



# EDUCATION MONITORING INDICATORS



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# ABOUT

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The Education Reform Initiative (ERG) is an independent not-for-profit think-and-do-tank that contributes to the systemic transformation of education for the greater benefit of the child and society as a whole by using sound evidence, constructive dialogue and opinions gathered from various stakeholders. The key elements of systemic transformation include evidence-based decision-making processes, stakeholder engagement and the access of all children to quality education.

Established in 2003, ERG strives to be exemplary for the Turkish society in its function as an NGO, being an initiative supported by leading foundations in Turkey.

ERG carries out its research and education activities through the ERG Education Observatory Unit and Education Laboratory and oversees the Teachers' Network.

The foundations that support ERG include the Mother Child Education Foundation, Aydın Doğan Foundation, Borusan Kocabıyık Foundation, Elginkan Foundation, ENKA Foundation, İstanbul Bilgi University, İstanbul Kültür University, Kadir Has Foundation, Mehmet Zorlu Foundation, MV Holding, Sabancı University, Tekfen Foundation, Vodafone Turkey Foundation, Vehbi Koç Foundation and Yapı Merkezi.



The Friedrich Naumann Foundation for Freedom (FNF) is the foundation for liberal politics in the Federal Republic of Germany. It aims to promote the goal of making the principle of freedom valid for the dignity of all people and in all areas of society, both in Germany and abroad. With the safeguarding and the development of its statutory projects (civic education and dialogue, sponsorship of the talented, research and political consultation, archive-work), the Friedrich Naumann Foundation wants to contribute to shaping the future. In Germany, the Foundation offers various forums, mostly for young and talented people, to exchange information and experience in present-day contexts. Its primary focus is to promote a greater understanding of politics and to inspire citizens to take part in political processes.

Abroad, the support of human rights, the rule of law and democracy in more than 60 countries form the core of the work of the regional offices in Europe, Africa, Asia, and Central America; various forms of international dialogue and transatlantic dialogue programme are used to promote these three values around the world. The foundation supports local, regional, and national initiatives to advance the rights of minorities, the democratic control of security forces and for strengthening international human rights coalitions. The FNF has been acting in Turkey with partners from civil society, academia, economy and politics since 1991 when the first office was opened in Ankara. In 2002, the office moved to Istanbul.

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# ABBREVIATIONS

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<b>CPI</b>	Consumer Price Index
<b>ERG</b>	Education Reform Initiative
<b>Eurostat</b>	European Statistical Office
<b>FNF</b>	Friedrich Naumann Foundation
<b>GDP</b>	Gross Domestic Product
<b>MoNE</b>	Ministry of National Education
<b>NUTS</b>	Nomenclature of Territorial Units for Statistics
<b>OECD</b>	Organisation for Economic Co-operation and Development
<b>PISA</b>	Programme for International Student Assessment
<b>TurkStat</b>	Turkish Statistical Institute



# ABOUT THE AUTHOR

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Özgenur Korlu was born in Istanbul in 1991. She graduated from Boğaziçi University in 2016 with a double major in political science and international relations, and economics. Korlu took graduate courses in social politics and economy at Boğaziçi University between 2016 and 2018, and she is currently completing a master's degree in business at MEF University. Korlu began working for ERG's Education Observatory in April 2018 and has been contributing to ERG's research work on governance and financing of education, assessment and evaluation systems, impact of socioeconomic inequalities on education, educational data analysis and data literacy. Korlu has penned various sections of the Education Monitoring Reports since 2018 and continues to create education monitoring indicators through reports, research articles, and projects.



# FOREWORD

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The Education Monitoring Indicators booklet is one of the products of the FNF-funded Education Data Literacy Summer School, which was held between August 12-14, 2020.

Since its inception in 2003, ERG has worked towards ensuring children's right to quality education by helping to create evidence-based policies. To serve this purpose, ERG has been publishing Education Monitoring Reports since 2008, wherein quantitative data acquired from various sources are turned into education indicators. This document presents these indicators, which have been used by ERG to monitor education for the last 12 years, along with their data sources and calculation methods, and it provides an overview of the changes that have been made to the education system over the course of the last 13 years.

This document highlights key Education Monitoring Indicators, such as data on resources allocated for education and how these resources have changed over the years. Other indicators, including those employed by MoNE to monitor annual objectives, such as number of students per classroom or teacher, the percentage of private education institutions and net enrollment rates, are also found here. Region specific indicators are included, as they highlight regional differences in education. Moreover, indicators on youth who are not in employment, education or training and on the PISA study are included to enable comparison of Turkey's education to that of OECD countries.

By publishing the Education Monitoring Indicators booklet, we aim to share the key indicators we've been using for monitoring education over the course of the last 12 years with the public and education shareholders and also to start a discussion on the adequacy of these indicators. Although the data and the indicators shared here provide essential information on Turkey's education system, they nonetheless only provide a limited picture of the whole system, thus impairing a thorough monitoring and evaluation of the changes in education. Yet, it is possible to overcome this shortcoming by sharing more comprehensive and detailed data with the public, promoting data literacy skills, discussing the adequacy of the current indicators and creating new ones. Our hope is that the Education Data Literacy Summer School 2020 and the Education Monitoring Indicators booklet will contribute to these processes.

## ***Işık Tüzün***

Director  
Education Reform Initiative

# DATA LITERACY SUMMER SCHOOL 2020

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Data literacy can be defined as the ability to obtain meaningful information from data. It is a necessary skill for stakeholders in terms of monitoring and evaluating education systems and actively participating in data-driven decision-making processes. With the objectives of increasing stakeholder participation in monitoring and evaluating education, developing collaboration between NGOs with regards to data and data literacy and discussing the adequacy of the current indicators used in monitoring and evaluating education, ERG launched the project 'Empowering Stakeholders in Monitoring and Evaluating Education and Participating in Policy Creation: Data Literacy Summer School'. Funded by FNF, the project organized the 'Education Data Literacy Summer School', held between August 12-14, 2020, bringing together 9 experts and 15 NGOs that work in education.

The summer school hosted nine sessions over three days. The theme on the first day was basic data education. Indicators were used to analyze the current situation of education in Turkey and exercises were held to improve data literacy. The second day began with a discussion on children's rights, the basis for all work in education, and the theme for the day was education monitoring indicators. Participants and experts were divided into four groups to analyze four separate issues: refugee children in education, teacher policies, special education and the impact of socioeconomic inequalities on education. After these group sessions, the most commonly used indicators in education analysis were introduced, and their adequacy was discussed. On the third day, where advocacy was the main theme, the process for creating new indicators and other needs in education were discussed. The Data Literacy Summer School 2020 ended after all groups presented their ideas to each other.

After the summer school ended, the presentations and other information shared during the sessions were published on a [website and online newsletters](#). The video recordings of the sessions were included in the newsletters and on ERG's YouTube page. The Education Monitoring Indicators 2020 document, where ERG's key indicators for the last 13 years are explained in detail, is published as part of this project. Another output of this project, a website where educational data, including graphs and reference documents are shared interactively, will be launched at some time in 2021.

The summer school hosted participants from the [Mother Child Education Foundation \(AÇEV\)](#), [Başka Bir Okul Mümkün Association](#), [Diyarbakır Education Monitoring and Reform Initiative](#), [Support to Life Foundation](#), [HEY Akademi](#), [Development Workshop](#), [Rural Schools Transformation Network](#), [Maya Foundation](#), [Teachers Network](#), [Teachers Academy Foundation](#), [Tarlabaşı Community Center](#), [Educational Volunteers Foundation of Turkey](#), [Tohum Autism Foundation](#) and [Sulukule Volunteers Association](#).



To access the website where presentations from the Data Literacy Summer School, expert opinions, related blog entries and summer school bulletins can be found, visit:



The experts involved in the summer school were Pınar Dağ, academician and founder of [Data Literacy Association](#) and [Open Data Journalism Turkey](#), Yeliz Düşkün, senior policy analyst, Özge Karakaya, strategy, collaborations and communications coordinator at [Education Reform Initiative](#), İdil Seda Ak, disability rights activist and researcher, lawyer Seda Akço from the [Humanistic Bureau](#), Prof. Pınar Uyan Semerci, director of the [Center for Migration Research at Bilgi University](#), Yaprak Sarıışık, coordinator of children's services and policy at [Istanbul Metropolitan Municipality](#), Agata Fortuna, project and education coordinator, Ayşegül Taşıtman, project specialist at [Koç University's Social Impact Forum](#), and Pınar İlkiz, co-founder and communications director at [Pikan Ajans](#). As ERG, we would like to express our gratitude to all the participants and experts that contributed to the summer school.

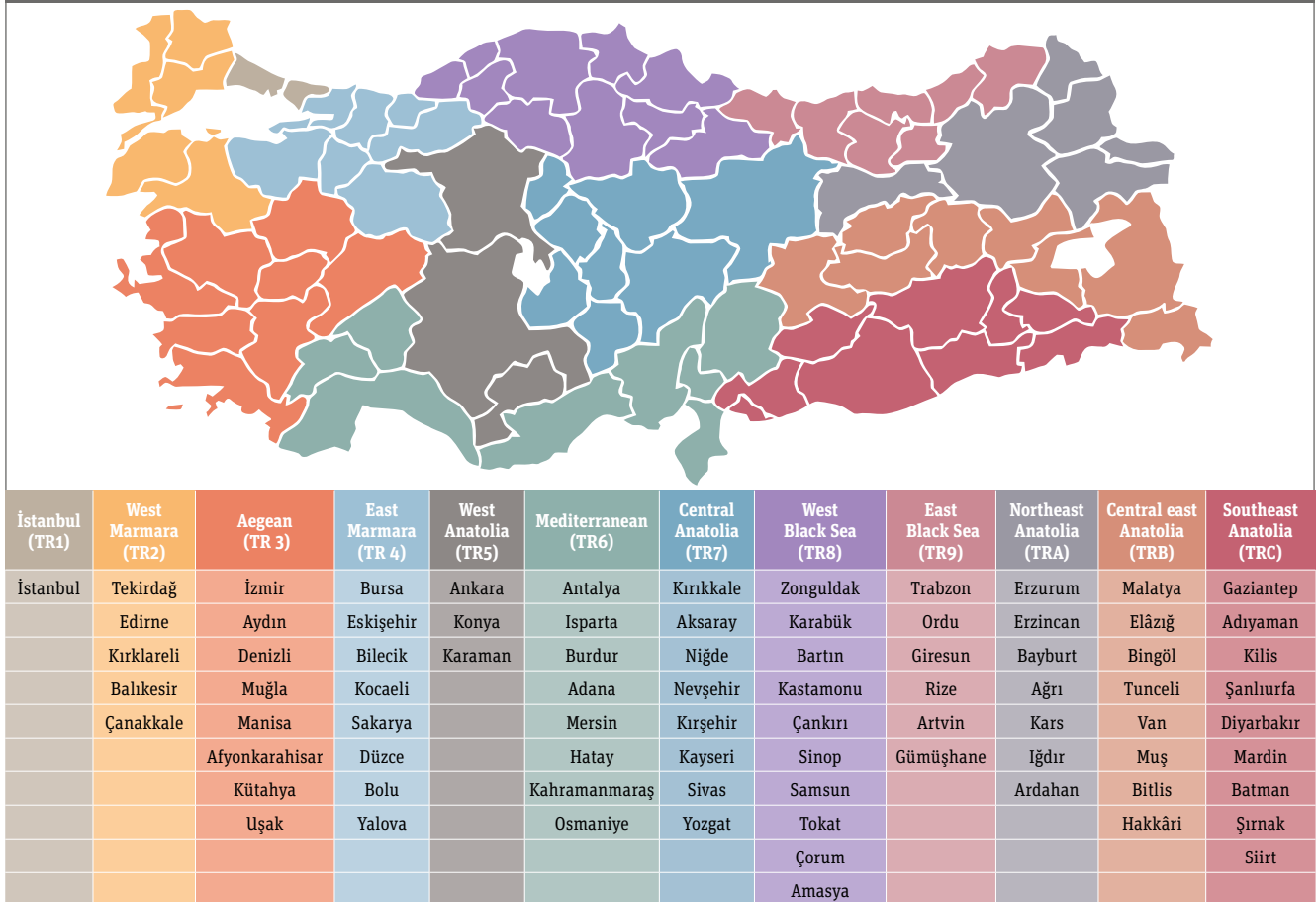
We are hoping that the Education Data Literacy Summer School 2020, and all the accompanying work would help create a collaboration between NGOs with regards to data and data literacy, and contribute to the monitoring, evaluation and advocacy work in education.

# KEY INDICATORS

This booklet contains the key indicators used for monitoring education. These indicators have been used in many ERG publications, including the Education Monitoring Reports. National and international education studies also use these indicators, as they allow for international comparison. Although the currently used indicators are fundamental to monitoring education, they still need to be reviewed, and new ones need to be created, as the amount and types of education data are constantly increasing.

Accordingly, this booklet contains 20 indicators, 20 tables and 6 graphs, along with their data sources and calculation methods. These indicators can also be accessed on the booklet in Excel and CSV formats. To facilitate annual provincial data comparisons, the provinces were grouped into Nomenclature for Territorial Units for Statistics (NUTS) Level 2 regions in this booklet. These regions and the provinces they include are shown in Figure 1.

**FIGURE 1: NUTS LEVEL 2 REGIONS AND PROVINCES**



## INDICATOR 1: RATIO OF PUBLIC SPENDING ON EDUCATION TO GDP (%)

Public spending on education is vital for ensuring every child's access to quality education and the continued provision of education services. The ratio of public spending on education to gross domestic product (GDP) can be used to make annual comparisons. A country's GDP shows the sum of the gross values added in a year. Analyzing public spending on education in terms of its percentage to GDP, which is an economic indicator, allows this spending to be monitored by taking the country's economic status into account. In Turkey, central and local administrations are responsible for managing public spending on education.

Table 1 shows the public spending on education and its ratio to GDP. Spending by local administration reached its highest in 2014, with 8.3% of all public expenditures for education being undertaken by the local administration. This ratio was lowest in 2019, at 1.7%. As for the ratio of total public spending on education to GDP, it was highest in 2014, at 4.5%, and lowest in 2008, at 3.5%.

**TABLE 1: PUBLIC SPENDING ON EDUCATION SERVICES (THOUSAND TRY, 2019 PRICES)**

	Central administration's education spending	Local administration's education spending	Total public spending on education	GDP	The ratio of local administration's education spending to total public spending on education (%)	The ratio of central administration's education spending to GDP (%)	Ratio of total public spending on education to GDP (%)
2008	82,461,652	4,566,717	87,028,369	2,570,530,000	5.2	3.2	3.5
2009	90,999,628	5,224,436	96,224,065	2,424,450,000	5.4	3.8	4.1
2010	97,219,382	4,954,702	102,174,084	2,575,990,000	4.8	3.7	4.0
2011	123,147,054	7,405,476	130,552,530	2,857,390,000	5.7	3.8	4.0
2012	114,739,157	7,788,551	122,527,708	2,864,870,000	6.4	4.0	4.3
2013	132,152,914	8,970,605	141,123,520	2,948,260,000	6.4	4.0	4.3
2014	140,582,110	12,765,404	153,347,514	3,021,020,000	8.3	4.1	4.5
2015	150,670,454	5,006,537	155,676,991	3,753,500,000	3.2	4.4	4.5
2016	160,564,351	4,129,731	164,694,082	3,884,620,000	2.5	3.7	3.8
2017	178,544,440	3,758,800	182,303,240	4,067,140,000	2.1	4.0	4.1
2018	175,512,807	8,479,877	183,992,684	3,968,740,000	4.6	3.7	3.9
2019	156,257,879	2,698,515	158,956,394	4,450,000,000	1.7	4.1	4.2



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Ministry of Finance General  
Directorate of Public Accounts,  
Statistics on the Central  
Administration Budget

Ministry of Finance General  
Directorate of Public Accounts,  
Statistics on the Local  
Administration Budget

National Education Statistics,  
Formal Education 2019-20  
TurkStat Consumer Price Index  
(based on 2013)

## DATA SOURCES

The data for 2008 to 2019 were compiled using the database for central and local budget statistics provided by the Directorate of Public Accounts. This database includes a folder titled Fkod3, which shows the public spending for each service provided. The GDP data are taken from the 'National Education Statistics, Formal Education 2019-20'. Expenditure and GDP data for the years prior to 2019 were converted into 2019 prices using the consumer price index (CPI) for Turkey determined by the Turkish Statistical Institute (TurkStat).

## HOW WAS THIS INDICATOR MEASURED?

The 'Fkod3' link, found under the 'budget expenses' tab of the central administration budget statistics database, contains an Excel file of the data used here. In this file, the cells found at the intersection of the 'education services' row and the 'total' column show the central administration's total education spending. To access the central administration's spending for different years, the 'Fkod3' file needs to be downloaded for each year. To obtain information on the local administration's education spending, the 'Fkod3' file needs to be downloaded from the local administration budget statistics database.

The GDP data can be accessed through the 'National Education Statistics, Formal Education 2019-20'. The file that contains the data is titled 'Ratio of the MoNE Budget to Gross Domestic Product and the Consolidated/Central Government Budget'. The expenditures shown here also need to be converted into 2019 prices.

When annual spending data are compared, inflation should be taken into account. This way, the value of past spending can be compared to the most recent year for which data are available. For this reason, data pertaining to expenditures before 2019 in Table 1 were converted to 2019 prices using the consumer price index (CPI) determined by TurkStat. TurkStat publishes consumer price indexes by month; therefore, all 12 months need to be averaged to find the yearly rate. This would involve adding the CPI for each month and then dividing it by 12 (Formula 1). This calculation needs to be performed for each year.

### FORMULA 1: CALCULATING THE AVERAGE ANNUAL CPI RATE

$$\text{Annual average consumer price index} = \frac{\text{Annual average consumer price index}}{12}$$

To convert expenditures or GDP before 2019 into 2019 prices, the amount in question for that year needs to be divided by the CPI for that year and then multiplied by the average CPI for 2019 (Formula 2). For example, to convert the public spending on education in 2008 into 2019 prices, the first X needs to be replaced with the public spending on education in 2008, and the second with the average annual CPI for 2008.



**FORMULA 2: CONVERTING EDUCATION SPENDING or GDP DATA INTO 2019 PRICES**

$$\text{Education spending or GDP for Year X (in 2019 prices):} = \frac{\text{Education Spending or GDP for year X}}{\text{Average CPI for year X}} \times \frac{\text{Average CPI for 2019}}{\text{Average CPI for year X}}$$

The ratios in the table were calculated using the expenditure and GDP data in their respective rows. To calculate the ratio of total public spending to GDP, the total public spending was divided by GDP and then multiplied by 100 (Formula 3). The ratio of the central administration's education spending to GDP was calculated using the same formula. To calculate the share of local administration in education spending, local administration's total education spending was divided by the total public education spending and then multiplied by 100 (Formula 3).

**FORMULA 3: RATIO CALCULATIONS**

$$\text{Ratio of total public spending on education to GDP for year X} = \frac{\text{Total public spending on education for year X}}{\text{GDP for year X}} \times 100$$

$$\text{Ratio of central administration's spending on education to GDP for year X} = \frac{\text{Central administration's total spending on education for year X}}{\text{GDP for year X}} \times 100$$

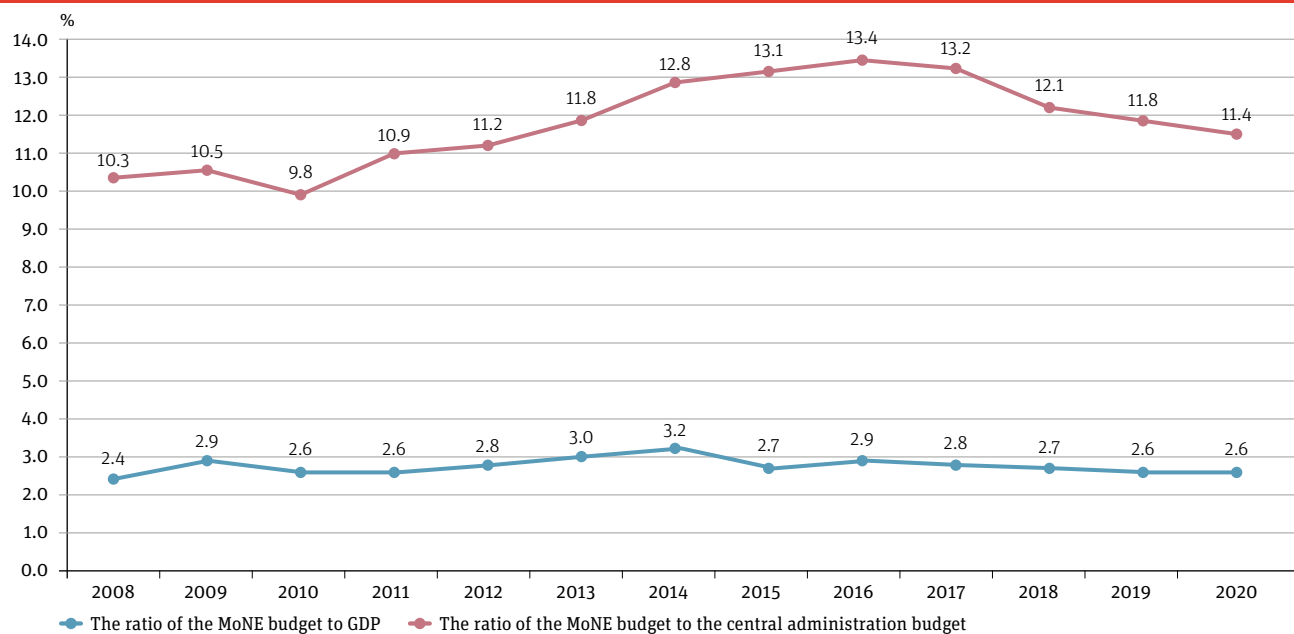
$$\text{Ratio of local administration's spending on education to total public spending on education for year X} = \frac{\text{Local administration's spending on education for year X}}{\text{Total public spending on education for year X}} \times 100$$

## INDICATOR 2: RATIO OF THE MoNE BUDGET TO THE CENTRAL ADMINISTRATION BUDGET AND GDP (%)

A majority of the expenses related to children's access to education services in Turkey are undertaken by MoNE. Therefore, it is important to analyze the MoNE budget in order to monitor the resources allocated for providing access to quality education. The MoNE budget can be analyzed by comparing it to the central administration budget and to GDP. The central administration budget, regulated by the Central Government Budget Law, includes funds for public general budget administrations, special budget administrations, as well as regulatory and supervisory agencies. Monitoring the proportion of the MoNE budget within the central administration budget is important, as this shows how much of the public funds is reserved for MoNE. Similarly, comparing the MoNE budget to GDP allows for analyzing the budget within the context of Turkey's current economic conditions.

Graph 1 presents the ratio of the MoNE budget to GDP and to the central administration budget. Yearly comparisons show that the budget's ratio to GDP fluctuates less than its ratio to the central government budget. The MoNE budget's ratio to the central administration budget varies between 9.8% to 13.4%, while its ratio to GDP only varies between 2.4% to 3.2%. The ratio of the MoNE budget to GDP reached its highest level in 2014, and to the central government budget, in 2016.

**GRAPH 1: CHANGES IN THE MoNE BUDGET OVER THE YEARS**



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[Excel](#) [CSV](#)

## DATA SOURCES

The ratios were calculated by ERG using the 'National Education Statistics, Formal Education 2019-20'. The file that contains the annual data on the MoNE budget, central administration budget, and GDP is titled 'Ratio of the MoNE Budget to Gross Domestic Product and to the Consolidated/Central Government Budget'.



*National Education Statistics,  
Formal Education 2019-20*

## HOW WAS THIS INDICATOR MEASURED?

The graph was created using the data on the MoNE budget, the central administration budget, and the GDP, found on page 244 of the 'National Education Statistics, Formal Education 2019-20'. Since this graph used ratios, converting the expenditures to 2019 prices was not needed. The MoNE budget's ratio to both the central administration and to GDP was calculated for each year. To find the MoNE budget's ratio to GDP, the budget was divided by GDP and then multiplied by 100 (Formula 4). The same formula was used for finding its ratio to the central administration budget, this time replacing GDP with the central administration budget. For example, for calculating the 2008 data, the numerator and the denominator in Formula 4 were replaced with 2008 figures.

### FORMULA 4: RATIO CALCULATION

$$\text{MoNE budget's ratio to GDP for year X} = \frac{\text{MoNE budget for year X}}{\text{GDP for year X}} \times 100$$

$$\text{Ratio of MoNE budget to central administration budget for year X} = \frac{\text{MoNE budget for year X}}{\text{Central administration budget for year X}} \times 100$$

## INDICATOR 3: ECONOMIC DISTRIBUTION OF THE MoNE BUDGET (%)

In addition to evaluating the total value of the MoNE budget, analyzing its economic classification is also important for monitoring the use of resources. Changes in the distribution of this budget can point to certain needs or policy changes in the education system. The current budget items and the expenditures related to each item are shown below:

- **Personnel Expenditures:** wages and benefits of the MoNE staff
- **Social Security Premiums:** premiums paid for the wages and benefits for the MoNE staff
- **Goods and Services Procurement Expenditures:** the expenditures for all schools under the umbrella of MoNE, including electricity, water, heat, stationary goods, personnel's travel allowances, service procurement costs, purchase of movables, maintenance and repair costs of immovables, and student medical treatments
- **Current Transfers:** room and board expenditures for students attending any of the boarding schools and schools abroad under the umbrella of the MoNE
- **Capital Expenditures:** maintenance, repair and construction costs for all the schools and institutions under the umbrella of the MoNE
- **Capital Transfers:** expenditures and funds that involve money transfers made abroad

Table 2 shows the distribution of the MoNE budget by economic classification. Accordingly, the item with the largest share of the budget is personnel expenditures, while the smallest is capital transfers. In 2010, there was a significant increase (4.5 percentage points) in the social security premium payments and a 5.7-percentage-point decrease in current transfers. The capital expenditures, which refer to investments made in education, were highest in 2014, at 9.3%, and lowest in 2020, at 4.7%. Between 2018 and 2019, capital expenditures showed the biggest decline in 10 years (3.5 percentage points), dropping to 4.9%.

**TABLE 2: ECONOMIC DISTRIBUTION OF THE MoNE BUDGET (%)**

	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
<b>Personnel Expenditures</b>	67.2	66.3	70.8	72.1	70.7	69.4	68.7	68.1	69.1	68.8	68.6	71.7	72.9
<b>Social Security Premiums</b>	7.9	7.6	12.1	11.4	11.5	11.0	10.7	10.7	10.6	10.5	10.6	11.7	11.5
<b>Goods and Services Procurement Expenditures</b>	9.7	10.3	7.6	7.6	7.8	8.3	8.3	9.4	9.2	9.5	9.4	8.8	7.9
<b>Current Transfers</b>	9.0	8.9	3.2	3.0	3.2	2.9	3.0	2.9	2.7	2.6	3.0	2.9	3.0
<b>Capital Expenditures</b>	5.5	5.4	5.2	4.9	6.6	8.3	9.3	8.9	8.2	8.5	8.4	4.9	4.7
<b>Capital Transfers</b>	0.6	1.5	1.2	1.0	0.1	0.1	0.1	0.1	0.2	0.03	0.03	0.02	0.02



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## DATA SOURCES

This indicator was measured by ERG using the 'National Education Statistics Formal Education' books published between 2009 and 2020. The data related to the items used for calculating the economic classification were found in the 'Budget' section of the books.

## HOW WAS THIS INDICATOR MEASURED?

Table 2 was created using the information found in the 'National Education Statistics Formal Education' books published between 2009 and 2020. Since this graph used ratios, converting the expenditures to 2019 prices was not needed. To calculate the ratios, each of the economic classification items (personnel expenditures, social security premiums, goods and services procurement expenditures, current transfers, capital expenditures, capital transfers) were divided by the MoNE budget of the same year and then multiplied by 100 (Formula 5). For example, when the 2008 data were calculated, the numerator and the denominator were replaced with 2008 figures.



Millî Eğitim İstatistikleri Örgün  
Eğitim 2019/20

### FORMÜL 5: ORAN HESAPLAMASI

$$\text{The ratio of personnel expenditures*to the MoNE budget for year X} = \frac{\text{Personnel expenditures* for year X}}{\text{MoNE budget for year X}} \times 100$$

\* It is possible to replace personnel expenditures with the other economic classification items (social security premiums, goods and services procurement expenditures, current transfers, capital expenditures, capital transfers) and calculate their ratio to the MoNE budget.

## INDICATOR 4: PRIVATE SCHOOLS IN THE EDUCATION SYSTEM

In addition to public funds, there are also private funds reserved for education. These funds include expenditures undertaken by households and non-public institutions. One way of monitoring private funding in education is to examine the proportion of private schools to all schools, which is found by calculating the ratios of private schools and private school students to the total number of schools and students.

Table 3 shows the ratio of students attending private education institutions. This ratio is on the rise for all levels. Between 2008 and 2020, the biggest increase took place in secondary education, with 9.7 percentage points. In 2019-20, the highest ratio of students in private schools was also in secondary education. In Turkey, there are no private schools under the umbrella of the General Directorate of Religious Education; therefore, the ratio for this item is 0%.

**TABLE 3: RATIO OF STUDENTS ENROLLED IN PRIVATE EDUCATION INSTITUTIONS (%)**

	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20
<b>All levels</b>	2.9	3.0	3.2	3.5	3.9	4.4	5.2	7.5	7.7	8.4	8.8	8.7
<b>Pre-primary education</b>	8.8	9.0	9.0	9.5	11.6	12.8	14.8	15.9	15.2	15.7	16.5	17.7
<b>Primary school</b>	-	-	-	-	3.0	3.3	3.7	4.3	4.3	4.6	5.0	5.2
<b>Lower secondary school</b>	-	-	-	-	3.2	3.5	4.2	5.7	5.4	6.0	6.2	6.3
<b>Primary education</b>	2.3	2.4	2.5	2.8	3.1	3.4	4.0	5.0	4.9	5.3	5.6	5.8
<b>Secondary education</b>	3.4	3.2	3.3	3.6	3.9	4.8	5.7	11.1	12.0	13.0	13.7	13.1
<b>General secondary education</b>	5.8	5.8	6.0	6.7	7.1	7.4	9.3	20.4	20.8	22.7	22.1	19.4
<b>Vocational and technical secondary education</b>	0.1	0.1	0.1	0.3	1.1	3.2	4.0	5.3	6.0	6.1	6.6	7.5
<b>Religious secondary education</b>	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



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Table 4 shows the ratio of private schools to all schools. Parallel to the rise in the number of students in these institutions, the ratio of private schools to all schools is also getting higher. The only level where this ratio is decreasing is pre-primary education, which is due to the faster increase in the number of public pre-primary education institutions compared to that of private ones. According to 2020 data, the highest ratio of private schools was in general secondary education, where there has been a 31-percentage-point increase since 2008.

**TABLE 4: RATIO OF PRIVATE SCHOOLS TO ALL SCHOOLS (%)**

	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20
<b>All levels</b>	8.5	8.9	9.4	10.0	9.6	10.8	12.6	15.7	15.9	17.8	19.2	20.2
<b>Pre-primary education</b>	61.8	64.0	62.7	61.3	60.0	59.6	59.9	54.7	53.1	51.8	50.2	49.2
<b>Primary school</b>	-	-	-	-	3.4	3.8	4.4	5.2	5.2	6.5	7.3	8.0
<b>Lower secondary school</b>	-	-	-	-	5.3	5.7	6.5	9.0	8.3	10.0	10.9	12.2
<b>Primary education</b>	2.7	2.6	2.7	2.9	4.1	4.5	5.2	6.7	6.5	8.0	8.9	9.8
<b>Secondary education</b>	9.3	8.2	8.6	9.2	9.9	13.1	17.7	27.7	23.6	25.4	28.7	29.8
<b>General secondary education</b>	19.3	17.4	18.9	20.1	21.5	26.9	29.7	47.2	43.0	45.6	50.9	50.3
<b>Vocational and technical secondary education</b>	0.6	0.5	0.5	0.9	2.3	6.7	10.5	10.2	8.5	8.6	8.9	9.0
<b>Religious secondary education</b>	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0


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## DATA SOURCES

Data were calculated by ERG using the ‘National Education Statistics Formal Education’ books published between 2009 and 2020. The data on private education institutions and the number of students at these institutions were found under the section titled ‘Number of private education institutions, students, teachers and classrooms’. Open education institutions and the students enrolled in these institutions were not included in the calculations.



National Education Statistics,  
Formal Education Books  
(2007-2020)

## HOW WAS THIS INDICATOR MEASURED?

The tables were created using the data found in the ‘National Education Statistics Formal Education’ books published between 2009 and 2020. Open education institutions and students enrolled in these institutions were not included in the calculations, which means that the total numbers of schools and students used in the formula excluded open education institutions and their students. Since there are no private open education institutions, the number of private schools or their students were not affected by this exclusion. In Turkey, there are four types of open education institutions: open lower secondary education institutions, open upper secondary education institutions, open vocational and technical secondary education institutions and open religious secondary education institutions.

To calculate the number of students enrolled in private education institutions, as shown in Table 3, the number of total students at these institutions need to be divided by the total number of students (excluding those in open education) and then multiplied by 100 (Formula 6). For example, when data for 2008 were calculated, the numerator and the denominator in Formula 6 were replaced by 2008 figures. This formula can also be used to find the ratio of private school students in different education levels or program types. For example, to calculate the ratio of students in private pre-primary institutions, the number of students in these institutions would be placed in the numerator, and the total number of students in pre-primary education, in the denominator. When calculating for lower and upper secondary education institutions, the number of open education students should be subtracted from the total number of students.

**FORMULA 6: RATIO CALCULATION**

$$\text{Ratio of students in private education institutions for year X} = \frac{\text{Number of students in private education institutions for year X}}{\text{Total number of students for year X (excluding open education)}} \times 100$$

To calculate the ratio of the private schools to all schools (except open education institutions), as shown in Table 4, the number of private schools need to be divided by the total number of schools and then multiplied by 100 (Formula 7). This formula can also be used to find the ratio of private schools in different education levels or program types. For example, to calculate the ratio of private pre-primary institutions, the number of private pre-primary institutions would be placed in the numerator, and the total number of pre-primary institutions, in the denominator. When calculating for lower and upper secondary education institutions, the number of open education institutions should be subtracted from the total number of institutions.

**FORMULA 7: RATIO CALCULATION**

$$\text{Ratio of private schools to all schools for year X} = \frac{\text{Number of private schools for year X}}{\text{Total number of schools for year X (excluding open education)}} \times 100$$



## INDICATOR 5: RATIO OF STUDENTS IN PRIVATE SCHOOLS, BY REGION (%)

Even though the national averages provide a general idea about what the indicators are measuring in Turkey, analyzing these indicators by region allows for detection of regional differences. By studying the ratio of students enrolled at private education institutions by region, variations in different regions or education levels can be found. Tables 5, 6 and 7 show the yearly variations in the ratio of students attending private schools, by region. In general, the number of students attending these schools are increasing, in all education levels and regions.

Table 5 shows the ratio of students in private pre-primary institutions to all students in this level, by region. Between 2011 and 2020, this ratio increased the most in West Marmara (17.8 percentage points) and the least in Southeast Anatolia (3.3 percentage points). In 2019-20, this ratio was highest in Istanbul and lowest in Southeast Anatolia, with a 26.9-percentage-point difference between these two regions.

**TABLE 5: RATIO OF STUDENTS IN PRIVATE PRE-PRIMARY EDUCATION INSTITUTIONS TO ALL STUDENTS IN THIS LEVEL, BY REGION (%)**

	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20
<b>Turkey</b>	5.4	9.5	11.6	8.7	14.8	15.9	15.5	15.7	16.5	17.7
<b>İstanbul</b>	20.1	28.3	29.6	26.9	34.2	33.8	33.3	34.1	33.0	31.3
<b>West Marmara</b>	3.4	7.3	9.1	7.5	13.2	14.4	15.9	17.0	19.6	21.2
<b>Aegean</b>	7.1	10.0	13.1	11.1	16.6	19.0	19.2	19.9	21.0	22.7
<b>East Marmara</b>	6.5	11.3	13.1	9.7	16.9	18.1	17.3	18.4	19.7	20.5
<b>West Anatolia</b>	7.0	14.9	19.0	11.7	23.5	22.6	23.0	23.3	23.0	23.5
<b>Mediterranean</b>	3.1	6.2	7.7	4.4	9.0	11.5	11.1	12.5	13.4	15.4
<b>Central Anatolia</b>	2.0	6.2	7.3	3.4	10.2	10.6	9.4	9.2	9.9	11.1
<b>West Black Sea</b>	2.2	5.0	6.2	4.0	8.3	10.5	9.7	10.2	11.3	12.9
<b>East Black Sea</b>	2.0	4.6	5.1	2.5	7.7	8.0	8.5	9.3	9.2	10.2
<b>Northeast Anatolia</b>	1.2	3.0	3.6	1.9	4.8	5.0	4.8	4.9	5.4	5.8
<b>Central East Anatolia</b>	1.1	2.5	3.1	2.1	4.7	5.0	4.6	5.0	5.2	6.1
<b>Southeast Anatolia</b>	1.1	2.3	2.8	1.8	3.9	3.9	3.7	3.3	3.9	4.4



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Table 6 shows the ratio of students in private primary education institutions (primary+lower secondary schools) to all students in this level. Between 2013 and 2020, private school enrollment increased the most in Istanbul for primary education institutions (3.8 percentage points for primary and 5.8 percentage points for lower secondary schools). During the same time period, it increased the least in Central East Anatolia (0.6 percentage points for primary and 1.1 percentage points for lower secondary schools). In 2019-20, Istanbul had the highest ratio of primary school students in private education (9.3%), and three regions had the same lowest ratio of 1.7%: Northeast Anatolia, Central East Anatolia and Southeast Anatolia. The difference between Istanbul and these regions is 7.6 percentage points.

**TABLE 6: RATIO OF STUDENTS IN PRIVATE PRIMARY EDUCATION INSTITUTIONS TO ALL STUDENTS IN THIS LEVEL, BY REGION (%)**

	PRIMARY EDUCATION		PRIMARY SCHOOLS									LOWER SECONDARY SCHOOLS							
	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20	
<b>Turkey</b>	2.5	2.8	3.0	3.3	3.7	4.3	4.3	4.6	5.0	5.2	3.2	3.3	4.2	5.7	5.4	6.0	6.2	6.3	
<b>Istanbul</b>	4.5	4.9	5.5	6.1	6.9	7.8	8.1	8.4	9.0	9.3	5.3	5.5	7.3	10.0	9.8	10.8	11.2	11.1	
<b>West Marmara</b>	1.9	2.0	2.1	2.4	2.7	3.4	3.2	3.7	4.2	4.5	2.4	2.6	3.1	4.9	4.3	5.1	5.4	5.7	
<b>Aegean</b>	3.0	3.3	3.5	3.9	4.4	5.4	5.1	5.6	6.2	6.4	3.8	4.0	5.2	7.1	6.6	7.2	7.5	7.6	
<b>East Marmara</b>	2.9	3.2	3.5	3.7	4.1	2.3	4.9	5.3	5.9	6.2	3.6	3.7	4.6	6.6	6.4	7.1	7.3	7.5	
<b>West Anatolia</b>	4.3	4.8	5.3	5.9	6.7	7.7	7.7	8.0	8.3	8.6	5.6	5.9	7.2	9.1	8.4	9.2	9.4	9.9	
<b>Mediterranean</b>	2.4	2.6	2.6	2.7	3.0	3.5	3.4	3.7	4.1	4.2	3.0	3.1	3.8	5.0	4.7	5.4	5.6	5.6	
<b>Central Anatolia</b>	2.1	2.3	2.5	2.6	3.1	3.5	3.3	3.5	3.7	3.8	2.6	2.8	3.1	4.8	4.0	4.2	4.3	4.4	
<b>West Black Sea</b>	1.7	1.9	2.2	2.4	2.6	3.0	2.7	3.2	3.5	3.8	2.2	2.2	2.8	3.7	3.2	3.8	4.2	4.4	
<b>East Black Sea</b>	1.3	1.5	1.7	1.8	1.9	2.4	2.0	2.3	2.6	2.8	1.6	1.7	2.1	2.8	2.3	2.6	2.8	3.1	
<b>Northeast Anatolia</b>	0.9	1.0	1.0	1.2	1.5	1.7	1.4	1.5	1.6	1.7	1.2	1.0	1.8	2.4	1.9	2.2	2.4	2.5	
<b>Central East Anatolia</b>	1.0	1.0	1.1	1.2	1.3	1.5	1.2	1.4	1.5	1.7	1.2	1.2	1.4	2.0	1.7	1.9	2.0	2.3	
<b>Southeast Anatolia</b>	0.9	1.0	1.0	1.1	1.3	1.4	1.3	1.4	1.6	1.7	1.2	1.2	1.6	2.1	2.0	2.2	2.4	2.5	



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Table 7 shows the same indicator for secondary education. Between 2011 and 2020, Istanbul showed the largest increase in private school enrollment for general secondary education (20.3 percentage points), and Southeast Anatolia, for vocational and technical secondary education (9.5 percentage points). The regions with the smallest increase were Northeast Anatolia for general secondary education (5.3 percentage points) and West Black Sea for vocational and technical secondary education (2.1 percentage points). Based on 2020 data, general secondary education was the level with the largest regional difference in private education enrollment. Between Istanbul and Northeast Anatolia, the regions with the highest and the lowest ratios of 34.4% and 7.2% respectively, there is a 27.2-percentage-point difference. For vocational and technical secondary education, the regions with the highest and lowest ratios were Southeast Anatolia and East Black Sea, at 9.5% and 1.5% respectively, indicating a 8-percentage-point difference.

**TABLE 7: RATIO OF STUDENTS IN PRIVATE SECONDARY EDUCATION INSTITUTIONS TO ALL STUDENTS IN THIS LEVEL, BY REGION (%)**

	GENERAL SECONDARY EDUCATION										VOCATIONAL AND TECHNICAL SECONDARY EDUCATION									
	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20
<b>Turkey</b>	6.0	6.7	7.1	7.4	9.3	20.4	20.0	22.7	22.1	19.4	0.1	0.2	0.9	2.5	3.1	4.1	4.9	4.7	5.1	5.6
<b>İstanbul</b>	14.1	15.4	15.8	17.1	21.8	41.3	40.7	44.6	39.9	34.4	0.4	0.6	1.4	3.3	4.1	5.1	6.1	6.4	6.4	6.6
<b>West Marmara</b>	2.4	2.7	2.8	2.6	3.6	12.3	13.6	15.3	15.5	15.9	0.0	0.0	0.3	1.7	2.4	3.5	4.5	3.8	4.3	4.6
<b>Aegean</b>	5.7	6.5	7.0	7.2	8.2	17.8	16.6	18.9	19.5	17.3	0.0	0.0	0.6	2.2	2.7	4.1	4.6	4.3	4.7	5.2
<b>East Marmara</b>	6.0	6.5	6.9	7.2	8.7	19.6	17.9	21.2	21.7	20.3	0.1	0.4	0.8	2.0	2.4	3.4	4.1	3.8	4.2	4.4
<b>West Anatolia</b>	8.4	9.2	10.2	11.1	14.0	30.0	29.2	32.5	31.2	28.5	0.2	0.3	1.3	3.7	4.6	5.7	6.8	5.8	5.1	3.9
<b>Mediterranean</b>	4.2	5.0	5.5	5.7	7.3	17.1	16.9	19.4	19.1	16.9	0.0	0.1	1.1	3.7	4.3	5.9	6.4	5.7	5.9	6.0
<b>Central Anatolia</b>	4.1	4.8	5.2	5.1	6.6	14.0	13.5	15.6	15.6	13.8	0.2	0.4	0.7	2.6	3.2	4.3	4.5	5.0	4.7	4.8
<b>West Black Sea</b>	2.3	2.7	2.9	3.1	4.3	12.0	12.0	13.9	14.0	12.4	0.0	0.0	0.1	0.8	0.9	1.4	1.3	1.2	1.5	2.1
<b>East Black Sea</b>	2.4	2.6	2.7	2.4	3.1	9.3	9.4	11.1	11.6	10.4	0.0	0.1	0.2	0.9	1.1	1.5	2.0	1.7	1.4	1.5
<b>Northeast Anatolia</b>	1.9	2.3	2.2	2.3	3.7	9.0	9.1	10.0	9.5	7.2	0.0	0.0	0.0	0.1	0.2	0.3	0.0	0.4	1.7	2.8
<b>Central East Anatolia</b>	2.1	2.2	2.7	2.5	3.9	13.7	12.1	13.8	12.5	9.6	0.0	0.0	0.2	0.9	1.5	2.2	3.5	3.7	4.6	7.5
<b>Southeast Anatolia</b>	2.3	2.7	2.9	3.1	5.0	13.1	13.8	15.1	14.2	11.7	0.0	0.4	1.4	3.1	3.2	4.1	5.1	5.4	7.2	9.5



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*Education Monitoring Report  
2010*

*Education Monitoring Report  
2011*

*National Education Statistics,  
Formal Education Books (2007-  
2020)*

## DATA SOURCES

Data from 2010-11 and 2011-12 were compiled from the data shared by the MoNE with ERG, and the rest was calculated by ERG using the 'National Education Statistics Formal Education' books published between 2012 and 2020. Data on students enrolled in private education institutions by province were found in the 'Formal Education' section of the books, where they were shown for each education level. Students enrolled in open education institutions were not included in the calculations.

## HOW WAS THIS INDICATOR MEASURED?

The tables were created using data shared by MoNE with ERG in 2011 and 2012 and the 'National Education Statistics Formal Education' books published between 2012 and 2020. Students enrolled at open education institutions were not included in the calculations, which means that the total number of students used in the formula excluded open education students. Since there are no private open education institutions, the number of private school students were not affected by this exclusion. In Turkey, there are four types of open education institutions: open lower secondary education institutions, open upper secondary education institutions, open vocational and technical secondary education institutions and open religious secondary education institutions.

Since the tables provide regional information, data on the provinces need to be converted into regional data first. To find the total number of students attending private schools in a certain region, the number of students from each province needs to be added. The same addition needs to be done for finding the number of total students. The regions and their provinces are shown in **Figure 1**.

To find the ratio of the students in private education institutions, as shown in the tables, students enrolled in private schools need to be divided into the total number of students (excluding those in open education) and then multiplied by 100 (Formula 8). For example, when data for 2011 was calculated, the numerator and the denominator in Formula 8 were replaced with 2011 figures. This formula can also be used to find the ratio of private school students in different education levels or program types. For example, to calculate the ratio of students in private pre-primary institutions in Istanbul, the number of students in these institutions would be placed in the numerator and the total number of pre-primary students in Istanbul, in the denominator. When calculating for lower and upper secondary education institutions, the number of open education students should be subtracted from the total number of students.

### FORMULA 8: RATIO CALCULATION

$$\text{Ratio of students in private education institutions for year X} = \frac{\text{Number of students in private education institutions for year X}}{\text{Total number of students for year X (excluding open education)}} \times 100$$

## INDICATOR 6: NET ENROLLMENT RATES (%)

One of the main indicators for monitoring education is enrollment rates, which refer to the ratio of students in education. Enrollment rates can be measured in three sub-indicators: age, net enrollment rate and gross enrollment rate. Enrollment rate by age refers to the ratio of students of a specific age group enrolled in school. Net enrollment rate is the ratio of students who are enrolled in formal education institutions at their own education level. Gross enrollment rate is the ratio of students enrolled in school in their own education level to the total population at that theoretical age group. The theoretical age groups for each education level in Turkey are shown below (please note that the numbers refer to the age completed by the child):

- Pre-primary education: Ages 3-5
- Primary school: Ages 6-9
- Lower secondary school: Ages 10-13
- Secondary education: Ages 14-17

For an accurate monitoring of access to education, additional indicators, such as absenteeism, grade repetitions and early school leaving, should be examined, in addition to enrollment rates.

Table 8 shows the yearly net enrollment rates by education level. Net enrollment rates are on the rise for all levels in Turkey, except for primary school. The biggest rise is observed in secondary education between 2008 and 2020, with 26.4 percentage points. The gender gap in enrollment rates has also decreased over the years for this level.

TABLE 8: NET ENROLLMENT TRENDS IN TURKEY (%)

		2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20
Pre-primary education (Ages 3-5)	Total	17.9	22.9	26.9	29.9	30.9	26.6	27.7	32.7	33.3	35.5	38.5	39.1	41.8
	Female	-	-	26.5	29.4	30.5	26.3	27.2	32.2	32.9	35.1	38.2	38.8	41.4
	Male	-	-	27.3	30.3	31.2	26.9	28.2	33.1	33.6	35.9	38.8	39.4	42.1
Pre-primary education (Ages 4-5)	Total	26.6	32.5	38.6	43.1	44.0	37.4	37.5	41.6	43.0	45.7	50.4	50.8	52.4
	Female	-	-	39.2	42.5	43.5	36.8	36.6	40.9	42.4	45.1	50.0	50.4	52.0
	Male	-	-	38.6	43.7	44.6	37.9	38.3	42.2	43.5	46.3	50.9	51.2	52.8
Pre-primary education (Age 5)	Total	-	-	61.0	66.9	65.7	39.7	42.5	53.8	55.5	58.8	66.9	68.3	71.2
	Female	-	-	-	-	65.2	38.3	40.7	52.2	54.2	57.4	65.8	67.2	70.4
	Male	-	-	-	-	66.2	41.0	44.3	55.3	56.7	60.1	68.0	69.3	72.0
Primary schools	Total	-	-	-	-	-	98.9	99.6	96.3	94.9	91.2	91.5	91.9	93.6
	Female	-	-	-	-	-	98.9	99.6	96.6	95.2	91.2	91.7	92.1	93.5
	Male	-	-	-	-	-	98.8	99.5	96.0	94.5	91.1	91.4	91.8	93.7
Lower secondary schools	Total	-	-	-	-	-	93.1	94.5	94.4	94.4	95.7	94.5	93.3	95.9
	Female	-	-	-	-	-	93.0	94.5	94.3	94.4	95.8	94.7	93.6	96.1
	Male	-	-	-	-	-	93.2	94.6	94.4	94.4	95.6	94.3	92.9	95.7
Primary education (Total)	Total	97.4	96.5	98.2	98.4	98.7	96.0	99.3	97.1	96.4	96.5	96.1	96.1	97.7
	Female	96.1	96.0	97.8	98.2	98.6	96.0	99.2	97.1	96.5	96.6	96.3	96.2	97.8
	Male	98.5	97.0	98.5	98.6	98.8	96.0	99.4	97.1	96.3	96.4	96.0	95.9	97.6
Secondary Education	Total	58.6	58.5	65.0	66.1	67.4	70.1	76.7	79.4	79.8	82.5	83.6	84.2	85.0
	Female	55.8	56.3	62.2	63.9	66.1	69.3	76.1	79.3	80.2	82.4	83.4	83.9	85.2
	Male	61.2	60.6	67.6	68.2	68.5	70.8	77.2	79.5	79.4	82.7	83.8	84.5	84.9


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National Education Statistics,  
Formal Education Books  
(2007-2020)

## DATA SOURCES

The data were obtained from the 'National Education Statistics Formal Education' books published between 2009 and 2020. The calculations were performed by MoNE.

## HOW WAS THIS INDICATOR MEASURED?

The rates in the table were obtained from the 'National Education Statistics Formal Education' books published between 2009 and 2020. Net enrollment rates are calculated by dividing the number of students whose ages match the theoretical age group for the education level they are enrolled in by the total number of children at that age group and then multiplying the result by 100 (Formula 9). For example, to find the net enrollment rates in secondary education for 2007-08, the numerator in Formula 9 needs to be replaced with the number of students between ages 14 to 17 and the denominator, with the total number of children between the ages 14 to 17, for that academic year.

### FORMULA 9: NET ENROLLMENT RATE (%)

$$\text{Net enrollment rate for year X} = \frac{\text{Number of children in the right theoretical age group for their education level for year X}}{\text{Total number of children in Turkey in the same theoretical age group for year X}} \times 100$$

## INDICATOR 7: THE DISTRIBUTION OF STUDENTS IN PRE-PRIMARY EDUCATION, BY INSTITUTION TYPE (%)

Students in pre-primary education are enrolled in various institutions in Turkey, including those with easily accessible models, such as summer kindergartens and mobile classrooms, as well as public and private pre-primary education institutions affiliated with the MoNE. This variability in education institutions requires that pre-primary education be monitored both in terms of access and in terms of governance.

Table 9 shows the distribution of students in pre-primary education by institution type. Based on 2020 data, the institution type with the highest enrollment rate is public kindergartens. On the other hand, this is also the institution type that has the highest percentage loss in enrollment (24 percentage points), as different types of institutions have been created over the years. Based on 2020 data, among the institutions that are not affiliated with the MoNE, community-based institutions had the highest enrollment rate. The enrollment rate at these institutions has increased by 5.3 percentage points since 2016. Community-based institutions include educational centers for 4-6-year-olds affiliated with the Directorate of Religious Affairs, as well as the creches governed by the municipal government and various associations.

**TABLE 9: DISTRIBUTION OF PRE-PRIMARY STUDENTS BY INSTITUTION TYPE (%)**

	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20
<b>Public education institutions affiliated with MoNE</b>												
Public kindergartens	14.6	15.1	16.5	17.8	20.4	22.6	24.2	25.2	25.5	24.7	24.7	24.9
Nursery classrooms in public schools	73.9	74.2	73.4	71.5	67.1	63.6	59.6	56.4	54.6	54.0	52.0	49.9
Summer kindergartens	0.8	0.6	0.4	0.4	0.1	0.4	0.5	0.5	0.4	-	0.1	0.002
Mobile classrooms	0.1	0.2	0.1	0.2	0.1	0.04	0.05	0.01	0.01	0.004	0.02	0.03
<b>Public education institutions not affiliated with MoNE</b>												
Institutions opened in accordance with Law no. 657, article no. 191	1.9	0.9	0.6	0.7	0.7	0.6	0.8	0.3	0.5	0.5	0.6	0.5
Community-based institutions	-	-	-	-	-	-	-	1.7	3.9	5.1	6.1	7.0
<b>Private education institutions affiliated with MoNE</b>												
Private kindergartens	3.0	3.3	3.6	4.1	5.2	6.3	7.7	8.8	8.4	9.1	9.8	10.7
Nursery classrooms in private schools	2.1	1.9	1.9	1.9	2.3	2.5	2.9	3.1	2.7	2.8	3.1	3.1
<b>Private education institutions not affiliated with MoNE</b>												
Creches and care centers affiliated with the Ministry of Family, Labour and Social Services	3.7	3.7	3.6	3.5	4.1	4.0	4.3	3.9	4.1	3.8	3.5	3.9
Creches established in enterprises in accordance with the Labour Law								0.01	0.02	0.02	0.02	0.02



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*National Education Statistics,  
Formal Education Books  
(2007-2020)*

## DATA SOURCE

Data were calculated by ERG using the ‘National Education Statistics Formal Education’ books published between 2009 to 2020. The data on pre-primary education institutions were found in the section titled ‘Number of pre-primary education institutions, students, teachers and classrooms, by institution type’.

## HOW WAS THIS INDICATOR MEASURED?

The tables were created using the ‘National Education Statistics Formal Education’ books published between 2009 and 2020. The data sources provide information on the number of students for each type of institution. To find the distribution of students in different types of institutions, the number of students at a specific type of institution needs to be divided by the total number of students in pre-primary education and then multiplied by 100 (Formula 10). This calculation needs to be repeated for each year. Formula 10 can also be used for calculating the ratio of students in any pre-primary education institution, which would require placing the number of students in the institution in question, in the numerator.

### FORMULA 10: RATIO CALCULATION

$$\text{X yılı resmi anaokullarındaki öğrenci oranı} = \frac{\text{X yılı resmi anaokullarındaki öğrenci sayısı}}{\text{X yılı okulöncesi eğitimdeki toplam öğrenci sayısı}} \times 100$$



## INDICATOR 8: NET ENROLLMENT RATES IN PRE-PRIMARY EDUCATION, BY REGION (%)

Pre-primary education is vital for narrowing the learning and developmental differences between children. All children should have access to quality pre-primary education. By 2020, pre-primary education was not compulsory in Turkey, however, there has been a significant increase in access to pre-primary education. Similar to other education levels, enrollment rates are used as an indicator to analyze access to pre-primary education. According to the 'MoNE Regulations on Pre-Primary and Primary Institutions', children can enroll in pre-primary education institutions as of 36 months (3 years) of age. Enrollment rates at these institutions are calculated separately for 3-5-year-olds, 4-5-year-olds, and 5-year-olds. It should be noted that before 2012-13, the academic year the school starting age was legally changed, the age categories were 3-6-year-olds, 4-6-year-olds, and 5-6-year-olds. Because pre-primary education is not compulsory in Turkey, families' socioeconomic status affect children's access to early childhood education. As regional differences are also known to play a part in access, it is important to monitor the net enrollment rates to pre-primary education by taking regional differences into account.

Table 10 shows the net enrollment rates in pre-primary education by age and by region. After the decline seen in the 2012-13 academic year, which was caused by the change in the school starting age, net enrollment rates began to climb up again for all age groups. The rates were highest in the East Black Sea region until 2012-13, and in the West Marmara region during the last three years. Based on 2020 data, the difference between the regions with the highest and the lowest net enrollment rates, West Marmara and Northeast Anatolia, respectively, is 17.4 percentage points. Between 2013 and 2020, Istanbul was the region with the highest increase in 5-year olds' enrollment rates, with 25.1 percentage points, followed by Central East Anatolia, at 23.3, and Southeast Anatolia, with 22.1 percentage points.

TABLE 10: NET ENROLLMENT RATES IN PRE-PRIMARY EDUCATION, BY REGION (%)

	2008-2009			2009-2010			2010-2011			2011-2012			2012-2013			2013-2014		
	3-6 ages	4-6 ages	5-6 ages	3-6 ages	4-6 ages	5-6 ages	3-6 ages	4-6 ages	5-6 ages	3-6 ages	4-6 ages	5-6 ages	3-5 ages	4-5 ages	5 ages	3-5 ages	4-5 ages	5 ages
Turkey	22.9	32.5	50.8	26.9	38.5	61.0	29.8	43.1	66.9	30.9	44.0	65.7	30.9	44.0	55.3	27.7	37.5	42.5
İstanbul	16.8	23.5	38.3	18.4	25.5	41.2	19.3	27.4	44.0	20.3	28.7	44.7	23.2	32.5	41.1	21.4	28.4	32.0
West Marmara	27.1	39.1	64.8	30.0	42.9	72.0	33.7	48.4	80.3	35.3	50.0	75.9	36.7	52.2	72.1	32.3	43.5	55.5
Aegean	26.2	37.6	61.7	30.1	43.2	71.8	36.5	52.8	82.9	38.1	54.4	81.2	36.2	51.3	68.7	32.2	43.4	52.9
East Marmara	30.1	42.8	64.7	30.3	43.6	70.1	30.0	43.8	70.5	31.9	45.8	71.0	33.7	47.8	62.2	31.1	41.8	48.9
West Anatolia	23.1	31.7	51.5	25.2	35.7	59.8	28.0	39.4	64.2	31.2	44.3	69.9	32.1	44.9	59.8	28.7	38.5	47.5
Mediterranean	23.2	33.5	54.5	26.9	39.1	65.5	34.4	50.0	78.1	39.8	56.2	75.7	36.5	52.2	67.9	33.3	45.2	52.2
Central Anatolia	24.4	35.6	58.1	29.5	43.0	72.5	29.8	43.7	73.6	30.3	43.8	70.5	30.7	44.8	60.2	27.1	37.4	46.3
West Black Sea	28.5	40.9	61.7	34.5	49.5	78.5	32.7	47.1	73.7	36.1	51.7	78.0	35.8	50.7	64.2	32.0	42.7	49.0
East Black Sea	37.0	51.3	69.3	40.3	56.6	82.8	41.0	58.6	85.7	39.1	54.9	81.5	37.7	53.2	64.3	33.8	44.8	49.5
Northeast Anatolia	18.3	26.0	37.9	24.6	35.0	53.7	25.4	36.7	56.6	25.9	37.0	55.9	26.7	38.3	42.9	24.3	33.1	32.8
Central East Anatolia	21.8	31.1	44.8	27.1	38.9	56.4	33.9	49.5	76.0	30.7	44.0	66.5	29.6	42.6	47.1	26.0	35.6	35.2
Southeast Anatolia	18.9	27.0	40.6	27.1	39.3	55.3	28.6	41.3	57.0	26.8	38.7	56.1	27.0	39.0	42.3	23.3	32.0	31.1


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*Education Monitoring Report  
2008*

*Education Monitoring Report  
2009*

*Education Monitoring Report  
2010*

*Education Monitoring Report  
2011*

*National Education Statistics,  
Formal Education Books (2007-  
2020)*

## DATA SOURCES

Rates for 2008-09, 2009-10 and 2011-12 were calculated using the data shared by the MoNE with ERG, while the other rates were calculated by ERG using the 'National Education Statistics Formal Education' books published between 2012 and 2017. Rates between 2018 and 2020 were calculated by MoNE and obtained from the 'National Education Statistics Formal Education' books.

## HOW WAS THIS INDICATOR MEASURED?

The net enrollment rates for pre-primary education are calculated by taking the number of children of a specific age group that are enrolled in pre-primary education and dividing this number by the total number of children in that age group (Formula 11). For example, to calculate the net enrollment rate for 3-5-year-olds in 2008-09, the numerator in Formula 11 needs to be replaced with the number of 3-5-year-olds enrolled in pre-primary education institutions, and the denominator, with the total number of children in that age group in 2008. The same formula could be used for calculating the enrollment rates for 4-5-year-olds and 5-year-olds. Similarly, it can be used to calculate enrollment rates in different regions, where first, the data on the number of students and the total number of

	2014-15			2015-16			2016-17			2017-18			2018-19			2019-20			
	3-5 ages	4-5 ages	5 ages	3-5 ages	4-5 ages	5 ages	3-5 ages	4-5 ages	5 ages	3-5 ages	4-5 ages	5 ages	3-5 ages	4-5 ages	5 ages	3-5 ages	4-5 ages	5 ages	
	32.7	41.6	53.8	33.3	43.0	55.5	35.5	45.7	58.8	38.5	50.4	66.9	39.1	50.8	68.3	41.8	52.4	71.2	Turkey
	27.5	34.2	44.2	28.4	36.3	47.1	29.9	37.9	48.9	31.9	40.5	53.5	33.2	41.6	55.4	40.8	49.9	66.2	İstanbul
	37.4	47.1	65.3	39.7	50.2	69.1	42.9	53.7	71.0	47.2	60.0	79.5	46.9	58.9	78.0	51.0	62.1	80.8	West Marmara
	36.1	46.0	63.9	38.3	48.9	66.3	39.8	50.5	68.2	43.1	55.5	75.5	43.5	55.3	75.5	46.8	57.3	76.5	Aegean
	36.8	46.2	61.3	37.2	48.2	62.8	41.2	52.9	69.0	43.6	56.8	74.7	45.9	59.4	77.7	47.7	59.7	78.8	East Marmara
	34.3	43.3	60.3	32.3	41.9	58.5	34.8	44.6	61.6	36.0	46.5	65.3	37.0	47.3	66.7	41.4	51.2	68.5	West Anatolia
	36.6	47.1	63.4	37.4	48.0	64.8	39.5	50.8	67.7	41.3	54.5	75.0	41.2	53.8	75.4	43.0	54.0	75.3	Mediterranean
	31.3	41.3	59.0	33.1	43.9	61.1	35.4	47.0	64.9	38.6	52.1	71.7	37.9	50.7	71.3	40.9	52.9	72.6	Central Anatolia
	38.8	48.2	61.3	39.8	50.0	63.6	42.3	53.7	67.7	42.8	55.2	72.5	43.4	55.6	72.8	46.7	58.0	75.5	West Black Sea
	39.3	48.8	61.0	41.2	52.2	64.6	43.4	55.0	67.9	44.9	58.1	74.8	45.7	58.8	75.6	49.2	61.4	79.7	East Black Sea
	28.8	36.7	40.8	29.6	38.1	42.9	32.1	41.3	47.5	36.1	47.5	57.7	37.0	48.8	62.0	36.0	46.2	63.4	Northeast Anatolia
	31.0	40.2	45.2	32.0	41.8	47.1	33.6	43.9	50.3	36.3	49.3	62.3	38.3	51.6	68.1	37.2	48.8	70.4	Central East Anatolia
	28.0	36.5	41.4	27.4	36.4	42.2	29.9	39.4	46.5	36.5	49.3	62.3	35.9	48.4	63.5	34.5	45.1	64.4	Southeast Anatolia

children in each province need to be converted into regional data. To do this, the number of students and the total number of children in each province need to be added. Using these data, the regional net enrollment rates can be found using Formula 11. The regions and their provinces are shown in [Figure 1](#).

#### FORMULA 11: NET OKULLUŞMA ORANI NET ENROLLMENT RATE (%)

$$\text{3-5-year-olds' enrollment rates in pre-primary education for year X} = \frac{\text{Number of 3-5 year-olds in pre-primary education for year X}}{\text{Total number of 3-5-year olds in Turkey for year X}} \times 100$$

## INDICATOR 9: NET ENROLLMENT RATES IN SECONDARY EDUCATION, BY SEX (%)

Among all education levels, secondary education has the lowest enrollment rates. Moreover, the gender gap in net enrollment is the widest at this level. Closing this gap is essential for achieving gender equity and for providing access to quality education for all children. Non-enrollment in secondary education could be due to family decisions and/or economic reasons, and boys and girls can be affected differently. Monitoring net enrollment rates for boys and girls in secondary education by region would help provide a more accurate picture.

Table 11 shows the net enrollment rates for boys and girls by region. In general, the gender gap in enrollment has been narrowing in all regions since 2008-09. In 2012-13, the academic year secondary education became compulsory, male enrollment rates were 7.6 percentage points higher in both Southeast Anatolia and Central East Anatolia. In 2019-20, the gender gap dropped to 2.9 percentage points in Southeast Anatolia, and to 1.3 percentage points in Central East Anatolia. Southeast Anatolia had the widest gender gap in enrollment rates in 2019-20.

**TABLE 11: NET ENROLLMENT RATES IN SECONDARY EDUCATION, BY SEX (%)**

	2008-09		2009-10		2010-11		2011-12		2012-13		2013-14	
	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female
<b>Turkey</b>	60.6	56.3	67.6	62.2	68.2	63.9	68.5	66.1	70.8	69.3	77.2	76.0
<b>İstanbul</b>	62.2	63.5	72.6	70.2	70.6	70.8	70.7	72.1	72.7	74.8	80.8	82.6
<b>West Marmara</b>	73.8	71.8	79.7	76.9	79.6	77.6	80.0	78.9	81.2	80.6	85.6	84.3
<b>Aegean</b>	65.2	65.5	72.0	71.2	74.0	72.9	73.1	74.6	75.4	77.5	80.9	82.7
<b>East Marmara</b>	74.1	68.7	80.9	74.4	80.5	75.5	80.1	77.2	81.3	79.6	84.9	84.6
<b>West Anatolia</b>	69.2	68.7	75.8	74.5	76.1	75.6	75.8	77.1	77.6	79.4	84.1	85.7
<b>Mediterranean</b>	61.9	58.5	68.5	64.7	68.7	65.9	69.5	68.4	71.8	71.2	77.5	77.3
<b>Central Anatolia</b>	61.8	56.8	68.6	63.8	69.8	65.5	70.8	68.5	72.7	72.0	78.6	79.2
<b>West Black Sea</b>	65.3	58.7	71.8	64.4	73.4	67.4	74.4	70.2	76.8	74.3	82.8	82.2
<b>East Black Sea</b>	70.7	64.5	77.3	70.3	78.3	72.7	79.9	76.2	80.8	79.0	88.3	87.7
<b>Northeast Anatolia</b>	43.9	33.5	50.1	38.9	50.8	41.5	52.7	45.2	55.4	49.1	64.4	61.1
<b>Central East Anatolia</b>	47.0	34.6	53.4	40.1	53.8	42.5	52.4	43.8	57.2	49.6	66.7	62.1
<b>Southeast Anatolia</b>	42.1	30.7	49.8	36.9	50.1	39.4	52.1	43.3	54.9	47.5	64.4	57.7



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## DATA SOURCES

The data were obtained from the 'National Education Statistics Formal Education' books. The calculations were performed by MoNE.

## HOW WAS THE INDICATOR MEASURED?

All the data in the table were obtained from the 'National Education Statistics Formal Education' books. The net enrollment rates in secondary education for girls can be calculated by dividing the number of 14-17-year-old girls enrolled in secondary education by the total number of 14-17-year-old girls in the general population and then multiplying the result by 100 (Formula 12). The same formula can be used for finding the enrollment rates of boys, this time using the data on boys. Formula 12 can also be used to find the net enrollment rates in different regions, where first, the data on the number of students and the total number of 14-17-years-old children in each province need to be converted into regional data. To do this, the number of students and the total number of youth in each province need to be added. Using these data, the regional net enrollment rates can be found using Formula 12. The regions and their provinces are shown in [Figure 1](#).



National Education Statistics,  
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### FORMULA 12: NET OKULLULAŞMA ORANI NET ENROLLMENT RATE (%)

$$\text{Net enrollment rate of girls in secondary education for year X} = \frac{\text{Number of 14-17-year-old girls in secondary education for year X}}{\text{Total number of 14-17-year-old girls in Turkey for year X}} \times 100$$

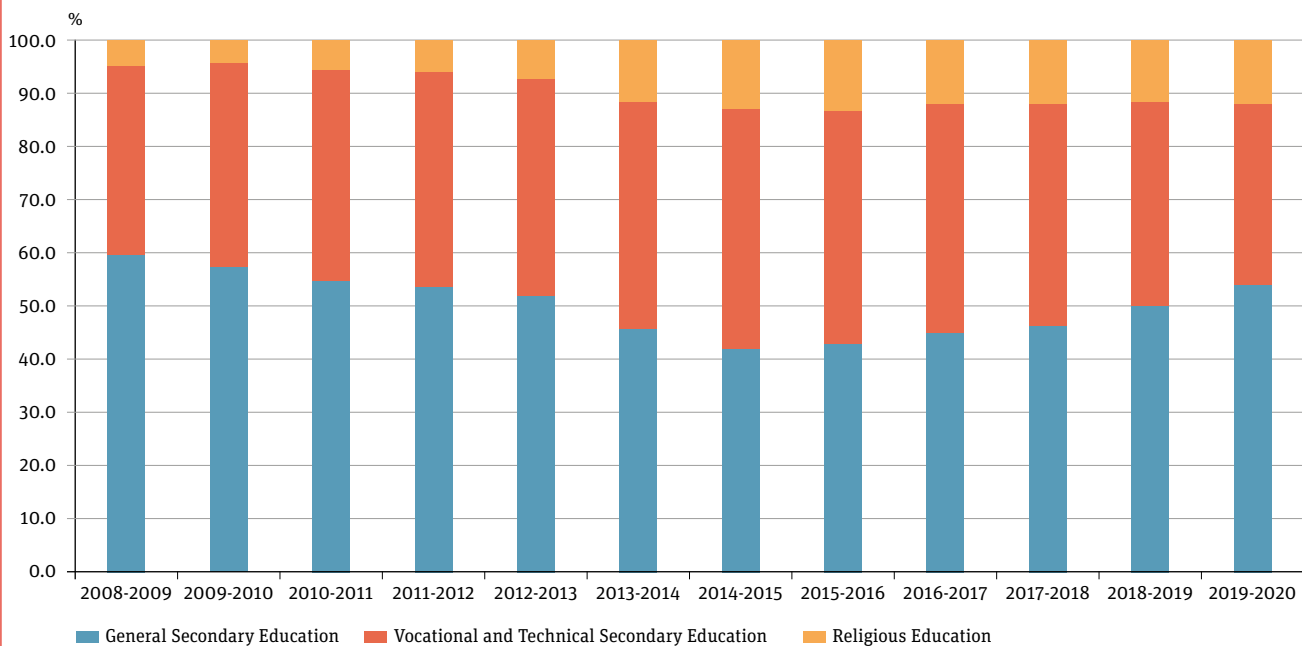
	2014-15		2015-16		2016-17		2017-18		2018-19		2019-20		
	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	
	79.5	79.3	79.4	80.2	82.7	82.4	83.8	83.4	84.5	83.9	85.2	84.9	Turkey
	81.4	83.5	81.6	84.5	85.6	87.3	86.5	87.9	88.5	89.1	89.0	89.5	İstanbul
	85.1	85.2	84.3	85.4	86.2	86.8	86.5	87.2	87.7	87.4	87.4	87.8	West Marmara
	83.4	85.2	83.0	86.0	86.2	87.6	87.7	88.4	88.3	88.2	88.4	88.9	Aegean
	87.1	86.9	86.1	87.2	90.1	90.1	90.7	90.6	90.9	90.7	90.8	90.9	East Marmara
	85.0	86.6	85.0	88.2	89.1	90.5	90.0	91.2	91.3	91.2	91.1	91.3	West Anatolia
	80.2	80.5	80.0	81.2	83.2	83.6	84.6	84.7	85.5	85.1	86.4	86.0	Mediterranean
	81.2	82.3	81.7	84.0	86.3	86.6	87.6	87.6	87.7	87.2	87.7	88.3	Central Anatolia
	85.4	86.2	85.7	87.3	89.3	89.3	90.5	90.4	89.3	89.3	90.9	90.6	West Black Sea
	91.0	89.1	88.9	90.0	90.0	90.5	91.4	91.4	90.4	90.0	92.7	92.3	East Black Sea
	65.9	64.1	65.4	64.9	67.4	67.4	68.8	70.1	69.5	71.8	71.3	74.3	Northeast Anatolia
	66.8	62.6	66.8	64.4	70.0	66.8	71.5	68.9	72.6	70.8	74.5	73.2	Central East Anatolia
	67.9	63.2	68.2	64.2	70.6	65.8	71.9	67.2	72.1	68.4	73.2	70.3	Southeast Anatolia

## INDICATOR 10: DISTRIBUTION OF SECONDARY EDUCATION STUDENTS BY PROGRAM TYPE (%)

Secondary education institutions are grouped into three categories based on the programs they offer: general, vocational and technical, and religious. Analyzing the distribution of secondary education students by program type allows for the monitoring of student preferences and of policy changes in public secondary education related to the transition system between education levels, as well as program types and school quotas.

Graph 2 shows the distribution of secondary education students in Turkey by program type. A decline is observed in general secondary education enrollment rates between 2008-09 and 2014-15, but these rates increase again after 2014-15. A similar increase is observed for both vocational and technical education and religious education up to 2015-16. After this date, enrollment rates for both these program types fluctuate.

**GRAPH 2: DISTRIBUTION OF SECONDARY EDUCATION STUDENTS, BY PROGRAM TYPE (%)**



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## DATA SOURCES

Data were calculated by ERG using the ‘National Education Statistics Formal Education’ books published between 2009 and 2020. The data used for the graph was found under the section titled ‘Number of schools, students, teachers and classrooms in secondary education by program type’. Students enrolled in open education institutions were not included in the calculations.

## HOW WAS THE INDICATOR MEASURED?

The data used for finding the rates in the graph were obtained from the ‘National Education Statistics Formal Education’ books. Students enrolled in open education institutions were not included in the calculations, which means that the total number of students used in the formula excluded open education students. In Turkey, there are students enrolled in open education for all three types of secondary education programs.

To calculate the rates in the graph, the total number of students in each program type (excluding students in open education) were divided by the total number of students in secondary education (excluding students in open education) and then multiplied by 100 (Formula 13). For example, data for 2008-09 were calculated by replacing the numerator and the denominator in Formula 13 with 2008-09 figures. Although Formula 13 below shows the calculation for finding the ratio of general secondary education students to all secondary education students, it can also be used for finding the ratio of students in vocational and technical, and religious secondary education.



*National Education Statistics,  
Formal Education Books  
(2007-2020)*

### FORMULA 13: RATIO CALCULATION

$$\text{Ratio of students in general secondary education for year X} = \frac{\text{Number of students in general secondary education for year X}}{\text{Total number of students in secondary education for year X}} \times 100$$

\*Open education students are not included.

## INDICATOR 11: DISTRIBUTION OF SECONDARY EDUCATION STUDENTS BY PROGRAM TYPE (%)

As with the other indicators, regional differences should be taken into account when analyzing the distribution of students by program type. Since 2014-15, the MoNE has been publicly sharing the number of students in the religious education program, though this information was previously combined with the data for vocational and technical education programs. For comparison purposes, this indicator will continue to combine religious education program data with the data for vocational and technical education programs for the years after 2014-15.

Table 12 shows the regional distribution of secondary education students by program type. An increase is observed in the ratio of students in vocational and technical education between 2008-09 and 2014-15, and in general secondary education after 2014-15. The regional analysis of program types shows that there is no region where the

**TABLE 12: DISTRIBUTION OF SECONDARY EDUCATION STUDENTS, BY PROGRAM TYPE (%)**

	2008-9		2009-10		2010-11		2011-12		2012-13		2013-14	
	General Secondary Education	Vocational and Technical Secondary Education	General Secondary Education	Vocational and Technical Secondary Education	General Secondary Education	Vocational and Technical Secondary Education	General Secondary Education	Vocational and Technical Secondary Education	General Secondary Education	Vocational and Technical Secondary Education	General Secondary Education	Vocational and Technical Secondary Education
<b>Turkey</b>	59.2	40.8	57.1	42.9	56.4	43.6	56.1	43.9	54.6	45.4	53.6	46.4
<b>İstanbul</b>	60.0	40.0	63.9	36.1	59.1	40.9	58.9	41.1	57.3	42.7	53.4	46.6
<b>West Marmara</b>	53.5	46.5	56.9	43.1	50.2	49.8	50.6	49.4	51.4	48.6	52.9	47.1
<b>Aegean</b>	55.0	45.0	59.6	40.4	50.1	49.9	51.0	49.0	50.6	49.4	52.6	47.4
<b>East Marmara</b>	47.3	52.7	46.4	53.6	45.1	54.9	45.9	54.1	45.6	54.4	46.0	54.0
<b>West Anatolia</b>	60.3	39.7	51.5	48.5	56.7	43.3	56.9	43.1	54.5	45.5	53.3	46.7
<b>Mediterranean</b>	63.6	36.4	64.5	35.5	59.0	41.0	57.3	42.7	55.9	44.1	55.0	45.0
<b>Central Anatolia</b>	58.1	41.9	58.2	41.8	53.1	46.9	53.1	46.9	51.9	48.1	53.2	46.8
<b>West Black Sea</b>	53.0	47.0	55.3	44.7	49.5	50.5	50.0	50.0	49.2	50.8	51.8	48.2
<b>East Black Sea</b>	48.1	51.9	53.6	46.4	44.9	55.1	45.5	54.5	45.4	54.6	48.0	52.0
<b>Northeast Anatolia</b>	64.6	35.4	56.1	43.9	60.7	39.3	59.8	40.2	57.8	42.2	56.6	43.4
<b>Central East Anatolia</b>	68.9	31.1	56.8	43.2	63.8	36.2	61.1	38.9	58.7	41.3	56.7	43.3
<b>Southeast Anatolia</b>	73.5	26.5	54.1	45.9	72.0	28.0	70.1	29.9	65.5	34.5	60.6	39.4



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majority of students prefer general or vocational and technical education over the other. Since 2008-09, the regional differences in the enrollment to these programs have also been shrinking. In 2010-11, there was a 26.9-percentage-point difference in the enrollment rates to general secondary education between the regions with the highest and the lowest enrollment rates, which were Southeast Anatolia and East Marmara. By 2019-20, this difference dropped to 7 percentage points, this time between Northeast Anatolia, the region with the highest enrollment rate, and East Marmara, with the lowest.

## DATA SOURCES

Data were calculated by ERG using the 'National Education Statistics Formal Education' books published between 2009 and 2020. Information was found in the section titled 'Secondary education'.

## HOW WAS THE INDICATOR MEASURED?

All the ratios in Table 12 were calculated using data obtained from the 'National Education Statistics Formal Education' books. To calculate the ratios in the table, the total number of students in a specific program type were divided by the total number of students in



National Education Statistics,  
Formal Education Books  
(2007-2020)

	2014-15		2015-16		2016-17		2017-18		2018-19		2019-20		
	General Secondary Education	Vocational and Technical Secondary Education	General Secondary Education	Vocational and Technical Secondary Education	General Secondary Education	Vocational and Technical Secondary Education	General Secondary Education	Vocational and Technical Secondary Education	General Secondary Education	Vocational and Technical Secondary Education	General Secondary Education	Vocational and Technical Secondary Education	
	51.0	49.0	52.5	47.6	52.8	47.2	54.0	46.0	57.5	42.5	54.2	45.8	Turkey
	49.2	50.8	49.9	50.1	50.1	49.9	52.9	47.1	57.5	42.5	51.5	48.5	Istanbul
	52.8	47.2	55.7	44.3	56.5	43.5	56.6	43.4	59.8	40.2	56.1	43.9	West Marmara
	52.5	47.5	55.1	44.9	55.6	44.4	55.8	44.2	59.1	40.9	56.2	43.8	Aegean
	45.9	54.1	48.2	51.8	49.0	51.0	50.3	49.7	53.7	46.3	51.2	48.8	East Marmara
	51.8	48.2	53.7	46.3	54.1	45.9	55.5	44.5	60.0	40.0	55.9	44.1	West Anatolia
	53.6	46.4	54.3	45.7	55.2	44.8	55.7	44.3	58.8	41.2	56.9	43.1	Mediterranean
	51.4	48.6	53.2	46.8	52.8	47.2	53.1	46.9	55.6	44.4	52.5	47.5	Central Anatolia
	50.8	49.2	52.1	47.9	52.3	47.7	52.8	47.2	55.3	44.7	52.4	47.6	West Black Sea
	45.9	54.1	48.0	52.0	48.4	51.6	49.5	50.5	52.1	47.9	52.5	47.5	East Black Sea
	53.0	47.0	55.3	44.7	55.6	44.4	56.9	43.1	57.9	42.1	58.2	41.8	Northeast Anatolia
	51.2	48.8	51.6	48.4	51.2	48.8	52.6	47.4	55.8	44.2	54.7	45.3	Central East Anatolia
	53.0	47.0	53.9	46.1	54.1	45.9	55.3	44.7	58.8	41.2	56.0	44.0	Southeast Anatolia

secondary education and then multiplied by 100 (Formula 14). For example, data for 2008-09 were calculated by replacing the numerator and the denominator in Formula 14 with 2008-09 figures. Although Formula 14 below shows the ratio of general secondary education students to all students in secondary education, it can be used to calculate the ratio of vocational and technical secondary education students or the ratio of students in either program in any of the regions.

To calculate the regional distribution of students by program type, first, the number of general or vocational and technical secondary education students and the total number of students in secondary education in each province need to be converted into regional data. Since the MoNE provides provincial data, the number of students in each province can be added to find the regional data. Later, these regional data can be entered into Formula 14 to find the regional distribution of students by program type. The regions and their provinces are shown in [Figure 1](#).

#### FORMULA 14: RATIO CALCULATION

$$\text{Ratio of students in general secondary education for year X} = \frac{\text{Number of students in general secondary education for year X}}{\text{Total number of students in secondary education for year X}} \times 100$$

## INDICATOR 12: NUMBER OF STUDENTS IN FORMAL SPECIAL EDUCATION

One of the main indicators of children's equal access to quality education is the number of children receiving special education services. Formal special education services are provided in three categories: inclusive classrooms, special education classrooms, and special education schools. Like all children, those with special needs have a right to quality education with their peers.

Table 13 shows the number of students receiving special education services by category. Since the total number of children with special needs in Turkey is not shared publicly, it is not possible to calculate the ratio of children with special needs who are enrolled in education. The MoNE also does not share information on the number of children who graduate from an education level and enter the next one. In order to analyze the data in Table 13 accurately, these pieces of information are necessary. Other findings from the available data show that the number of boys in special education is almost twice the number of girls each year, and that the number of students receiving special education services are increasing every year. A similar increase is observed in the number of students in blended classrooms, but the ratio of students in these classrooms fluctuate, since students in other categories are also on the rise.

### DATA SOURCES

The data are obtained from the 'National Education Statistics Formal Education' books published between 2009 and 2020. The ratios of students in blended classrooms were calculated by ERG. The data were found under the section titled 'Number of schools, students, teachers and classrooms in special education'.

### HOW WAS THIS INDICATOR MEASURED?

The data for each year were obtained from the 'National Education Statistics Formal Education' books published between 2009 and 2020. To find the ratio of students in inclusive classrooms, the number of students in inclusive classrooms were divided by the total number of students receiving special education services and then multiplied by 100 (Formula 15).



National Education Statistics,  
Formal Education Books  
(2007-2020)

### FORMULA 15: RATION CALCULATION

$$\text{Ratio of students in blended classrooms for year X} = \frac{\text{Number of students in blended education classrooms for year X}}{\text{Total number of students receiving special education services for year X}} \times 100$$

TABLE 13: NUMBER OF STUDENTS RECEIVING FORMAL SPECIAL EDUCATION

	2008-09			2009-10			2010-11			2011-12			2012-13			2013-14				
	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female		
Inclusive education	Pre-primary education*	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
	Primary schools	-	-	-	-	-	-	-	-	-	-	-	-	66,941	40,732	26,209	66,351	40,855	25,496	
	Lower secondary schools	-	-	-	-	-	-	-	-	-	-	-	-	80,107	49,120	30,987	86,134	52,828	33,306	
	Primary education	-	-	-	-	-	-	84,580	27,444	57,136	137,893	84,309	53,584	147,048	89,852	57,196	152,485	93,683	58,802	
	Secondary education	-	-	-	-	-	-	7,775	4,816	2,959	10,860	6,744	4,116	14,247	8,777	5,470	20,632	12,688	7,944	
	All levels	-	-	-	-	-	-	92,355	32,260	60,095	148,753	91,053	57,700	161,295	98,629	62,666	173,117	106,371	66,746	
Special Education Classes	Pre-primary education	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
	Primary schools	-	-	-	-	-	-	-	-	-	-	-	-	13,538	8,417	5,121	15,064	9,289	5,775	
	Lower secondary schools	-	-	-	-	-	-	-	-	-	-	-	-	11,939	7,372	4,567	14,030	8,674	5,356	
	Primary education	-	-	-	-	-	-	18,541	11,502	7,039	20,958	12,939	8,019	25,477	15,789	9,688	29,094	17,963	11,131	
	Secondary education	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
	All levels	-	-	-	-	-	-	18,541	11,502	7,039	20,958	12,939	8,019	25,477	15,789	9,688	29,094	17,963	11,131	
Special Education Schools**	Pre-primary education**	513	304	209	659	401	258	727	424	303	890	516	374	1,006	564	442	1,225	747	478	
	Primary schools	-	-	-	-	-	-	-	-	-	-	-	-	11,346	7,127	4,219	10,900	6,753	4,147	
	Lower secondary schools	-	-	-	-	-	-	-	-	-	-	-	-	10,591	6,567	4,024	11,296	7,112	4,184	
	Primary education	20,145	12,391	7,754	21,676	13,461	8,215	22,608	14,077	8,531	20,813	12,988	7,825	21,937	13,694	8,243	22,196	13,865	8,331	
	Secondary education	4,728	3,327	1,401	5,860	4,053	1,807	7,017	4,797	2,220	8,099	5,378	2,721	10,934	7,198	3,736	17,084	11,212	5,872	
	All levels	25,386	16,022	9,364	28,195	17,915	10,280	30,352	19,298	11,054	29,802	18,882	10,920	33,877	21,456	12,421	40,505	25,824	14,681	
<b>Total number of students receiving formal education</b>	25,386	16,022	9,364	28,195	17,915	10,280	141,248	63,060	78,188	199,513	122,874	76,639	220,649	135,874	84,775	242,716	150,158	92,558		
<b>Ratio of students in blended education</b>	-	-	-	-	-	-	65.4	51.2	76.9	74.6	74.1	75.3	73.1	72.6	73.9	71.3	70.8	72.1		



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	2014-15			2015-16			2016-17			2017-18			2018-19			2019-20				
	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female		
	304	186	118	1,399	924	475	3,585	2,407	1,178	2,601	1,711	890	1,260	795	465	789	489	300	Pre-primary education*	Inclusive education
	72,095	44,646	27,449	81,380	50,922	30,458	94,897	60,306	34,591	105,098	67,544	37,554	115,556	74,091	41,465	119,307	76,492	42,815	Primary schools	
	89,887	55,053	34,834	92,032	56,446	35,586	109,684	68,117	41,567	108,753	68,210	40,543	130,624	81,819	48,805	142,670	89,719	52,951	Lower secondary schools	
	161,982	99,699	62,283	173,412	107,368	66,044	204,581	128,423	76,158	213,851	135,754	78,097	246,180	155,910	90,270	261,977	166,211	95,766	Primary education	
	20,935	12,848	8,087	27,730	17,144	10,586	34,320	21,528	12,792	41,318	26,197	15,121	48,257	30,248	18,009	55,534	34,285	21,249	Secondary education	
	183,221	112,733	70,488	202,541	125,436	77,105	242,486	152,358	90,128	257,770	163,662	94,108	295,697	186,953	108,744	318,300	200,985	117,315	All levels	
	-	-	-	-	-	-	-	-	-	-	-	-	2,110	1,308	802	2,442	1,546	896	Pre-primary education	Special Education Classes
	16,322	10,146	6,176	17,849	11,183	6,666	21,473	13,705	7,768	23,305	15,065	8,240	25,836	16,813	9,023	27,337	17,928	9,409	Primary schools	
	15,943	9,854	6,089	18,893	11,592	7,301	21,427	13,205	8,222	22,510	13,948	8,562	23,468	14,598	8,870	24,549	15,361	9,188	Lower secondary schools	
	32,265	20,000	12,265	36,742	22,775	13,967	42,900	26,910	15,990	45,815	29,013	16,802	49,304	31,411	17,893	51,886	33,289	18,597	Primary education	
	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	Secondary education	
	32,265	20,000	12,265	36,742	22,775	13,967	42,900	26,910	15,990	45,815	29,013	16,802	51,414	32,719	18,695	54,328	34,835	19,493	All levels	
	1,631	1,053	578	1,010	644	366	1,120	723	397	1,113	708	405	1,401	895	506	1,642	1,085	557	Pre-primary education**	Special Education Schools***
	10,063	6,305	3,758	10,213	6,372	3,841	10,792	6,861	3,931	11,659	7,526	4,133	12,111	7,913	4,198	12,898	8,423	4,475	Primary schools	
	11,267	7,147	4,120	11,174	7,142	4,032	11,741	7,476	4,265	11,844	7,423	4,421	12,241	7,612	4,629	12,658	7,908	4,750	Lower secondary schools	
	21,330	13,452	7,878	21,387	13,514	7,873	22,533	14,337	8,196	23,503	14,949	8,554	24,352	15,525	8,827	25,556	16,331	9,225	Primary education	
	20,835	13,628	7,207	26,809	17,118	9,691	24,559	15,822	8,737	25,409	16,396	9,013	25,951	16,743	9,208	25,948	16,661	9,287	Secondary education	
	43,796	28,133	15,663	49,206	31,276	17,930	48,212	30,882	17,330	50,025	32,053	17,972	51,704	33,163	18,541	53,146	34,077	19,069	All levels	
	259,282	160,866	98,416	288,489	179,487	109,002	333,598	210,150	123,448	353,610	224,728	128,882	398,815	252,835	145,980	425,774	269,897	155,877	Total number of students receiving formal education	
	70.7	70.1	71.6	70.2	69.9	70.7	72.7	72.5	73.0	72.9	72.8	73.0	74.5	74.3	74.9	74.8	74.5	75.3	Ratio of students in blended education	

\* Includes kindergartens but not nurseries.

\*\* Includes nurseries but not kindergartens.

\*\*\* Includes applied learning centers.

## INDICATOR 13: NUMBER OF STUDENTS PER TEACHER

This indicator refers to the student-to-teacher ratio in an education system. Although this ratio cannot determine the quality of education or the well-being of students or teachers on its own, it should still be monitored along with other indicators that measure well-being. It is also necessary to analyze this indicator for each region, as differences between them could point to regional discrepancies in resources allocated for education or to problems in teacher policies.

Table 14 shows the number of students per teacher in pre-primary education for each region. There is a general decline in the number of students per teacher in this level. Also, regional differences are narrowing. While there was a difference of 27 students per teacher in 2008-09 between Southeast Anatolia and West Anatolia, the regions with the highest and the lowest numbers, this difference dropped to 6 students in 2019-20. Between 2009 and 2020, the region with the most dramatic change in the number of students per teacher was Southeast Anatolia, where the numbers dropped from 44 to 20.

**TABLE 14: NUMBER OF STUDENTS PER TEACHER IN PRE-PRIMARY EDUCATION, BY REGION**

	Pre-primary											
	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20
<b>Turkey</b>	27	23	23	21	17	17	17	17	17	18	17	16
<b>İstanbul</b>	20	21	18	14	15	15	16	16	16	16	16	18
<b>West Marmara</b>	20	18	20	19	17	16	16	17	17	18	16	16
<b>Aegean</b>	26	22	25	22	16	15	16	16	16	16	15	15
<b>East Marmara</b>	29	24	22	21	18	17	18	17	18	17	17	16
<b>West Anatolia</b>	17	17	18	16	14	14	14	14	14	14	14	14
<b>Mediterranean</b>	28	25	27	27	20	20	19	18	18	18	17	16
<b>Central Anatolia</b>	32	24	24	22	17	16	16	16	16	17	16	15
<b>West Black Sea</b>	30	21	21	21	17	16	16	15	16	15	15	15
<b>East Black Sea</b>	38	23	23	22	18	17	17	17	16	17	16	15
<b>Northeast Anatolia</b>	35	24	21	19	16	18	18	17	18	20	18	17
<b>Central East Anatolia</b>	38	26	27	23	18	19	18	18	19	21	19	18
<b>Southeast Anatolia</b>	44	29	27	27	20	21	20	20	21	27	22	20



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Table 15 shows the figures for primary education. Between 2013 and 2020, the regional difference in the number of students per teacher fluctuated between 7 and 10, and for lower secondary education, between 8 and 11. During this time period, the number of students per teacher declined the most in Central East Anatolia.

**TABLE 15: NUMBER OF STUDENTS PER TEACHER IN PRIMARY EDUCATION, BY REGION**

	Primary Education				Primary Schools								Lower Secondary Schools							
	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20
<b>Turkey</b>	23	22	21	20	18	19	18	18	17	17	18	17	19	18	17	15	16	16	15	15
<b>İstanbul</b>	29	28	27	26	23	24	23	21	21	21	22	21	25	23	22	20	21	20	20	20
<b>West Marmara</b>	19	18	18	17	16	16	16	15	14	15	16	15	17	16	15	14	15	14	14	13
<b>Aegean</b>	19	18	18	17	15	16	15	15	14	14	15	14	16	15	14	13	14	13	13	13
<b>East Marmara</b>	22	21	20	19	18	18	18	17	17	17	17	17	19	17	17	15	16	16	15	15
<b>West Anatolia</b>	21	20	19	18	17	17	17	16	15	16	16	16	18	17	15	14	15	15	14	14
<b>Mediterranean</b>	22	21	20	19	18	18	17	16	16	17	18	17	18	18	17	15	16	15	15	15
<b>Central Anatolia</b>	19	18	18	17	16	17	16	15	15	15	16	15	16	15	14	13	15	14	14	13
<b>West Black Sea</b>	18	17	17	16	15	15	14	14	13	14	15	14	16	15	14	13	13	13	13	12
<b>East Black Sea</b>	18	16	16	16	15	16	15	15	14	14	15	14	14	14	13	12	12	12	12	11
<b>Northeast Anatolia</b>	23	21	20	20	17	21	19	16	16	17	16	15	18	19	15	13	15	15	13	12
<b>Central East Anatolia</b>	25	23	23	21	19	22	20	19	17	17	16	15	21	21	17	15	17	16	14	13
<b>Southeast Anatolia</b>	30	28	27	26	22	25	24	23	21	22	20	20	24	25	20	18	20	20	17	17



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Table 16 shows the number of students per teacher in secondary education for each region. The numbers are decreasing for both program types. In general education, regional differences are also narrowing every year. For example, between Southeast Anatolia and West Black Sea, the regions with the highest and lowest numbers in 2008-09, the difference of 13 students has dropped to 4 in 2019-20. A similar picture is observed in vocational and technical education, where the regional difference in the number of students per teacher between 2008 and 2020 has dropped from 10 to 5. In general secondary education, the biggest decline in the number of students per teacher occurred in Southeast Anatolia between 2009 and 2020 (from 27 to 15 students), and in vocational and technical education, both in Istanbul and Southeast Anatolia (from 22 to 13 in Istanbul, and from 20 to 11 in Southeast Anatolia).

TABLE 16: NUMBER OF STUDENTS PER TEACHER IN SECONDARY EDUCATION, BY REGION

	General Secondary Education											Vocational and Technical Secondary Education												
	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20
<b>Turkey</b>	18	18	18	16	16	16	14	12	13	12	12	12	16	17	18	16	15	14	14	13	12	12	11	10
<b>İstanbul</b>	19	20	21	18	17	17	14	11	13	12	12	13	22	24	25	22	19	17	17	16	14	14	14	13
<b>West Marmara</b>	19	19	14	13	14	14	13	12	12	12	11	15	16	16	15	14	12	12	11	9	10	9	8	
<b>Aegean</b>	15	15	15	14	14	16	13	11	12	11	11	14	16	16	15	14	13	12	12	10	11	10	9	
<b>East Marmara</b>	17	17	17	15	14	15	14	12	13	12	12	11	17	18	18	16	14	14	13	13	11	12	10	10
<b>West Anatolia</b>	16	16	16	15	15	15	13	10	12	11	11	11	12	14	15	14	13	12	12	10	11	9	9	
<b>Mediterranean</b>	18	18	18	16	17	16	15	13	14	13	12	13	16	18	18	16	15	14	14	13	12	13	11	11
<b>Central Anatolia</b>	16	16	16	15	15	16	14	12	13	13	13	13	14	15	15	14	13	12	12	11	12	10	9	
<b>West Black Sea</b>	14	15	14	13	14	14	14	12	13	12	12	13	14	15	15	14	13	12	12	10	11	10	9	
<b>East Black Sea</b>	15	14	14	13	13	14	13	12	12	12	12	15	15	16	14	13	11	11	11	9	10	9	8	
<b>Northeast Anatolia</b>	21	19	20	17	18	17	15	14	15	14	14	14	17	17	17	16	16	14	14	13	12	13	11	10
<b>Central East Anatolia</b>	21	21	20	16	17	19	16	13	14	14	14	14	17	18	17	15	16	14	14	13	12	13	11	10
<b>Southeast Anatolia</b>	27	26	27	24	25	24	19	16	16	16	15	15	20	21	20	19	17	17	18	16	14	15	12	11


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National Education Statistics,  
Formal Education Books  
(2007-2020)

## DATA SOURCES

The data are obtained from the 'National Education Statistics Formal Education' books published between 2009 and 2020. The regional data for each education level were found under the 'Formal Education' section. Students enrolled in open education institutions were not included in the calculations.

## HOW WAS THIS INDICATOR MEASURED?

The data used for calculating the numbers in the tables were obtained from the 'National Education Statistics Formal Education' books. Students enrolled in open education institutions were not included in the calculations, which means that the total number of students used in the formula excluded open education students. In Turkey there are four types of open education institutions: open lower secondary education institutions, open upper secondary education institutions, open vocational and technical secondary education institutions and open religious secondary education institutions.



Since the tables provide regional information, data on the provinces need to be converted into regional data first. To find the total number of students and teachers in a certain region, the number of students and teachers from each province needs to be added. The regions and their provinces are shown in [Figure 1](#).

To calculate the number of students per class in the tables, the total number of students in each level or program type (excluding open education) was divided by the total number of teachers (Formula 16). The result should be rounded to a whole number. In the calculations made for these tables, digits greater than 5 after the decimal were rounded to the next number, and those smaller than 5 were rounded to the previous number.

Formula 16 can be used for any region or education level. For example, to find the number of pre-primary students per teacher in Istanbul, the numerator should be replaced with the total number of pre-primary students in Istanbul, and the denominator, with the total number of teachers.

#### FORMULA 16: NUMBER OF STUDENTS PER TEACHER

$$\text{Number of students per teacher for year X} = \frac{\text{Total number of students* for year X}}{\text{Total number of teachers for year X}} \times 100$$

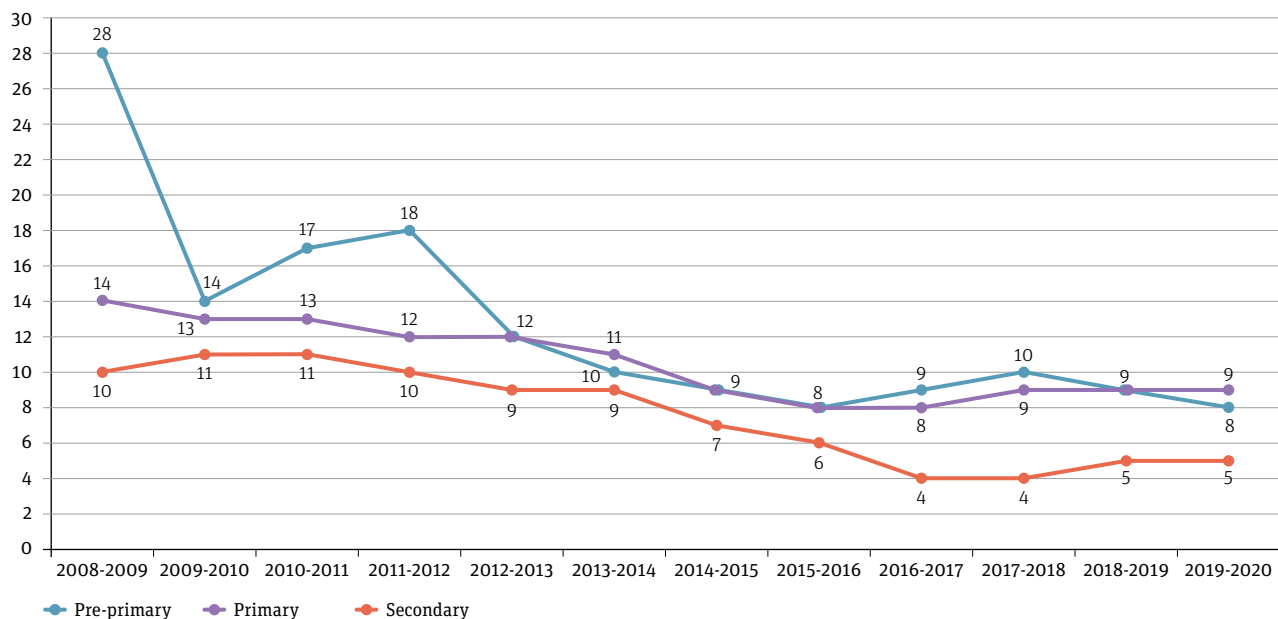
\* When calculating for lower and upper secondary education institutions, the number of open education students should be subtracted from the total number of students.

## INDICATOR 14: THE DIFFERENCE IN THE NUMBER OF STUDENTS PER TEACHER BETWEEN PUBLIC AND PRIVATE INSTITUTIONS

When analyzing the indicator of the number of students per teacher, the difference between public and private schools should be taken into account. Nationwide changes in this indicator over the years could be caused by the fluctuations in the number of private schools and the number of teachers or students found in these schools. Analyzing the difference in the number of students per teacher between public and private schools would help to monitor this indicator more accurately.

Graph 3 shows the yearly difference between public and private schools in terms of number of students per teacher. Between 2008 and 2020, the most significant decrease was in pre-primary education, from 28 to 8 students per teacher. In primary education, the number of students per teacher had been narrowing up to 2015-16 but then climbed back to the 2014-15 levels in 2017-18. Similarly, in secondary education, the difference was closing up to 2016-17, but in 2018-19 and 2019-20, it rose to a difference of 5 students per teacher.

**GRAPH 3: DIFFERENCE IN THE NUMBER OF STUDENTS PER TEACHER BETWEEN PUBLIC AND PRIVATE EDUCATION INSTITUTIONS**



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## DATA SOURCES

The data were calculated by ERG using the 'National Education Statistics Formal Education' books published between 2009 and 2020. The information was found under the title, 'Number of schools, students, teachers and classrooms in education institutions by education level'. Students enrolled in open education institutions were not included in the calculations.



National Education Statistics,  
Formal Education Books  
(2007-2020)

## HOW WAS THIS INDICATOR MEASURED?

The data used for calculating the numbers in the tables were obtained from the 'National Education Statistics Formal Education' books. Students enrolled in open education institutions were not included in the calculations, which means that the total number of students used in the formula excluded open education students. Since there are no private open education institutions, the number of private school students were not affected by this exclusion. In Turkey there are four types of open education institutions: open lower secondary education institutions, open upper secondary education institutions, open vocational and technical secondary education institutions and open religious secondary education institutions.

To calculate the data for the number of students per teacher shown in the tables, the number of students needs to be divided by the total number of teachers for any education level or program type (excluding open education). The result should be rounded to a whole number. In the calculations made for these tables, digits greater than 5 after the decimal were rounded to the next number, and those smaller than 5 were rounded to the previous number. After the calculations are made for both public and private schools, their difference can be found by subtracting the number of students per teacher in private institutions from the public ones (Formula 18). Formula 17 and 18 can be used for calculating the difference in all education levels.

### FORMULA 17: NUMBER OF STUDENTS PER TEACHER

$$\text{Number of students per teacher for year X} = \frac{\text{Total number of students* for year X}}{\text{Total number of teachers for year X}} \times 100$$

\* When calculating for lower and upper secondary education institutions, the number of open education students should be subtracted from the total number of students.

### FORMULA 18: DIFFERENCE IN THE NUMBER OF STUDENTS PER TEACHER BETWEEN PUBLIC AND PRIVATE EDUCATION INSTITUTIONS

$$\text{Difference in the number of students per teacher between public and private schools} = \left| \begin{array}{l} \text{Number of students per teacher in public schools} \\ - \text{Number of students per teacher in private schools} \end{array} \right|$$

## INDICATOR 15: NUMBER OF STUDENTS PER CLASSROOM

To provide a quality education, classrooms need to be equipped with proper educational tools. The needs for classrooms should be monitored within the context of two aspects of education: first, financing, since classrooms and school constructions constitute one of the main educational expenses, and second, education environments, since the number of classrooms affect student well-being and double-shift schooling.

Table 17 shows the number of students per classroom in primary education. Between 2012 and 2020, regional differences in the number of classrooms declined both in primary and in lower secondary schools. In 2012-13, the differences between the regions with the highest and lowest rates were 17 students for primary and 35 students for lower secondary

**TABLE 17: NUMBER OF STUDENTS PER CLASSROOM IN PRIMARY EDUCATION, BY REGION**

	Primary Education																			
	Primary Education				Primary Schools								Lower Secondary Schools							
	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20
<b>Turkey</b>	32	32	31	30	22	23	23	22	20	20	20	20	42	40	34	30	31	29	29	28
<b>İstanbul</b>	49	46	45	44	33	31	33	30	27	27	26	26	58	54	44	38	39	35	35	35
<b>West Marmara</b>	24	23	23	22	16	17	18	17	16	16	17	17	33	31	28	27	28	26	26	25
<b>Aegean</b>	27	26	25	24	18	19	19	18	17	17	17	17	33	31	27	24	25	24	24	24
<b>East Marmara</b>	31	30	29	28	20	21	21	21	20	20	20	20	45	40	34	30	30	29	29	28
<b>West Anatolia</b>	33	32	32	31	25	25	24	23	21	21	22	21	35	34	31	28	29	27	27	26
<b>Mediterranean</b>	33	31	31	30	22	22	22	21	20	20	21	21	44	43	37	32	33	31	31	30
<b>Central Anatolia</b>	24	23	23	22	18	18	17	17	15	15	16	15	29	30	27	25	26	25	25	24
<b>West Black Sea</b>	24	23	22	22	17	17	18	17	15	16	16	15	29	26	24	22	22	21	21	20
<b>East Black Sea</b>	22	22	21	21	16	16	16	16	15	14	15	15	29	28	24	22	22	22	22	21
<b>Northeast Anatolia</b>	29	28	28	26	19	20	19	18	16	15	15	14	34	35	29	26	26	24	24	23
<b>Central East Anatolia</b>	34	34	34	31	22	22	22	20	18	18	18	17	48	53	37	30	33	32	31	30
<b>Southeast Anatolia</b>	44	44	44	41	25	30	30	28	26	26	26	26	64	62	42	37	37	35	36	35



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schools, and in 2019-20, these rates dropped to 12 and 15, respectively. Between 2012 and 2020, the sharpest decline for primary schools was observed in Istanbul, while for lower secondary schools, the sharpest decline was in Southeast Anatolia.

Table 18 shows the data for secondary education. Between 2009 and 2020, regional differences in the number of students narrowed for both general and vocational technical secondary education. In 2008-09, the difference between the regions with the highest and the lowest number of students per classroom was 19 for general secondary education and 21 for vocational and technical. In 2019-20, these rates dropped to 6 and 10, respectively. Between 2009 and 2020, the sharpest decline for general secondary education was observed in Southeast Anatolia, and for vocational and technical secondary education, in Istanbul.

**TABLE 18: NUMBER OF STUDENTS PER CLASSROOM IN SECONDARY EDUCATION, BY REGION**

	General Secondary Education											Vocational and Technical Secondary Education												
	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20
<b>Turkey</b>	29	31	31	28	28	29	26	20	22	21	21	21	33	36	38	35	34	29	29	27	23	21	19	18
<b>Istanbul</b>	31	34	35	32	33	33	27	19	21	19	20	22	48	52	51	48	43	37	37	34	28	27	24	23
<b>West Marmara</b>	27	26	24	22	22	25	23	20	21	21	20	20	29	31	33	31	31	25	24	22	18	18	16	15
<b>Aegean</b>	25	26	26	24	24	25	24	19	21	20	19	20	30	34	36	33	33	28	27	25	21	20	18	17
<b>East Marmara</b>	26	28	27	25	23	25	24	20	22	21	20	20	37	39	40	37	28	31	28	27	23	22	19	18
<b>West Anatolia</b>	29	30	30	30	28	28	26	17	19	18	18	18	33	36	39	35	33	30	32	25	21	21	18	17
<b>Mediterranean</b>	31	33	32	30	29	30	27	21	23	21	21	22	32	38	39	38	37	30	30	28	24	22	20	19
<b>Central Anatolia</b>	25	25	26	24	23	27	24	20	21	20	20	21	27	30	31	28	28	22	22	21	19	19	17	16
<b>West Black Sea</b>	24	24	24	22	22	25	22	19	21	21	21	21	28	30	33	30	28	25	24	23	19	19	17	15
<b>East Black Sea</b>	24	24	23	22	21	24	23	19	21	20	20	21	26	28	28	26	26	21	21	20	17	17	15	13
<b>Northeast Anatolia</b>	25	27	28	26	25	27	27	22	23	23	23	24	26	29	31	30	31	27	28	25	20	17	16	14
<b>Central East Anatolia</b>	33	34	34	29	30	33	28	22	24	24	24	24	32	34	34	32	34	26	28	26	23	21	19	16
<b>Southeast Anatolia</b>	43	47	48	42	40	42	33	25	27	24	24	24	32	37	38	35	37	33	34	29	25	22	20	18



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*National Education Statistics,  
Formal Education Books  
(2007-2020)*

## DATA SOURCES

Data were calculated by ERG using the ‘National Education Statistics Formal Education’ books published between 2009 and 2020. Regional data for each education level were found in the ‘Formal Education’ section of the books. Open education institutions and the students enrolled in these institutions were not included in the calculations.

## HOW WAS THIS INDICATOR MEASURED?

The tables were created using the data found in the ‘National Education Statistics Formal Education’ books. Open education students enrolled in these institutions were not included in the calculations, which means that the total numbers of students used in the formula excluded open education students. In Turkey, there are four types of open education institutions: open lower secondary education institutions, open upper secondary education institutions, open vocational and technical secondary education institutions and open religious secondary education institutions.

Since the tables provide regional information, data on the provinces need to be converted into regional data first. To find the total number of students and classrooms in a certain region, the number of students and classrooms from each province need to be added. The regions and their provinces are shown in [Figure 1](#).

To calculate the data for the number of students per classroom shown in the tables, the number of students needs to be divided by the total number of classrooms for any education level or program type (excluding open education). The result should be rounded to a whole number. In the calculations made for these tables, digits greater than 5 after the decimal were rounded to the next number, while those smaller than 5 were rounded to the previous number. Formula 19 can be used for all regions and education levels. For example, when calculating the number of primary students per classroom in Istanbul, the numerator should be replaced with the number of students, and the denominator, with the number of classrooms in primary schools.

### FORMULA 19: NUMBER OF STUDENTS PER CLASSROOM

$$\text{Number of students per classroom for year X} = \frac{\text{Total number of students* for year X}}{\text{Total number of classrooms for year X}} \times 100$$

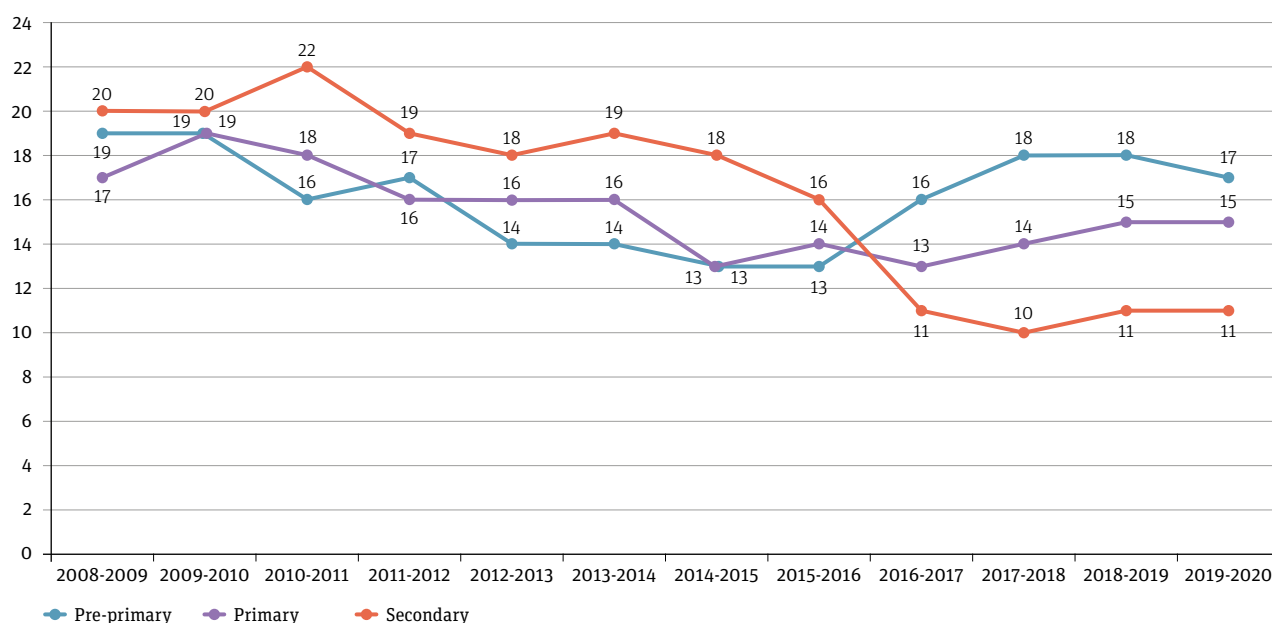
\* When calculating for lower and upper secondary education institutions, the number of open education students should be subtracted from the total number of students.

## INDICATOR 16: DIFFERENCE IN THE NUMBER OF STUDENTS PER CLASSROOM BETWEEN PUBLIC AND PRIVATE INSTITUTIONS

When analyzing the indicator of the number of students per classroom, the difference between public and private schools should be taken into account. Nationwide changes in this indicator over the years could be caused by the fluctuations in the number of private schools and the number of classrooms or students found at these schools. Analyzing the difference in the number of students per classroom between public and private schools would help to monitor this indicator more accurately.

Graph 4 shows the difference in the number of students per classroom between public and private schools. This difference fell in pre-primary education up to 2015-16, in primary education up to 2014-15, and in secondary education up to 2017-18, but it increased in all levels after these years. In 2020, the difference in the number of students per classroom was most pronounced in pre-primary education, followed by primary and then, secondary education.

**GRAPH 4: DIFFERENCE IN THE NUMBER OF STUDENTS PER CLASSROOM BETWEEN PUBLIC AND PRIVATE EDUCATION INSTITUTIONS**



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*National Education Statistics,  
Formal Education Books  
(2007-2020)*

## DATA SOURCES

The data were calculated by ERG using the 'National Education Statistics Formal Education' books published between 2009 and 2020. The information was found under the section titled 'Number of schools, students, teachers and classrooms in education institutions by education level'. Students enrolled in open education institutions were not included in the calculations.

## HOW WAS THIS INDICATOR MEASURED?

The data used for calculating the numbers in the tables were obtained from the 'National Education Statistics Formal Education' books. Students enrolled in open education institutions were not included in the calculations, which means that the total number of students used in the formula excluded open education students. Since there are no private open education institutions, the number of private school students were not affected by this exclusion. In Turkey there are four types of open education institutions: open lower secondary education institutions, open upper secondary education institutions, open vocational and technical secondary education institutions and open religious secondary education institutions.

To calculate the data for the number of students per teacher shown in the tables, the number of students needs to be divided by the total number of teachers for any education level or program type (excluding open education) (Formula 20). The result should be rounded to a whole number. In the calculations made for these tables, digits greater than 5 after the decimal were rounded to the next number, while those smaller than 5 were rounded to the previous number. After the calculations are made for both public and private schools, their difference can be found by subtracting the number of students per classroom in private institutions from the public ones (Formula 21). Formula 20 and 21 can be used to calculate the difference in all education levels.

### FORMULA 20: NUMBER OF STUDENTS PER CLASSROOM

$$\text{Number of students per classroom for year X} = \frac{\text{Total number of students* for year X}}{\text{Total number of classrooms for year X}} \times 100$$

\* When calculating for lower and upper secondary education institutions, the number of open education students should be subtracted from the total number of students.

### FORMULA 21: DIFFERENCE IN THE NUMBER OF STUDENTS PER CLASSROOM BETWEEN PUBLIC AND PRIVATE EDUCATION INSTITUTIONS

$$\text{Difference in the number of students per classroom between public and private schools} = \left| \text{Number of students per classroom in public schools} - \text{Number of students per classroom in private schools} \right|$$

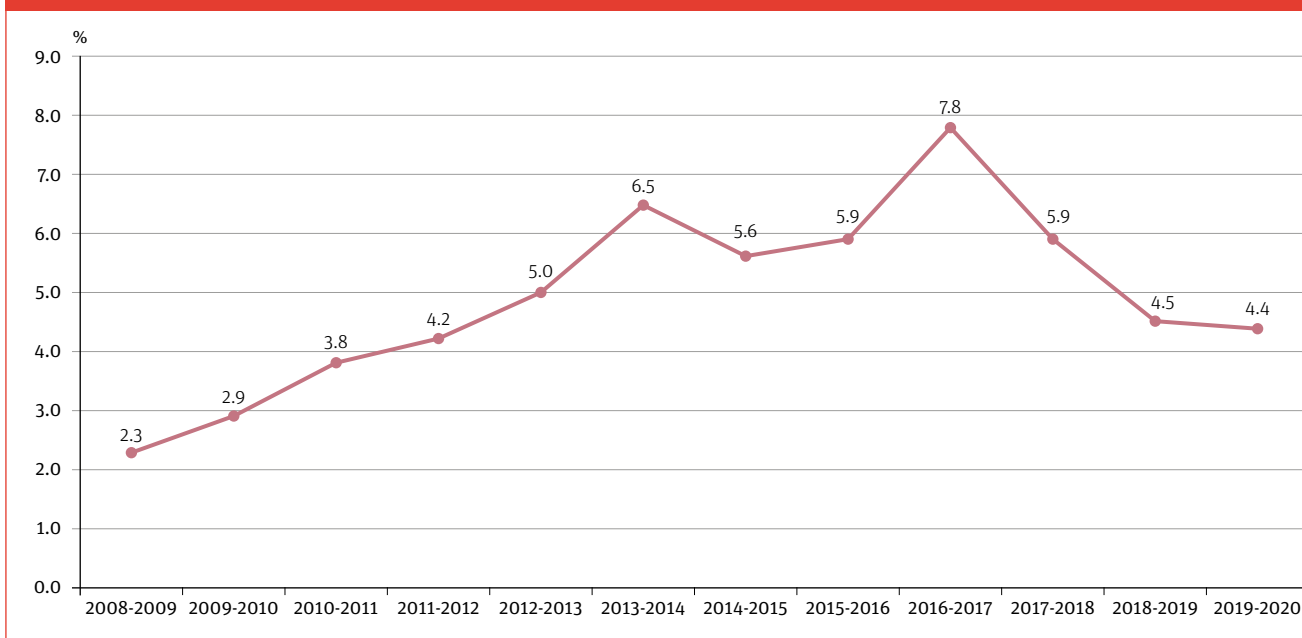


## INDICATOR 17: RATIO OF STUDENTS ENROLLED IN OPEN EDUCATION (AGES 14-17) TO ALL SECONDARY STUDENTS (%)

Although open education provides an important opportunity for adults who had left formal education for various reasons, children between the ages of 14 and 17 that are of school age should enroll in formal education institutions with their peers. Currently, in Turkey, there is no ban on the enrollment of children between the ages of 14 and 17 in open education institutions. Monitoring the ratio of children in this group is important in terms of equity and quality in education.

Graph 5 shows the ratio of students between the ages of 14 and 17 enrolled in open education to all students in secondary education. This ratio shows an upward trend until 2016-17 but begins to decline afterwards.

**GRAPH 5: RATIO OF STUDENTS ENROLLED IN OPEN EDUCATION (AGES 14-17) TO ALL STUDENTS IN SECONDARY EDUCATION (%)**



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The results of the 'Household Labour Force Survey' need to be requested from TurkStat using this link: <https://web.tuik.gov.tr/tr/request-system/>

*Education Monitoring Report  
2018*

*Education Monitoring Report  
2019: Students and Access to  
Education*

*Education Monitoring Report  
2020: Students and Access to  
Education*

## DATA SOURCES

The ratios for 2008 to 2012 were taken from Turkstat's 'Household Labour Force Survey', and those for 2013 to 2020 were calculated by ERG using the data provided by the MoNE, and the 'National Education Statistics Formal Education' books published between 2009 and 2020. Students enrolled in open education institutions were included in the calculations.

## HOW WAS THIS INDICATOR MEASURED?

When calculating the ratios on the graphs, the data on students between the ages of 14 and 17 who are enrolled in open education were obtained from the 'Household Labour Survey' and the information provided by the MoNE, and the data on the total number of students in secondary education was obtained from the 'National Education Statistics Formal Education' books. To find the ratios, the number of students between the ages of 14 and 17 was divided by the total number of students in secondary education and then multiplied by 100 (Formula 22).

### FORMULA 22: RATIO CALCULATION

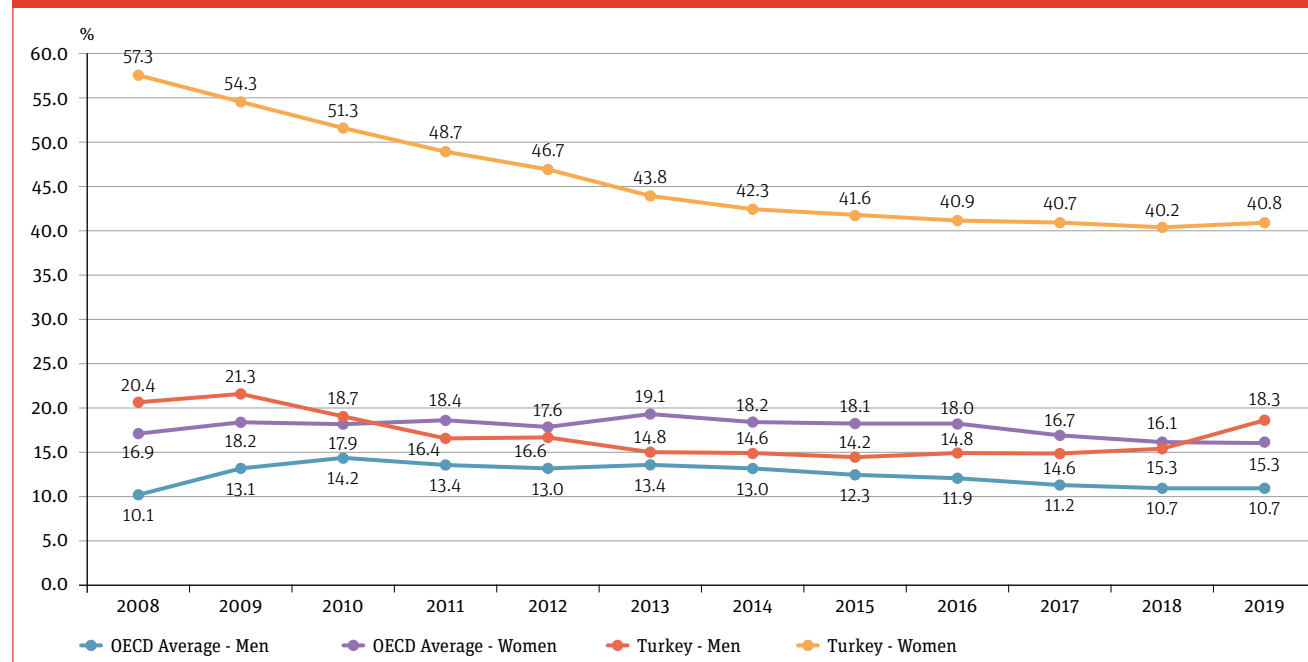
$$\text{Ratio of students aged 14-17 enrolled in open education for year X} = \frac{\text{Number of students aged 14-17 enrolled in open education for year X}}{\text{Total number of students in secondary education for year X}} \times 100$$

## INDICATOR 18: YOUTH (AGED 15-29) NOT IN EMPLOYMENT, EDUCATION OR TRAINING (NEET)

It is important for the young population between the ages of 15 to 29 to be in education and/or employment in terms of their personal well-being and their countries' economic development. Additionally, this age group's educational and employment status can be analyzed as an output of the education system. Countries' education and employment policies may affect men and women separately, therefore the NEET indicator should be monitored by sex.

Graph 6 shows the ratio of youth aged 15-29, who are not in education, employment or training (NEET). In Turkey, the ratio of NEET women in this age group is higher than that of the OECD average, as well as the ratio of NEET men in Turkey. Although the ratio of NEET women is also higher than NEET men in OECD countries, the gender difference is much more pronounced in Turkey. The average ratio of NEET men in Turkey, aged 15-29 (18.3%) is close to the OECD average (10.7%), whereas for women in Turkey, this ratio is 40.8% in 2020, a figure much higher than the OECD average of 15.3% for the same year.

**GRAPH 6: YOUTH NOT IN EDUCATION, EMPLOYMENT OR TRAINING (NEET), AGES 15-29**



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OECD Data

Eurostat

## DATA SOURCES

The data on Organisation for Economic Co-operation and Development (OECD), was obtained from the OECD Data page, and data on Turkey was obtained from the European Statistical Office (Eurostat). The calculations were performed by OECD and Eurostat.

## HOW WAS THIS INDICATOR MEASURED?

The ratios on the graph were taken from the data sources mentioned above, and calculations were performed by the organizations that prepared the data. This data can be found on ERG's website in Excel and CSV formats. The data sources do not provide employment or education information on age groups other than the 15-29 bracket, therefore choosing this age group is necessary when trying to access the data.

To calculate the data on women, as shown in the graphs, the number of women aged 15-29 who are not in employment, education or training was divided by the total number of women in this age group and then multiplied by 100 (Formula 23). The same calculation is done to find the ratio for men.

### FORMULA 23: RATIO CALCULATION

$$\text{Ratio of NEET Women for year X (aged 15-29)} = \frac{\text{Number of NEET women for year X (aged 15-29)}}{\text{Total number of women aged 15-29 for year X}} \times 100$$

## INDICATOR 19: EARLY SCHOOL LEAVING

In 2012, Turkey increased compulsory education from 8 to 12 years. As of 2020, this education included primary, lower secondary and upper secondary levels. Although education is compulsory, there are children and adults who do/did not have access to education or have/had to leave education early for various reasons. In order to detect this problem and create solutions for it, early school leaving should be monitored along with enrollment rates. TurkStat provides data on youth between the ages of 15 and 19 who do not have any diplomas, and on those between 20 and 24 who do not have a secondary education diploma.

Table 19 shows the ratio of youth between the ages of 15 and 19 who do not have any diplomas, and the ratio of youth between 20 and 24 who do not have a secondary education diploma. Between 2008 and 2017, the ratios and the difference between sexes were on a decline for both age groups. By 2017, the ratio of women aged 15-19 without a diploma was higher than that of men, but the gender difference of 8.9 percentage points in 2008 decreased to 3 percentage points in 2017. For youth aged 20-24, the ratio of men without a secondary education diploma surpassed that of women after 2016. While the ratio of women who did not graduate from secondary education was 15.1 percentage points more than that of men in 2008, in 2017, men's ratio was 0.5 percentage points higher than women's.

**TABLE 19: EARLY SCHOOL LEAVING**

	Ratio of youth without a diploma, ages 15-19 (%)				Ratio of youth without a diploma for secondary education, ages 20-24 (%)		
	Total	Men	Women	Ratio of those still enrolled in education but do not have a diploma	Total	Men	Women
2008	13.3	9.1	18.0	17.0	51.1	42.8	57.9
2009	12.0	8.4	16.8	16.8	50.0	42.9	56.0
2010	10.3	7.2	13.7	17.7	49.0	42.8	54.1
2011	9.8	7.0	12.8	19.6	47.4	42.2	52.0
2012	8.8	6.8	10.9	20.4	46.0	41.8	49.8
2013	8.0	6.3	9.9	20.3	45.0	42.4	47.4
2014	8.2	6.0	10.4	16.5	47.4	45.2	49.5
2015	8.2	6.6	10.0	20.7	46.5	46.2	46.7
2016	7.7	5.9	9.7	16.4	43.9	44.2	43.7
2017	7.7	6.3	9.3	15.4	42.8	42.9	42.7



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*Education Monitoring Reports*

Annual data compilations and regional data acquired from the 'Household Labour Force Survey' can also be accessed through the Education Monitoring Reports.

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## DATA SOURCES

Data was compiled by ERG using Turkstat's 'Household Labour Force Survey'.

## HOW WAS THIS INDICATOR MEASURED?

The micro datasets for 'Household Labour Force Surveys' were used for this indicator. These datasets provide information on the age groups and their level of education. On Turkstat's webpage, the data that should be requested for youth between the ages of 15 and 19 is 'those without a diploma', and for youth between the ages of 20 and 24, 'those without a diploma for secondary education or higher'. Since the survey results represent all of Turkey, a weighting coefficient must be used, which requires the use of statistics software.

## INDICATOR 20: PROFICIENCY LEVELS OF 15-YEAR-OLD STUDENTS IN MATHEMATICS, READING AND SCIENCE (%)

The Programme for International Student Assessment, PISA, is a study held by OECD every three years to assess academic achievement for 15-year-olds. PISA measures students' ability to use their reading, mathematics and science knowledge to meet real-life challenges and determines their proficiency levels based on the points they receive in the study. OECD considers Level 2 at PISA to be a baseline level of proficiency in reading and mathematics, and levels below 2, low-academic performance. For science, Level 2 is not considered a baseline for scientific literacy, but levels below 2 are still considered low performance. Turkey has been participating in PISA since 2003.

Table 20 shows the PISA proficiency levels of students in Turkey and OECD countries. The ratio of students who showed Level 1 or lower proficiency in Turkey is higher than that of the OECD average. The ratio of these students decreased between 2003 and 2012 but rose again in 2015. Moreover, the distribution of proficiencies between Turkey and the OECD

**TABLE 20: READING, MATHEMATICS AND SCIENCE PROFICIENCIES OF 15-YEAR-OLD STUDENTS, BASED ON PISA (%)**

		2003		2006		2009		2012		2015		2018	
		Turkey	OECD	Turkey	OECD	Turkey	OECD	Turkey	OECD	Turkey	OECD	Turkey	OECD
Mathematics	Level 1 or lower	52.3	21.4	52.1	21.3	42.2	22.0	42.0	23.0	51.3	23.4	36.7	24.0
	Level 2	22.1	21.1	24.3	21.9	25.2	22.0	25.5	22.5	25.3	22.5	27.3	22.2
	Level 3	13.5	23.7	12.8	24.3	17.4	24.3	16.5	23.7	16.3	24.8	20.4	24.4
	Level 4	6.8	19.1	6.7	19.1	9.6	18.9	10.1	18.1	5.9	18.6	10.9	18.5
	Level 5	3.1	10.6	3.0	10.0	4.4	9.6	4.7	9.3	1.0	8.4	3.9	8.5
	Level 6	2.4	4.0	1.2	3.3	1.3	3.1	1.2	3.3	0.1	2.3	0.9	2.4
Reading	Level 1 or lower	36.8	19.1	32.2	20.1	24.5	18.8	21.7	18.0	40.0	20.1	26.1	22.6
	Level 2	30.9	22.8	31.0	22.7	32.2	24.0	30.8	23.5	32.6	23.2	30.2	23.7
	Level 3	20.8	28.7	24.5	27.8	29.1	28.9	28.7	29.1	21.1	27.9	26.9	26.0
	Level 4	7.7	21.3	10.3	20.7	12.4	20.7	14.5	21.0	5.7	20.5	13.5	18.9
	Level 5	3.8	8.3	2.1	8.6	1.8	6.8	4.1	7.3	0.6	7.2	3.1	7.4
	Level 6	-	-	-	-	0.0	0.8	0.3	1.1	0.0	1.1	0.2	1.3
Science	Level 1 or lower	-	-	46.6	19.3	29.9	18.0	26.3	17.8	44.5	21.2	25.2	22.0
	Level 2	-	-	31.3	24.0	34.5	24.4	35.4	24.5	31.3	24.8	32.8	25.8
	Level 3	-	-	15.1	27.4	25.2	28.6	25.1	28.8	19.1	27.2	27.3	27.4
	Level 4	-	-	6.2	20.3	9.1	20.6	11.3	20.5	4.8	19.0	12.3	18.1
	Level 5	-	-	0.9	7.7	1.1	7.4	1.8	7.2	0.3	6.7	2.3	5.9
	Level 6	-	-	0.0	1.3	0.0	1.1	0.0	1.1	0.0	1.1	0.1	0.8



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average was similar until 2012 but started to differ in 2015. In 2018, there was a decrease in the ratio of students who showed Level 1 proficiency or lower and an increase in other levels in Turkey.



*OECD Education GPS – PISA 2018*

*Education Monitoring Report  
2018*

*OECD PISA – Data*

To access the micro datasets and reports for the years shown in the table

<https://www.oecd.org/pisa/data/>

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### **DATA SOURCE**

Data were published by OECD and compiled by ERG.

### **HOW WAS THIS INDICATOR MEASURED?**

Proficiency levels are determined based on the points students receive in the study. OECD calculates the points, as well as the number and ratios of students for each proficiency level. All the data shown on the table can be accessed through OECD's 'Education GPS' website, where data on Turkey and the OECD average can be found. These data can also be accessed in Excel and CSV formats on this booklet.



# MAIN SOURCES OF DATA

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- Education Monitoring Reports  
[www.egitimreformugirisimi.org/egitim-gozlemevi/izleme-raporlari/](http://www.egitimreformugirisimi.org/egitim-gozlemevi/izleme-raporlari/)
- General Government's Financial Statistics  
[muhasebat.hmb.gov.tr/genel-yonetim-mali-istatistikleri](http://muhasebat.hmb.gov.tr/genel-yonetim-mali-istatistikleri)
- National Education Statistics Formal Education books (2007-2020)  
[sgb.meb.gov.tr/www/resmi-istatistikler/icerik/64](http://sgb.meb.gov.tr/www/resmi-istatistikler/icerik/64)
- TurkStat Household Labour Force Surveys (For data requests)  
[web.tuik.gov.tr/tr/request-system/](http://web.tuik.gov.tr/tr/request-system/)
- OECD Data  
[data.oecd.org/youthinac/youth-not-in-employment-education-or-training-neet.htm](http://data.oecd.org/youthinac/youth-not-in-employment-education-or-training-neet.htm)
- OECD Education GPS  
[gpseducation.oecd.org](http://gpseducation.oecd.org)
- Eurostat  
[appsso.eurostat.ec.europa.eu/nui/show.do?dataset=edat\\_lfse\\_20&lang=en](http://appsso.eurostat.ec.europa.eu/nui/show.do?dataset=edat_lfse_20&lang=en)

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