What to do to increase access and equity in Romanian Education?

Case study: "education divide" and "ethnic divide"

Constantin Serban IOSIFESCU[6]

Abstract. The analysis and research results regarding the state of the Romanian education system confirm not only the overall low quality of education, but also huge disparities and inequities. This paper analyze, on the basis of the data collected by ARACIP from about 85% of the school units, some issues regarding this aspect, the "education divide" and the "ethnic divide": the level of parents' education is correlated, positively, with attendance and results; on the other hand, the proportion of Roma students is also correlated with attendance and results, but negatively. Moreover, our analysis confirmed the "segregation" of schools by results and by risk factors. For this reason, the interventions meant to increase participation and improve results should be school based, integrated and flexible: the "mix" of programmes and actions must be different in different communities, schools and even at individual level.
Key words: equity in education; evidence-based decision making; quality of education.

1. Introduction

In the last years, criticisms addressed to the Romanian educational system multiplied, regarding its quality, access and equity, all having as a background the chronic under-financing. The main external stakeholders – students, parents and employers – become more and more critical. Unfortunately, this general dissatisfaction is based not on impressions or opinions, but on statistical data regarding investment in education and evolution of various indicators on participation at education and learning outcomes. There are many analyses, research results, reports confirming the critical state of education in Romania. We shall not detail them[i] but we must underline that the same analyses, research results, reports confirm not only the overall low quality of education provided in the Romanian educations system, but also huge disparities and inequities. Moreover, the evolution of the indicators regarding participation at education[ii] and results / learning outcomes[iii] demonstrate that the overall problems of the educational system are even explained by these inequities in education provision. Recent Strategic documents developed at national level (see, for instance, Partnership Agreement România, 2014) already identified four main disadvantaged categories of children as targets for EU Cohesion and Investment funds: **children from rural areas, children from low-income and poorly educated families, Roma children and children with disabilities**.

[6]PhD in Educational Sciences. Works at the Romanian Agency for Quality Assurance in Pre-University Education, Bucharest, Romania. siosifescu@gmail.com

We have already data demonstrating that the objectives set for 2020 have already been fulfilled, regarding the urban, educated population, with average and above average income. For instance, the rate of early school leavers in urban areas is under 10%, while in the rural area it is almost 30% (we remind, at an average level of more than 18% in 2015, and increasing). **Hence, the main sources for growth, which can ensure to fulfil, in 2020, the said indicators, are to be found in the disadvantaged groups cited above**.

Given that school does not succeed to correct (in the contrary, it deepens) inequality of opportunity caused by the community and family environment[iv], reform strategies aiming to increase quality will be successful and sustainable only if they also aim, constantly, to correct inequities and to enlarge access to quality education for disadvantaged groups.

In order to offer support for these policies, among other research papers, surveys, studies and reports[v], ARACIP began, in 2015, to analyze, statistically, the general data made public by the school units via the Yearly Internal Evaluation Report on Quality of Education[vi]. The first general research report, made on the basis of the collected data, was published in 2015 (ARACIP, 2015c) and the conclusions are not only confirming other analysis and surveys made at national and international levels, but also revealed some other interesting issues to be used for building robust, efficient and effective public policies in education.

We mention that this was the first exercise (for schools but for ARACIP as well) of data collection using, for this purpose, the computer application provided by ARACIP. For this reason, even we consider the conclusions of this exercise sound and useful (see below), we took them into consideration with precaution and we are looking for further confirmation. However, based on the comparison with other data sources (for instance, the National Institute of Statistics, the Institute of Educational Sciences), even if about 1000 schools have gaps and errors in their data, we may state that our data (an thus, our conclusions, as well) are correct, because they represent about 85% of school units, and similar percentages of all students and teachers.

In this paper, we present some of these conclusions and, on this basis, some specific recommendations for policy making, in order to maximize the impact on participation at education and on learning outcomes. Of course, there will be no absolute novelty in what we propose (because studies of this kind were produced before (e.g. UEFISCDI 2015), but our conclusions may be used for developing initiatives with real added value.

2. Some conclusions regarding access and equity in education: the ”education divide” and the “ethnic divide”

The correlations between results and context or input factors (such as the area where school is functioning – rural and urban – and regarding the influence of family or community wealth on participation at education and results) are made, on regular basis, and there are enough data arguing that schools in rural and poor areas have weaker participation and poorer results. For this reason, we analyze other two variables and their influence on the above

mentioned indicators: the average level of parents' education – leading to the **"education divide"** – and the percentage of Roma students – leading to the **"ethnic divide".**

We'll present, in this chapter, some results of our own research (ARACIP, 2015c) and using data made public by schools and collected by ARACIP. The general research question of the study was: **what kind of correlations exists between data, especially regarding how contextual factors (family and community) or school (existing resources) affect school attendance and learning outcomes?**

2.1. Some facts

Dropout rate is higher where parents' level of education is lower – see Figure 1 for the level of dropout according to the level of parents' education (for primary and lower secondary levels of education).

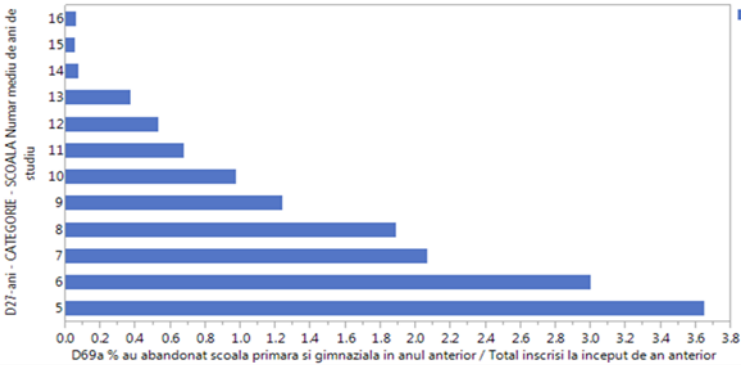

Figure 1. Dropout rate according to parents' education (for primary and lower secondary levels of education)

In schools with higher results in regular assessment and at national examinations there are parents with higher education level. Overall, a statistically significant correlation between parent education and results (current and national assessments / examinations), is registered only for urban schools. For urban high schools, there is, as well, a correlation between parents' education and the percentage of higher marks and, especially, with the percentage of high school graduates, enrolled in higher education, (see Figure 2).

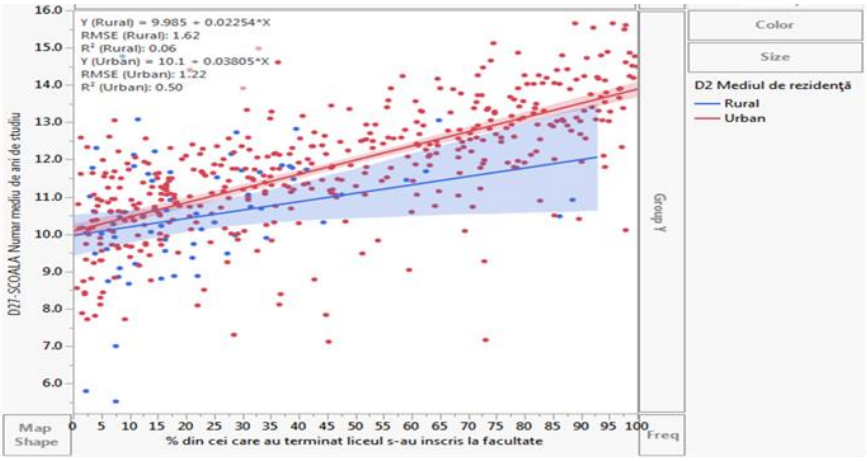

Figure 2. The correlation between the parents' education and the percentage of high school graduates enrolled in higher education

It seems that, in rural areas, schools are more able to compensate the negative impact of low education level of parents. Additional explanations for the lack of correlation, in rural schools, between the level of parents' education and results may be: the low percentage of parents with higher education in rural schools (less than 1% and half of the percentage registered 15 years ago – see ARACIP 2015a); the insignificant percentage of graduates of rural schools enrolled in higher education.

Teachers' qualification is higherin schools where parents' education is higher (see Figures 3 and 4). In Figure 3, both dimensions are put into relationship with dropout rate (higher rates are marked with red dots):

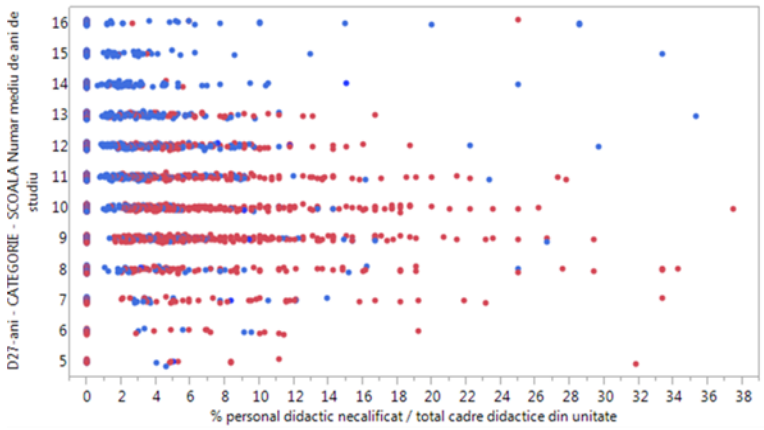

Figure 3. Distribution of unqualified teachers according with parents' education level and dropout rate

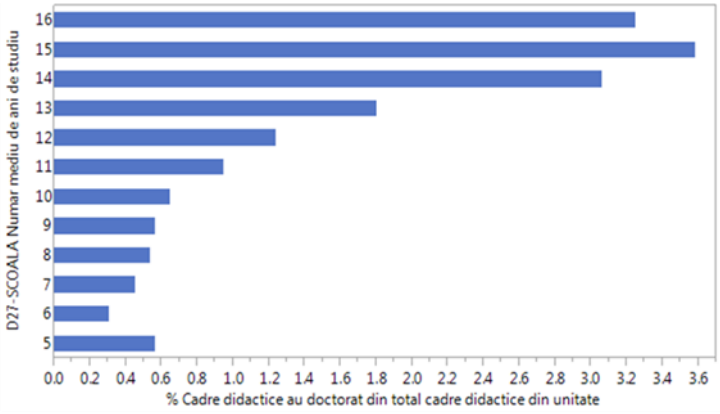

Figure 4. Percentage of teachers with PhD according to parents' education level

School attendance is lower where parents' education is lower. In Figure 5 we may see that the highest number of absences per student is registered mainly in urban areas but also in rural disadvantaged areas, in schools were parents' education level is lower. Generally, the attendance is better in rural schools. The exceptions (attendance in rural schools lower than in urban schools), are for schools where the average level of parents' education is 15 and 16 – this situation is met in suburban areas, where are located a lot of private schools collecting students from wealthy and educated families from Bucharest and other big cities.

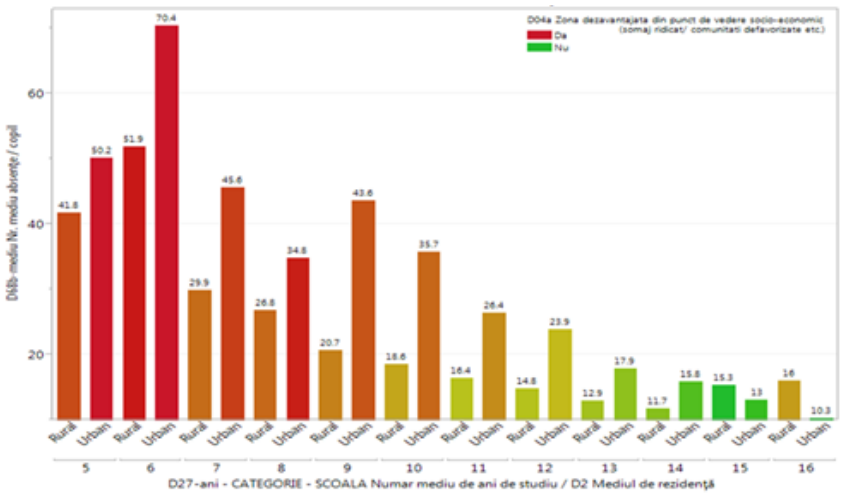

Figure 5. The average no of absences, according with the level of parents education and school position (rural/urban; disadvantaged area = red / not disadvantaged area = green)

The level of parents' education is negatively correlated with the percentage of Roma children. The level of parents' education co-varies with the ethnical composition of the school population **only** in relationship with Roma minority (see Figures 6).

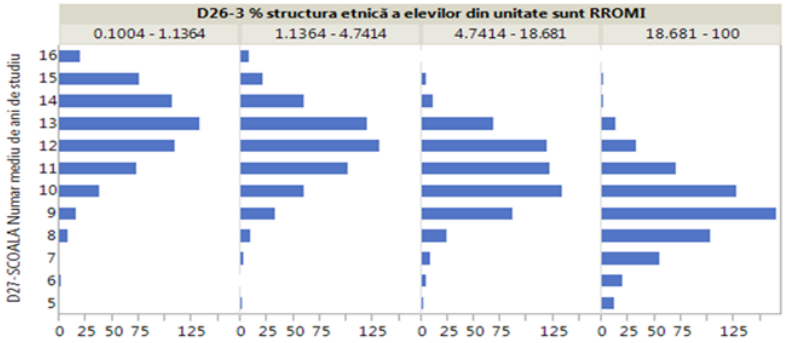

Figure 6. The level of parents' education, according with the percentage of Roma students

In the case of other ethnical groups, there are not such variations. We present, as an example, the same situation regarding the Romanian (majority) population (Figure 7):

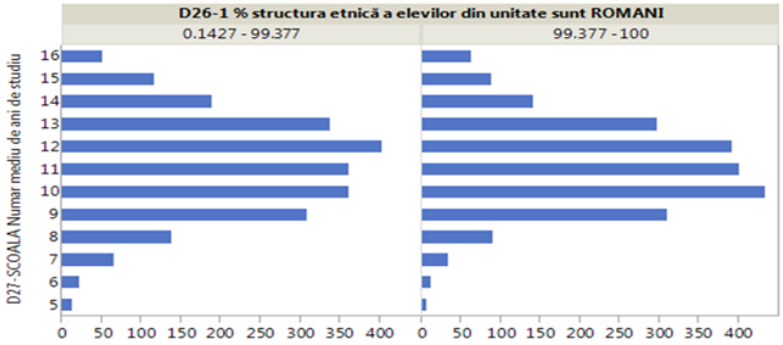

Figure 7. The level of parents' education, according with the percentage of Roma students

School attendance is lower where the percentage of Roma students is higher. Especially the **truancy is higher in rural and urban areas where the percentage of Roma students is higher** (see Figure 8):

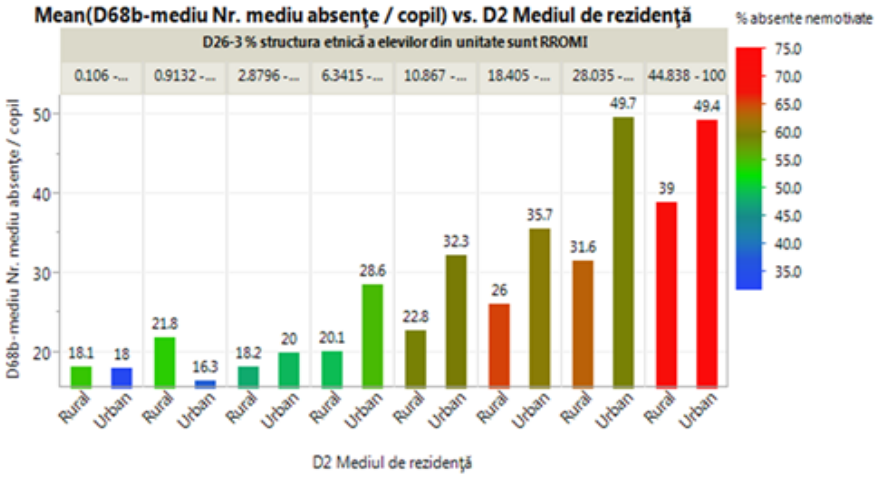

Figure 8. The average no of absences, according with the percentage of Roma students, school position (rural/urban) and the percentage of truancy (no of un-motivated absences / student: higher no = red, lower no = green)

The dropout rate is higher where the percentage of Roma students is higher. For primary and lower secondary levels of education, the dropout rate in schools where the percentage of Roma students is higher than 90% is 6-7 times higher than in schools where the percentage of Roma students is lower than 15% (see Table 1):

Table 1. Dropout rate, according to the percentage of Roma students, in primary and lower secondary schools.

% of Roma students	0.1 — 15 %	15 — 30 %	30 — 45 %	45 — 60 %	60 — 75 %	75 — 90 %	90 — 100 %
Dropout rate in the previous school year – primary level of education	0.6 %	1.3 %	2.0 %	2.5 %	1.9 %	1.7 %	3.5 %
Dropout rate in the previous school year – lower secondary level of education	0.8 %	2.0 %	3.9 %	3.7 %	3.5 %	4.0 %	5.7 %

2.2. Discussion

As a primary conclusion, our research confirms the results of other similar investigations: school attendance, dropout rate and results (learning outcomes) are highly influenced by two main factors, **the level of parents' education and the percentage of Roma students.** We may assume too that **these two variables are inter-correlated**, as well (further investigation being needed in this respect). There are other factors influencing the above mentioned indicators – such as the school location (rural / urban) and the wealth of the community. These other factors are, of course, are correlated with the ones we mentioned above: for instance, he level of education is correlated with individual income (UNICEF, 2015).

But, on the other hand, planning interventions and support programmes having in mind only the area (e.g. programmes only for rural areas) or only the poverty level **may be misleading and not having the intended results.** For instance, the learning outcomes (results at national / international assessments and examinations) are better correlated with the educational level of the families, while attendance and dropout are better correlated with wealth. In other words**: wealth may bring students in schools, but parents' education forecast the level of their school attainment**.

Another example: there are wealthy rural areas (e.g. several areas surrounding big urban centres), not needing interventions for raising income or for developing the local economy. But these areas may need increased educational support, in order to improve the passing rates in high school and higher education.

The ethnical composition of the school population - i.e. higher percentage of Roma students – is another indicator to be taken into consideration in describing risks and vulnerabilities at school level. Roma families cumulate, usually, all disadvantages: they are poor, poorly educated, with high unemployment, with health and housing problems. So, we may assume (of course, this statement too needs further research) **that the percentage of Roma students may be the most important factor affecting participation at education and results**. On this basis, improving both education participation and attainment in schools functioning in Roma communities is a must, having in mind the demographic evolutions as well: "young Roma are entering labour markets at much higher rates than aging majority populations: 1 in 5 of new labour market entrants in Bulgaria, Romania, and Serbia are Roma" (World Bank, Europe and Central Asia, 2010, p.4).

On top of this, the existing resources in schools are correlated with the input and context factors and with results, as well (for these correlations regarding human resources[vii], see above, and for the financial ones – see UNICEF, 2015).

Going more in depth, the data we have **confirms the "segregation" of schools by results** (PISA, 2013): between-school differences in PISA results are higher, in Romania, than OECD average and the differences in results within-school are lower than the OECD average. Likewise, the variation within results is explained more by school position (within the community) than by students' socio-economic status within school.

And this segregation of schools is not only by results: **we have schools cumulating advantages** (wealthy and educated families, better qualified teachers and more resources, low percentage of Roma and disabled students) **and performing well** (low dropout rate, low level of absenteeism, high graduation and survival rates in high school and higher education etc.). But **we also have schools cumulating disadvantages** (poor and poorly educated families, less qualified teachers, fewer resources, higher percentages of Roma and disabled students) **and, of course, performing poorly** (high dropout rate and absenteeism, low graduation and survival rates in high school and higher education etc.). And this "segregation" is not entirely by locality: for instance, in a small town in Moldova with three schools, almost all Roma students are gathered in only one.

3. A summary of recommendations

All the factors influencing negatively participation at education and results are, usually, cumulated, but they may blend in various ways. For these reasons, if we **aim to improve participation at education and learning outcomes**, the interventions:

- **Must be school based.**
- **Must be cumulated, in order to address all local, specific risk factors**.
- **Should be "mixed" in different ways - in different communities, in different schools** (even in the same community) **and even for different individuals**.

For instance, in the same community, some schools may need interventions at the level of basic conditions (infrastructure: water, sewerage etc.), others may not need such interventions. Some schools will need more equipment and teaching aids, other will need only better qualified teachers etc.

The same with support measures at individual level: some students need the financial and educational support, other students need only educational **or** financial support (for instance, disabled students may need financial support, but not educational or vice versa).

The international practices demonstrate that **integrated interventions** (addressing, from different angles and with different kinds of support, coming from different institutions) demonstrate the highest impact and return on investment (Edwards and Downes, 2013) because of **their cumulative effects**: better housing and financial support for families, correlated with better teachers will increase participation and will improve the results; better education attainment will increase earnings and employment opportunities. On the other hand, a hungry or abused child will not learn, until the lower levels of needs are satisfied. The same, efforts made to ensure professional qualification will become useless if there are no employment opportunities in the local community.

So, the interventions should be "**menu based**", each community selecting, from this "menu", for each school and even for each individual, the most adequate support measures.

For this reason, in Roma communities, where all risk factors cumulate, **the interventions should be cumulated, as well**: economic (financial support – as "conditional cash transfer or not –, employment opportunities, "social economy" etc.), social (judicial support, prevention of child abuse and child work, day centres etc.) and educational (better paid and better qualified teachers, tutoring and recovery programs, extra support teachers etc.). In this blend, **scholarships and other incentives for "resilience"** are a must. In order to "blend" interventions in an adequate ways, there must be enough **financial flexibility**, at community and school level.

Of course, this **"a la carte" system of interventions and the financial flexibility** must be completed with a robust and powerful evaluation system, based on clear indicators and with early warning mechanisms, and t**he main outcomes of this intervention system will be continuously diminished "segregation" among schools and individuals (regarding participation and results), diminished "education divide" and "ethnic divide", improved overall quality of education, demonstrated, at its turn, by better results at national and international evaluations and examinations.**

References

Analiza sistemului de învățământ preuniversitar din România din perspectiva unor indicatori statistici. Politici educaționale bazate pe date (2015). București: Institutul de Științe ale Educației – accessed at http://www.ise.ro/analiza-sistemului-de-invatamant-preuniversitar-din-romania-din-perspectiva-unor-indicatori-statistici-politici-educationale-bazate-pe-date on 25 May 2016

ARACIP (2013). *Studiu național privind stadiul dezvoltării culturii calității La nivelul sistemului de învățământ preuniversitar*. București/Cluj-Napoca: ARACIP/Qual Media – accessed at http://www.edu.ro/index.php/articles/c949/ on 25 May 2016.

ARACIP (2015a). Raport național privind starea calității în unitățile de învățământ preuniversitar public din mediul rural. București: ARACIP – accessed at http://www.edu.ro/index.php/articles/23519 on 25 May 2016 .

ARACIP (2015b). Studiu privind nivelul calității serviciilor educaționale înregistrat prin standardele în vigoare și cel înregistrat prin noile standarde, precum și privind mecanismele, standardele și procedurile de evaluare internă și externă în România și în alte țări din Uniunea Europeană. București: ARACIP – Accesed at http://www.edu.ro/index.php/articles/23825 on 25 May 2016.

ARACIP (2015c). Rapoarte de cercetare ARACIP - Volumul II 2015. Concluzii rezultate din analiza datelor colectate în anul școlar 2013-2014. București: ARACIP – accessed at http://www.edu.ro/index.php/articles/23792 on 25 May 2016.

Country Fact Sheet- Romania (2013). Directorate-General Regional and Urban Policy Analysis Unit B1 (2013). *Country Fact Sheet- Romania 2013* - accessed at http://ec.europa.eu/regional_policy/sources/docgener/informat/country2012/country_ro_en.pdf on 25 May 2016

Education and Training Monitor (2013, 2014, 2015) – accessed at http://ec.europa.eu/education/tools/et-monitor_ro.htm on 25 May 2016

Edwards, A., Downes, P. (2013). *Alliances for Inclusion: Cross-sector policy synergies and interprofessional collaboration in and around schools. An independent report authored for the European Commission*. Brussels: European Commission.

Hanushek, E., Voessmann, L. (2010). *The Cost of Low Educational Achievement in the European Union*. EENEE Analytical Report No. 7 Prepared for the European Commission – accessed at http://www.eenee.de/portal/page/portal/EENEEContent/_IMPORT_TELECENTRUM/DOCS/EENEE_AR7.pdf on 25 May 2016.

McKinsey (2007). Barber, M., Mourshed M. (2007*). How the World's Best-Performing School Systems Come Out on Top*. McKinsey and Company – accessed at http://mckinseyonsociety.com/how-the-worlds-best-performing-schools-come-out-on-top/ on 25 May 2016.

McKinsey (2009). *The Economic Impact of the Achievement Gap in America's Schools* (2009), McKinsey & Company, Social Sector Office – accessed at http://mckinseyonsociety.com/downloads/reports/Education/achievement_gap_report.pdf on 25 May 2016.

OECD (2013). OECD Skills Outlook 2013 – accesed at http://skills.oecd.org/skillsoutlook.html on 25 May 2016.

Partnership Agreement România (2014). *Partnership Agreement România* 2014. RO16M8PA001.1.0. – accessed at http://europa.eu/rapid/press-release_IP-14-907_en.htm on 25 May 2016.

PIRLS (2011). Mullis, I., Martin, O., Foy., P., Drucker, K. (2012). *PIRLS 2011 International Results in Reading*. Boston / Amsterdam: TIMSS & PIRLS International Study Center, Lynch School of Education; International Association for the Evaluation of Educational Achievement (IEA) Secretariat – accessed at http://timssandpirls.bc.edu/isc/publications.html on 25 May 2016.

PISA (2013). *PISA 2012 Results: Excellence Through Equity: Giving Every Student the Chance to Succeed (Volume II)* (2013). Paris: OECD – accessed at http://www.oecd.org/pisa/keyfindings/pisa-2012-results-volume-ii.htm on 25 May 2016.

PISA (2014). *PISA 2012 Results: What Students Know and Can do: Student Performance in Mathematics, Reading and Science (Volume I). Revised edition February 2014*. Paris: OECD – accessed at http://www.oecd.org/pisa/keyfindings/pisa-2012-results-volume-i.htm on 25 May 2016.

TIMSS (2011) Mullis, I., Martin, O., Foy., P., Alka A. (2012). *TIMSS 2011 International Results in Mathematics*. Boston / Amsterdam: TIMSS & PIRLS International Study Center, Lynch School of Education; International Association for the Evaluation of Educational Achievement (IEA) Secretariat; Martin, O., Mullis, I., Foy., P., Stanco, G. (2012). *TIMSS 2011 International Results in Science*. Boston / Amsterdam: TIMSS & PIRLS International Study Center, Lynch School of Education; International Association for the Evaluation of

Educational Achievement (IEA) Secretariat – accessed at http://timssandpirls.bc.edu/isc/publications.html on 25 May 2016.

UEFISCDI (2015). *Higher Education Policy Series No. 13. Cadru strategic pentru un învățământ superior echitabi*l. București: UEFISCDI/Prospective Press – accessed at http://uefiscdi.gov.ro/Upload/e760f24a-7c52-4b2a-869e-27b45dd41c62.pdfon 25 May 2016.

UNICEF (2012). Fartuşnic, C. (Coord.), et alii (2012). *Toţi copiii la şcoală până în 2015. Iniţiativa globală privind copiii în afara sistemului de educaţie Studiu Naţional – România. Analiza situaţiei copiilor aflaţi în afara sistemului de educaţie în România.* București/Buzău: UNICEF/Alpha MDN – accessed at http://www.unicef.ro/publicatii/#Educatie on 25 May 2016.

UNICEF (2014a). Fartuşnic, C. (Coord.), et alii (2014). *Participarea la educaţie în învăţământul secundar superior - o provocare pentru politicile curente în România*. București/Buzău: UNICEF/Alpha MDN – accessed at http://www.unicef.ro/publicatii/#Educatie on 25 May 2016.

UNICEF (2014b). Fartușnic, C., *et alii* (2014). *Finanțarea sistemului de învățământ preuniversitar pe baza standardelor de cost: o evaluare curentă din perspectiva echității*. București: UNICEF/Vanemonde – accessed at http://www.unicef.ro/publicatii/#Educatie on 25 May 2016.

UNICEF (2015). *Costul investiţiei insuficiente în educaţie în România : raport final pentru UNICEF* (2015). București / Buzău: UNICEF / Alpha MDM – accessed at http://www.unicef.ro/publicatii/#Educatie on 25 May 2016.

World Bank, Europe and Central Asia (2010), *Roma Inclusion: An Economic Opportunity for Bulgaria, Czech Republic, Romania and Serbia*, (Human Development Sector Unit, Europe and Central Asia Region, 2010) – accessed at http://documents.worldbank.org/curated/en/2010/01/16371249/roma-inclusion-economic-opportunity-bulgaria-czech-republic-romania-serbia - on 25 May 2015.