Governance Centre was setup, activities of developing and sharing resources and digital services have been intensified.
2017 (+)	
2016 (+)	

²⁵ <http://www.speedtest.net/global-index>

²⁶ Measuring the Information Society Report, 2017, volume 1, https://www.itu.int/en/ITU-D/Statistics/Documents/publications/misr2017/MISR2017_Volume1.pdf

²⁷ <http://www.anrceti.md/bandalarga2017>.

²⁸ Evoluția pieței de comunicații electronice în trimestrul II - 2018
http://www.anrceti.md/files/filefield/Raport%20ev.%20piete%20CE%20Q_II_2018.pdf

²⁹ Evolution of electronic communications market in 2017, ANRCETI, http://www.anrceti.md/files/filefield/2017_EvPiata_Raport.pdf

³⁰ The Global Information Technology Report 2016, http://www3.weforum.org/docs/GITR2016/WEF_GITR_Full_Report.pdf

2015	(+)	
2014	(+)	
2018	(+)	Electronic Governance Agency has purchased services to implement a solution for interoperability in e-Governance in December 2013, and in 2018 a new legal framework on interoperability which aims to boost the use of the interoperability platform by public authorities and public institutions has been approved.
2017	(+)	
2016	(+)	
2015	(+)	
2014	(+)	
2018	(+)	In July 2012, Electronic Governance Agency has purchased hardware, software and services related to M-Cloud (Stage-1). In April 2014, Software Licenses for M-Cloud Platform and Development of platform level services were purchased. In July 2018, the Law on data exchange and interoperability, which governs electronic data exchange, information resources and the procedure for granting access to national registers and databases for all public entities was approved.
2017	(+)	
2016	(+)	
2015	(+)	
2014	(+)	
2018	(+)	There are several standards in this area, including standards on metadata, approved by the national organization responsible for standards - National Standardization Institute. There is also a Technical Committee (TC-28) responsible for standardization in Information Technology.
2017	(+)	
2016	(+)	
2015	(+)	
2014	(+)	
2018	(+)	By the Government Decision No 656 of 5 September 2012 the Programme on Interoperability Framework was approved. In July 2018, the Law on data exchange and interoperability was approved.
2017	(+)	
2016	(+)	
2015	(+)	
2014	(+)	
2018	(+)	Information Technology and Cybersecurity Service is responsible for the protection of data which are important for the state.
2017	(+)	
2016	(+)	
2015	(+)	
2014	(+)	

Evidence 8.3 How good are the ICT skills of the MoECR staff, its management and subordinated institutions?

2018	(+)	The management and civil servants of the ministry have basic IT skills and use them.
2017	(+)	
2016	(+)	
2015	(+)	
2014	(+)	
2018	(+)	There are trainings on ICT and e-Governance organized by the ministry.
2017	(+)	
2016	(+)	
2015	(+)	
2014	(+)	

2014	(+)	
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2018	(+)	Knowledges and skills to use ICT are taken into account when the civil servants of the ministry are appraised.
2017	(+)	
2016	(+)	
2015	(+)	
2014	(+)	

Evidence 8.4 How strong is the ICT industry in Moldova?

2018	(+)	Gross added value (VAB) achieved by the ICT sector increased by 9% and contributed to GDP growth by 0.6 p.p. in 2017. As a share of GDP, this sector reaches 6.6% and is steadily increasing. ³¹
2017	(+)	
2016	(+)	
2015	(+)	
2014	(+)	

³¹ <https://mei.gov.md/ro/content/sectorul-tic-inregistrat-cea-mai-mare-crestere-din-ultimii-opt-ani>

2014	(-)	is that two individual indicators related to education, <i>quality of schools' management</i> and <i>quality of education system</i> , rank Moldova the 118 th and 97 th , respectively ³² .
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Evidence 8.5 How active is the MoECR and its subordinated institutions on the Internet?

2018	(+)	Ministry has a webpage, which is updated for some compartments, but the information is not well-structured to be found easily by users.
2017	(+)	
2016	(+)	
2015	(+)	
2014	(+)	
2018	(-)	Even if there are some improvements in providing relevant information on the activity of the ministry, services provided by the ministry and about the educational system, there are still some major gaps due to fact that some important information is not updated, such as activity reports, reports on Medium Term Budgetary Framework, or the information is lacking, such as information on public procurements, performance of subordinated institutions etc.
2017	(-)	
2016	(-)	
2015	(-)	
2014	(-)	
2018	(-)	Not all subordinated institutions, especially vocational schools, high schools and boarding schools, have website or are present on the Internet. At the same time, the existing web pages of many educational institutions are not consonant and present outdated and scarce information.
2017	(-)	
2016	(-)	
2015	(-)	
2014	(-)	
2018	(+)	There is a Government website servicii.gov.md . By approving the "Actions Plan for Open Governance", "Strategic Program for Technological Modernization of Governance" and "Action plan on modernization reform of public services", the Government wants to digitize over 500 traditional services by 2020.
2017	(+)	
2016	(+)	
2015	(+)	
2014	(+)	

CONCLUSIONS

On the *National infrastructure of technologies and skills* dimension, a certain progress was recorded. There is well-developed infrastructure for Internet access, the number of households connected to the Internet is growing, and the access to the Internet is free of charge in many public spaces and there is a platform to launch start-ups in ICT. At the level of the MoECR there are sufficient ICT skills, the webpage of the ministry is completed, offers access to multiple information and is regularly updated, but digital channels for citizens' involvement are not sufficiently used. Alike, there are few initiatives to promote ICT projects.

³² The quality of school management indicator is part of Pillar 2 (Business and Innovation) while the quality of education system is part of pillar 5 (skills) of the Network Readiness Index from the Global Information Technology Report 2015, http://www3.weforum.org/docs/GITR2016/WEF_GITR_Full_Report.pdf

ASSESSMENT of national infrastructure of technologies and skills

Table 15. Assessment of national infrastructure of technologies and skills

Evidence area	Importance	Assessment	
		R/Y/G	Comments
Interne / mobile infrastructure	High	Green	A wide and relatively affordable coverage, as well in terms of cost
Use of shared services and infrastructure	Medium	Green	Although not all shared platforms are functional, they are in a process of development
Skills in the MoECR	High	Green	There are fundamental skills, but an organizational power and continuous trainings are required
ICT industry	Medium	Yellow	ICT industry and in general IT is not considered as a constraint in the open data development, but neither cannot be seen as a force that contributes to this process
MoECR presence on the Internet	Medium	Yellow	MoECR presence on digital channels is still not sufficient to achieve a high level of involvement and participation of citizens
PER TOTAL	High	Yellow	

RECOMMENDATIONS on national infrastructure of technologies and skills

Table 16. Recommendation on national infrastructure of technologies and skills

Actions	In charge	Comments
1. Develop a policy on external assessment (by civil society and using its resources) of the level and quality of presence of educational institutions on websites	State Secretary in the educational domain, ICTU	Status: Stated in 2014. Not completed. This would allow independent assessments, which could serve as motivation and guidance to increase the presence of educational institutions on the Internet
2. Strengthen the role of the MoECR through eTCD, Communication and Public Relations Division and the rest of the MoECR subdivisions as a leader in opening national data at the national level, including by using own pages of educational institutions	ICTU, Information and communication to mass-media Unit, MoECR subdivisions	Status: Stated in 2014. Not completed. By its mission, the MoECR has more intellectual resources to become the driving force in several Government reforms

■ Constraints to implement of social audit in schools

According to the “Empowered Citizens Enhancing Accountability of the Education Reform and Quality of Education in Moldova” project, social audit is being performed at the level of schools in a number of localities from the Republic of Moldova. The ultimate goal of social audit is to enhance the quality of education in available financial conditions. In order to achieve this goal, comprehensive information is required on all operational aspects of a school, as well as general information on the operation and performance of schools in the region and in the country. These include non-financial and financial indicators on school inputs, performed activities and achieved results, school management, on some results of the assessments and controls that take place in schools and on education policy documents. Therefore, information and data from multiple sources are needed, in some cases being necessary to combine data in order to obtain relevant indicators on the real activities of the school.

Table 17 reflects data availability according to the main groups of data needed to ensure an effective involvement of citizens in obtaining a quality education in schools having pre-set funding.

Table 17. Data availability in educational sector

	Types of open data	In Open Data (date.gov.md)	In EMIS
1	Identification data of the school (address, name, code, type, etc.)	Partially exist	Partially exist
2	Data on school infrastructure and its characteristics	Partially exist	Partially exist
3	Facilities available for teaching process	Partially exist	Partially exist
4	Data on teachers and workload (profile, experience, degrees, merits, etc.)	Partially exist	Partially exist
5	The number of pupils and structure of classes, subjects, extracurricular activities	Partially exist, but extracurricular activities are only on the list of extramural activities	Partially exist, but extracurricular activities are only on the list of extramural activities
6	Financial indicators (at least in the economic budget classification structure)	Partially exist, without sufficient details on the MoECR webpage, but exists in BOOST	Partially exist, only in school files
7	Reports on learning outcomes (grades, promotion, skills)	Partially existing	Partially exist
8	Reports on the external assessment (or/and internal assessment) on observing school standards (quality standards assessments)	Not existing	Partially exist
9	School management (category, level of training, managerial degree)	Partially exist	Partially exist
10	Auxiliary personnel (level of training, ratio per student and per teachers)	Full information	Partially exist
11	Data needed for inclusive education	Partially exist	Partially exist

The analysis of open data in the education system has shown that the level of open data can meet the information requirements for social audits in schools, with some constraints. At the same time, along with the implementation of the Education Management Information System (EMIS), the informational basis and data production opportunities will be considerably improved.

At the same time, it is necessary to note that an easy access to data is possible only by developing an interface, via which the user could form tables required by concrete queries (requests), similar to the NBS' one. It is also

necessary to fill the data with financial information, which could be taken from the Ministry of Finance. But, as regards financial information, there are some constraints related to data opening in treasury system, amendments of the legal framework regarding competences in education of authorities and additional funding from various sources (including the parents' contributions). In this respect, it is necessary a commitment of the State Treasury on opening data in education and data of rayon departments for education, so that data would be published monthly (or at least quarterly) in the disaggregated structure of budget classification.

Moreover, for a comprehensive coverage with data and information, besides data from the EMIS and the Treasury, it is necessary to publish assessment reports and other monitoring documents related to didactic process and school functioning (e.g. fire inspection report, etc.). Among these, surveillance and monitoring activities that are compulsory under the legal framework on schools and didactic process can be listed, and the results (reports) should be published in electronic form in the "institution file", which will be centrally stored as a component of the EMIS. Ideally, to ensure an easy access to the data of a school, it is necessary to make it possible to access all data related to a school in one place.

Another constraint is the schedule for opening and updating data. For an effective social audit, it is very important for the information to be available at the right times, when draft decisions are developed, immediately after the reporting periods (monthly and/or quarterly, biannually, annually). The information published with delay basically becomes useless, and in some situations can be daunting even for citizens to get involved.

For an effective social audit, it is not enough to have access to information about only one particular school, but it is necessary to have available similar information for as many as possible schools. Therefore, opening data for schools must become a policy for the Ministry of Education, Culture and Research, facilitating and encouraging at the same time the rayon departments for education and schools to have their own open data initiatives.

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