

EXECUTIVE SUMMARY

ICT IN EDUCATION SURVEY 2020

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Executive Summary

ICT in Education 2020

COVID-19 Edition - Adapted methodology

With the suspension of in-person activities as part of the prevention measures adopted to face the COVID-19 pandemic, for months, schools were in a regimen of remote or hybrid classes. During this period, the use of digital technologies in education intensified and, at the same time, inequalities in opportunities among students also became more evident. The 11th edition of the ICT in Education survey presents data that helps analyze the role of digital technologies in this disruptive period for education.

Emergency remote education and use of technologies by schools

The most common challenge mentioned by school managers to continuing educational activities during the COVID-19 pandemic was the difficulties faced by parents and legal guardians in supporting students in school activities (93%). The implementation of remote education modalities transferred the responsibility of mediating the learning of students from teachers to parents and guardians inside their homes, a task for which not everyone was prepared.

According to data from the 2020 edition of the ICT in Education survey, only one-fifth of schools carried out pedagogical activities

through e-learning before the pandemic, which indicates that a large proportion of schools was not prepared for the transition from face-to-face to remote classes.

Another challenge mentioned by a substantial number of school managers was lack of devices, such as computers and mobile phones, and Internet access in students' households (86%). This proportion was even higher among schools located in rural areas and those that are part of municipal and state school systems. Inequalities in access to and use of technologies became more evident during this period and added to other socioeconomic inequalities. For 65% of managers, assisting socially vulnerable students, such as those without access to food in households, was another challenge faced in the period.

Most managers stated that the schools offered printed activities and materials to

students (93%). At similar levels, 87% reported that schools adopted the use of at least one type of technology among remote education strategies: Nine out of ten managers said they created groups in applications or social networks to communicate with students or parents and legal guardians; 79% recorded video lessons and made them available to students; 65% used videoconferencing platforms, and 58%, virtual learning platforms. However,

variations among the survey strata were observed: Only 34% of schools located in rural areas used resources such as virtual learning

APPLICATIONS AND SOCIAL NETWORKS WERE ADOPTED BY A SUBSTANTIAL PROPORTION OF SCHOOLS TO INTERACT WITH STUDENTS AND FAMILY MEMBERS DURING THE PANDEMIC

platforms, a proportion that was also lower among schools located in the North region (31%) and small schools with up to 50 students enrolled (39%).

Connectivity and use of digital technologies in schools

When schools were authorized to resume face-to-face classes in many states in the country, attention was also focused on the availability of digital technologies for students and teachers in schools, especially because of the implementation of hybrid education mediated by digital media.

According to the ICT in Education 2020 survey, 82% of schools had Internet access, with higher proportions among state schools (94%) and private schools (98%). There were lower proportions of access in schools located in the North region (51%), in rural areas (52%), and in small schools with up to 50 students enrolled (55%) (Figure 1).

In 68% of schools with an Internet connection, access was made available in classrooms, and in 51%, access was available to students (Chart 1). Although there was a significant difference in the proportions of Internet access between urban schools (98%) and rural schools (52%), the percentages for both profiles of institutions regarding access in classrooms were close: 69% of urban schools with an Internet connection had access in classrooms, a percentage that was 61% among rural schools. Furthermore, in 52% of urban schools, access was made available to students, while in rural schools, this percentage was 48%.

Wireless connection was present in 94% of the total number of schools, but less than half (45%) made it available to students, including cases where this access was password-protected. The quality of Internet connection can be one of the determining factors of the dissemination of access among schools and

school community. Among state schools, 23% had an Internet connection equal to or greater than 51 Mbps, a proportion that was 11% among municipal schools. However, a large part of the schools – 38% of state schools and 44% of municipal schools – had a connection of up to 10 Mbps, which can make it difficult to carry out pedagogical activities, especially simultaneously.

The presence of devices for student use was another challenge to be overcome by schools. The institutions that were part of the state school system presented the highest proportions of desktop computers for student use: 37% have between 6 and 15 devices for pedagogical use, and 19% had more than 16 devices. There were no computers in 21% of municipal schools and in 37% of those located in rural areas.

82% OF BRAZILIAN
PRIMARY AND
SECONDARY
SCHOOLS HAS
INTERNET ACCESS

Offering of educational resources to students with disabilities

Eight out of ten schools assisted students with disabilities (Chart 2), and this proportion reached 90% of state schools. However, the availability of specific digital educational resources to support teaching and learning activities with these students still showed room for improvement. Digital educational materials, such as audiobooks and games, were present in a larger proportion of schools (28%). Only 15% had computer accessories, such as adapted keyboards and mice, microphones and speakers. In 33% of schools there was multifunctional resource rooms for specialized educational services. Furthermore, among schools with Internet access, 34% provided access to the Internet in these spaces. Another relevant aspect concerns the preparation of educators to use such resources: In the 12 months prior to the survey, 32% of schools had offered teacher training, with a higher proportion among private schools (41%).

FIGURE 1
SCHOOLS WITH INTERNET ACCESS (2020)

Total number of schools (%)

Total		82%
Area	Urban	98%
	Rural	52%
Administrative jurisdiction	Municipal	71%
	State	94%
	Private	98%

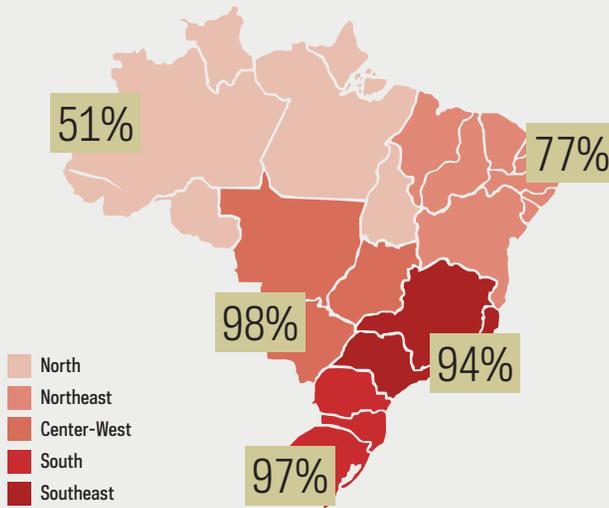
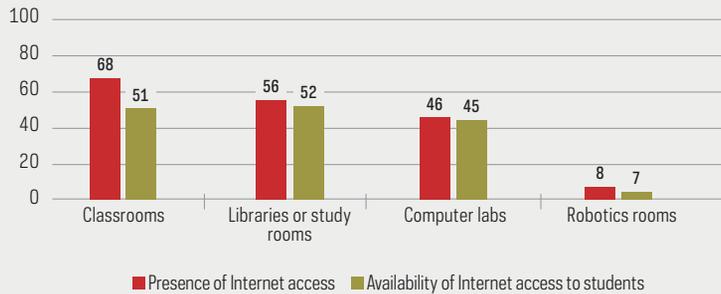


CHART 1
SCHOOLS WITH INTERNET ACCESS, BY LOCATION OF INTERNET ACCESS AND WHETHER IT WAS AVAILABLE TO STUDENTS (2020)

Total number of schools with Internet access (%)



33%

of the total number of schools had multifunctional resource rooms

34%

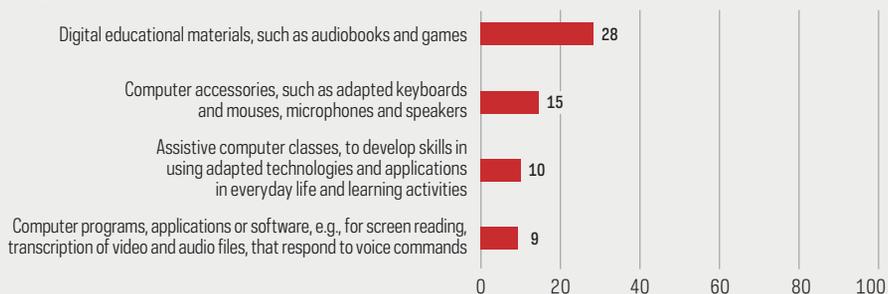
of schools with Internet access provided it in multifunctional resource rooms

32%

of schools with Internet access provided it to students in multifunctional resource rooms

CHART 2
SCHOOLS BY AVAILABILITY OF TECHNOLOGY RESOURCES FOR STUDENTS WITH DISABILITIES TO USE (2020)

Total number of schools (%)



Media and digital citizenship education

Eight out of ten school managers said that schools had conducted some kind of activity with students to discuss safe, responsible, and critical use of the Internet. Schools that provided up to Lower Secondary Education (94%) and those that provided up to Upper Secondary Education or Professional Training (88%) showed higher proportions of carrying out these types of activities than those that offered up to Primary Education (78%). The most common themes of such activities were cyberbullying, hate speech, and discrimination on the Internet, mentioned by 66% of school managers (Chart 5). Most schools developed interdisciplinary projects with students on the subject (72%). The presence of these activity themes also emerged in conflict mediation groups maintained by schools (48%).

Use of digital platforms and resources and privacy policies in schools

The data about the strategies adopted by schools to continue educational activities during the COVID-19 pandemic shows that applications, platforms, and social networks occupied a prominent role in teaching and learning processes. Managers of 51% of schools stated that they used virtual learning environments (Chart 4), a proportion that was 72% in state schools and 76% in private schools. More than half of schools were present on social networks: 64% of managers said that schools had profiles or pages in these digital spaces. The large volume of data collected by such applications, platforms, and networks has been a cause of concern for experts, especially in terms of what is guaranteed by the Brazilian General Data Protection Law (LGPD), which has been in force since August 2020. Schools still need support to better adjust to the new law and provide greater security when it comes to the protection of the rights of children and adolescents. Of the total number of schools, less than half (41%) had documents that defined the information security and data protection policies of the institutions, and 29% had organized debates or lectures on data protection and privacy in the 12 months prior to the survey.

Survey methodology and access to data

Carried out since 2010, the ICT in Education survey investigates access to, use and appropriation of information and communication technologies in the educational community, especially by students and teachers, in regular education schools. As in other sectors, the health measures adopted during the COVID-19 pandemic also impacted the development of surveys, especially those that are face-to-face. In the case of education, closure of schools greatly hindered researchers' ability to contact school community. The data collection for the ICT in Education 2020 survey, conducted by telephone with 3,678 managers of operating public schools (municipal, state, and federal) and private schools that offered regular Primary and Secondary Education, took place between September 2020 and June 2021. The results of the ICT in Education survey, including tables of proportions, total values and margins of error, are available on Cetic.br|NIC.br's website (<https://www.cetic.br>). The "Methodological Report" and the "Data Collection Report" can be accessed in both the printed publication and the website.

CHART 3

SCHOOLS BY MEASURES ADOPTED WITH THE USE OF TECHNOLOGIES TO CONTINUE PEDAGOGICAL ACTIVITIES DURING THE COVID-19 PANDEMIC (2020)

Total number of schools (%)

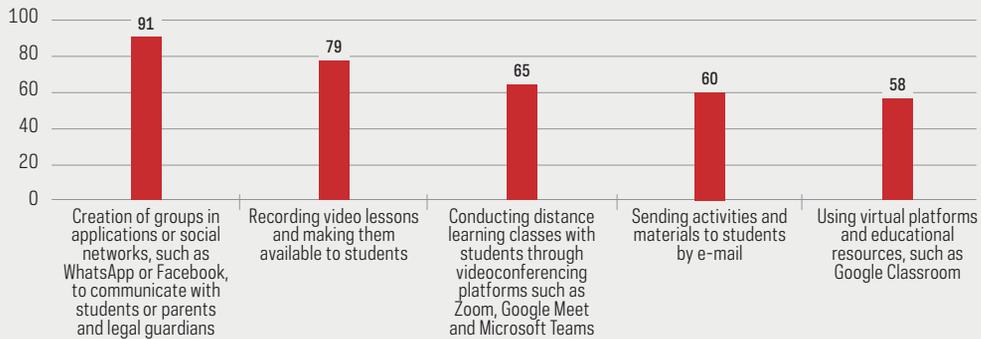
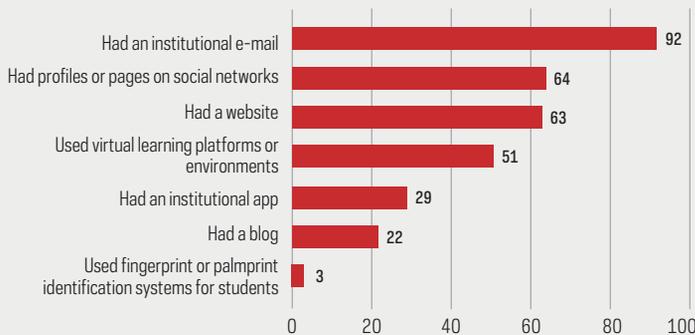


CHART 4

SCHOOLS BY USE OF SYSTEMS, APPLICATIONS AND PLATFORMS (2020)

Total number of schools (%)



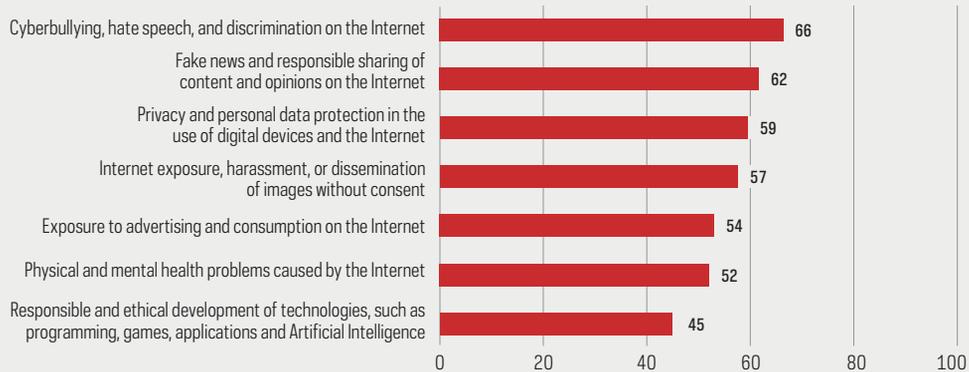
41%
of the total number of schools had documents that define the information security and data protection policies of the institution

29%
of schools organized debates or lectures on the subject in the 12 months prior to the survey

CHART 5

SCHOOLS BY ACTIVITY THEMES FOR STUDENTS ON SAFE, RESPONSIBLE AND CRITICAL USE OF THE INTERNET INCLUDED IN THE CURRICULA (2020)

Total number of schools (%)



ABOUT CETIC.br

cetic.br

The Regional Center for Studies on the Development of the Information Society, a department of NIC.br, is responsible for producing indicators and statistics on the access and use of the Internet in Brazil, disseminating analyzes and periodic information on the Internet development in the country. Cetic.br is a Regional Study Center, under the auspices of UNESCO. More information at <http://www.cetic.br/>.

ABOUT NIC.br

nic.br

The Brazilian Network Information Center – NIC.br (<http://www.nic.br/>) is a non-profit civil entity, which in addition to implementing the decisions and projects of the Brazilian Internet Steering Committee, has among its attributions: coordinate the registration of domain names – Registro.br (<http://www.registro.br/>), study, address and handle security incidents in Brazil – CERT.br (<http://www.cert.br/>), study and research network technologies and operations – CEPTRO.br (<http://www.ceptro.br/>), produce indicators on information and communication technologies – Cetic.br (<http://www.cetic.br/>), implement and operate Internet Exchange Points – IX.br (<http://ix.br/>), enable the participation of the Brazilian community in the global development of the Web and support the formulation of public policies – Ceweb.br (<http://www.ceweb.br/>), and host the Brazilian W3C office (<http://www.w3c.br/>).

ABOUT CGI.br

cgi.br

The Brazilian Internet Steering Committee, responsible for establishing strategic guidelines related to the use and development of the Internet in Brazil, coordinates and integrates all Internet service initiatives in the country, promoting technical quality, innovation and dissemination of the services offered. Based on the principles of multistakeholderism and transparency, CGI.br represents a democratic Internet governance model, internationally praised, in which all sectors of society participate equitable in the decision-making. One of its formulations is the 10 Principles for the Governance and Use of the Internet in Brazil (<http://www.cgi.br/principios>). More information at <http://www.cgi.br/>.



Access complete data from the survey

The full publication and survey results are available on the **Cetic.br** website, including the tables of proportions, totals and margins of error.

