



Turkey Country Brief

Connectivity in Education

A Crisis of Learning in Education...

In Turkey, there exists a crisis of learning in education. This is exemplified by out-of-school rates in the country, as well as those not achieving minimum proficiency. While 792,952 children and adolescents are enrolled in primary and secondary schools, **45,473 between the age of 6 and 17 are out-of-school**. Additionally, approximately **37.2% of children and young people do not achieve minimum proficiency** in foundational skills needed for further learning and skills development.^{1,2}

- Enrolled, achieving minimum proficiency
- Enrolled, not achieving minimum proficiency
- Out of School



... becomes acute.

When the COVID-19 pandemic disrupted in-person learning in Turkey starting in March 2020, the importance of devices and connectivity for the education system was placed in stark relief — as were the inequitable access to such crucial tools.

Increasing Importance of ICTs for Education

All strategies for continuing education during COVID-19 depended on ICTs as a medium for delivery. But **unequal preexisting infrastructure** in households and schools is also a major driver of the longer-term crisis of learning. Access to **connectivity** and **devices** is a **crucial enabler** of the learning process, particularly in:

- allowing a more effective administration of education systems, and
- developing digital skills to prepare students for the future workforce



COVID-19: Strategies for Distance Learning³



EBA Project

14.1 million students
Almost 1.2 million teachers



Educational Technologies Strategy Document

MoNE and UNICEF

framework for concrete studies related to technology

What's been done?

Government Strategies Addressing Challenges

In 2018, the Ministry of National Education launched “For a Stronger Tomorrow: Education Vision 2023,”⁴ aiming to reform the education system towards more flexible learning. IT sets critical goals for monitoring, evaluating, and developing management and learning activities nationwide, focusing on ICT usage, including the establishment of i) an online platform for school management, ii) a GIS system to map school needs and use of resources, iii) a data information system for teacher-parent interaction, iv) data analytics platform to assess student performance and needs.

Turkey's **National Broadband Strategy and Action Plan for 2017 to 2020**⁵ outlines the following basic principles:

- Improvement of the broadband infrastructure across the country
- Expanding fiber access across the country
- Increasing capacity and speed of broadband connectivity
- Ensuring the sectorial development based on competition and in compliance with the market requirements
- Developing the demand on the broadband internet services.

MEBBIS (Ministry of National Education Information Systems)⁶

database, was implemented as a platform for school administrators, teachers, students and parents. The tool aims to aid in school empowerment and is part of the school decentralisation plan.



Many solutions involve digital technology.

This, in turn, requires both connectivity and devices.



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What Gaps Remain?

Connectivity and Devices at Home⁷

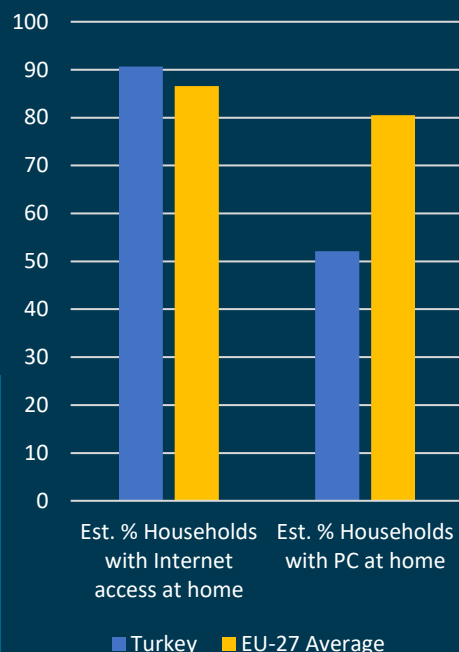


8.7 million **1.7 million**

Turkish households are not in possession of a PC

Turkish households do not have access to the Internet

Contextualizing the Gaps

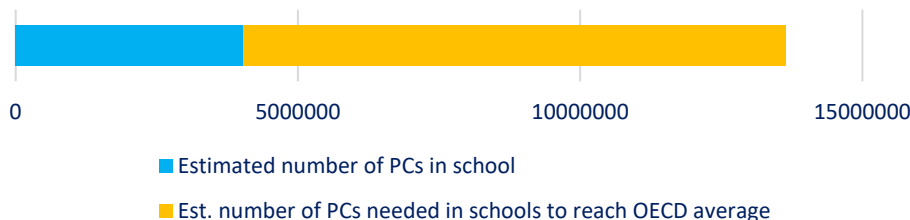


Exacerbating pre-existing inequalities:

The persistent lack of PCs in households is particularly significant when lockdowns triggered by COVID-19 facilitated the transition of economic activity to the digital sphere and transferred both educational and work activities to the household. Prior to the pandemic, more than **8 million households** were not equipped with a PC at home, particularly in rural areas. Moreover, **2 million households** did not have internet access at home. This suggests that a significant number of students were unable to enjoy online education content continuously.

Connectivity and Devices at School

Computers per Student in School⁹



9.6 million computers are needed in Turkey to reach the OECD average of 0.83 PCs per student.



Mapping School Connectivity...

Assessing the level and quality of broadband in schools, and proactively addressing infrastructure gaps, is increasingly important as students return to the classroom. This will ensure that connectivity is leveraged to deliver educational content and to manage the education system in an efficient manner, and that digital skills development is thoroughly included in curricula.

... Remains Imperfect.

Despite the wide variety of indicators, and a high level of school connectivity across the country, GIS-based mapping system providing a more accurate account of such information remains under implementation within the framework of Turkey's Education Vision.¹⁰

Filling the Device Gap in Schools

Low-Range Estimate¹¹

\$708 million

to reach the OECD average of 0.83 PCs per student.



To bridge learning gaps, devices are only as important as the connection that supports them and the access to high quality content and learning they enable. Investment in school and household connectivity as well as content development and robust digital education is vital and must be considered alongside device provision.

High-Range Estimate¹²

\$8.18 billion

to reach the OECD average of 0.83 PCs per student.

Funding not a particular Challenge



Public spending on education and training was 5.7% of the country's GDP in 2018, while the European Union countries' average for 2017 was 4.7%.¹³

Turkey has a successful history of leveraging innovative financing mechanisms and multistakeholder partnerships toward achieving appropriate levels of devices and connectivity in education. Three key examples are outlined below.



FATİH Project

Launched in 2010, the “Movement to Enhance Opportunities and Improve Technology” project, seeks to foster digital skills and bridge the ICT gap found in Turkish schools. So far, the project managed to connect over **15.000 schools** to the Internet and provide more than **1.4 million tablets** and **475,000 electronic blackboards**. Over the next 3 years, the project is set to **connect another 30.000 schools** to the Internet.¹⁴

In Q1 2021, the Ministry of National Education procured and distributed 664,157 free tablets with 25 GB of mobile LTE internet access for low income and rural settings.¹⁵

Since 2008, two examples of public-private partnerships led by the government provided 75,000 technology packages to households as well as 220,000 PCs being donated to school labs.¹⁶



ITU and UNICEF are committed

to helping the Government of Turkey and other stakeholders achieve national objectives. School connectivity is widely recognized as a means to a more efficient administration of educational systems, a building block in supporting innovative ways to distribute education content and increase access, and — most importantly — a fundamental prerequisite to endow pupils with the digital skills necessary to thrive in the job market. The achievement of appropriate device and connectivity levels, both at school and in the home, thus remain priorities of both the ITU Office for Europe and UNICEF Regional Office for Europe and Central Asia. Both offices cherish the opportunity to engage with partners and provide support through **technical assistance, capacity building and research**, as well as **knowledge exchange**.

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Endnotes

¹ Data from UNESCO UIS Database. <http://data.uis.unesco.org>

² UNICEF calculation of the number of students in primary, lower and upper secondary not achieving minimum proficiency in math; Data for Turkey is calculated using the latest figures available from UIS and PISA.

³ See: <http://www.oecd.org/education/policy-outlook/country-profile-Turkey-2020.pdf> and information provided by the Turkish Ministry of National Education

⁴ See: http://planipolis.iiep.unesco.org/sites/planipolis/files/ressources/turkey_education_vision_2023.pdf

⁵ See: http://www.sp.gov.tr/upload/xSPTemelBelge/files/IXIRY+Ulusal_Genisbant_Stratejisi_ve_Eylem_Plani_2017-2020.pdf

⁶ See: <https://www.oecd-ilibrary.org/sites/a85d5b7b-en/index.html?itemId=/content/component/a85d5b7b-en>

⁷ ITU WTID Database.

⁸ See: ITU WTID Database

⁹ PISA 2018 Results (Volume V); OECD 2020 (Figure V.5.4 School computers per student, school characteristics and reading performance)

¹⁰ See: http://planipolis.iiep.unesco.org/sites/planipolis/files/ressources/turkey_education_vision_2023.pdf

¹¹ This estimate is calculated using the cheapest smartphone available in the region, at \$73.60 per device. Price estimate is taken from A4AI price data, averaging the cost of the cheapest smartphones available in Georgia, Turkey and Ukraine. Although Smartphones are used as a proxy for the cheapest way to access online educational content and represent a baseline cost, they are not ideal for sustained learning nor comparable to PCs for educational purposes.

¹² This estimate is calculated using using a price of \$850 per computer and monitor, which is a UNICEF price estimation of a high-end computer and monitor more suitable for learning. It thus represents the most expensive end of the spectrum.

¹³ See: <https://data.worldbank.org/indicator/SE.XPD.SECO.PC.ZS?locations=EU> and <https://data.tuik.gov.tr/Bulten/Index?p=Education-Expenditure-Statistics-2018-30588>

¹⁴ See: <http://fatihprojesi.meb.gov.tr/en/altyapi-erisim.html>

¹⁵ See: <https://www.aa.com.tr/en/turkey/turkey-to-resume-distance-learning-as-of-nov-20/2048518>

¹⁶ Technology packages included low-cost computer with Microsoft software, free ADSL

Internet connections, parental control software, and after-sales support). See:

<https://www.intel.com.br/content/dam/doc/case-study/learning-series-elearning-in-turkey-study.pdf>.