COVID-19 AND THE GEORGIAN EDUCATION SECTOR

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2. INTRODUCTION

The research was conducted in the scope of the project "Increase Efficieny of Public Services in the Georgia Education System" funded by the Open Society Foundations (OSF). Against the background of a developing economy and a low degree of technical development, the education sector may be one of the most vulnerable in Georgia amid the conditions created by the COVID-19 pandemic and distance learning requirements. The aim of this project is to assess existing challenges and offer recommendations regarding possible measures to tackle them to stakeholders.

Considering Pisa Scores (70th out of 78 countries)[1], Georgia's education sector performance is quite disappointing. General problems in the sector include: Ageing of teachers in public schools and low wages in the sector, which decreases popularity of teaching; Poor technical equipment in schools and lack of training possibilities for respective personnel; high share of population living below the national poverty line and lacking access to the necessary literature or other learning materials are all core challenges in the sector. Additionally, the COVID-19 pandemic and subsequent lockdowns and safety regulations have led to decreased duration of classes and efficiency of the studying process.

Implementation of strategic planning in education is vital because education is an investment in human capital, and it is important for the sustainable economic development, financial stability, social well-being, and prosperity of our country. High-quality education promotes well-being and is a necessary prerequisite for personal, social, and professional development. To achieve these goals, the education system must be accessible to all and provide all citizens of the country with the opportunity to achieve high-quality sustainable outcomes.

To examine the above-mentioned problems and increase the quality and coverage of public services during and after the pandemic, the project team has implemented the following activities during the research process:

- The research team has conducted sector preliminary analyses and developed a research structure. Collected data was used for the quantitative and qualitative analysis of the sector.

[1] *The OECD International Student Assessment Program (PISA) measures reading, math, and science knowledge and skills in 15-year-olds.*

- The project team has developed 22 different FOI Requests related to the implemented regulations, study process, teacher's trainings, and related costs during the COVID-19 pandemic. FOI requests was sent to four public organizations: Ministry of Education, Science, Culture and Sport (MES); Education Management Information System; Teachers Development National Centre, and Georgian Public Broadcaster.

- To evaluate government actions in response to the COVID-19 pandemic and analyze financial costs before and during the pandemic period, the research team has started monitoring the spending of Ministry of Education, Science, Culture and Sport and its subsidiary public organizations through the government e-portal. Monitoring covers the years 2019, 2020 and 2021.

- Focus groups of teachers, parents, and school administration were selected from Tbilisi and other regions and problems brought by COVID-19 were analyzed based on the feedback from focus group participants. After the meetings with the focus groups, the project team has developed online questionnaires and disseminated to the broad auditory. Findings were analyzed and included in the research.

- The NGO "parents for education" and the "Educators and Scientists Free Trade Union of Georgia" were our partners in the scope of the project, and sociologist Giorgi Urchukhishvili assisted with the qualitative research

The Internet and digital technologies have played a vital role in alleviating some of the hardships caused by the ongoing pandemic. Due to the limitations on the freedom of movement, the educational process has partially or fully shifted to distance-learning for a large part of the population, using Microsoft Teams as a platform for conducting online classes at the secondary education level. Consequently, the demand for online access to private and public services has increased significantly.

The lack of Internet access throughout this period has become a serious impediment for many. A significant portion of Georgia's population is currently facing numerous challenges in this regard. This report will attempt to examine the state of internet access throughout Georgia based on the official data collected and published by the Communications Commission, National Statistics Office of Georgia (GeoStat), and other relevant sources.

Due to the COVID-19 pandemic, focus group meetings and other activities were held on online platforms. Sector knowledge and feedback from the sector participants that was gained, including from teachers, parents, and the school representative bodies, is reflected in the study findings and policy recommendations.

The Institute for Development of Freedom of Information plans to increase social awareness about the challenges in the sector by publishing the research papers and presenting the findings to the broader public.

3. MAIN FINDINGS

Georgia Ranks 70th out of 78 countries in terms of average score in reading, math, and science. International student assessment from the organization for Economic Cooperation and Development (OECD) has placed Georgia in the bottom eight out of 79 countries. While behind all neighboring countries and most of developing ones, only countries like Kosovo, Lebanon, and Morocco lag behind Georgia according to PISA 2018 results.

The allocation of resources to education as a % of GDP is low in Georgia compared to the EU and OECD average. Expenditure on education was increasing, on average, by 7.7% annually in a nine-year period (7.1% adjusted for inflation) and reached GEL 2 bln in 2020. However, it has been broadly unchanged as a share of GDP in the same period and accounted for 4.1% in 2020. This number remains low compared to the OECD average (5% in 2017) and the EU (4.7% in 2019).

Covid-19 pandemic led to a decrease in pupils in private educational schools by -5% at the expense of the growth of the number of pupils in public schools. This was mainly due to the economic contraction and real GDP growth of -6.2%[2] in 2020. Public schools accounted for nearly 90% of pupils in 2020, but this share was decreasing with the economic growth and higher attractiveness of private schools in the previous years, and the public schools were becoming increasingly attractive prior to years 2020/2021.

[2] *GeoStat, preliminary results*

Distance learning in the Georgian education system had not been utilized before the pandemic and the country was unprepared for the new challenges. 38% of households did not have computers and 16% lacked internet access in 2020.

Nearly 11% of total pupils and teachers have not used online study program TEAMS. The population had a problem with involvement in the distance learning process. In the distance learning process, schools had to use the Microsoft Teams program. 65k pupils and 7k teachers did not use TEAMS in the 2020/2021 study years.

The teaching profession is becoming less attractive in Georgia. Average teacher salaries are nearly 40% below the average salary in the country, and the number of teachers decreased by -7% to 64k in the 2020-2021 study year compared to the 2013-2014 study year. At the same time, pupils per teacher increased by 24% and 13% in private and public schools and reached 8.0 and 9.5, respectively, in the same period.

Nearly 1.4% of students dropped out of school in the 2019/2020 school year. The share of boys in these students was 59%. Although primary and basic education is required in Georgia, 42% of students who dropped out in 2019/2020 were below the tenth grade.

The requirements for school graduation exams might be too low in Georgia. High school graduation rate is 96% in Georgia, which is one of the highest numbers in the world. Only South Korea has a higher number. However, PISA scores and other quality indicators signal that school education programs and quality of education are poor.

Vocational programs do not fully meet the demands of the labor market and popularity of vocational institutions has decreased sharply in the last few years. The number of vocational institutions was 92 in 2020. Broadly unchanged compared to the 2013 year, but the number of enrolled students has decreased by 55%, to 9,399, in the same period. It should be mentioned that nearly half of EU students choose to study in vocational education programs, compared to the 4.2% in Georgia.

Demand for higher educational institutions has increased, especially for private institutions. The average number of students per higher education institution accounted for 2,500 in 2020/2021 study year, +27% higher compared to the 2012/2013 study year. At the same time, the number of students in private institutions increased by

+92%, to 157k, in the 2020/2021 study year, compared to the +18% growth in public institutions in the same period.

While private institutions became more attractive, the graduation rate in private higher educational institutions is lower compared to state institutions. Average graduation rate in public higher educational institution was 69% in 2012-2020 years, +16% higher compared to the private educational institutions in the same period.

Higher educational institutions could be overcrowded, and compulsory military service could be the reason for the low graduation rate. Students are exempt from military services during their study semester, which may lead to deliberate failures on the exams to extend study semester and incentivizes youth (under 27 age) to "pursue" PhD degrees at earlier ages.

Against the backdrop of restrictions imposed during the COVID-19 pandemic, internet consumption in the country increased almost 2.2 times. By 2020, mobile internet traffic had reached 192,315 terabytes, an increase of 119% compared to 2019.

Households do not have enough computers to provide distance learning opportunities for all students. According to the quantitative survey, only 60% of the participants use a personal computer for learning, while the rest of the respondents use other techniques. Given that not all families have a personal computer and large families often do not have several computers, using other technical devices is the only solution.

According to our estimates, up to GEL 100 mln is needed to provide computers and internet to socially vulnerable families and give them access to online learning platforms. According to the Social Service Agency, there are 96,000 students living in such families, of which 78,000 are estimated not to have access to the Internet or a computer.

Georgia surpassed other countries in the stringency index, except for Azerbaijan. Stringency index indicates that GoG introduced lockdown policy was strict in Georgia, compared to the EU and neighboring countries.

- Social inequality between Tbilisi and the regions

The distance learning process presents a bigger challenge in villages and regions compared to large cities. The share of households in rural areas that did not have computers and internet was 68% and 26%, respectively. However, during the same period, the share of households in cities with similar challenges was 24% and 9%, respectively.

473 villages and in total up to 2,000 settlements are still waiting for high-speed access to the internet, which should be granted under the "Universal Internetization Project" announced by the GoG in 2015. The project was to be financed by the "Cartu Fund" and, according to the initial estimates, would require up to USD 125-150 mln investment. However, the project implementer "Open Net" only received a total of GEL 3 mln in 2015-2017, and financing was stopped thereafter.

The TEAMS software was used less frequently in the regions. Of the students and teachers who did not use the TEAMS program, 91% and 98% of the total rates come from the regions, respectively. In Tbilisi, the problem is less acute and only 9% and 2% of students and teachers did not use the program.

Following the lifting of the restrictions, pupils still choose the traditional methods of schooling over distance learning, despite the risks from COVID-19 pandemic. After the lockdowns and reopening of schools, more than half of pupils went back to the schools. 75% of pupils living in rural areas returned to schools after their reopening, versus 46% of pupils living in urban areas.

- Economic impact of the COVID-19 pandemic on the educational sector

Internet is becoming more popular in the country, but high-quality internet is unavailable in rural, mountainous areas. The number of internet users grew by +8.7% and +5.8% YoY in 2019 and 2020 years and reached one mln subscribers. The most widely used internet-technology is the fiber-optic service, which was provided to almost 84% of total subscribers in 2020, +2% and +9% higher compared to 2019 and 2018 years, respectively. However, the provision of fiber-optic internet is related to the infrastructural constraints and is limited in the rural regions.

Expected productivity of pupils in Georgian schools is the lowest among regional and other countries. The Worldbank Human Capital Index (HCI) was launched in October 2018 and was updated in 2020 just before the pandemic started. Calculated rate for Georgia is 0.57 and is quite low compared to the neighboring and other European countries.

Present Value of (PV) Learning Losses for the Georgian economy reaches GEL 55 bln[3]. Due to the Covid-19 pandemic, GoG closed schools for one month and launched remote learning platforms to prevent the spread of the virus on the 4th of March 2020. Introduced lockdowns and low experience in distance learning decreases effectiveness in the studying process and is expected to have long-term consequences on the country's growth potential. It is also important to note that our estimates are close to the losses calculated in the medium intensity scenario in a study published by the Asian Development Bank in April 2021: "Losses of Education and Income from School Closures Caused by the COVID-19 Pandemic."

A significant number of the population in Georgia lacks access to technology and the internet:

- As of July 2020, 7.1% of children between the ages of 6 to 14 had never used the Internet;
- Approximately 35,000 children did not have access to distance-learning tools during the pandemic lockdowns;
- Out of 65 municipalities, less than 10 have a fiber-optic internet penetration rate above 50%;
- There are up to 10 municipalities with a fiber-optic penetration rate below 5%, covering up to 50,000 total inhabitants;
- In 2020, only 62% of households reported having a computer at home;

[3] *Assessment of the Institute for Development of Freedom of Information. The methodology is based on World Bank data.*

The issues representing the most significant challenges as revealed by the qualitative study and quantitative survey:

- **Socially vulnerable students and ones living in rural regions face more challenges with distance learning than students living in Tbilisi.** Challenges in rural areas include: problems of availability of internet access and corresponding technology to engage in distance learning, especially for socially vulnerable consumers and students in large families who do not have high quality of internet and several gadgets;

- **Lack of technical skills of teachers and parents to manage and attend online classes and upload homework is challenging for the study process.** Problems such as the length of the online lesson and the large number of students were prevalent in both Tbilisi and regional schools, and respondents underlined that the mentioned issues decreases the effectiveness of online lectures;

- **Distance learning may have been more stressful and problematic for elementary school students than for middle and high school students.** Challenges includes uploading homework, continuing depressive moods and so on. Respondents mostly agree that distance learning has no gender. Only one respondent stated that girls and boys were faced with almost the same problems and challenges during this period;

- **Quantitative survey has indicated that quality of studies decreased with distance learning. Non-attendance rate increased significantly compared to classroom studies, as well as compared to the starting period of pandemic as opposed to its later phase.** Quality of learning along with academic performance worsened in most of the cases compared to offline studies. Additionally, free internet was most demanded assistance respondents wish they could have had during pandemic.

4. EDUCATION SECTOR STRUCTURE

Georgia's education system consists of four pillars, which are: Early and Preschool Education, General Education, Vocational Education, and Higher Education. The right to receive education and choose its form in Georgia is guaranteed by the Constitution. Nearly 1 mln children, pupils, and students are enrolled in the education sector.

Early and preschool education, including the school readiness program, is voluntary. The age of children at this level is from 0 up to 5 years. No official document will be issued after the completion of the relevant program and is not a prerequisite for entering a school. Currently, 158k children visit Preschool Education Care (PEC) institutions in Georgia.

General education is regulated by the laws of Georgia "On General Education" and "On Education Quality Enhancement"; study in general educational institutions is carried out according to the National Curriculum, developed by the National Curriculum Department of the Ministry of Education, Science, Culture & Sport of Georgia. Full general education includes three levels (elementary, basic, secondary) and lasts 12 years.

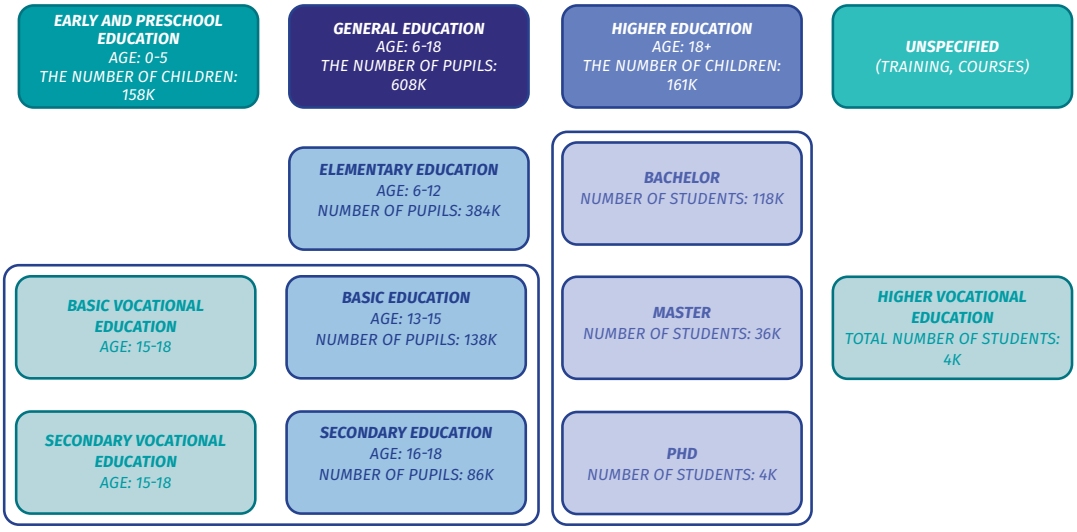
- Elementary education includes 6 years of study, which is implemented in I-VI grades (the average age of children: 6-12);
- Basic education includes 3 years (VII-IX grades, the average age of children: 13-15);
- Secondary education includes 3 years (X-XII grades, the average age of children: 16-18).

Elementary and basic education is mandatory in Georgia. A person who completes the full general education and receives the certificate (Atestate) has the right to continue learning at higher education institution. A person who completes the Basic education has the right to continue studies on the secondary education level of the general education or primary level of vocational education.

Higher and vocational education is regulated by the laws of Georgia "On Higher Education", "On Vocational Education", "On Education Quality Enhancement", and other legal sub-acts. Georgia has a three-cycle higher education system and is implemented on the bachelor (includes 4 years), master (includes 2 years), and doctoral levels (includes 3 years) of higher education.

Educational services in Georgia are provided by three types of institutions: public non-profit (state-funded and managed organizations), private commercial institutions established for profit in the private sector, and private non-profit institutions that are not established for profit (for example schools of the Georgian Patriarchy). It should be noted that the tax system is favorable for the private sector as education is exempt from value-added tax (VAT).

Table 1: The Georgian education market structure in 2020



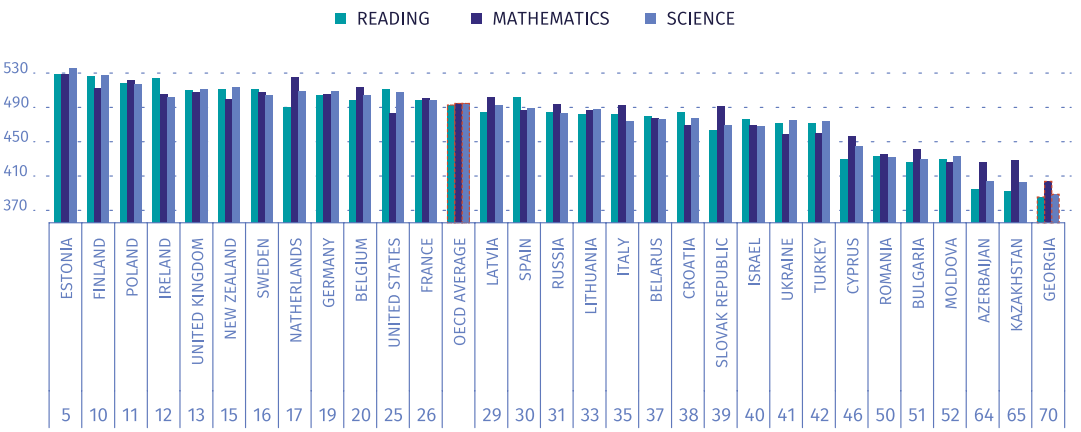
Source: National Center for Educational Quality Enhancement, IDFI

4.1 THE EDUCATION SECTOR

In recent years, numerous reforms have been carried out with the purpose of fundamentally restructuring the old-fashioned education system, changing its institutional structure, eliminating corruption, granting autonomy to universities, and introducing European standards. The fact is that all these reforms have not yet yielded significant results and the Georgian education system still faces many challenges and occupies the last positions in world rankings in terms of education.

The results of PISA show that the Georgian education system needs significant changes. Georgia Ranks 70th out of 78 countries by summed up score of reading, math, and science. We lag behind all neighboring and developed countries.

Fig 1: PISA 2018 Results

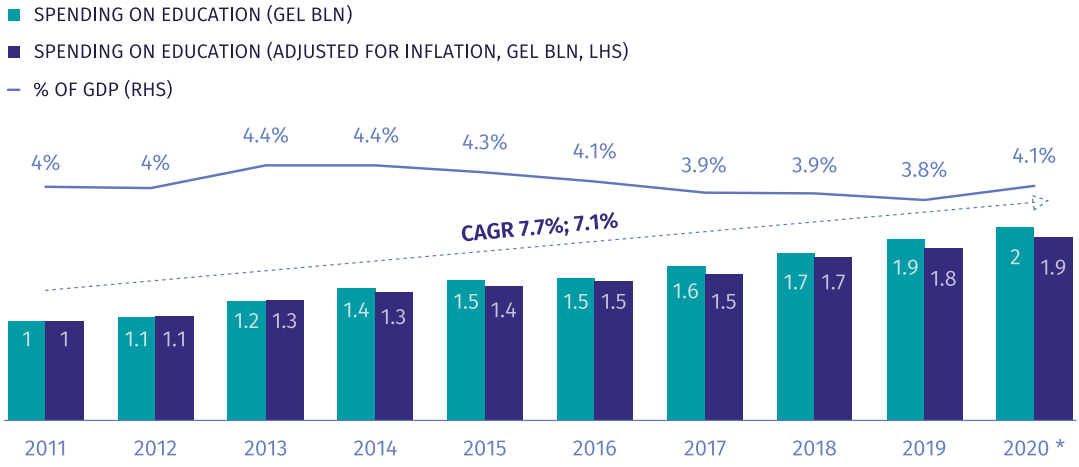


Source: World Development Indicators, IDFI

Note: Numbers below show where is a country in PISA 2018 ranking, by summed up score of reading, mathematics & science. (In case of Spain is given 2015 results)

Spending on education has increased at a 7.7% CAGR (7.1% when adjusted for inflation) over the last nine years and reached GEL 2 bln in 2020. However, it has been broadly unchanged as a share of GDP in the same period and accounted for 4.1% in 2020.

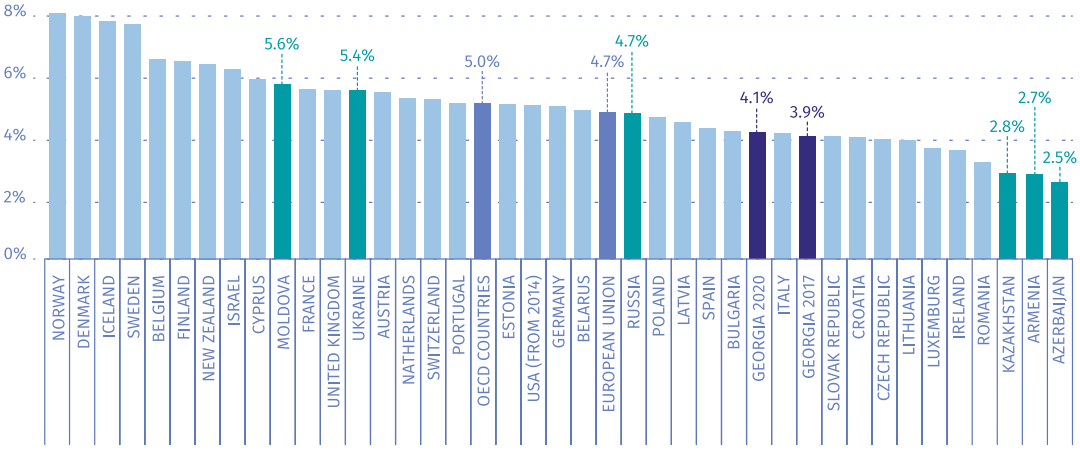
Fig 2: Expenditure on education (GEL, bln) and % share in nominal GDP



Source: GeoStat, IDFI

Expenditure on education in Georgia as a % of GDP was lower compared to the OECD average (5% in 2017) and EU (4.7%) and Russia (4.7%), but higher compared to the neighboring Armenia (2.7%) and Azerbaijan (2.5%).

Fig 3: Share of education in GDP in 2017 (Georgia: 2017 and 2020)



Source: World Development Indicators, IDFI

Note: Data is from 2017

State budget expenditure in Georgia was planned at GEL 12.7 bln in 2020 and is expected to Increase by 1.2% to GEL 12.8 bln in 2021. Payments on education, science, culture, and sports was planned at 11.3% of total in 2020 and is projected at 13.2% of total (+1.9 p.p.) in 2021, translating into +18% higher spending on education.

Pre-school and general education have the highest share of the total, and accounted to 70% of total government financing in 2020. This could be explained by the fact that pre-school and general Education are mostly state-financed, whereas costs for higher education are partially covered by the students (except for the government-paid scholarships for certain groups of students).

Fig 4: State Budget Payments (mln GEL)

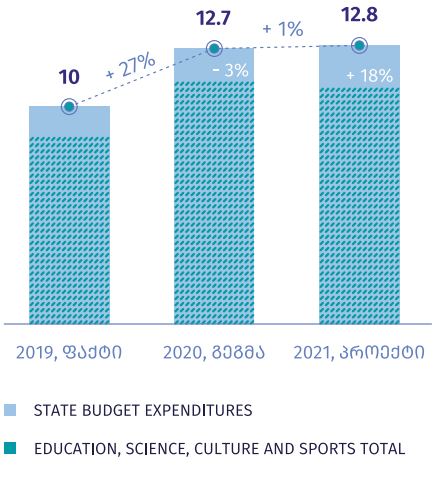
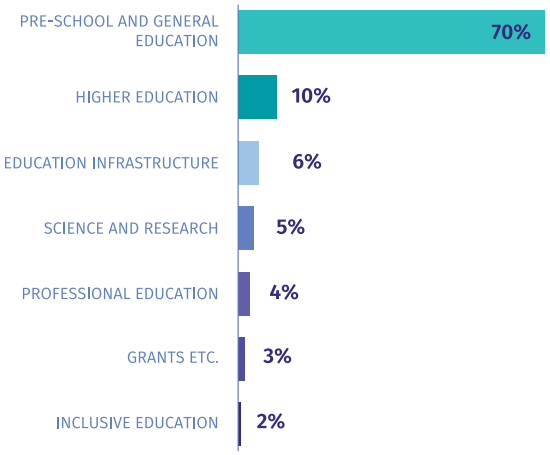


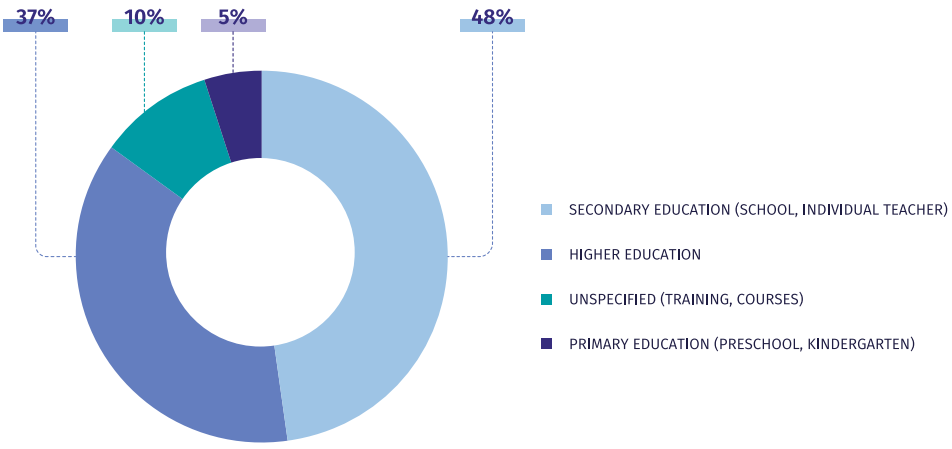
Fig 5: Structure of state education expenditures (bln GEL) in 2020



Source: Ministry of Finance of Georgia, IDFI

A greater proportion of household expenditures went to secondary (48%) and higher education (37%) in 2020. It should be noted that secondary education is mostly state-financed and share of household expenditure on secondary education is very low. Only 10% of pupils visit private schools, while 90% still rely on state financing.

Fig 6: Structure of domestic expenditure on education, including state financing in 2020



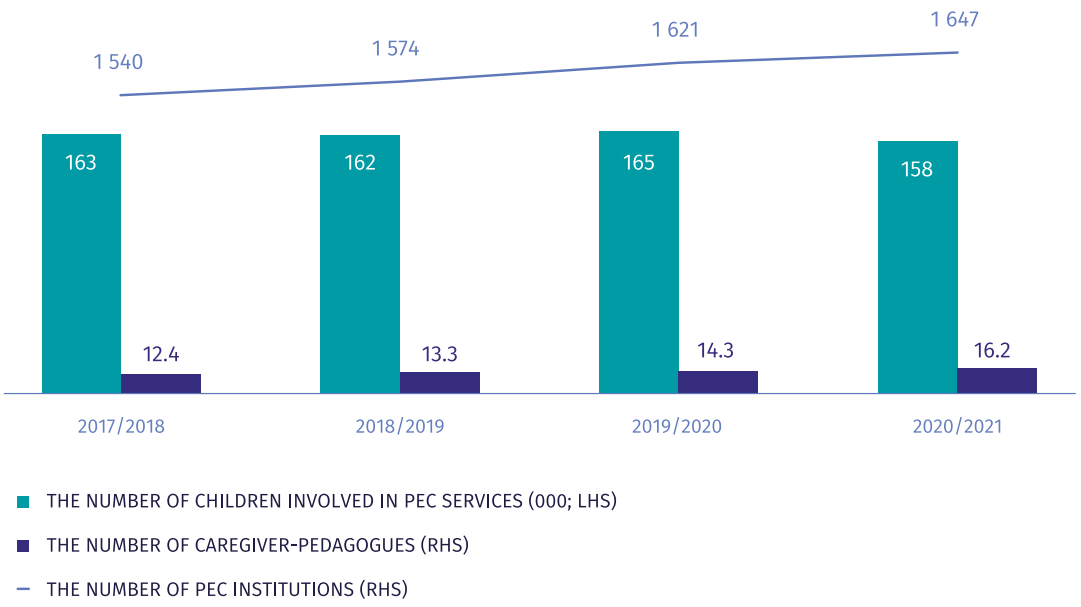
Source: GeoStat, IDFI

4.2 PRESCHOOL EDUCATION

Education at an early age is extremely important, as it lays the foundation for the further growth and development of the child. Investment in early childhood development has a positive impact on the health, well-being, socialization, education, and protection of children and supports the country's economic growth in the long term.

The number of PEC institutions and the number of caregivers-pedagogues increased per child. The number of PEC institutions increased to 1,647 in the years 2020/2021, up by +6.9%, compared to the 2017/2018 study year. The number of caregivers-pedagogues amounted to 16,234 in 2020/2021, up by +31% in the same period. In contrast, the number of children involved in PEC institutions decreased by -3% in the four-year period, to 158,000 in the years 2020/2021.

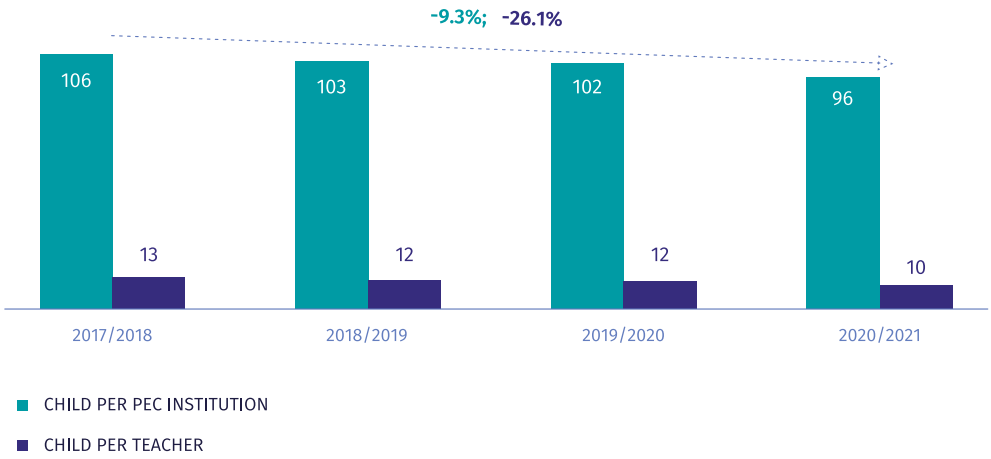
Fig 7: Indicators on public preschool education and care (PEC) institutions (at the beginning of school year, unit)



Source: GeoStat, IDFI

The quality of PEC services was expected to increase in the four-year period. The child-teacher ratio has decreased to 10 in 2020/2021, down -26.1% compared to 2017/2018, and on average there are 97 children per PEC institution, -9.3% lower, in the same period.

Fig 8: Child number per PEC institution and child per teacher ratio



Source: GeoStat, IDFI

From the regional outlook, Tbilisi accounts for 37% of children and 31% of caregivers-pedagogues. Number of PEC institutions is not proportionally distributed, given the size differences. However, the capital seems overcrowded, with 12 children per teacher, compared to the country average of 10.

Fig 9: Number of children in PEC institutions in 2020-2021

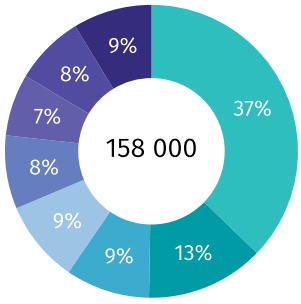
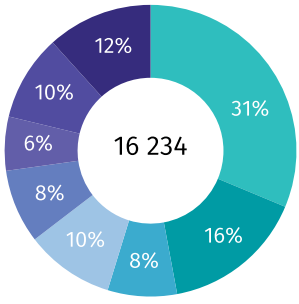


Fig 10: The number of caregiver-pedagogue in 2020-2021



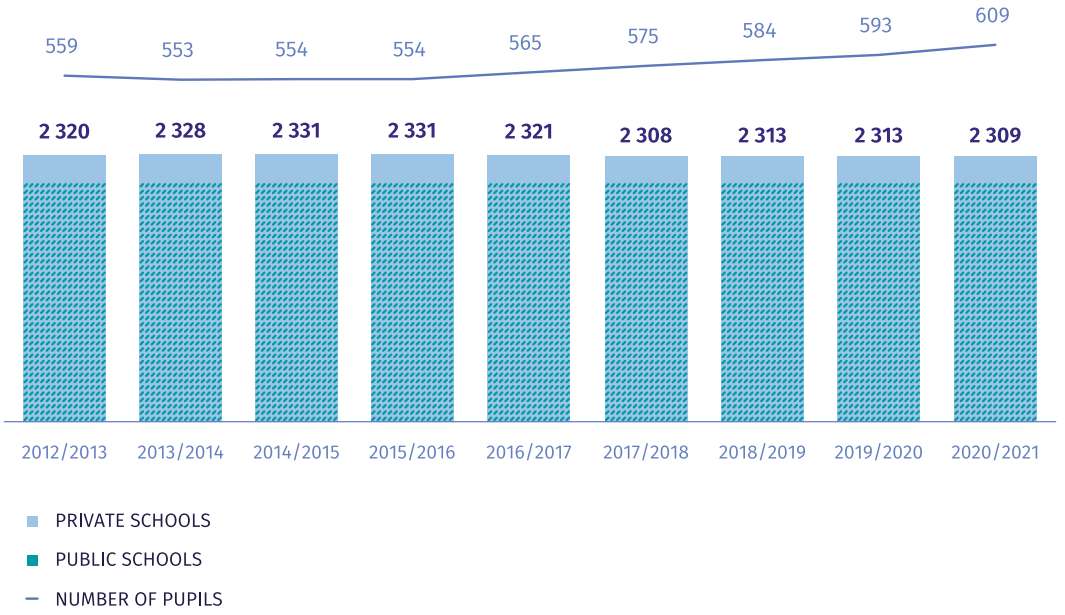
TBILISI IMERETI KVEMO KARTLI ADJARA KAKHETI
SHIDA KARTLI SAMEGRELO / ZEMO SVANETI OTHER REGIONS

Source: GeoStat, IDFI

4.3 GENERAL EDUCATION

The number of pupils has been increasing in the last few years. Currently, there are 2,309 general education schools in Georgia, and the number remained broadly unchanged for the last 8 years. Public schools account for 90% of the total, and the number of pupils reached 609k in 2020/2021 year, +9% higher compared to the 2012/2013 study year.

Fig 11: General education schools and number of pupils



Source: GeoStat, IDFI

The Covid-19 pandemic has led to a decrease in the number of pupils in private schools by -5% YoY in 2020, mainly due to the economic contraction and real GDP growth of -6.2% in the same period. Nearly 90% of pupils are attending classes in public schools, but this share was decreasing with the economic growth and higher attractiveness of private schools prior to the 2020/2021 study year. Higher growth of the number of pupils in private schools compared to the overall growth in the number of pupils could be explained by higher quality of education, better technical support, higher level of security, and other indicators that make studying in private schools more attractive.

Fig 12: Number of pupils in schools

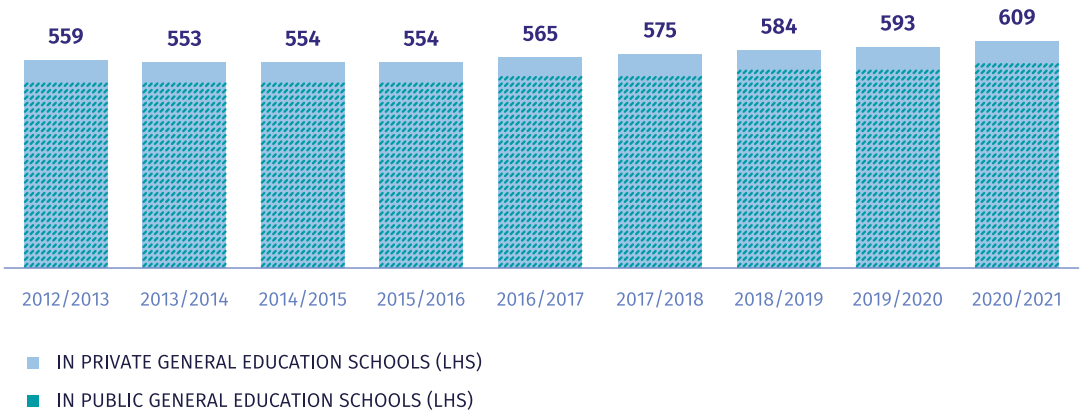
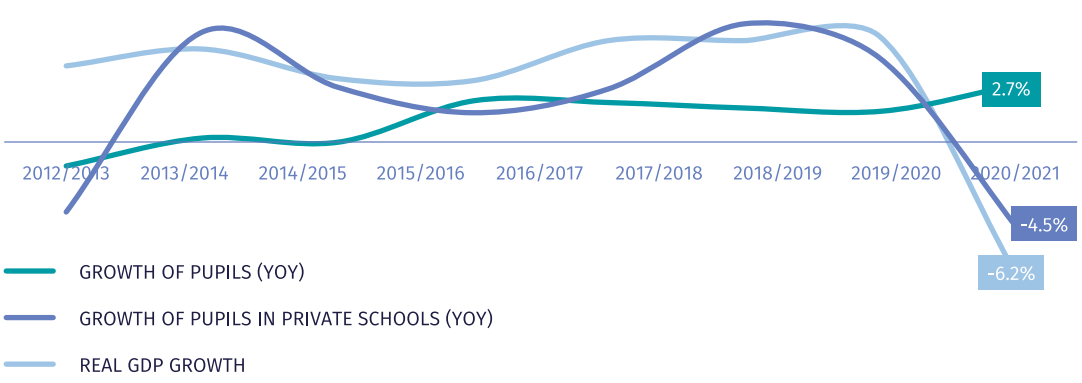


Fig 13: Growth of pupils in private schools (YoY) and real GDP growth



Source: GeoStat, IDFI

The teaching profession is becoming less attractive in Georgia. Teacher's average salaries are nearly 40% below the average salary in the country, and the number of teachers decreased by -7%, to 64k, in the 2020/2021 study year, compared to the 2013/2014 study year. At the same time, pupils per teacher increased by 24% and 13% in private and public schools and reached 8.0 and 9.5, respectively, in the same period.

Fig 14: Number of teachers ('000) and pupils per teacher

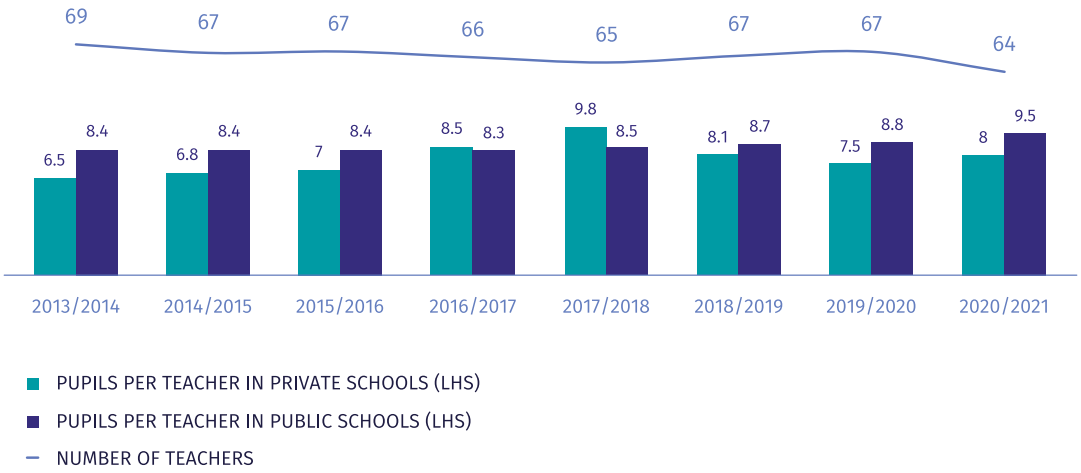
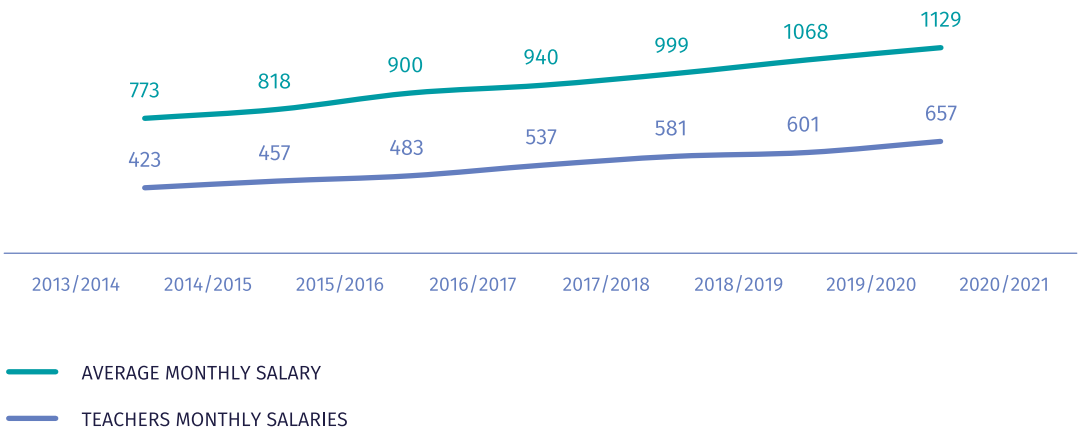


Fig 15: Average monthly salaries (GEL)



Source: GeoStat, IDFI

Pupils and teachers are mainly concentrated outside the capital. Tbilisi accounted for 34% of pupils, 22% of teachers, and 12% of schools in 2019. The demand for teachers is higher in Tbilisi, and schools operate with a higher scale. Pupils per teacher ratio

was 14 in Tbilisi, nearly 60% higher compared to the country average. Pupils per school amounted to 697, 175% higher compared to the country average, which could be explained by the fact that schools in Tbilisi are bigger.

Fig 16: Regional distribution of teachers, schools, and pupils in 2019

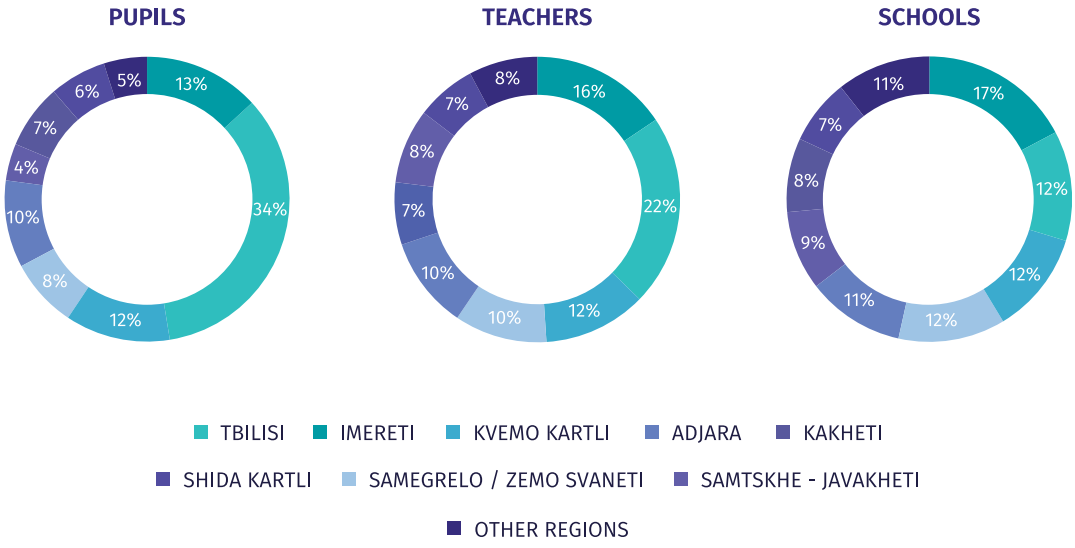
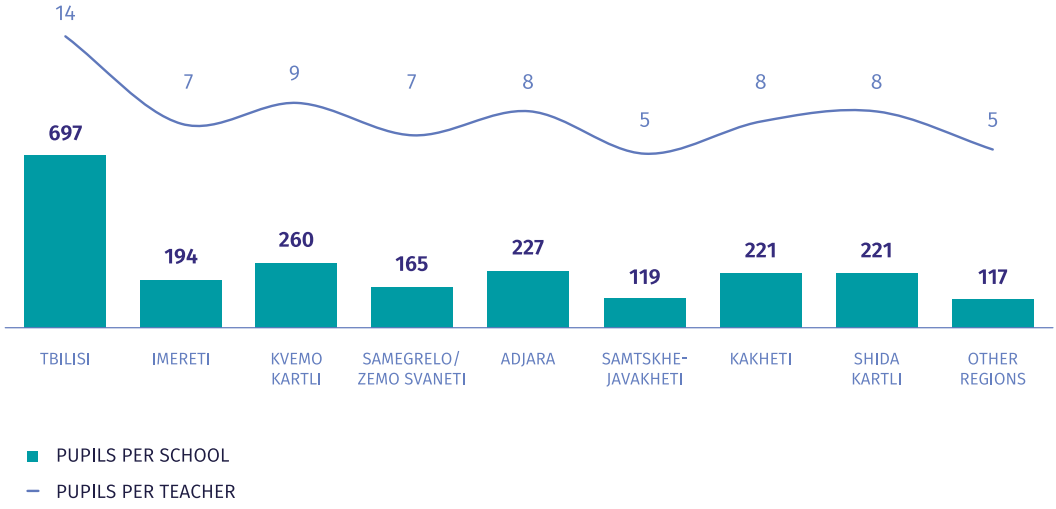


Fig 17: Pupils per school and pupils per teacher in 2019



Source: GeoStat, IDFI

Despite primary and basic education being mandatory in Georgia, 42% of pupils who abandoned their studies in school in the 2019/2020 study year were below tenth grade. In total, nearly 1.4% of pupils abandoned their studies in school in the 2019/2020 study year. The share of boys among pupils who abandoned their studies accounted for 59% during this period.

Fig 18: Distribution of general education school pupils by grades (at the beginning of school year, 000')

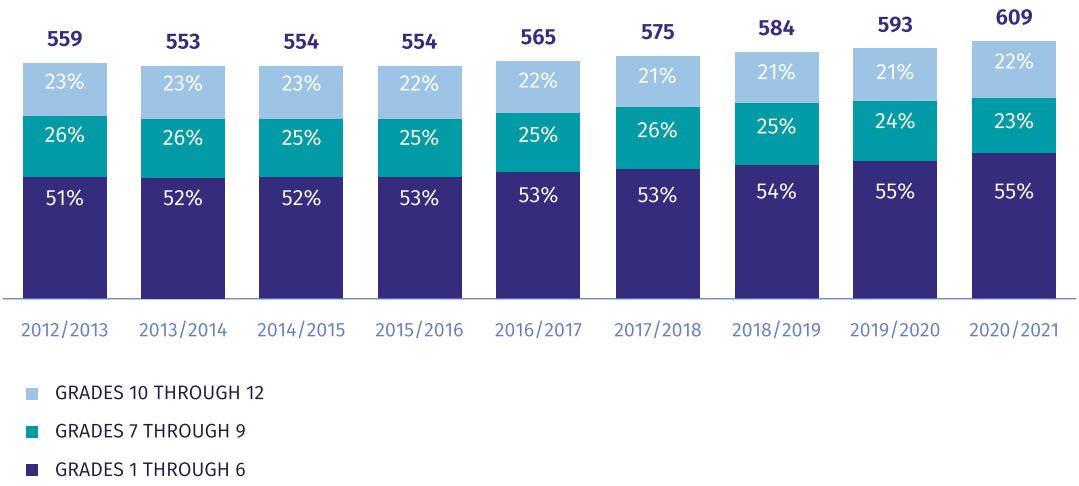
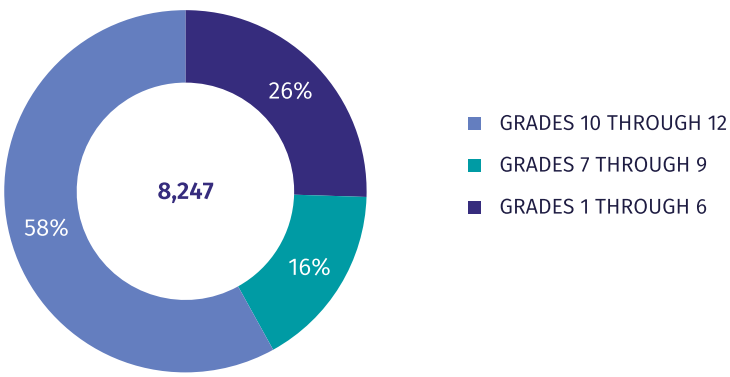


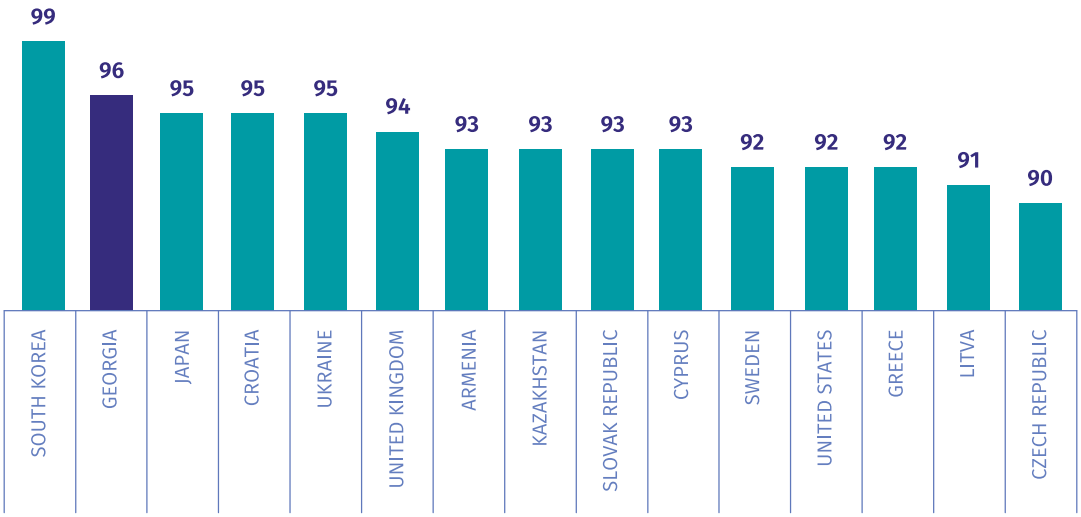
Fig 19: Pupils who abandoned the school in 2019/2020 study year



Source: GeoStat, IDFI

The criteria for school graduation exams may be too low in Georgia. High school graduate rate is 96% in Georgia, which is one of the highest rates in the world. Only South Korea has a higher rate. However, PISA scores and other quality indicators signal that school education programs and quality of education students receive in schools is poor.

Fig 20: Countries with the highest high school graduate rates (%)

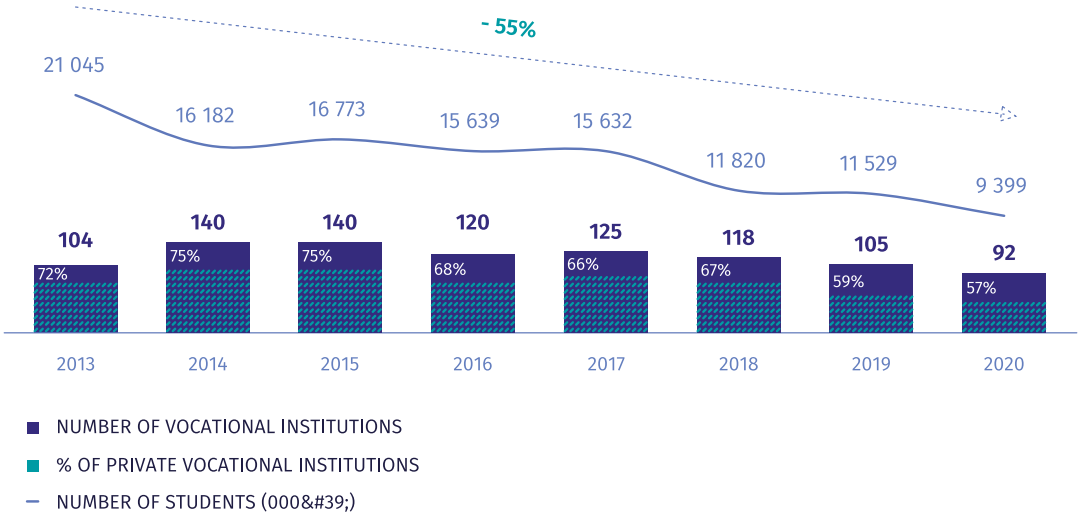


Source: World atlas, IDFI

4.4 VOCATIONAL EDUCATION

Popularity of vocational institutions has sharply decreased for the last seven years. The number of vocational institutions was 92 in 2020; Broadly unchanged compared to the 2013 year, but number of enrolled students has decreased by 55% to 9,399 in the same period. This could be explained by the low popularity of the institutions and poor quality of knowledge that vocational institutions transfer to the students. Share of private vocational institutions also decreased to 57% (-15 p.p.) in the same period, indicating low interest from the business sector.

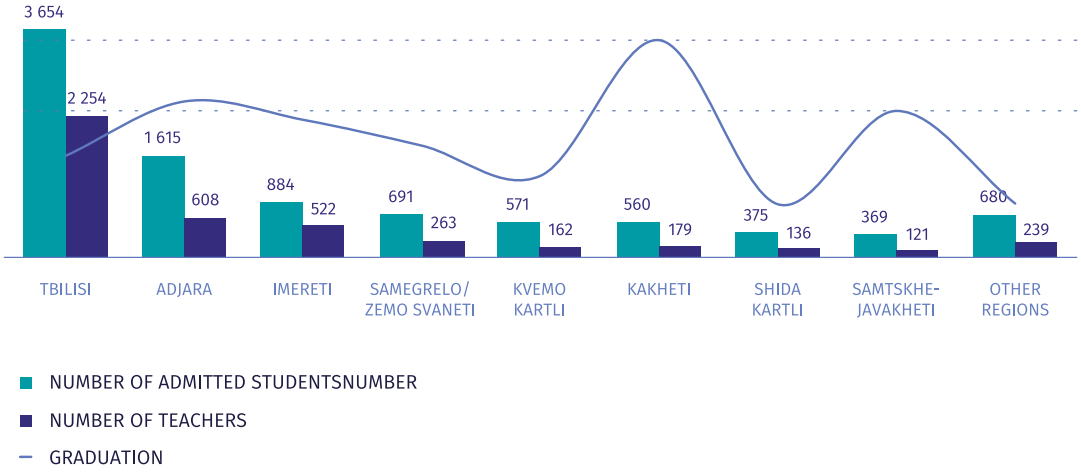
Fig 21: Number of vocational institutions, share of private institutions and number of enrolled students (%)



Source: GeoStat, IDFI

Tbilisi accounts for 39% of total enrolled students, but the graduation rate (36%) is below the country average (39%). Average teacher per student ratio in Tbilisi is 1.6 and is also below the country average 2.1. Among other regions, Adjara is leading with number of enrolled students, accounting for 17% of the total, with a graduation rate of 48%, well above the country average.

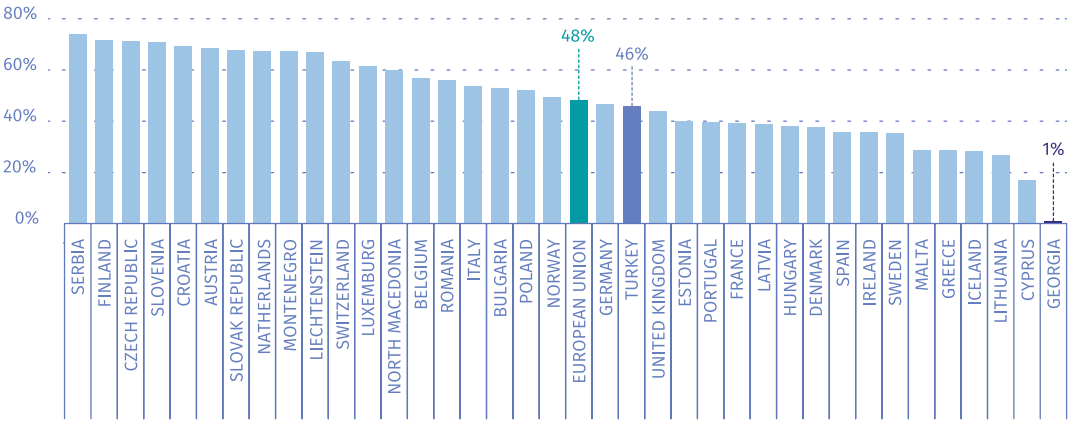
Fig 22: Number of enrolled students in vocational institutions, number of teachers and graduation rate in 2020



Source: GeoStat, IDFI

It should be mentioned that nearly half of EU students choose to study on vocational education programs compared to the 4.2% in Georgia. This difference could be explained by a lack of prestige of these institutions and absence of any regulations in the labor market requiring licenses or certificates for workers.

Fig 23: Rate of pupils enrolled in vocational education programs in EU countries in year 2017 (%)



Source: Eurostat, GeoStat, IDFI

Overall, vocational programs do not fully meet the demands of the labor market. Hence, fundamental changes in the vocational education system are necessary. Higher presence of the private sector and better quality of the study programs could increase the popularity of vocational institutions and improve the situation.

4.5 HIGHER EDUCATION

Demand on higher educational institutions has increased. Average number of students per higher education institution was 2,500 in 2020/2021 study year, +27% higher, compared to the 2012/2013 study year. The number of institutions was increasing from 2012 year and reached 75 in 2017/2018 study year but decreased thereafter to 64 higher educational institutions in 2020/2021 study year.

Private higher educational institutions are becoming more attractive and the number of students in private institutions increased by +92% to 57k in 2020/2021 study year, compared to the +18% growth in public institutions in the same period. But public higher institutions are bigger and the ratio of students per institution was on average 5,300, 4x higher compared to private institutions in 2020/2021 study year.

Fig 24: Number of students and % share of students in private higher educational institutions

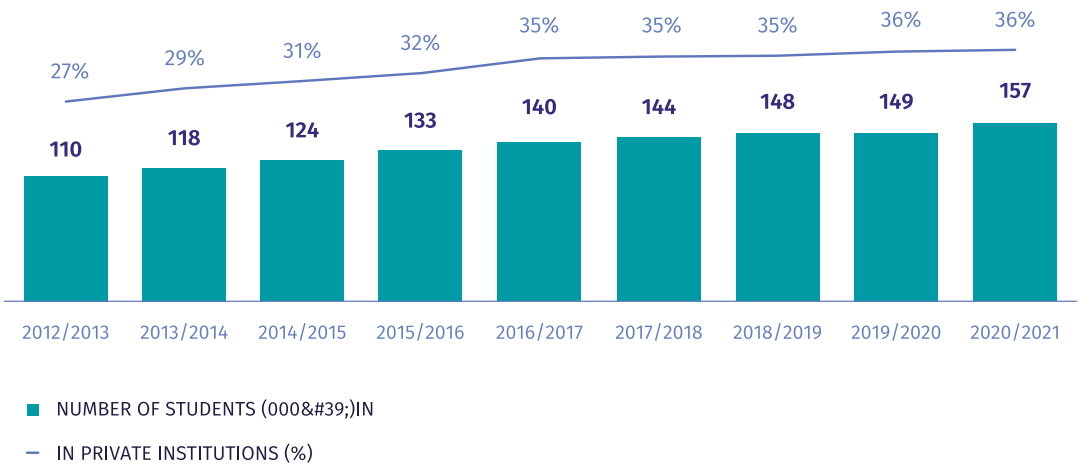
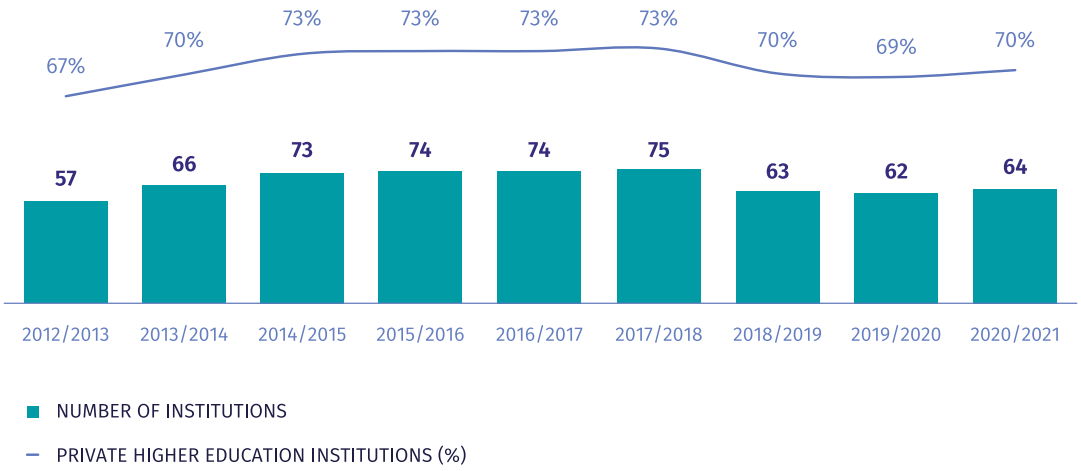


Fig 25: Number of higher educational institutions and % share of private higher educational institutions



Source: GeoStat, IDFI

Graduation rate in private higher educational institutions is lower compared to state institutions. Average graduation rate per admitted student[4] in public higher educational institution was 69% in 2012-2020 years, +16% higher compared to the private educational institutions in the same period.

Higher educational institutions could be overcrowded, and compulsory military service could be the reason for the low graduation rate. Students are exempt from military services during their study semester, which increases the rate of failures on the exams as a means to extend study semester and incentivizes youth (under 27 age) to "pursue" PhD degree at earlier ages.

[4] *We have calculated average graduation rate per student, considering number of admitted students and four-year study period.*

Fig 26: Number of admitted and graduated students in public higher education programs (000')

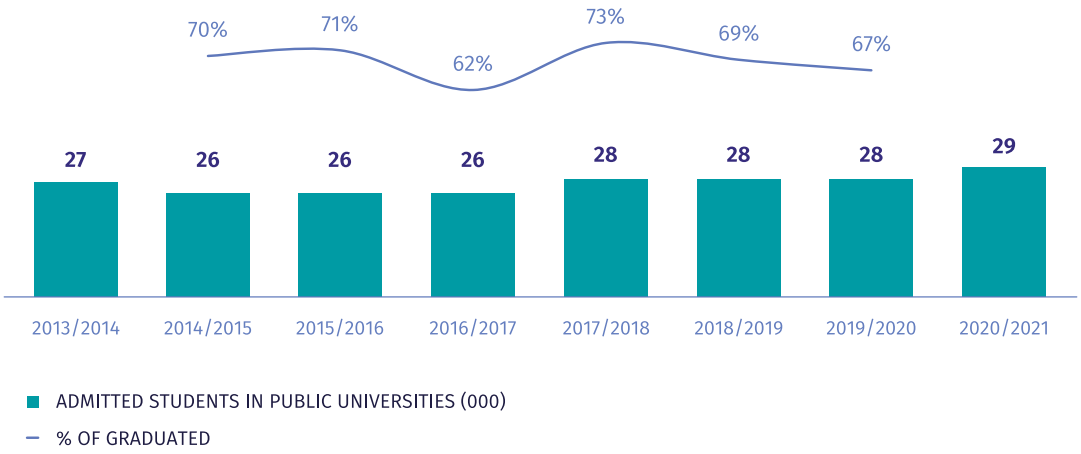
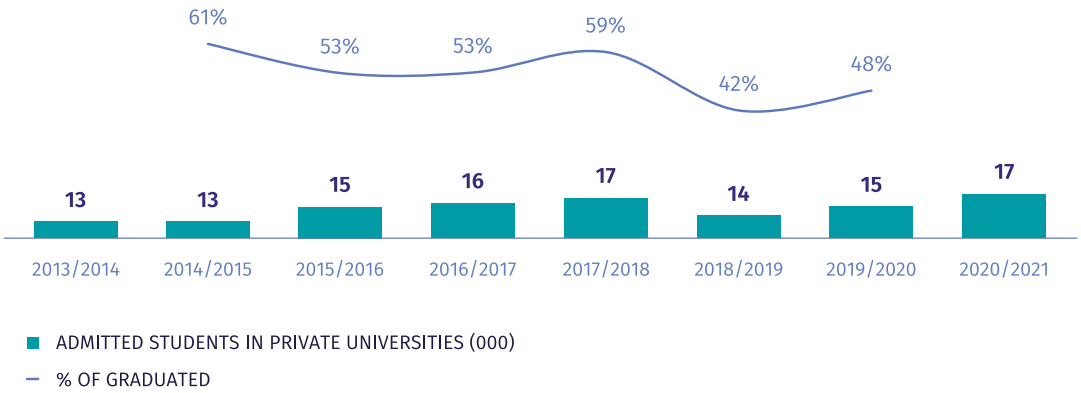


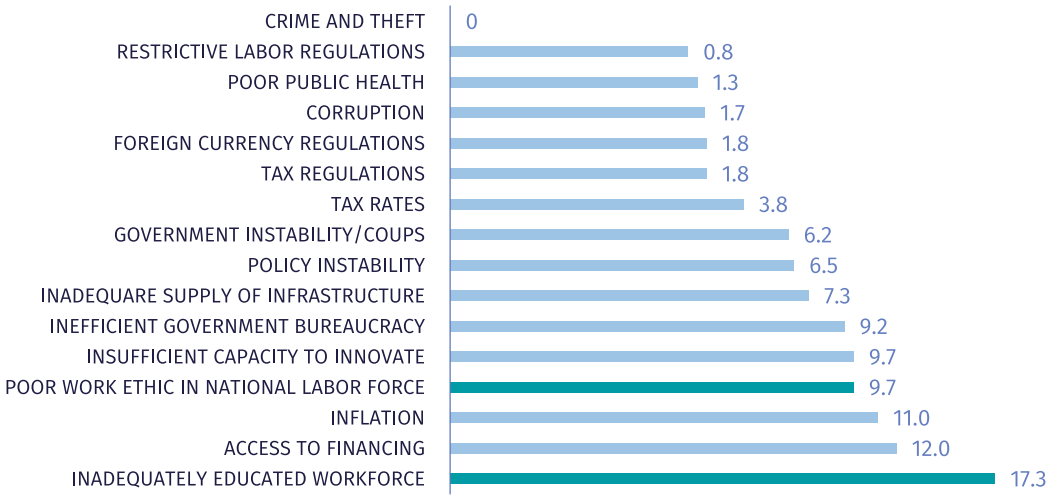
Fig 27: Number of admitted and graduated students in private higher education programs (000')



Source: GeoStat, IDFI

Inadequately educated workforce and poor work ethic remains the main challenging factors for business in Georgia. Knowledge gained from universities and the awarded degree does not function as a proper mechanism for the business in the employee's selection process, and this forces businesses to develop their own criteria.

Fig 28: Most challenging factors for doing business in Georgia in 2017



Source: World Economic Forum (Executive Opinion Survey 2017), IDFI

Overall, the demand for higher educational institutions is high but the university degree often does not imply a high chance of employment in a high-paying position, and graduates often do not practice their profession at all. The higher education system supplies the economy with a number of graduates who are often unable to meet the demands of the modern job market. The specifics of the Georgian labor market should be taken into account, where the demand for low-skilled, low-paid labor is high.

For years, a major way to escape compulsory military service was being enrolled at a higher education program; in fact this problem was so obvious that political party named “Girchi” created a loophole using legislation to help young people who don’t want to go into compulsory military service by registering them as priests of their church named “Biblical Freedom”, with 40 000 people using this method in 4 years. Considering the pressure from the Georgian Orthodox Church, which has declared in 2021 the practice to be a great sin, most young people are expected to choose an old way of being enrolled in higher education programs.

5. COVID-19 IMPACT ON THE EDUCATION SECTOR

The Georgian education sector is facing new challenges due to the COVID-19 pandemic. The pandemic has changed education dramatically and resulted in of the closing of schools and universities across the world. E-learning on digital platforms remained the only possibility to continue the educational process.

Considering the lack of appropriate conditions for distance learning, it is a significant challenge for the developing country to involve pupils and students in the online learning process when it is striving with high unemployment and low savings. Problems include: not having the appropriate equipment (computer, laptop, tablet, mobile phone, etc.), as well as access to the Internet (especially for people living in the regions).

5.1 TELECOMMUNICATION SECTOR

Internet is becoming more popular in the country. The number of internet users grew by +8.7% and +5.8% YoY in 2019 and 2020 years and reached almost a million subscribers. Georgia's Telecommunications sector is dominated by three major actors: MagtiCom, Silknet, and Veon Georgia. The latter only provides cellular services, while MagtiCom and Silknet have a large market share in terms of fixed internet as well as cellular services.

The share of Magticom and Silknet of total internet subscribers in 2020 was at 47% and 30%, respectively, and the rest (22%) was split among 150 other minor providers.

The Internet service market size in Georgia hit an all-time high GEL 276 mln by the end of 2020. 82% of total revenue was shared between MagtiCom and Silknet, and the remaining 18% was distributed among other internet service providers.

Fig 29: Number of internet subscribers

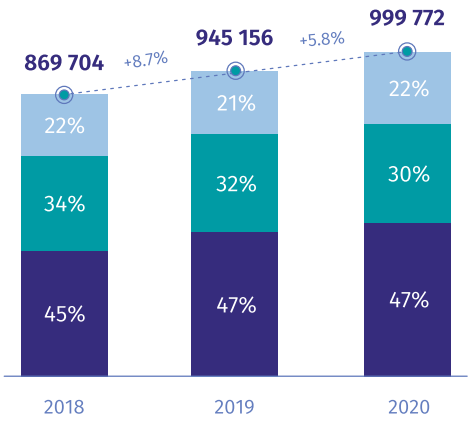
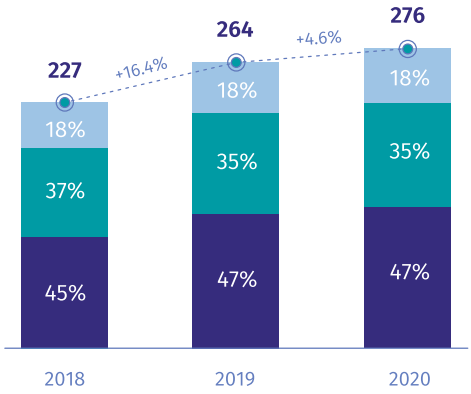


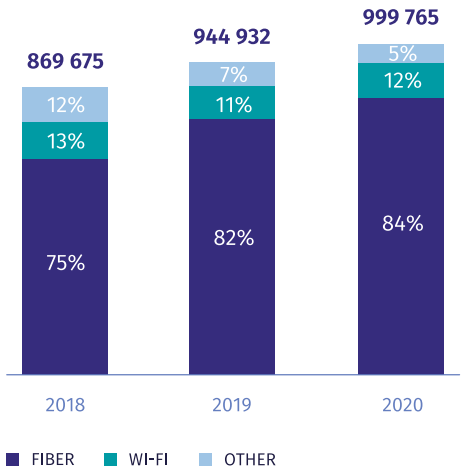
Fig 30: Revenue from the internet service (GEL mln)



Source: ComCom, IDFI

High quality internet is less readily available in the rural, mountainous areas. The most widely used internet-technology is the fiber-optic service, which was provided to almost 84% of total subscribers in 2020, +2% and +9% higher compared to 2019 and 2018 years, respectively. However, the provision of fiber-optic internet is related to infrastructural constraints and is limited in the rural regions. Inhabitants of these regions resort to less reliable technologies, such as LTE, CDMA and Wi-Fi, which can be slower and weather-dependent.

Fig 31: Share of subscribers by technology



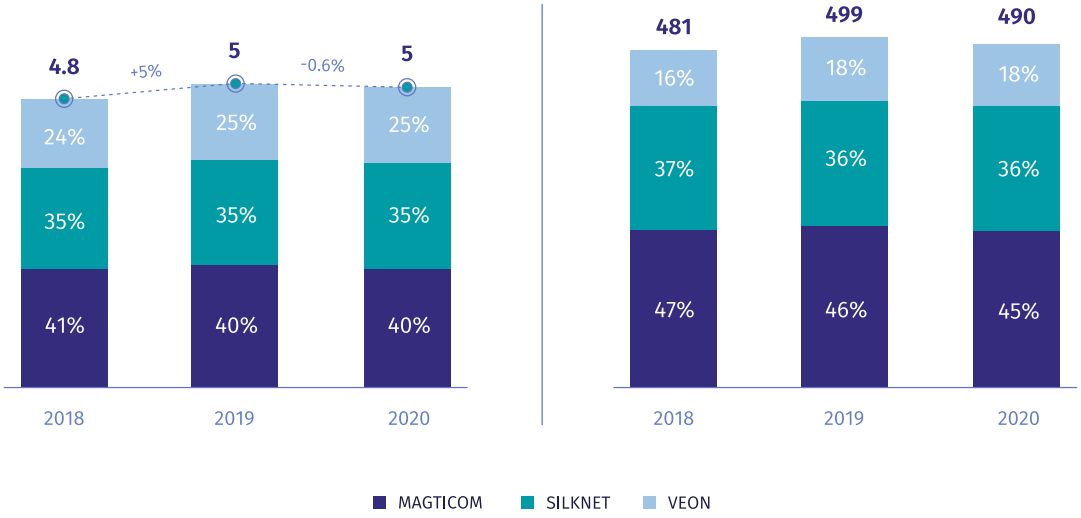
Source: ComCom, IDFI

In terms of cellular service, shares are more evenly distributed between MagtiCom, Silknet, and Veon. Users tend to subscribe to multiple service providers and the number of total subscribers is higher.

By the end of 2020, the cellular service market was worth GEL 0.5 bln, broadly unchanged across the last two years. Revenue of MagtiCom accounted for 45% of the total market in 2020 and is leading nearly 2.5x higher compared to Veon, which has nearly the same number of subscribers.

Fig 32: Number of mobile subscribers (mln)

Fig 33: Revenue from cellular service (GEL mln)



Source: ComCom, IDFI

Cellular Internet is another alternative to broadband fiber-optics. The number of subscribers has been on a steady rise for the past several years, and no significant change has been observed during 2020. The market is split fairly evenly among the 3 major telecommunications companies, each having approximately one third of the total share.

Lockdowns increased internet traffic in the country nearly 2.2 times. The impact of the pandemic and subsequent lockdowns becomes most apparent by looking at the changes in cellular internet traffic. Throughout 2020, cellular internet traffic exceeded 192,315 terabytes of data, which amounts to a 120% increase compared to 2019. Traffic almost tripled for MagtiCom and Silknet, while Veon Georgia saw a comparably modest increase of 34%.

Fig 34: The number of cellular internet subscribers (mln)

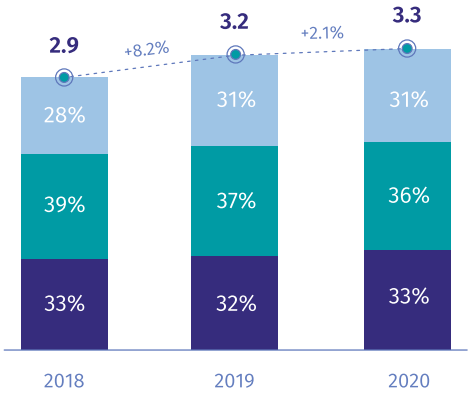
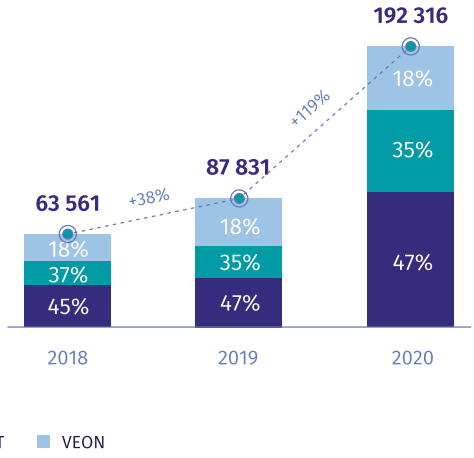


Fig 35: Cellular internet traffic (TB)



Source: ComCom, IDFI

5.2 ACCESS TO TECHNOLOGY AND THE INTERNET

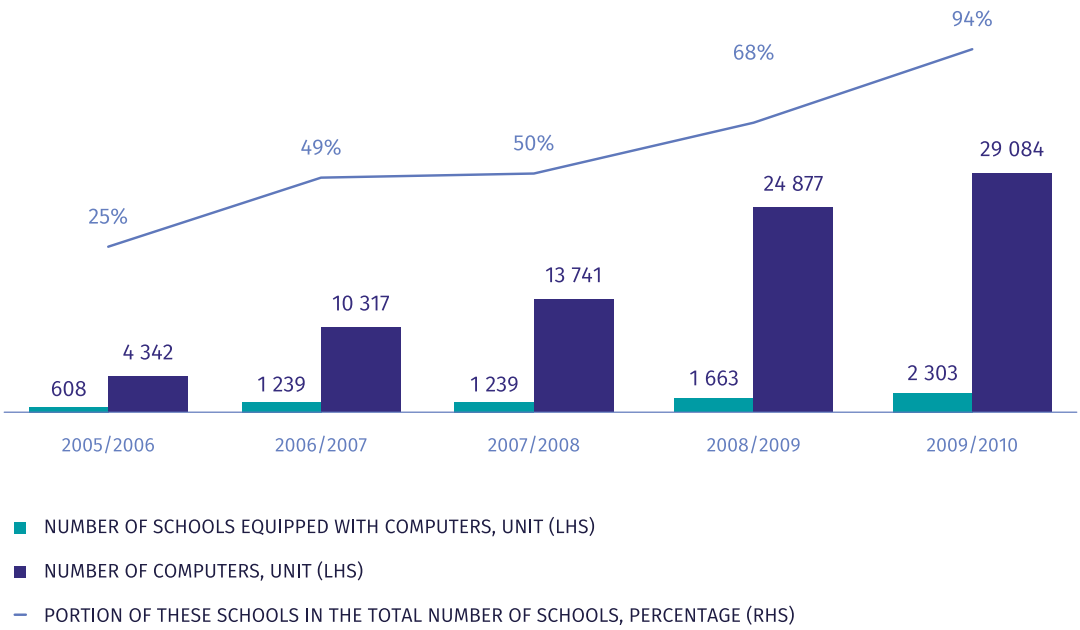
Access to technology is important for the distance learning process. We have identified several problems in this regard:

- Significant part of the population does not have access to the appropriate gadgets used the study process;
- Internet accessibility is a problem outside the capital;
- Good quality of the internet is practically absent in the rural areas;
- Economic issues and inability to attend classes;
- Certain number of pupils did not used software required for distance learning;
- Interaction problems between pupils and teachers.

A SIGNIFICANT PART OF THE POPULATION DOES NOT HAVE THE APPROPRIATE GADGETS FOR USE IN THE STUDY PROCESS

Equipping schools with computers and implementing appropriate training for their use remains a challenge. According to the latest data available, in 2009-2010 years 94% of schools were equipped with computers (20 pupils per device). However, whether the old technique is updated regularly and appropriate training is provided for teachers and children is unknown, and even whether the teachers are able to work with existing equipment is a separate issue.

Fig 36: Availability of computers in schools (at the beginning of school year)

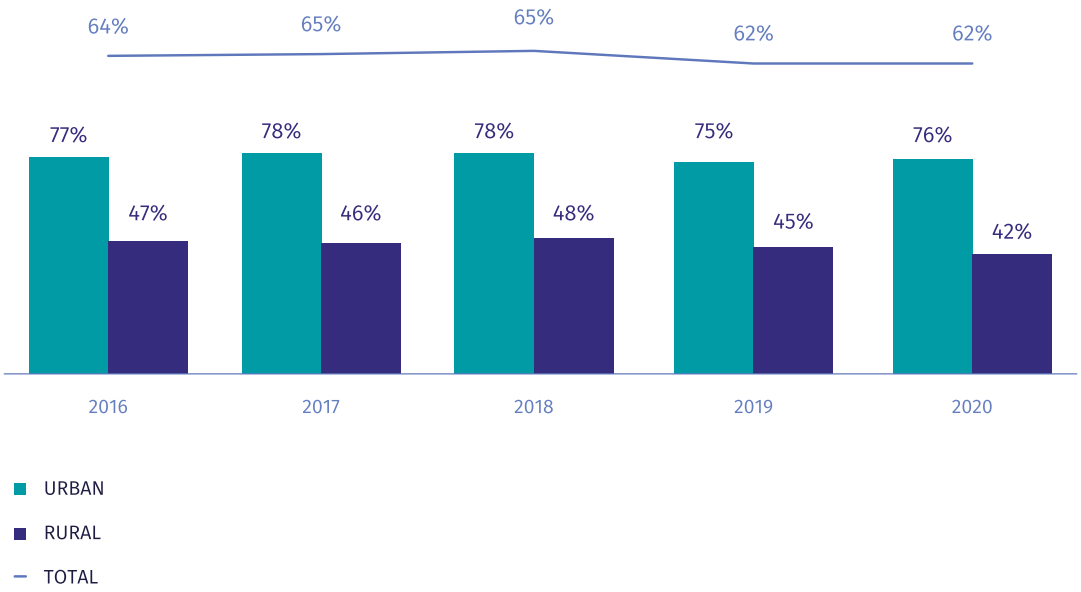


Source: GeoStat, IDFI

Distance learning in the Georgian education system was not adopted before the pandemic and the country was unprepared for the new challenges. 38% of households did not have computers and 16% still lacked internet access in the same period.

Challenges in the distance learning process in the rural areas are higher compared to the urban areas, driven by the high degree of inequality, which is largely related to the socio-economic status of families. Share of households who lacked access to computers in the rural areas was 68% in 2020, whereas the share of households with the same problems in the urban areas was 24% in the same period.

Fig 37: Share of households with computer access (%)



Source: GeoStat, IDFI

INTERNET ACCESSIBILITY IS A PROBLEM OUTSIDE THE CAPITAL

Households in Tbilisi, for the most part, have internet access (91%), but only 74% of the population had access to the internet in the rural areas in 2020. Additionally, the knowledge on how to use computer and Internet is a problem especially among rural populations. 37% of the rural population has never used the internet, compared to 17% of urban population of the country.

35,000 children[5] in Georgia had never used internet and did not have access to distance-learning tools - nearly 7% of the total children aged 5-14 as of July 2020, when the entire education process had already shifted to online learning.

[5] *According to GeoStat's census data, there were 492,200 children aged 5-14 in Georgia, as of January 2020.*

Fig 38: Share of households with internet access (%)

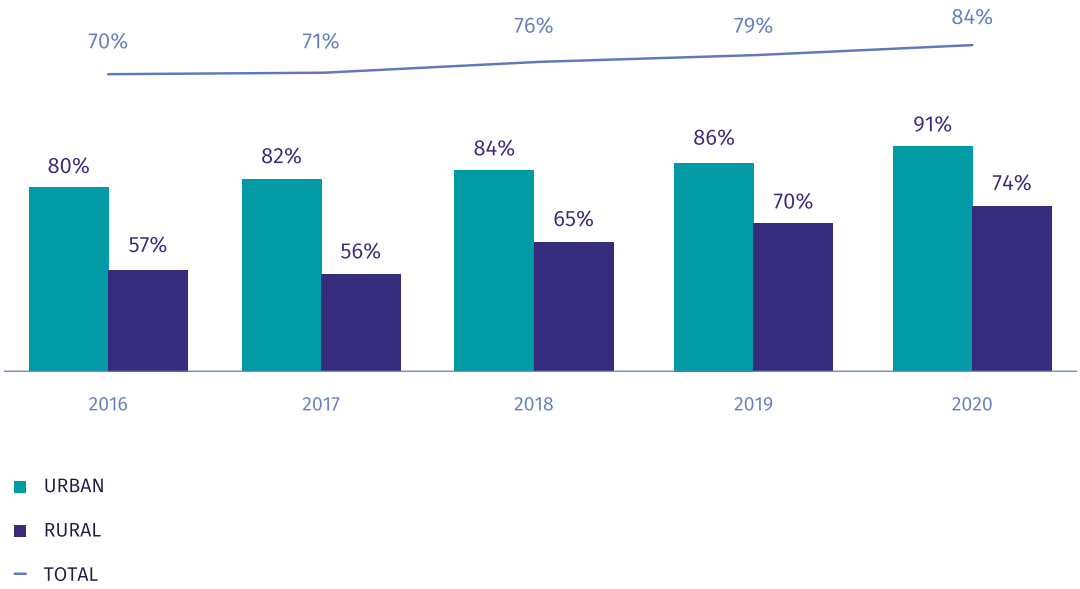
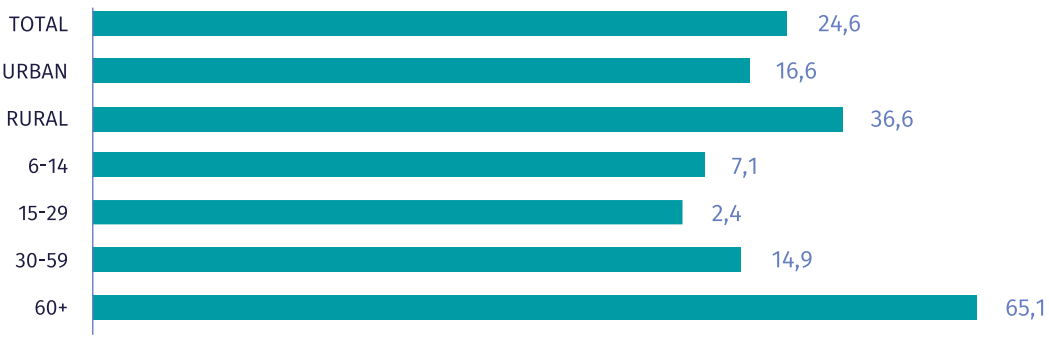


Fig 39: % of population reporting never having used the Internet



Source: GeoStat, IDFI

Internet penetration rate in Tbilisi and Adjara is high, comprising 122% and 103%, respectively. This is mainly driven by tourism and commercial spaces. However, internet penetration in the rural areas and especially in the mountainous regions, such as Racha-Lechkhumi and Kvemo Svaneti, fail to meet the high-intensity needs of distance-learning and video calls.

Table 2: Internet penetration rate by region:

Region	Household	Subscribers	Penetration rate (%)
Tbilisi	313,576	382,419	121,95%
Adjara A/R	70,500	72,493	102,83%
Kvemo Kartli	106,381	68,734	64,61%
Shida Kartli	90,775	40,243	44,33%
Mtskheta-Mtianeti	30,463	13,493	44,29%
Samtskhe-Javakheti	58,895	25,253	42,88%
Kakheti	115,644	47,770	41,31%
Imereti	145,760	78,789	54,05%
Samegrelo-Zemo Svaneti	118,045	41,532	35,18%
Guria	40,623	8,912	21,94%
Racha-Lechkhumi and Kvemo Svaneti	14,481	224	1,55%

Source: GeoStat, IDFI

GOOD QUALITY OF THE INTERNET IS PRACTICALLY ABSENT IN THE RURAL AREAS

The low quality of the internet provided by older technology is another challenge for the distance learning process. Distance learning requires good quality internet to attend classes and avoid disruptions in the study process. More than half of the fiber technology consumers live in Tbilisi, whereas only one third of the population live in the capital, meaning the good quality internet is unevenly distributed in the country. Fiber technology is also available in other cities, but is mostly absent in the rural areas.

Fig 40: Distribution of optical network subscribers (%)

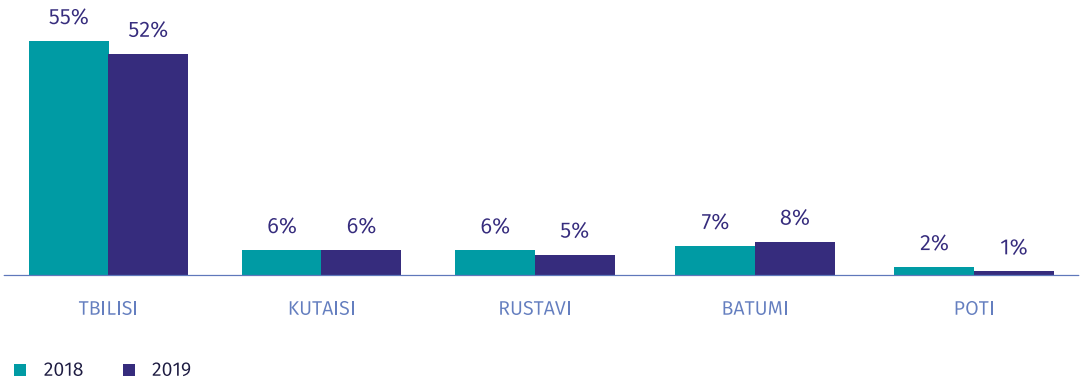
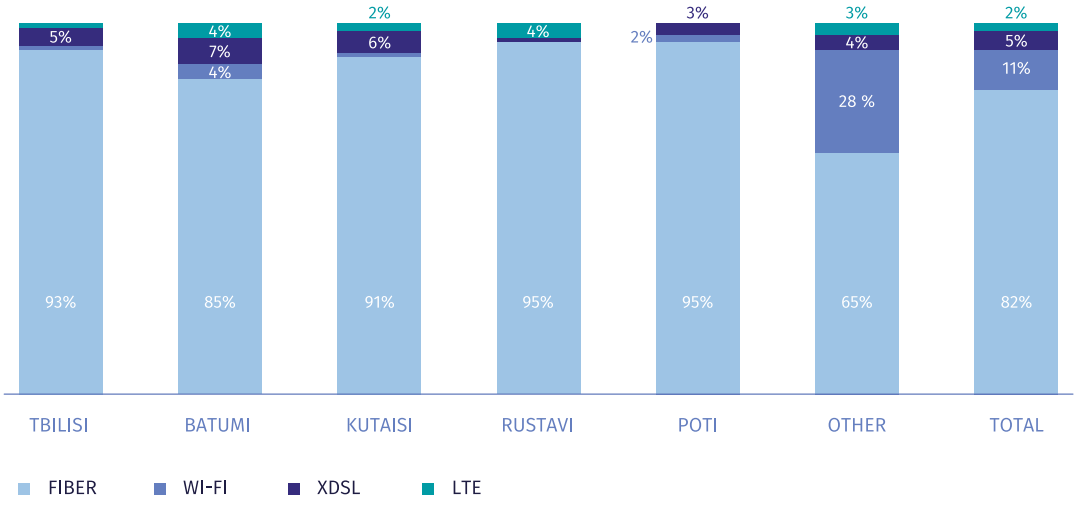


Fig 41: Part of optical-fiber technology subscribers in fixed broadband internet service users of a city (%)

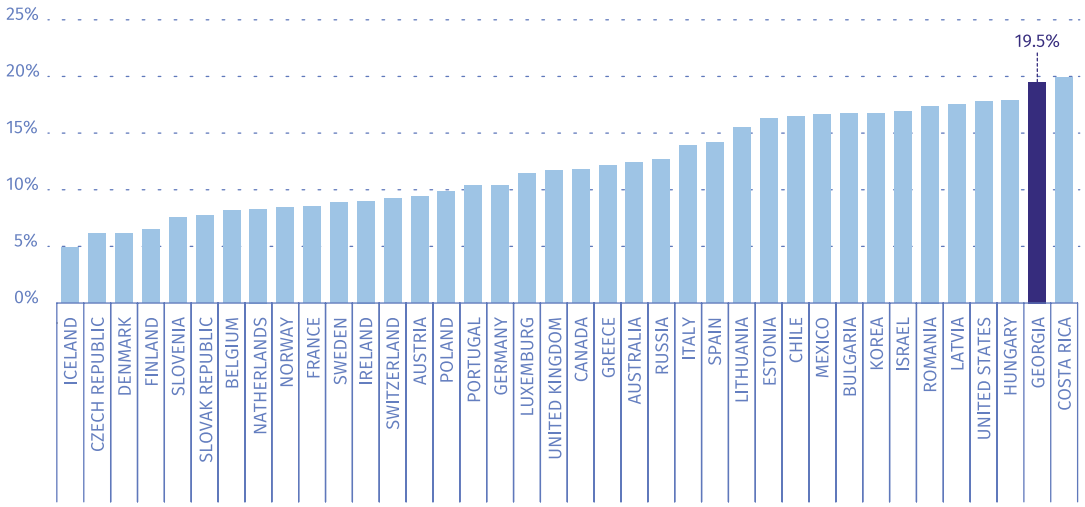


Source: ComCom, IDFI

ECONOMIC ISSUES AND INABILITY TO ATTEND CLASSES

COVID-19 deepened the poverty threshold in Georgia. Absolute poverty rate in the country was 21.3% in 2020, +0.8 p.p. higher compared to 2019. In OECD countries, only Costa Rica had a higher poverty rate in 2019 (19.9%).

Fig 42: Poverty rates in OECD countries as of 2019 (%)

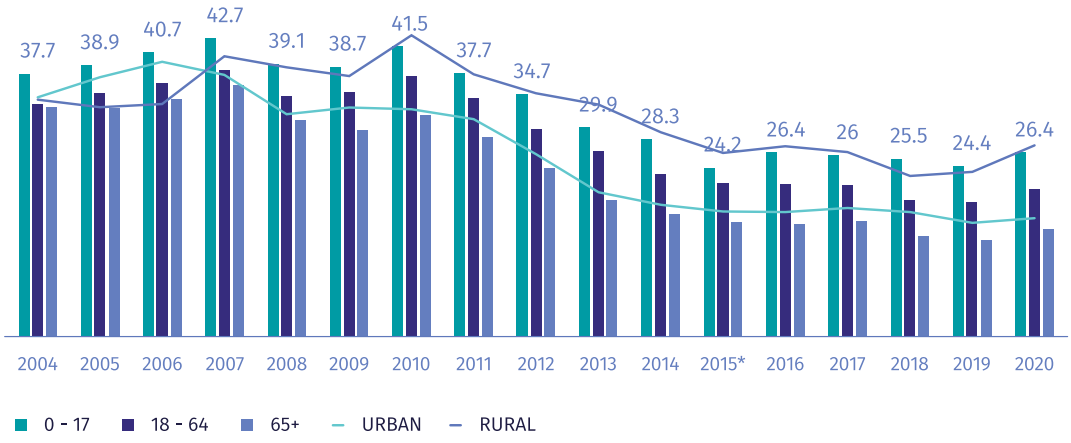


Source: Statista, GeoStat, IDFI;

Note: Rate indicates the population under absolute poverty line

Children in Georgia face a higher risk of poverty than any other population group. The share of population under age 17 living below the absolute poverty line was 26.4% in 2020, which represents the highest share among other subgroups. Additionally, it is +2 p.p. higher compared to 2019. Children in families living below the poverty line are particularly vulnerable to the rapid spread of the coronavirus and face higher probability of disruption in study process. Poverty in the regions is a bigger problem compared to urban areas.

Fig 43: Share of the population below the absolute poverty line (%)



Source: GeoStat, IDFI

Up to GEL 100 mln[6] is needed to provide computers and internet to the socially vulnerable families and give them access to online learning platforms. Charte[7] studied the conditions available to students living in socially vulnerable families for online learning. According to the Social Service Agency, there are 96,000 students living in such families, of which 78,000 are estimated not to have access to the Internet or a computer. By providing connectivity, it is possible to empower people to improve the quality of their lives and their communities and drive socio-economic growth.

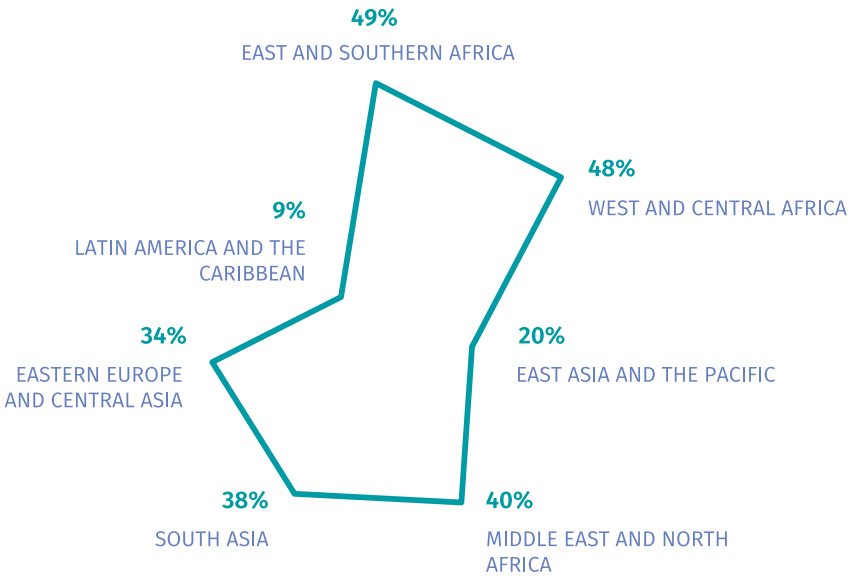
[6] *The indicator is calculated by the Institute for Development of Freedom of Information in consultation with charte.ge. Considering that equipping one child with a computer and internet costs an average of 1200 GEL, and as of today, up to 78,000 children need this kind of assistance.*

[7] *Charte.ge is a charity online platform, created in 2017. The author of the project is "Educare Georgia" Educational Foundation. The goal is to make world-class education accessible to anyone living in Georgia through the Internet and modern technologies. The organization donated laptops to more than 1,300 families or funded their Internet payments.*

CERTAIN NUMBER OF PUPILS DID NOT USED SOFTWARE REQUIRED FOR THE DISTANCE LEARNING

According to an UNICEF survey, a huge number of children worldwide were unable to participate in e-learning due to Covid-19. The closings of schools impacted 1.5 bln schoolchildren globally, and a minimum of 463 mln schoolchildren internationally where unable to access remote learning.

Fig 44: Minimum proportion of schoolchildren unable to access remote learning (%)



Source: UNICEF, IDFI

The population in Georgia also had a problem with involvement in the distance learning process. In the distance learning process, schools had to use the Microsoft Teams program. 65k pupils and 7k teachers did not use Teams in the 2020/2021 study years, which represents nearly 11% of total pupils and teachers.

Social inequality is particularly pronounced in the regions. Of the students and teachers who did not use the TEAMS program, 91% and 98% of the total came from the regions, respectively. In Tbilisi, the problem is less acute and only 9% and 2% of students and teachers did not use the program.

Fig 45: Number of public-school pupils who did not use teams in the 2020-2021 school year.

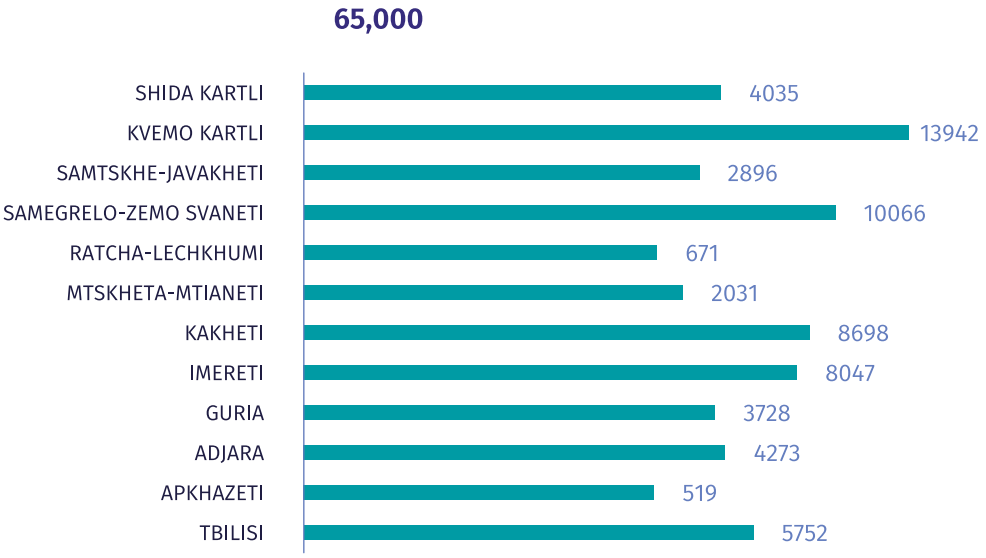
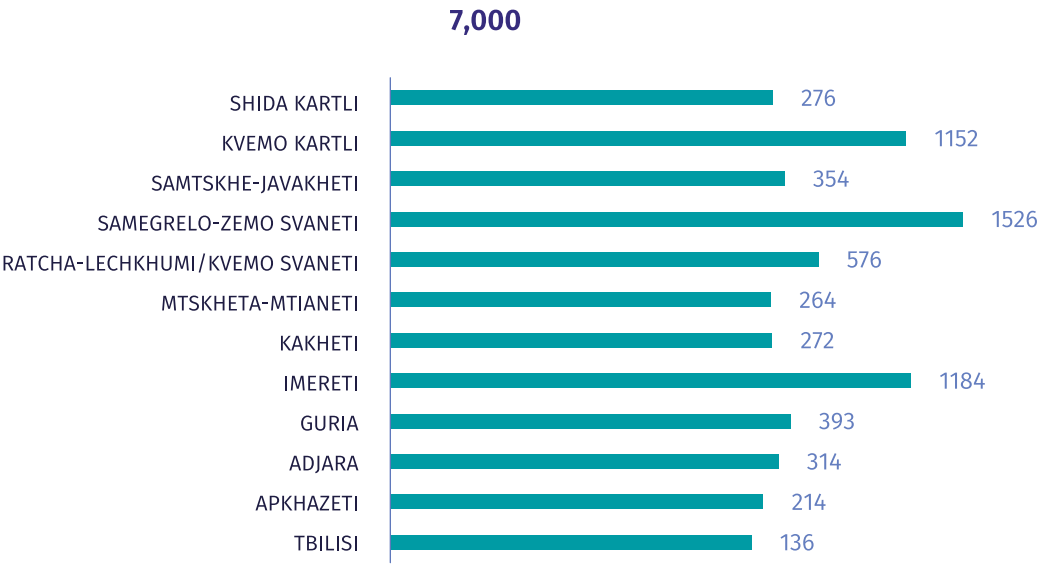


Fig 46: Number of public-school teachers who did not use teams in the 2020-2021 school year.



Source: GeoStat, IDFI

Overall, COVID-19 worsened living conditions for the population, and people below the poverty line were more effected by the pandemic. Higher poverty rate in the country is one of the main challenges for equal access to the education. The only way to get an education for children in families under the poverty line is through free public schools. However, during the lockdowns, education services for the children in such families were unavailable in most cases due to the lack of technology. Even if they are provided with the appropriate equipment by the state, they do not have access to electricity and the internet. We believe that it should imperative that these families and children are not left behind, and that all norms be adopted to create appropriate conditions for them.

The process of teaching and learning is interactive, and there are benefits from the involvement of students in their learning process that are difficult to achieve in distance learning even for developed countries' educational systems (brainstorming, buzz session, debates). Learning is collaborative, and this looks especially incompatible in a virtual environment because these advantages do not easily transfer to online platforms.

It is most difficult for children to grasp the existing reality and adapt to the limitations of the pandemic, hence distance learning poses a challenge to young students' mental health (anxiety) more than others. It is therefore essential that the online learning process is properly planned and adapted to the needs of the students so that they are fully involved in the process and less harmed by the existing reality. Consultation and involvement of psychologists are recommended for primary school children. There is also a huge role for families that the state can provide by keeping them informed.

5.3 LOCKDOWN EFFECTS ON THE ECONOMY AND THE STUDY PROCESS

Due to the COVID-19 pandemic, at least one member of a household lost his/her job and 53% of all households experienced decrease in the average monthly income from March till the end of year 2020[8] in Georgia. Lockdown policy introduced by the GoG was measured by the Oxford Coronavirus Government Response Tracker (OxCGRT) stringency index[9] and results indicate that Georgia received 70 points out of 100, an average value since March 2020 till today.

Fig 47: Share of people who lost their job or income decreased in 2020

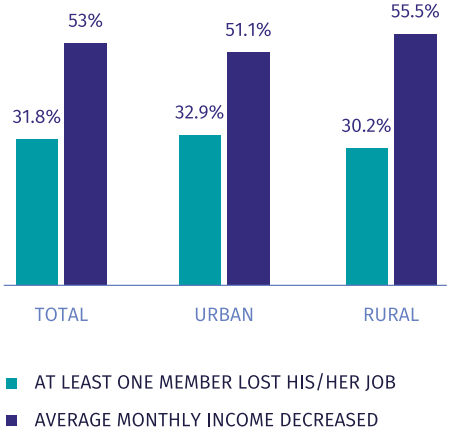
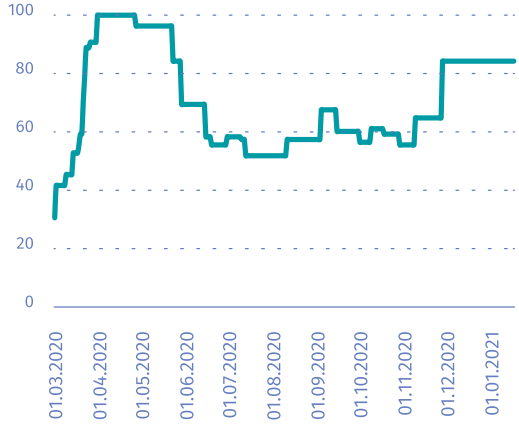


Fig 48: Stringency Index in Georgia



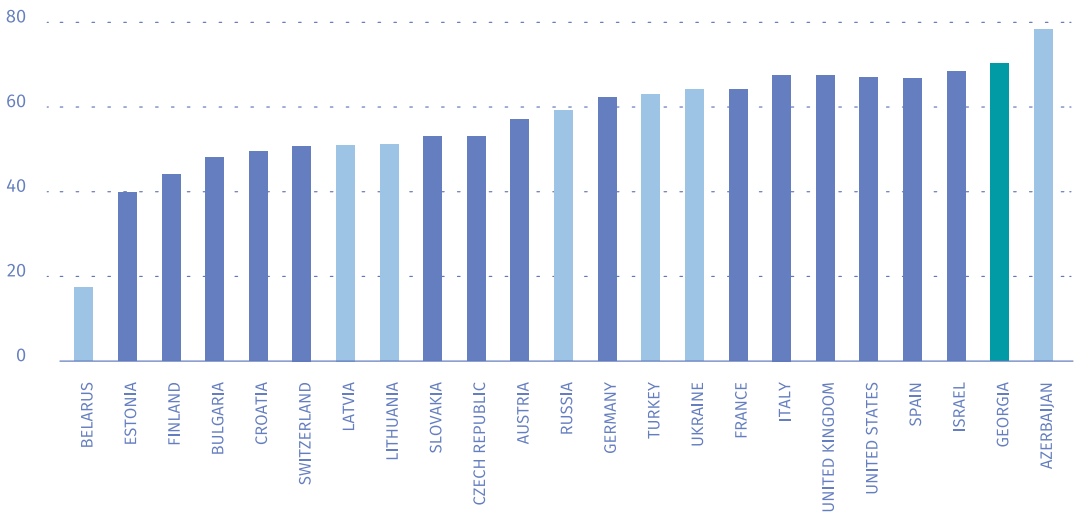
Source: Unicef, OxCGRT, IDFI

Georgia surpassed other countries in stringency index, except for Azerbaijan. Overall, Stringency index indicates that GoG introduced lockdown policy was strict in Georgia, compared to the EU, CIS and neighboring countries.

[8] *According to the survey conducted by Unicef*

[9] *Was used to calculate how strict the government policies were based on nine indicators, including shutting down the schools and workplaces and varies from 0 to 100 (100 = Strictest).*

Fig 49: Stringency index in Georgia and other countries



Source: OxCGRT, IDFI

Nearly half of the populations average monthly income decreased by more than 25%, according to the UNICEF study in 2020. Furthermore, to cope with the crisis, 83% of households which were affected reduced other family expenses, 67% cut down expenses for food, 50% started spending their savings, and 46% borrowed money from friends and relatives.

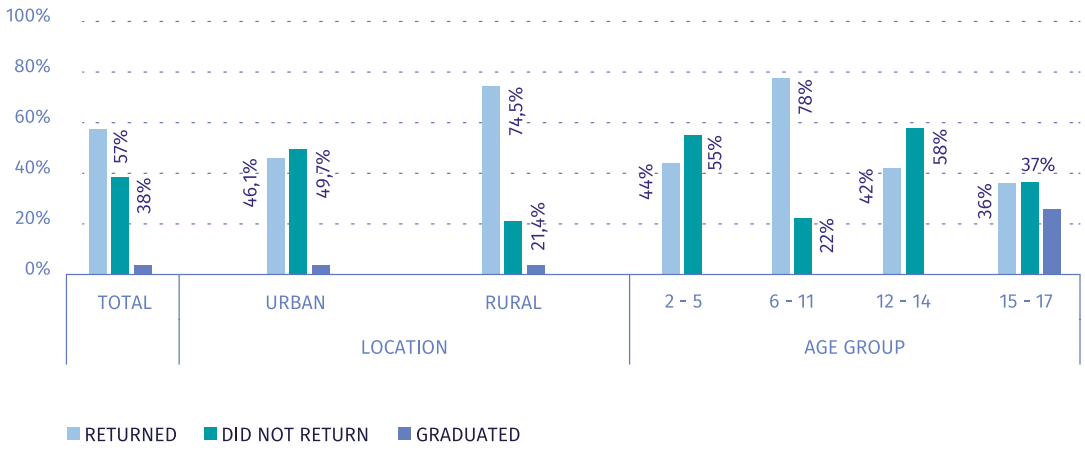
Figure 50: Share of Households, whose average monthly income decreased by

Source: UNICEF, GeoStat, IDFI

Pupils still choose the traditional ways of schooling over distance learning, despite the risks from COVID-19 pandemic. After the lockdowns and reopening of schools' more than half of pupils went back to schools.

75% of pupils leaving in rural areas returned to schools after their reopening, versus 46% of pupils leaving in urban areas. Absence of the equipment required for the distance learning and low internet accessibility could be the reasons why people living in rural areas are more dependent on traditional ways of schooling.

Figure 51: Share of pupils, who returned to school after their reopening (%)



Source: UNICEF, GeoStat, IDFI

5.4 GOVERNMENT POLICY IN THE EDUCATION SECTOR DURING COVID-19

During the pandemic, GoG provided different social assistance programs, including subsidizing communal expenses, rescheduling bank loans, and other social assistance measures. Social assistance programs concerning increasing quality of educational services included:

- One-time GEL 200 social assistance to children
- Study materials for pupils
- Preferential internet package
- General accessibility of the internet – "Universal Internetization Project"
- Public Procurement in the Education Sector

ONE-TIME GEL 200 SOCIAL ASSISTANCE TO CHILDREN

GEL 200 was provided as a one-time social assistance for children under the age 18, and it was distributed to the population equally, regardless of the income of the parent. GEL 200 distributed by the government for all children under age 17 is not enough to support pupils living in socially vulnerable families through study process, and it could be better to select pupils from socially vulnerable families and increase assistance for them.

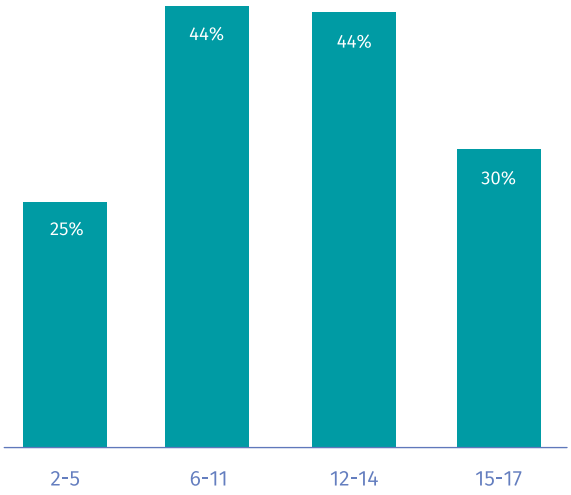
STUDY MATERIALS FOR PUPILS

One of the methods used to facilitate the transition to distance learning was the distribution of "learning packages". The packages included study modules, workbooks, and other necessary materials that would help students in self-learning. This approach is especially important for students who do not have access to the Internet.

According to a joint report by UNESCO and the World Bank[10], "learning packages" were distributed in one way or another in 89% of countries. According to the study, the effectiveness of this method was evaluated positively in high- and middle-income countries, while it was evaluated more negatively in low-income countries.

Study materials were distributed by educational institutions in Georgia as well. Assistance is especially important for socially vulnerable families and helped them ease the financial burden.

Figure 52: share of children between the age of 2-17, who received study materials from educational institutions or local department of education



Source: Unicef, GeoStat, IDFI

PREFERENTIAL INTERNET PACKAGES FOR TEACHERS AND STUDENTS

The GoG supported mobile internet accessibility for pupils and teachers from up to 2,500 public and private schools and provided preferential Internet packages with the cooperation of three major mobile operators in Georgia - Silknet, MagtiCom, and Veon. The signed Memorandum of Understanding (MoU) between the Ministry of Education, Science, Culture and Sports and mobile operators enables students and teachers to

[8] *UNESCO, UNICEF, and World Bank. 2020. Survey on National Education Responses to COVID-19 School Closures*

purchase 20 GB of mobile internet monthly for 10 GEL, 2.5x lower compared to the regular price. Pupils and teacher will be able to use preferential mobile internet package until the end of the 2020-2021 school year.

Preferential mobile internet package will improve access to the internet but is still "expensive" for the population, considering that 20% of them is under the absolute poverty line.

Throughout 2020, the state subsidized utility bills in Georgia[11]. In particular, electricity and gas were provided free of charge to households whose monthly consumption did not exceed 200 kilowatts and 200 m3. The benefits also applied to cleaning fees and water supply, though not to the Internet, which arguably indicates underestimation of its importance by the state. However, it should be noted that the Chairman of the ComCom addressed telecommunications companies to support population with the critical services and critical infrastructure without interruptions and to operate at full capacity during the state of emergency.

GENERAL ACCESSIBILITY ON INTERNET – "UNIVERSAL INTERNETIZATION PROJECT"

473 villages and in total up to 2,000 settlements are still waiting for the high-speed access to the internet, which should be granted under the "Universal Internetization Project" announced by the GoG in 2015. Non-entrepreneurial Non-commercial Legal Entity (NNLE) "Open Net" was established under the MOESD to develop broadband infrastructure in Georgia. The USD 150 mln project's goal was to construct an 8,000-kilometer fiber-optic network by 2020 and provide high-speed Internet access up to 2,000 settlements. Open Net was to implement infrastructure in places where private Internet providers did not plan to invest due to high costs or low customer demand. The list of 473 villages to be covered in the first phase of the project was also announced, but the construction has not yet started. The Procurement Agency has authorized "Open Net" to start building fiber-optic infrastructure through a simplified procurement process, but the announced tender worth GEL 20 mln failed.

[11] *Matsne.gov.ge – Governement Decree on subsidies.*

The project was to be financed by the "Cartu Fund" and according to the initial estimates would require up to USD 125-150 mln investment. However, "Open Net" only received a total of GEL 3 mln in 2015-2017 and financing from "Cartu Group" was stopped thereafter[12]. Since then, the organization has been operating through other private donations.

Later, in 2019 the GoG adopted the 2019-2025 Georgia's National Strategy and Action Plan for the Development of Broadband Networks. According to the MOESD, the strategy envisages the establishment of Georgia as a digital and informational hub in the region, and its implementation will be supported by the World Bank. The general objectives of the strategy include stimulating competition, attracting investments, and increasing digital skills and demand throughout Georgia. The target outcomes for 2025 include:

- Ensure 99% 4G coverage throughout Georgia;
- Piloting 5G Service in at least 3 municipalities;
- 1GB/s access for all legal entities;
- High speed (100 MB/s+) broadband network access for all households.

The ComCom, municipalities, the private sector, various sectoral regulatory bodies, and civic and international organizations will take part in the implementation of the strategy. The strategy and action plan will be implemented within the framework of the allocations of the responsible agencies envisaged by the state budget of Georgia and within the budget of ComCom and other sectoral regulatory bodies. According to the World Bank estimates, up to USD 600 mln (about GEL 1.6 bln) will be required to reach the target. The project expects most of the investment from the private sector.

Since the renewal of the project, we have seen some degree of activity. More specifically, the development of broadband fiber-optic infrastructure in the Ozurgeti Municipality, a process that initiated in October 2020. As of now, 140 km of cable has been deployed (28,576 population)[13]. The project was completed on May 14 and the

[12] *Information provided to IDFI by "Open Net"*
[13] *Opennet.ge - Progress Tracking portal.*

constructed broadband infrastructure was put into operation. Additionally, the second pilot project has been launched in the Kobuleti Municipality, and with 50 km of fiber-optic infrastructure planned to be built for about 10,500 inhabitants.

The World Bank, in support of the National Broadband Network Development Strategy for Georgia 2020-2025 and the Action Plan for its implementation, in cooperation with the Government of Georgia, has developed the project "Log in Georgia", which plans to build optical networks for 1,000 settlements, including villages in mountainous regions. The project will benefit approximately 500,000 people. Within the framework of the project, the construction of an optical network will start in the first quarter of 2022 in the Chokhatauri municipality; In the first quarter of 2022, works will also start in Ambrolauri and Oni municipalities.

PUBLIC PROCUREMENT IN THE EDUCATION SECTOR

Health concerns, confinement measures and border closures implemented in the wake of the Covid-19 crisis have caused severe disruption in the supply and distribution chain of goods, works and services that the public sector needs. In an attempt to overview general trends and tendencies in the public procurement sphere, IDFI monitored the announced tenders and simplified procurement activities of the Ministry of Education and Science of Georgia and seven of its NNLE-s through the State Procurement Agency's online portal.

COVID-19 decreased state purchases through the tenders in education sector in 2020. The total volume of announced tenders in 2020 amounted to GEL 89 mln, -35.4% less, compared to 2019. This reduction was driven by the fact that public educational facilities were closed for the most part of the year.

Table 3: Total volume of public tenders in education sector in 2019-2020 (Gel, mln)

Agency	2019	2020	% Change
Ministry of Education and Science of Georgia	2.9	1.2	-59%
Education and Science Infrastructure Development Agency	115.3	82.6	-28%
Education Management Information System	15.4	2.9	-81%
National Assessment and Examinations Center	1.0	0.4	-60%
Teachers Professional Development Center	1.8	0.14	-92%
National Center for Educational Quality Enhancement	0.1	1.1	+1000%
Office of Resource Officers of Educational Institutions	1.0	0.6	-40%
International Education Center	0.1	0.05	-50%
Total:	**137**	**89**	**-35%**

Source: Ministry of Education and Science, IDFI

Announced tenders in education sector for software products and courier services increased. The number of individual tenders announced has also decreased by 53%. The downward trend is present in every monitored agency, except the National Center for Educational Quality Enhancement, which had announced large tenders for various software products as well as courier services.

GEL 31 mln tender was announced to provide 55,000 laptop computers for the first grader pupils in 2020. The tender was announced within the framework of the programme “My First Computer” by the Education and Science Infrastructure Development Agency.

898 Projectors and 6,350 laptop computers were purchased for GEL 13 mln within the International Bank for Reconstruction and Development (IBRD) financed project “Georgia I2Q - Innovation, Inclusion and Quality”. The project aims to expand access

to quality preschool education and foster quality teaching and learning in general education through innovative sustainable infrastructure design and total financing amount to Euro 90 mln. Additionally, 4 million GEL was expended on supplying and installation of Wi-Fi networks in 121 schools.

Fig 53: Tender Statistics of Education Agencies 2019-2020

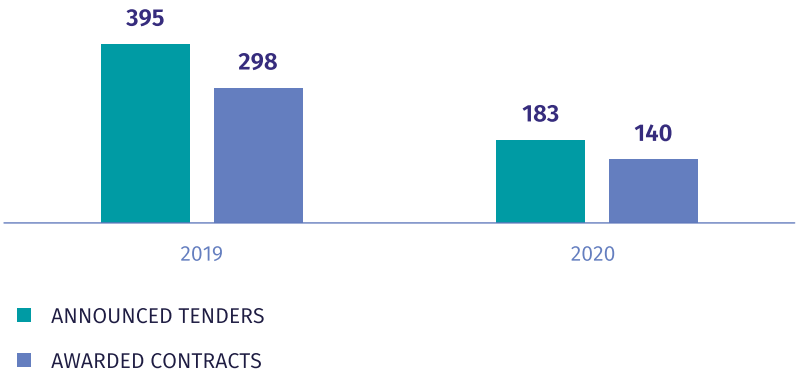
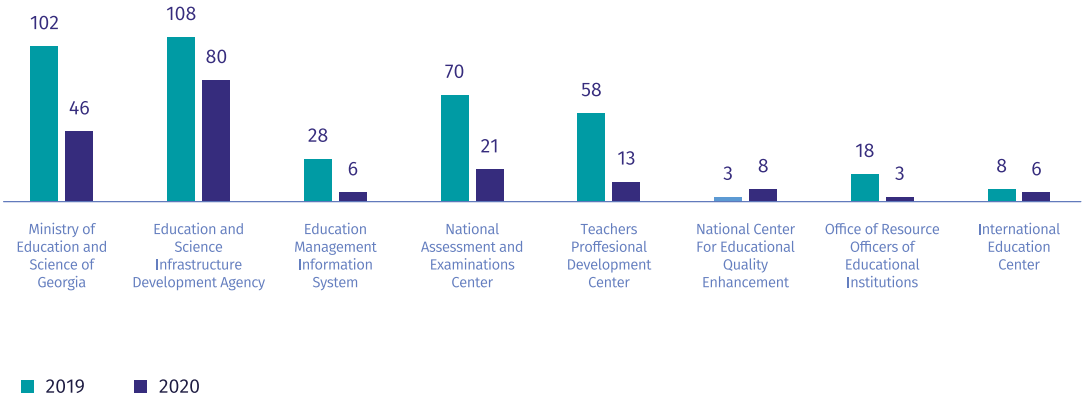


Fig 54: Number of Tenders announced by Agencies 2019-2020



Source: Ministry of Education and Science, IDFI

SIMPLIFIED PROCUREMENT

Volume of simplified procurement contracts decreased by -78% YoY to GEL 15.9 mln in 2020. Public institutions use simplified procurement procedures instead of electronic tenders to purchase the required products/services in urgent situations as well as other circumstances specified under the procurement law. To do this, each government institution needs the approval of the Procurement Agency.

Table 4: Volume of simplified procurement in education sector in 2019-2020 (Gel, mln)

Agency	2019	2020	% Change
Ministry of Education and Science of Georgia	3.1	1.1	-64%
National Assessment and Examinations Center	1.7	2.2	32%
National Center For Educational Quality Enhancement	0.4	0.4	-14%
Office of Resource Officers of Educational Institutions	0.9	0.3	-64%
Office of Resource Officers of Educational Institutions	57.5	11.3	-80%
Education and Science Infrastructure Development Agency	0.3	0.2	-43%
Teachers Professional Development Center	0.1	0.1	+36%
International Education Center	9.1	0.2	-97%
Total:	**73.1**	**15.9**	**-78%**

Source: Ministry of Education and Science, IDFI

The number of simplified procurement contracts decreased by -27% YoY to 843 in 2020. All agencies decreased the number of simplified contracts except the Education Infrastructure Development Agency, which increased simplified procurements by +23% YoY, to 264 contracts in 2020, accounting for nearly 30% of total simplified contracts in 2020.

Fig 55: Total Number of Simplified Procurement

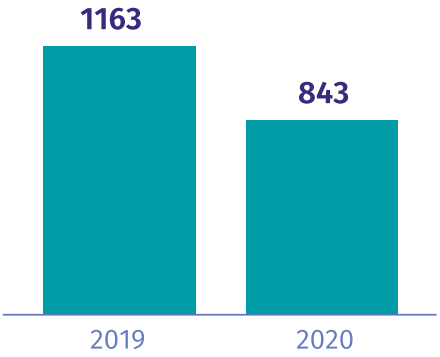
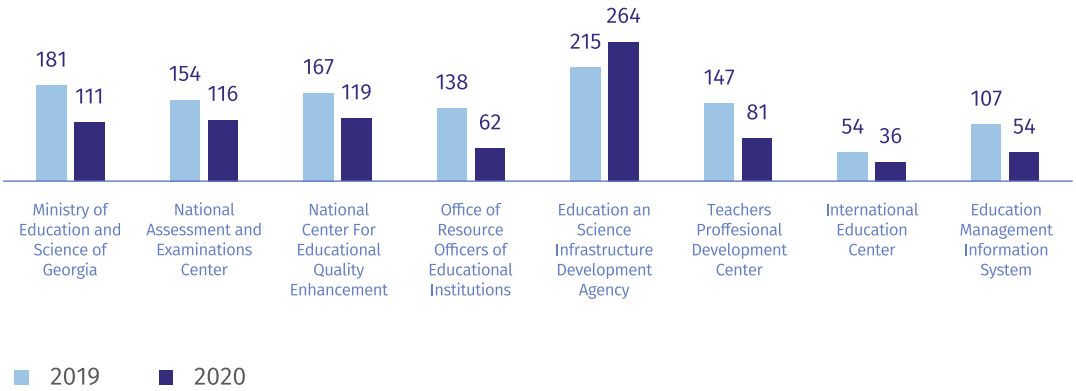


Fig 56: Number of Simplified Procurement conducted in 2019-2020



Source: Ministry of Education and Science, IDFI

Other than the institutions mentioned above, education-related public procurement was exercised by local governments. In the period between July 22nd to September 30th, 2020, 41 municipalities procured hygiene-related materials and services for 241 schools and 16 municipalities for 133 kindergartens through simplified procurement.

Overall, distance learning in the Georgian education system was not implemented before the pandemic and the country was unprepared to face the new challenges. To research problems with the pandemic more accurately, IDFI has conducted focus group surveys presented below.

6. FOCUS GROUP SURVEY RESULTS

Within the framework of this research project, both qualitative and quantitative methods were used to collect sociological data through online surveys and focus groups. It was decided to conduct focus groups in order for the research team to receive information on the challenges that arose in the distance learning environment and to present these challenges in terms of the ones that were more pronounced either in Tbilisi or the regions. In the scope of the qualitative study, six focus groups were conducted among teachers, school principals, and parents from Tbilisi as well as other regions of Georgia[14]. Quantitative study was conducted using online survey techniques and involved more than 500 respondents.

6.1 QUALITATIVE RESEARCH

The goal of the qualitative study was to identify in-depth problems that might go beyond the scope of a quantitative survey. on the discussions with focus groups mentioned above revealed the following kinds of problems:

- **Challenges related to the internet access and lack of the necessary technical equipment, especially for socially vulnerable students and large families;**
- **The lack of skills to use information technology tools by parents and management of teams, including problems with evaluation (Inability to Export the e-Journal);**
- **The problem of large numbers of students and the duration of the lesson in distance learning;**
- **The problem of involving hyperactive students with special needs in the lesson and depressive tendencies among students in elementary grades;**

[14] *Respondents from the groups have talked about positive sides of the online/distance learning, efforts of schools, teachers and parents to better direct the process. We have underlined main challenges in this short summary.*

CHALLENGES RELATED TO INTERNET ACCESS AND LACK OF NECESSARY TECHNICAL EQUIPMENT, ESPECIALLY FOR THE SOCIALLY VULNERABLE STUDENTS

One of the main problems identified in focus groups is the problem of Internet access, especially in regions and mountainous areas where Internet access is often problematic due to the lack of appropriate communication systems. One of the parent respondents from the region mentions that a faulty internet connection is the main problem that public schools faced during the pandemic.

- *"A little bit of a challenge was that we have a problem with the Internet. I have bad internet connection at the moment as well; I forgot when I called."*
- *"The biggest problem is that we are from a village in a mountainous area and we suffer a lot in every way, especially if there is bad weather and there is snow, the internet connection suffers a lot."*

Due to faulty internet connection, students are often "kicked out" of the TEAMS program, which is an additional challenge in the conduct of the learning process.

> *"I once thought my son was lying to me and telling me that TEAMS had kicked him out, but really when I sat next to him I was convinced, I blame it more on the internet, the internet was not good."*

One of the respondent principals from the region says that although his school is involved in the "New School Model", which provides school support from the ministry for technological issues, they still consistently have the problem of faulty internet connection.

> *"The biggest problem for my school is that the quality of Wi-Fi, ie the Internet is very low. Despite the fact that we are involved in the project of the "new school model" and still the quality of the Internet is low."*

The problems of distance learning mostly affected the socially vulnerable students. They did not have the proper hardware and good internet connection, which prevents them from participating fully in the learning process.

> *"Children have neither a normal phone nor a computer. There are families who had access to the Internet, but no computers."*

"The socially vulnerable did not have a telephones, many did not have internet. Even those who had a phone, had internet problems. They had to go to a neighbor. This will all lead to some feelings of resentment in the child, they do not enjoy going to a neighbor's at half past 10 in the morning. I think socially vulnerable families have found it most difficult."

Large families also face problems with distance learning. According to the respondents, families with more than 2 students may face the problem of coinciding lessons, or lack of suitable devices. Respondent parents discuss the problems of a large family:

"I have four children and three of them are in school and sometimes they have to attend lessons at the same time, and it was very challenging. Not all four of them have a computer so they have to switch between them, logout, log back in and so on."

"I have 5 children. All five school-age and we had a problem with the internet too. Sometimes no sound was heard. Mostly no sound was heard, or they were getting kicked out of the lesson and it was very difficult for us."(Parent from Tbilisi)

THE LACK OF SKILLS TO USE AN INFORMATION TECHNOLOGY TOOLS BY PARENTS AND MANAGEMENT OF TEAMS, INCLUDING PROBLEMS WITH EVALUATION (INABILITY TO EXPORT THE E-JOURNAL)

The next problem that emerged from the research is the lack of TEAMS management skills on the part of teachers and parents living in the rural areas. One of the parents from the region says that rural parents found it very difficult to set up distance learning due to a lack of internet access, technology, and digital literacy. Respondent parents say that often students artificially disrupted the learning process, such as, for example, when students would mute their peers' microphones, which the teachers could not control, and consequently, this led to the disruption of the learning process.

"In my opinion, the negative thing was that the children could turn off the microphone for a classmate, and when the teacher would share the screen,

some students could connect and edit or delete it. Some things needed to be improved, things that are easier to manage in the classroom than it is in this online mode." (Parent from the region)

One of the parents says that it is very difficult for elementary school students to upload their assignments in TEAMS, as they would need a phone that they usually do not have due to their age. Involvement of parents is necessary, which may be complicated by the latter's schedule, occupation, or lack of digital literacy, all of which may pose an additional challenge.

"The biggest challenge for elementary school children is uploading assignments to TEAMS, because this requires a phone." (Parent from the region)

According to one school's principal, TEAMS does not have a separate window for student assessments where teachers and parents can view grades by semesters.

"It would be desirable if the semester results were displayed in separate window, for example, 7th grade grades for the first semester and the same for the next semester and finally the annual results."

Additionally, school principals agree that it would be good if the e-journal would have an export function.

"If an export function is added to the e-journal, it will be very good for a simpler form of verification, verification and even paperwork for both the administration and the teachers, and it will be very good to have the ability to export."

Teachers say that TEAMS does not have the function of marking attendance, and it is also impossible to mark the total scores.

" Personally, what bothered me in the process of working was the lack of the ability to mark total scores. We have had this shortcoming since February 1st." (Teacher from the region)

THE PROBLEM OF LARGE NUMBERS OF STUDENTS AND THE DURATION OF THE LESSON IN DISTANCE LEARNING

According to one of the respondents, 30 minutes is not enough to explain and manage a lesson in some subjects, especially when there are 30 or more students in the class. It is especially problematic to manage a large number of students and involve them in the learning process while distance learning.

> *"If 30 children are sitting in the one class and there is one teacher, they have half an hour or 45 minutes of involvement, they cannot physically attend, even if they are learning "Old Georgian", to discuss such a large topic." (Parent from the region)*

The challenge of class size is present both in the regions and in Tbilisi.

> *"As for the number of students, there are too many in public schools, ie a maximum of 28 children, and I think it is too much, not only for distance learning, but also for face-to-face teaching, and I think it would be good if there were 10 to 15 students per group." (Parent from Tbilisi)*

THE PROBLEM OF INVOLVING HYPERACTIVE STUDENTS WITH SPECIAL NEEDS IN THE LESSON AND DEPRESSIVE TENDENCIES AMONG STUDENTS IN ELEMENTARY GRADES

Respondent parents say that distance learning makes it difficult for a hyperactive child to be involved in the learning process due to a lack of knowledge, skills, and methodology among the schools / teachers.

> *"A hyperactive child still needs to have another person by his side who reminds him, so to speak, that he has to get involved, that is, it is still difficult for the teacher online to approach each child individually and pay more attention to, say, a hyperactive child." (parent from Tbilisi)*

The study further revealed other problems related to distance learning. Teachers say distance learning has had a big impact on elementary school students and may have caused them to feel depressed.

"Psychologically, for first-graders.. second-graders the pandemic was the cause of depressive symptoms." (Teacher from the region)

Overall, the qualitative research has revealed challenges in terms of availability of the internet access and corresponding technology to accept distance learning, especially for socially vulnerable pupils and students in large families who do not have high quality of internet and several gadgets. It was revealed that socially vulnerable students and ones living in rural regions may face more challenges with distance learning than students living in Tbilisi.

Lack of technical skills of teachers and parents to manage and attend online classes and upload homework is also challenging for the study process. Problems such as the length of the online lesson and the large number of students were prevalent in both Tbilisi and regional school students, and respondents underlined that the mentioned issues decrease the effectiveness of online lectures.

Analysis of qualitative data from the study revealed that distance learning may have been more stressful and problematic for elementary school students than for middle and high school students, with challenges including uploading homework, continuing depressive moods and so on. Respondents mostly agree that the impact of distance learning does not vary across gender. According to only one respondent, girls and boys faced almost the same challenges and difficulties during this period, although boys from higher grades still managed avoid lessons in more cases than girls. Against the background of existing challenges, distance learning has presented new opportunities, and in some cases, as a result of school administration and parental activism, students have been provided with the necessary conditions for learning. Some schools provided informational support to students, provided technology for learning to vulnerable students, and provided funds for the Internet. There was also an effort by the parents to form shared groups through social networks and to conduct trainings in the training program TEAMS. However, we think that the systematic dissemination of these initiatives is necessary to achieve a tangible effect to improve the quality of teaching. It is also important to consider the attitude of certain parents towards distance learning, which in their opinion is a way to effectively manage time in certain cases.

6.2 QUANTITATIVE RESEARCH (ONLINE SURVEY)

The quantitative survey included 528 respondents. Respondents were teachers, school administration representatives, and parents. The designed questionnaire included questions formulated by a group of researchers based on the analysis of the focus group data.

33% of respondents were from Tbilisi, while 20% and 14% of participants are living in Samegrelo-Zemo Svaneti and Imereti regions respectively, with the remaining people being from all over Georgia. In addition, age distributions show that great majority of participants are between 31 and 60 years old.

Fig 57: Region (place of living)

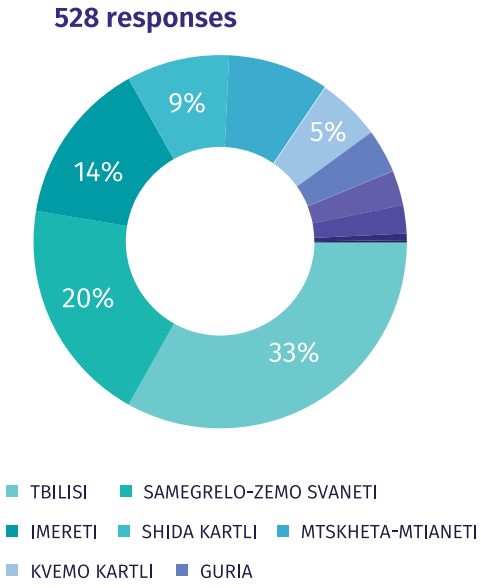
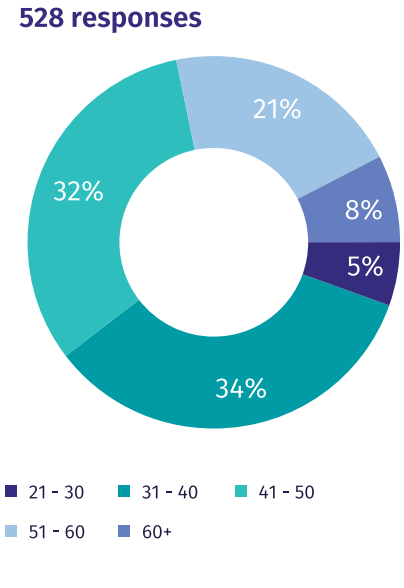


Fig 58: Age



Source: Survey, IDFI

Participants are mostly Teachers (66%), followed by Parents (35%) and Principals (5%), while a respondent can be all three of them at the same time. Furthermore, 67.3% teach at elementary schools, 53% in middle schools and 40.9% in high schools.

Fig 59: Status of Respondent: 528 responses

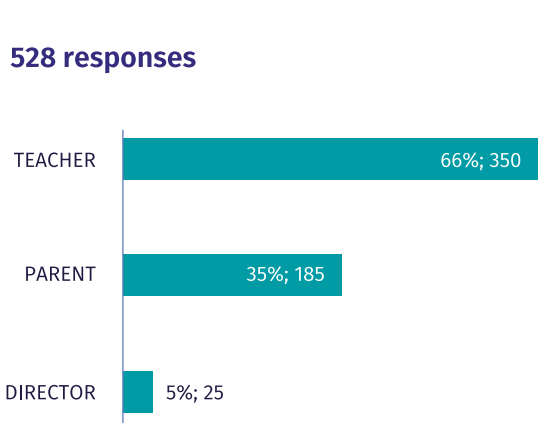
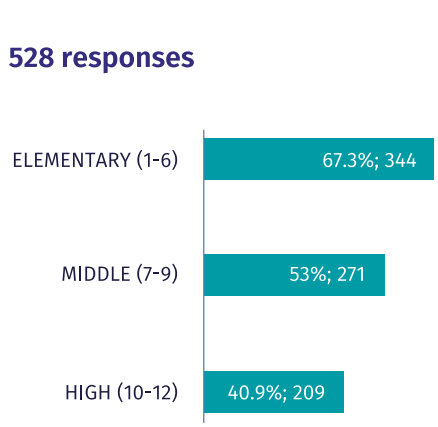


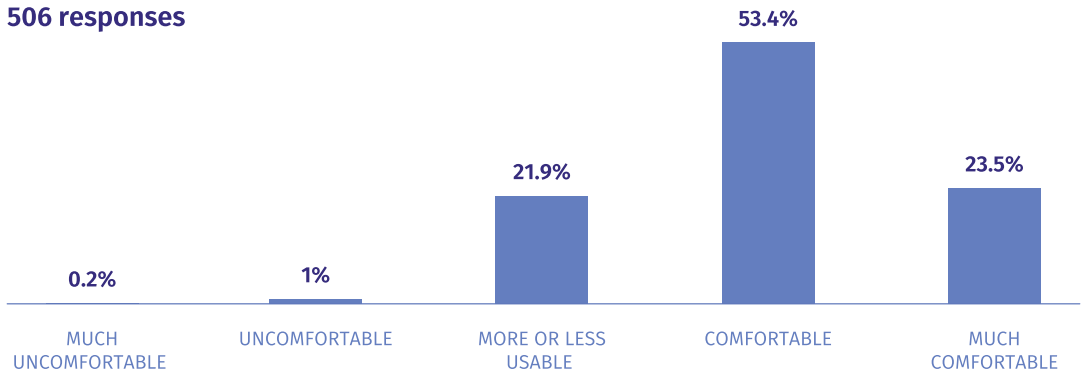
Fig 60: At what stage do you teach your child studies online



Source: Survey, IDFI

The TEAMS software is used in distance learning by 94% of all participants, and most of them consider it to be a comfortable (53.4%) or Very comfortable (23.5%) tool for online learning.

Fig 61: To what extent is TEAMS usable for online learning?

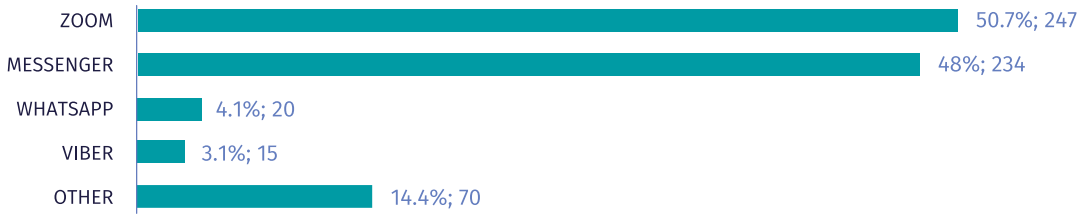


Source: Survey, IDFI

Although participants are comfortable with TEAMS, other programs are also popular, with some wishing ZOOM (50.7%) and Messenger (48%) had been used during distance learning as well. Considering that only 23.5% recognize TEAMS as "Very comfortable" and the high popularity of ZOOM and Messenger, one may argue that TEAMS was a fairly helpful program during this pandemic, but lacks some features to do the job it was intended for during the distance learning process.

Fig 62: Which other program would you wish to use during the distance learning process?

487 responses



Source: Survey, IDFI

85.4% of all participants received information about online learning from their school or the Ministry of Education, and 67% of all respondents even received training regarding the use of TEAMS, but 25% of the participants who received this training think that it was not timely.

Nearly 62% of the survey participants argue that attendance during online classes was lower compared to the regular learning classes.

Fig 63: How did attendance at online classes change compared to classroom studies?

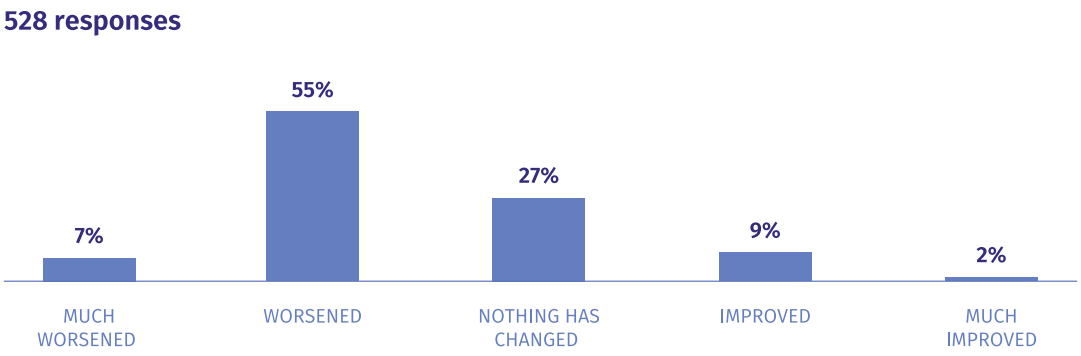
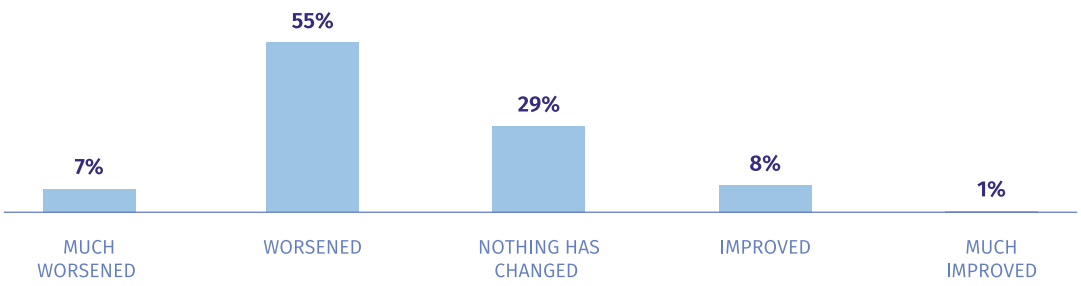


Fig 64: How much did of the rate of non-attendance change during distance learning?



Source: Survey, IDFI

More than half of the respondents think that academic performance has worsened compared to offline studies, and only 16% think that to the contrary, it has improved. The quality of learning had also worsened according to participants (63%), and only 8% answered that it had improved.

Fig 65: How did the academic performance of pupils' change compared to offline learning?

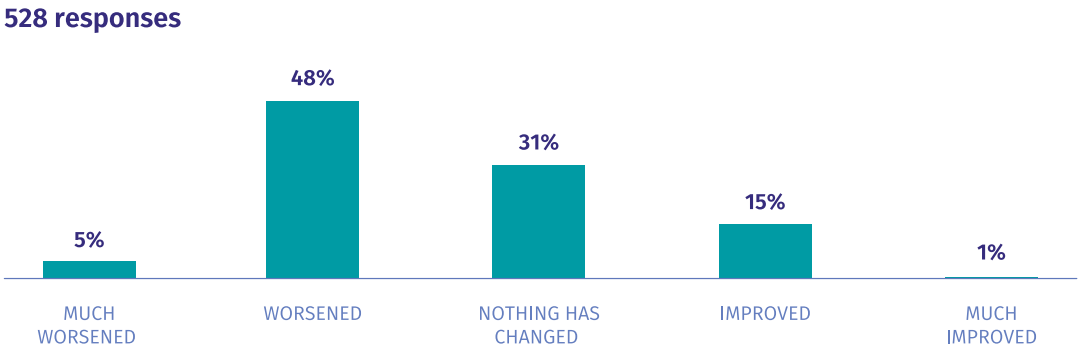
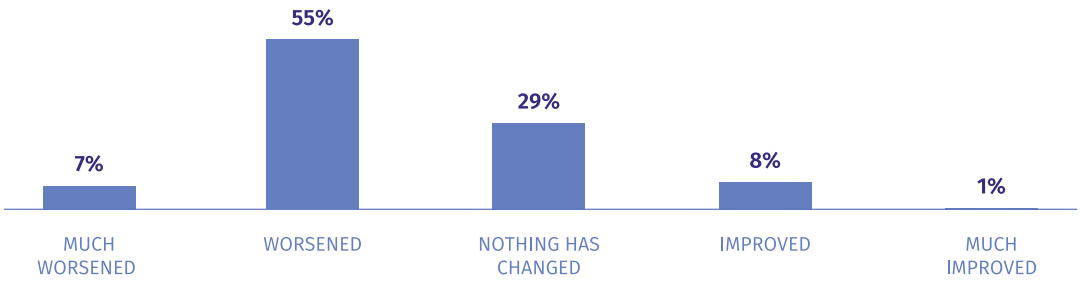


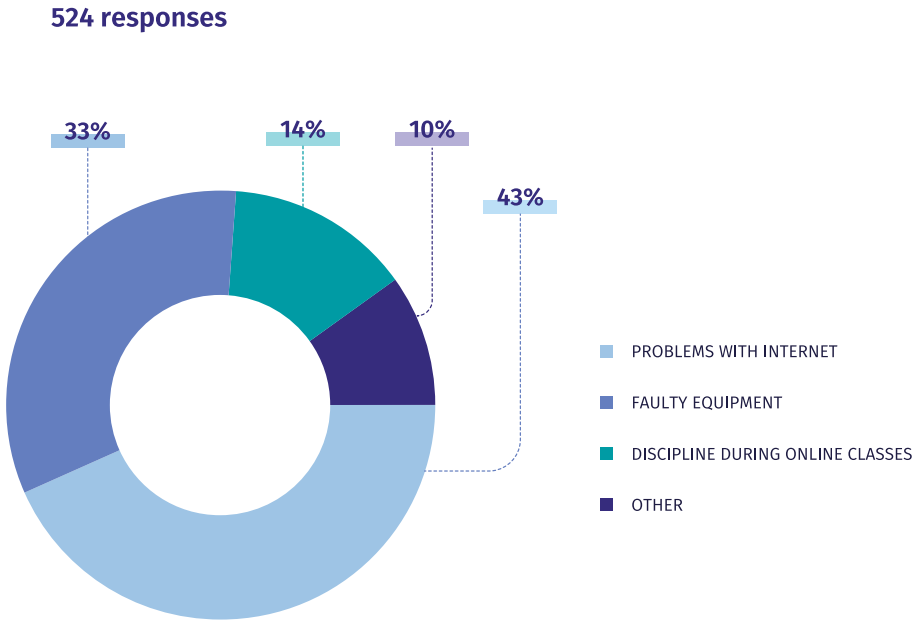
Fig 66: By your observation, how did the learning/quality of learning change?



Source: Survey, IDFI

Problems with the internet (43%) and absence of proper equipment (33%) was most frequent complications mentioned by the participants. Discipline during online classes (14%) was mentioned also as another complications during the online studies.

Fig 67: What additional complications during distance learning would you single out?



Source: Survey, IDFI

Insufficient number of computers is a significant challenge for distance learning. According to the survey, only 60% of pupils and teachers use personal computers for studying, and the rest of the respondents rely on other gadgets. Considering that not every household has personal computer and the fact that there are several pupils in one household, it is hard to have sufficient numbers of computers. There was a great desire for free or cheap internet during the distance learning period.

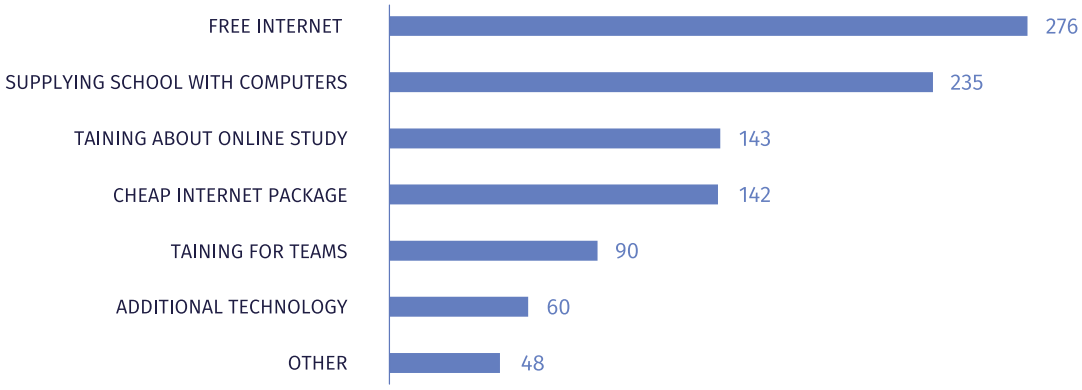
In 15 countries surveyed by the Asian Development Bank, steps have been taken to increase access to distance education via mobile phones. In 11 countries, ministries of education have distributed subsidized or free devices, while in 17 countries, including Georgia, the government has provided internet access with subsidized or at zero rate for educational purposes through negotiations with Internet providers (UNESCO, UNICEF and World Bank 2020).

Fig 68: Which technology do you use during online studies?

528 responses

Fig 69: What would have been helpful for you with regards to online learning? (Multiple answers are possible)

528 responses



Source: Survey, IDFI

It is also noteworthy that 59% of all respondents think that their school had a strategy for distance learning, while only 23% didn't confirm that information and 18% don't have any information about the subject. Moreover, 84.7% of respondents say that not all pupils had access to internet, with 78.4% of those pupils being from socially vulnerable families and 54.8% coming from large families.

Fig 70: By your observation, does every pupil have access to internet?

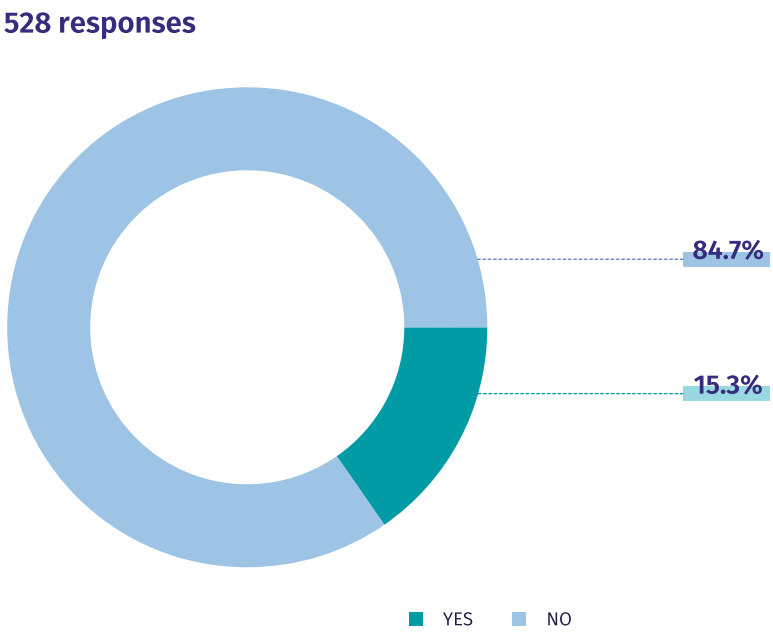
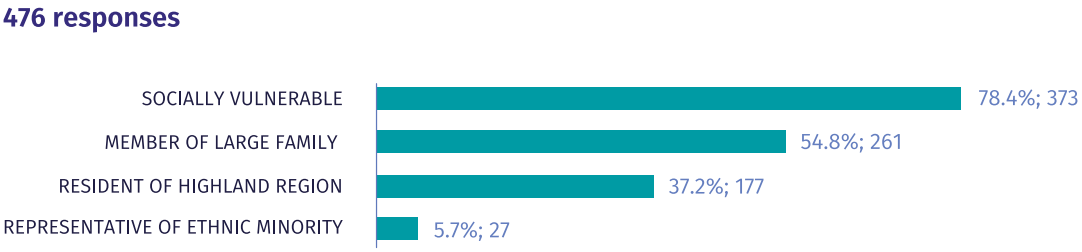


Fig 71: If no, which schoolchildren do not have access to internet?

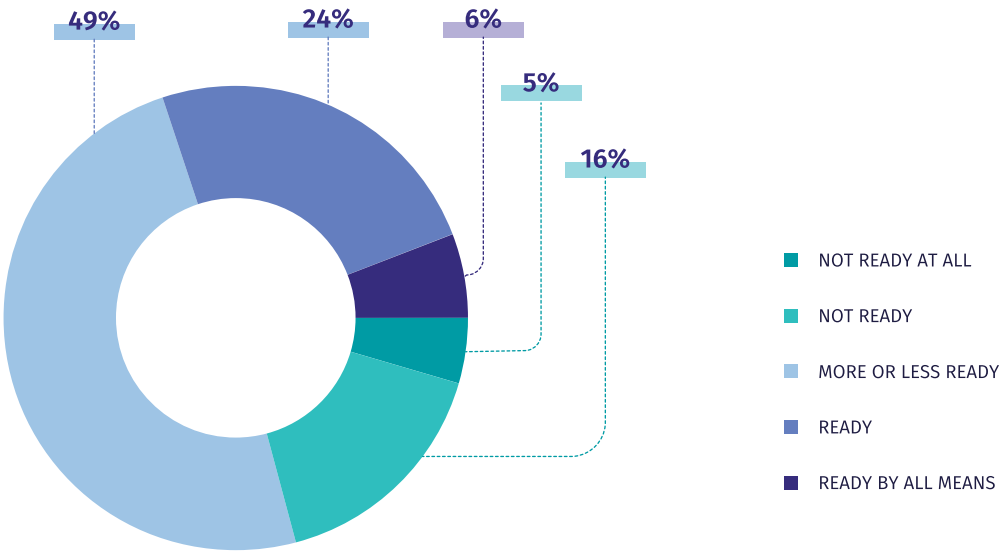


Source: Survey, IDFI

49% of all respondents think teachers are more or less ready to deal with the psychological condition of the children. A slightly higher number of participants think that they are ready (24%) or ready by all means (6%) compared to ones who think that teachers are not ready (16%) or Not ready at all (5%).

Fig 72: In your opinion, to what extent are teachers ready, in terms of stress, to deal with the psychological condition of children?

528 responses



Source: Survey, IDFI

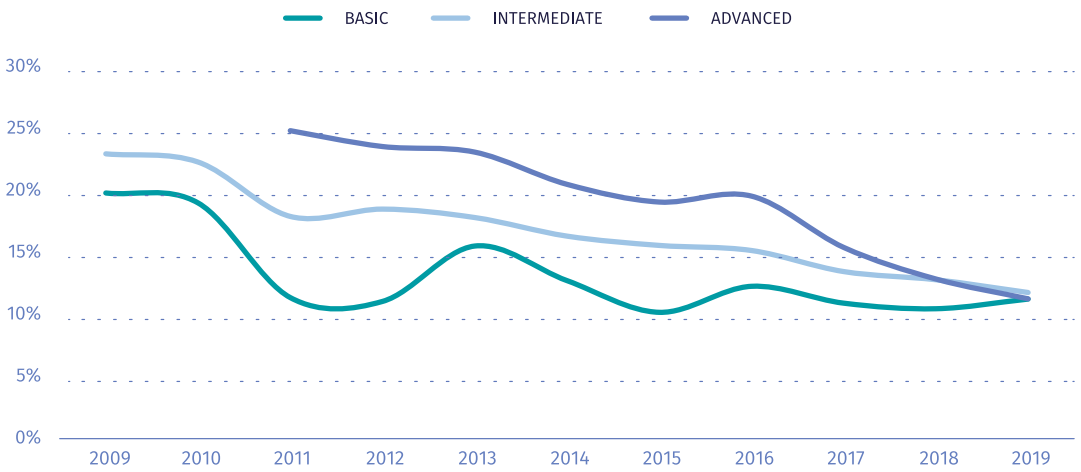
Overall, quantitative research has indicated that non-attendance rate increased significantly compared to the classroom studies as well as compared to the starting period of pandemic to later phase. But, more importantly, the majority of the respondents believed that the quality of learning along with academic performance worsened in most of the cases compared to offline studies.

Other issues are the availability of technology and internet access, which is the main obstacle in the distance learning process. Most popular gadgets for teachers and pupils were personal computers and mobile phones. Meanwhile, free internet was the most demanded assistance respondents wish they could have had during the pandemic.

7. LEARNING LOSSES AND THE COVID-19

Unemployment rate in the labor force among those with a higher education degree decreases sharply in Georgia. In 2011, nearly 24% of the labor force with a degree was unemployed, but this number decreased by 14 p.p. to -11% in 2019.

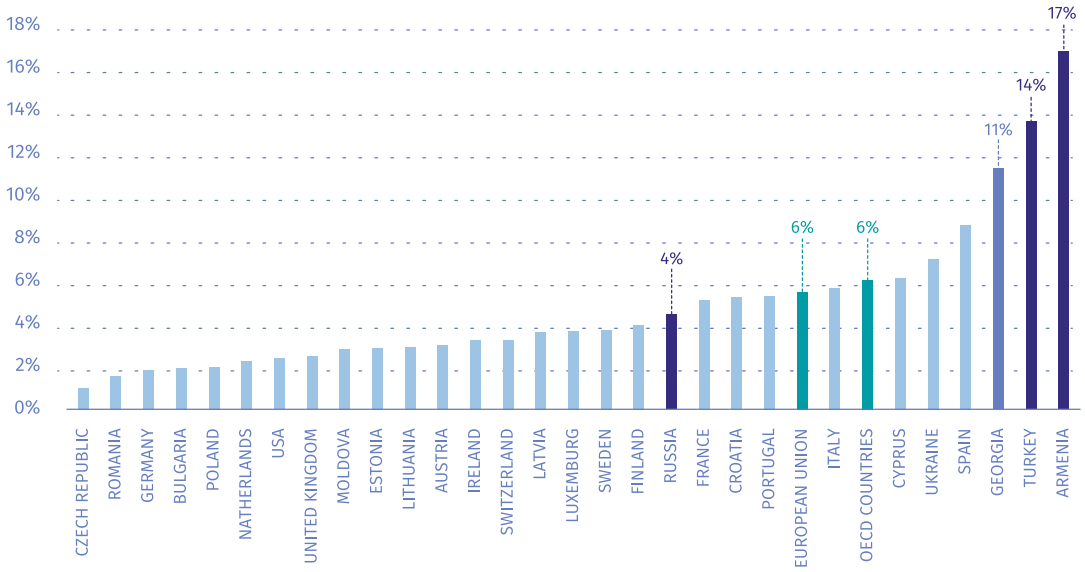
Figure 73: Unemployment rate in different groups by education level in Georgia.



Source:WB, IDFI

However, the unemployment rate in the labor force among those with higher education degrees in Georgia (11%) is still well above other countries, including OECD members (6%) and EU countries (6%), indicating a low quality of higher education.

Figure 74: Unemployment rate in different groups by education level in Georgia.



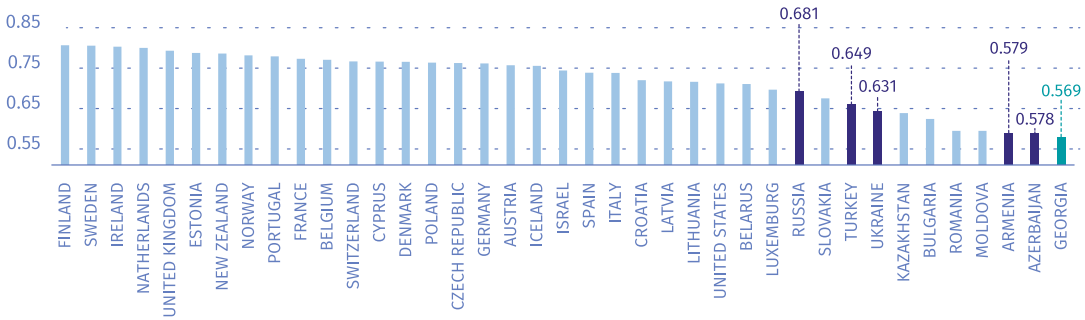
Source:WB, IDFI

Due to the Covid-19 pandemic, GoG closed schools for one month and launched remote learning platforms to prevent the spread of the virus on the 4th of March 2020. Introduced lockdowns and lack of experience with distance learning decreases effectiveness in the studying process and is expected to have long-term consequences on the country's growth potential.

Distance learning is better than stopping the learning process altogether, but it also gives rise to serious challenges, including rising unemployment and the economic crisis caused by the COVID-19 pandemic, which has reduced household incomes due to accumulated stress and the lack of access to private lessons and expensive technologies or other attributed necessary for the learning process. Not all children have access to the internet, computers or cell phones, and in large families, when lessons are conducted simultaneously, technology becomes a scarce resource. Below, we explain how we developed a model for calculating losses related to the education process and what the long-term consequences of these losses will be for the Georgian economy.

Expected productivity of pupils in Georgian schools is the lowest among regional and other countries. The World Bank Human Capital Index (HCI)[15] was launched in October 2018 and was updated in 2020 just before the pandemic started. Calculated rate for Georgia is 0.57 and is quite low compared to the neighboring and other European countries. The HCI measures the probability of a child born today to become a productive worker in the future given the quality of education and healthcare in a specific country. HCI ranges from 0 to 1 and consists of three main elements: Children survival rate (99% in Georgia), Adult survival rate and Quality of Education measured as Learning Adjusted Years (8.3 in Georgia) and Expected Years of Schooling (12.9 years in Georgia).

Figure 75: HCI index in different countries in 2020



Source: WB, IDFI

The COVID-19 pandemic has led to restrictions in various parts of the world, which have been a source of downward pressure for various sectors of the economy. Restrictions imposed on the education sector have hampered the education process, which will affect the qualifications of the next generation and will have a negative impact on the economy. Using data from the World Bank, the Human Capital Index, the Institute for the Development of Freedom of Information has developed a model to calculate the degree of economic disruption caused by the weakening of the learning process, the methodology of which is as follows:

[15] *Learning loss model was taken from a Worldbank paper and adapted to calculate overall GDP that will be lost in the future years on account of this learning loss for Georgia.*

- Government effectiveness for mitigating learning losses in schoolchildren (M):

$$M=G*A*E$$

G- actions to create alternative ways for remote learning

A- access of children to remote learning platforms

E- effectiveness of remote learning compared to classroom studying

- Learning Adjusted Years of Schooling (LAYS) is calculated with the following formula:

$$LAYS=P*S*(1-M)$$

P-School productivity measure (student average Harmonized Test Scores,HTS)

S-% share of days of school closures in Georgia

- Yearly Earning per Student (YEpS) is needed to calculate average yearly change in every student's future earnings that are enrolled in Georgian education system, starting from primary education and all the way through high school:

$$YEpS=LAYS*R*Earnings$$

R-expected long run return on one year of education,HCI used

Earning-Average annual income in Georgia

- Total Yearly Earnings (TYE) of students' calculations:

$$TYE = N * A * UHCI$$

N - Number of Students

A - Adult survival rate

UHCI[16]- Utilization adjusted Human Capital Index

Present Value of (PV) Learning Losses for the Georgian economy reaches GEL 55 bln in 2020. For the PV calculations of the learning losses we assumed that students will, on average, start working in 10 years from now and work for 45 years. Discount rate is taken 3% (Target inflation). Although, it is worth mentioning that numbers used in calculation are derived during the ongoing pandemic and the picture could in fact be better when compared to the numbers that our model has predicted. Below we present our calculation methodology.

It is also important to note that our estimated losses are close to the losses calculated in the medium intensity scenario in the paper "Loss of Education and Income from School Closure Caused by the COVID-19 Pandemic" published by the Asian Development Bank in 2021. The difference is mainly due to the assumptions made in the model, and even under the same assumptions, the difference between the present values of losses does not exceed 5 billion GEL.

Overall, Education decreases unemployment in the long-term and has a positive impact on the well-being of the population. Learning loss caused by pandemic could be reduced in the future if the government and families support youth population and increase education level in the country.

[16] *It doesn't take into account labor market specifications of Georgian reality. Hence, Worldbank adjusted HCI calculations in such way to match labor market demand for skill and cognitive abilities*

8. POLICY RECOMMENDATIONS AND ACTIONS TO MITIGATE NEGATIVE EFFECTS FROM COVID-19

- **During the COVID-19 pandemic, Georgia is still unprepared for the distance learning and the quality of distance learning should be improved. In order to improve the effectiveness of learning, it's important to develop relevant guidelines and give technical assistance to the socially vulnerable population. Therefore, it's necessary to discuss this issue through various professional platforms, including the parliament of Georgia and urgently create an effective policy. Based on the current dynamics of the daily infections, the new academic year is expected to start via distance learning and without improving the present conditions, heavy losses are to be expected. Furthermore, it is essential to provide technical assistance to the socially vulnerable population, in order to provide basic conditions for learning.**

In the context of the COVID-19 pandemic, when a very small part of the population has been vaccinated and the pandemic has not yet been defeated, it is important to improve the quality of distance learning. The population has a problem with involvement in the distance learning process. Nearly 11% of total pupils and teachers have not used the online study program TEAMS. The process of teaching and learning is interactive, and it is most difficult for children to grasp the existing reality and adapt to the limitations of the pandemic, hence distance learning poses a challenge especially to young students' mental health (anxiety). It is therefore essential that the online learning process is properly planned and adapted to the needs of the pupils.

Distance learning is a new challenge, but it also presents an opportunity at the same time. Therefore, prolonging digitalization and adoption of modern study tools could bring new challenges to the Georgian education system and lead to an underdeveloped labor force as compared to other countries. Distance learning is not only a good solution during lockdowns, but it is supposed to overcome problems of missing classes and increase the effectiveness of the study process.

- **To support distance learning and ensure its continuity as well as effectiveness, it is necessary to monitor distance learning, by randomly selecting classes and deeply analyzing the issues uncovered through our qualitative research.**

The poor knowledge of digital technologies among parents and, in some cases, teachers, as well as the short duration of lessons and the large number of students are a significant challenge to ensuring a perfect learning process. Further research in this area will allow us to explore the existing challenges in depth.

- **Learning Losses can be decreased by higher quality of schooling, increasing length of the study semesters, and introducing additional trainings for pupils with low performance.**

Learning losses associated with the COVID-19 pandemic and respective lockdowns of schools are significant for the Georgian economy, with the PV of losses comprising GEL 55 bln. Introduced lockdowns and low experience in distance learning decreases the effectiveness in the learning process and is expected to have long-term negative consequences on the skills development of the youth and the country's overall growth potential.

- **Allocation of more resources to the education sector is necessary to increase the popularity of teaching as a profession, support socially vulnerable population to attend distance learning, and increase overall quality of studying, especially in the public sector.**

The financial resources allocated to education as a % of GDP is low in Georgia compared to the EU and OECD averages, leading to low wages among teachers, which in turn decreases the popularity of teaching profession and exacerbates the ageing problem in the sector.

Education services for children in socially vulnerable families are unavailable for the most part, during distance learning. GEL 200 distributed by the GoG for all children under age 17 is not enough to support pupils living in socially vulnerable families with the study process, and it could be better to select pupils from socially vulnerable families and increase assistance for them.

It is estimated that 78,000 students do not have access to the Internet or a computer, and up to GEL 100 mln is needed to provide computers and internet to socially vulnerable families and give them access to online learning platforms.[17]

- **Reducing the size of student groups and increasing the number of lessons will help improve the effectiveness of the learning process, as opportunities to monitor the growth of students will increase. It is also desirable to increase social interaction among students in the context of distance learning.**

Qualitative research conducted in focus groups revealed that the excessive number of students in distance learning conditions and the low duration of the lessons are significant challenges for the learning process. In addition, hyperactive students often have difficulty concentrating on lessons and students in elementary grades often face depressive moods.

- **The COVID-19 pandemic and the challenges of distance learning have shown that the school graduation rate is quite high despite the existing problems. We believe that the general education system needs fundamental research-based reform, including the improvement of the criteria required for graduation, which can have a positive impact on student motivation, choice of vocational and higher education, and consequently on the quality of education.**

The criteria of school graduation exams might be too low in Georgia. High school graduation rate is 96% in Georgia, which is one of the highest numbers in the world. However, PISA scores and expected productivity of pupils in Georgia indicate that the school education program and quality of education is poor.

- **Provision of internet carries many indirect benefits for the country. Therefore, the GoG together with the private internet providers, should ensure internet access to the population and consider the costs associated with this issue, taking into account the indirect benefits of increased education in the country.**

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[17] *By the estimation of Institute for Development of Freedom of Information and Charte.ge.*

Internet is an important foundation for socio-economic development in today's global and growing digital economy. Currently, there is a high digital inequality in Georgia, which is mainly due to social, geographical and economic factors.

The lockdowns imposed during the Covid-19 pandemic lead to more than doubling of the internet traffic in Georgia. Internet is becoming increasingly popular, but high-quality internet is unavailable in rural, mountainous areas. The country must immediately launch a program that will provide good quality internet access in all regions of Georgia, or revise the timelines and current implementation of ongoing projects.

9. ABBREVIATIONS

CAGR - Compound Annual Growth Rate

ComCom – Georgia's Communications Commission

GB – Gigabyte

GeoStat – National Statistics Office of Georgia

GoG – Government of Georgia

HCI – Human Capital Index

HTS - Harmonized Test Scores

IBRD – International Bank for Reconstruction and Development

IDFI - Institute for Development Freedom of Information

MOESD - Ministry of Economy and Sustainable Development

MoU – Memorandum of Understanding

NNLE - Non-entrepreneurial Non-commercial Legal Entity

OECD - Organization for Economic Cooperation and Development

OSGF - Open Society Georgia Foundation

OxCGRT - Oxford Coronavirus Government Response Tracker

PEC – Preschool Education and Care

TB - Terabyte

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