Chapter 1

Turkey's Achievement Profile in the Context of Equal Opportunities in Education: Evaluation of TIMSS (2019) and PISA (2018) Results and Some Current Policies

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Abstract

In adapting to the changing century, individuals must struggle with many unknown situations. It is important for individuals to have many skills in adapting to new developments and overcoming challenges. Education undoubtedly plays a big role in acquiring and maintaining these skills. Getting a better education for individuals means a better future. This situation represents a better economic welfare situation for a country. Considering international assessment indicators is crucial for providing a better education. The Program for International Student Assessment (PISA) and the International Mathematics and Science Trends Survey (TIMSS) are among the most well-known of these exams. Even though our country has a developing profile in these exams, it seems that there is still work to be done. Among OECD countries, performance gaps between schools are high in Turkey. It is necessary to provide a more qualified education that offers equal opportunities. Therefore, steps need to be taken. In this context, the research reflects Turkey's profile in the context of equal opportunity in education within the framework of PISA (2018) and TIMSS (2019) results. In addition, Turkey's recent education policies in the context of equal opportunity in education are discussed. Thus, it is aimed to shed light on the structures by reflecting the latest situation regarding equal opportunities in education and to draw attention to what needs to be done. Qualitative

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research method was used in the research. Document analysis technique, one of the qualitative research methods, was used in the research. As a result of the research, it is seen that Turkey has a student profile that exhibits a higher level of low performance and a lower level of high performance in basic skill levels compared to OECD countries, in line with PISA (2018) and TIMSS (2019) data. On the other hand, it is seen that there is an improvement in intermediate level skills, but there is something to be done about the performance gaps. Furthermore, in the context of relevant data, it is seen that the socio-economic disadvantage situation continues in schools within the country regarding educational equity. Variations are also observed in academic skill averages and academic support provided between schools. On the other hand, it is seen that developments have been achieved with many applications and projects. When we look at the relevant applications, it is seen that the continuity of what has been done must be ensured and additional applications are needed.

1.Introduction

In the developing and changing world, the skills needed by individuals also change. In the 21st century, with the increasing use of artificial intelligence and technology, the required professions and occupational definitions are undergoing transformations. Therefore, the importance of education becomes more significant. Students have to struggle with many social, economic and cultural challenges. Students need to make sense of changing unknown technologies and adapt to their future careers. In addition to the knowledge and skills, there is a need for values and behaviors to use them effectively. Education is widely regarded as the most effective means to achieve this. Recently, literacy skills, especially in mathematics, science and reading, have gained importance and become a necessity of our age (OECD, 2019a).

International assessments play a crucial role in shaping educational systems. They allow evaluation of education systems and comparison of many variables across various countries (OECD, 2019a; Sarıer, 2020). Among the international assessments that provide the most information in this field, the Programme for International Student Assessment (PISA) and Trends in Mathematics and Science Study (TIMSS) are prominent (Aydın-Ceran, 2021).

Through the data from the PISA exam conducted by the Organisation for Economic Co-operation and Development (OECD), Turkey has made significant progress in education. This progress is also supported by TIMSS assessments. It is seen that Turkey has made progress in terms of quality

and equality in education However, despite the improvements, disparities in educational outcomes among schools are observed, with achievement gaps being higher compared to OECD countries. This situation negatively impacts the country's development and exacerbates educational inequality (OECD, 2016a; OECD, 2016b).

In this context, this research examines Turkey's recent performance in PISA 2018 and TIMSS 2019 data, reflecting Turkey's profile in terms of educational equity. Based on the relevant data, some of the policies implemented by Turkey in recent years to reduce disparities in educational opportunities are discussed.

2. Method

2.1. The Subsections of the Research

Qualitative research method is used in the research. Qualitative research method is defined as revealing perceptions and events in their natural environment and in a holistic manner, and describing the previously unnoticed results by setting out from the data attitudinally (Yıldırım and Şimşek, 2013). Document analysis technique, one of the qualitative research method was used in the study. The research draws attention to achievement gaps in the context of equal opportunity in education in Turkey. In this context, Turkey's success profile was revealed using the document analysis technique from PISA (2018) and TIMSS (2019) exam data based on OECD and IEA reports. Then, some of Turkey's recent practices in the context of equal opportunity in education were discussed and reflected with the document analysis technique. Projects carried out by the Ministry of Education were discussed. Recent support was presented. In the research, descriptive analysis was conducted using secondary data sources as thesis, articles and reports.

2.2. Data Collection

The printed scentific resources such as current records or documents, current legislation, theses, books, magazines, articles and Ministry of National Education reports were used. In addition, international websites and databases providing information about the education systems of UNICEFF (2022), IEA (2020) and OECD (2023) were also consulted to access the sources in the literature. Efforts were made to reach up to date resources in data collection for the reliability of the study.

2.3. Data Analysis

The research data was analyzed using the descriptive analysis technique. Descriptive analysis means describing and interpreting data under certain headings (Yıldırım and Şimşek, 2013). The research includes previously analyzed data. In this context, the research describes Turkey's profile and some recent practices in the context of equality of opportunity in education, in line with PISA (2018) and TIMSS (2019) data.

3. Findings

3.1. Evaluation of TIMSS (2019) and PISA (2018) Results

Turkey participates in 2 important international exams to assess its education outcomes on a global level. Since 2003, Turkey has been participating in the Programme for International Student Assessment (PISA) exam, which is part of the International Student Assessment Program. The PISA exam is conducted every three years. The 2021 PISA assessment was conducted in 2022 due to the pandemic. The PISA exam measures individuals' ability to use their knowledge in real-life situations and assesses their skills in science, mathematics, and reading. Additionally, through surveys, data is collected on students' socio-economic status, family, working environment, attitudes, school, school administrators, and teachers. The PISA exam assesses students based on their age rather than their grade level. To be eligible for assessment, a student must be enrolled in at least the 7th grade (OECD, 2019b). In our country, mostly 9th and 10th grade students take this exam.

On the other hand, the other international exam that Turkey participates in is the Trends in Mathematics and Science Study (TIMSS), which focuses more on curriculum-based measurement of math and science knowledge and skills. The TIMSS exam is conducted every 4 years, with the most recent one being in 2019. TIMSS measurements include 4th and 8th-grade students. The specified age for 4th grade in this exam is 9.5 years. In our country, 5th-grade students also take the exam due to improvements made in the curriculum. In the 2019 TIMSS exam, it was reported that 20% of 8th-grade students had results below the lowest proficiency level in mathematics, which is significantly higher than the OECD average of 10%. It is observed that students at this level demonstrated inadequate performance in basic mathematical skills. On the other hand, it is noted that 32% of students performed at a high and advanced level of achievement (OECD, 2022a).

Table 1. TIMSS 2019 Turkey and OECD 8th Grade Mathematics Proficiency Levels

	Below low benchmark (below 400)	Low benchmark (400)	Intermediate bencmark (475)	High benchmark (550)	Advanced benchmark (625)
Türkiye	19,6	24,0	24,7	19,4	12,2
OECD	10,3	21,4	30,7	24,7	12,9

(OECD, 2022a).

In the TIMSS 2019 exam, it is observed that the low performance rate in the field of mathematics is higher than the OECD average. On the other hand, it is seen that there is a similar profile to the OECD average in the advanced-level performance rate.

Table 2. TIMSS 2019 Turkey and OECD 8th Grade Science Proficiency Levels

	Below low benchmark (below 400)	Low benchmark (400)	Intermediate benchmark (475)	High benchmark (550)	Advanced benchmark (625)
Türkiye	12,4	21,3	28,2	25,4	12,8
OECD	6,2	18,6	36,8	30,3	8,0

(OECD, 2022a).

It is observed that there is a more successful profile in science skills. While the rate of low performance is 12%, it is stated that 38% of students exhibit advanced level performance (OECD, 2022a).

On the other hand, in the PISA exam conducted in 2018, it is observed that Turkey performed below the average in the three fundamental proficiency levels of reading, mathematics, and science skills. Despite performing below the average, it is noted that there has been an improvement in science skills, bringing Turkey closer to the OECD average performance (OECD, 2022a). In the PISA exam, there are proficiency levels that show to what extent students are successful in reading, mathematics, and science skills and what they can do in these domains. The levels of proficiency in reading and the score status are indicated in the table 3 below (Ministry of National Education, 2019a; OECD, 2019b; OECD, 2022a).

Table 3. Brief Description of the Levels of Reading Proficiency in PISA 2018

Level	Level score limit	Characteristics of task
6	698	Understanding long and complex texts. Using information according to relevant criteria, making versatile comparisons. Questioning the source of a text in detail. Comprehending long and abstract texts where indirect inferences can be made. Creating complex plans.
5	626	Easily comprehending long texts and making inferences. Using known and various reasoning methods for a deep understanding of texts. Answering indirect questions by making connections with many pieces and sources of information. Making specific inferences, critically evaluating hypotheses. Evaluating objectivity or bias based on indirect or direct clues.
4	553	Comparing perspectives and making inferences based on multiple sources. Investigating, placing, and integrating many parts of embedded information. Fulfilling tasks that require recalling content from the previous task.
3	480	Making inferences about information in many texts presented indirectly. Synthesizing content. Making inferences at both simple and complex levels. Gathering many pieces of information to reach the main idea. Researching information based on indirect clues. Recognizing the relationship between pieces of information that are often based on multiple criteria.
2	407	Making inferences about the main idea in a moderately long text. Constructing meaning and understanding relationships in a specific part of the text when information for inference is not clear. Comparing reasons and consequences based on short and explicit statements.
1a	335	Making connections based on previous knowledge or information provided. Making inferences about information in a text written on a known topic.
1b	262	Evaluating simple sentences as they are. Interpreting the real meaning of reading passages by establishing simple relationships. Scanning and placing explicitly stated information in a simple sentence or passage.
1c	189	Verifying and understanding the meaning of simple sentences directed towards actual comprehension.

(Ministry of National Education, 2019a; OECD, 2019b).

It is seen that the students appear to have higher level competencies at higher skill levels.

Table 4. Türkiye and OECD Reading Proficiency Levels in PISA 2018

	Level 2 and below	Level 5 and above
Türkiye	26,13	3,32
OECD	22,6	8,7

(OECD, 2019b; OECD, 2022a).

It is observed that the percentage of students in Turkey exhibiting low performance in reading skills is close to the OECD average. On the other hand, having an above-average percentage of low performance indicates that there are steps to be taken in this regard. The percentage of students displaying high performance in reading proficiency levels is below the OECD average.

There are proficiency levels for students' success in PISA math domain. The relevant proficiency levels are described in the table 5 below (Ministry of Education, 2019a; OECD, 2019b; OECD, 2022a).

Table 5. Brief Description of the Levels of Mathematics Proficiency in PISA 2018

Level	Leve score limit	Characteristics of task
6	669	Advanced mathematical thinking and reasoning skills. The ability to model and use information for complex problem situations, conceptualize, and generalize.
5	607	The ability to develop models for complex situations by determining assumptions and work with them. The ability to select, compare, and evaluate appropriate problem-solving strategies.
4	545	The effective ability to work with clear models for concrete or complex situations that require assumptions or constraints. The ability to use limited skills, make inferences in simple contexts.
3	482	The ability to follow clearly defined steps. The ability to apply simple problem-solving methods. The ability to make interpretations for different sources of information. Limited ability to make inferences.

2	420	The ability to interpret and make direct inferences within contexts that allow direct inferences. The ability to derive results from a single source. The ability to use basic algorithms, formulas, procedures, or rules to solve problems involving whole numbers.
1	358	The ability to answer questions in familiar contexts where the necessary information is clearly presented, and the questions are clear. The ability to describe information in clear situations and perform routine operations.

(Ministry of National Education, 2019a; OECD, 2019b).

It is seen that the students appear to have higher level competencies at higher skill levels.

Table 6. Türkiye and OECD Mathematics Proficiency Levels in PISA 2018

	Level 2 and below	Level 5 and above
Türkiye	36,7	4,8
OECD	24,1	10,9

(OECD, 2019b; OECD, 2022a).

It is stated that the rate of high and low performance is observed more in mathematics skills than in other skills. (OECD, 2022a). Turkey's rate of mathematics skills below basic proficiency (below level 2) appears to be quite high compared to the OECD average.

There are proficiency levels for PISA science literacy according to the achievements of students. Relevant proficiency levels are defined in the table (Ministry of Education, 2019a; OECD, 2019b; OECD, 2022a).

Table 7. Brief Description of the Levels of Science Proficiency in PISA 2018

Level	Level score limit	Characteristics of task
6	708	Being able to benefit from related scientific ideas and concepts, presenting hypotheses regarding new scientific facts and processes. Using both procedural and epistemic knowledge in predictions. Utilizing knowledge beyond the curriculum. Being able to distinguish claims based on evidence and theory from those based on other circumstances.
5	633	Being able to use abstract scientific ideas and concepts in explaining complex events and processes. Applying and interpreting sophisticated epistemic knowledge in evaluating and justifying alternative experimental designs. Using theoretical knowledge in predictions.
4	559	Being able to use more abstract and complex content knowledge in explaining complex or less-known events and processes. Conducting experiments with two or more independent variables in a limited content. Evaluating an experimental design using pieces of process or epistemic knowledge.
3	484	Using moderately complex knowledge in explaining and structuring similar cases. Creating explanations with relevant clues and support in less similar and more complex situations.
2	410	Being able to define a question in a simple experiment, interpret data, and provide an appropriate scientific explanation using basic methodological knowledge and everyday content knowledge. Being able to use basic or everyday scientific knowledge to obtain valid results from a single data set.
1a	335	Being able to define and explain simple scientific facts using methodological or everyday content knowledge. Working in structured research with no more than two variables with support. Being able to define simple causal relationships. Being able to interpret graphical or visual data with low cognitive requirements.
1b	261	Being able to use basic and everyday scientific knowledge in identifying aspects of similar or simple phenomena. Being able to identify simple patterns in data, recognize basic scientific terms, and follow clear instructions in managing the scientific process.

(Ministry of National Education, 2019a; OECD, 2019b).

It is seen that the students appear to have higher level competencies at higher skill levels.

Table 8. Türkiye and OECD Mathematics Proficiency Levels in PISA 2018

	Level 2 and below	Level 5 and above
Türkiye	25,15	2,46
OECD	22,0	6,8

(OECD, 2019b; OECD, 2022a).

The rate of high performers in science is lower than the OECD average. On the other hand, the rate of low performers appears to be far from the average (OECD, 2022a).

3.1.1. Average performance of upper secondary schools in Türkiye

In Turkey, students make academic or professional choices for upper secondary school after secondary school. Students attend many different types of high schools. There are 8 types of high schools in the PISA 2018 sample. The majority of these high schools consist of Anatolian high schools and vocational high schools. In line with PISA 2018 results, there are significant performance gaps between high schools in Turkey.

Table 9. PISA 2018 Performance Averages According to Upper Secondary School Types

	Mathematics	Reading	Science
Anatolian high School	485	496	499
Vocational and Technical Anatolian High School	409	422	424
Multi-programme Anatolian High School	376	394	402
Science High School	592	584	588
Social Sciences High School	516	528	527
Anatolian Imam and Preacher High School	427	445	445

(OECD, 2022a).

Among high schools, there is a difference of 216 points between the top performer and the lowest performer in mathematics skills. In order to understand the magnitude of the difference between schools in a country, the average performance of high schools can be compared with the average performance of countries. It is emphasized that the average performance of

592 points in science high schools is higher than the average performance of PISA participating countries. On the other hand, the average score of 376 points of Multi-Program High Schools is among the lowest 10% among PISA participating countries (OECD, 2019b).

3.1.2. Socio-economic profile of students

According to international exam results, socio-economic status appears to have a linear relationship with learning outcomes (OECD, 2019b; Özer and Suna, 2021). The socio-economic profile of students in Turkey becomes significant in terms of the results. PISA and TIMSS exams collect data on students' socio-economic status as well as academic measurements. Higher variation in socio-economic background means greater heterogeneity in students' backgrounds. According to TIMSS, variation in socio-economic backgrounds of students in Turkey is expressed as the highest among all countries participating in PISA and TIMSS. Having a student population from very heterogeneous backgrounds makes achieving equitable outcomes inherently a greater challenge than in countries where student backgrounds are more homogeneous. It is stated that inequalities among the entire 15-year-old group in Turkey may be even greater than the data suggested, since the 2018 assessment covers 73% of the target group (OECD, 2019b).

PISA and TIMSS assessments have developed indices drawing on many sources of information on student background to provide a measure of socio-economic background.

3.1.2.1. PISA index of economic, social and cultural Status (ESCS)

In PISA, a student's socio-economic status is included as an index, which is a composite measure that combines the financial, social, cultural and human-capital resources available to students into a single score. It is known to depend on various variables related to students' family background. The index is based on many variables related to family background. These; Parents' education, parents' professions, and items that can be purchased as material wealth or cultural capital. The availability of a quiet room to study, Internet access, number of books, possession of a computer or tablet, desk, and other educational resources available at home are also included (OECD, 2019b).

3.1.2.2.TIMMS home resources index

1. Grade 4 home resources for learning scale: number of books at home, number of children's books at home, study support at home (internet

connection, computer, desk and own room), parental education and parental occupation.

2. Grade 8 educational resources learning scale: number of books at home, home study support (internet connection, computer, desk, and own room), and parental education.

According to TIMSS home resources learning scales, it is emphasized that in the 4th grade, the rate of students with low resources at home in Turkey is more than 7 times the average of OECD member countries, and in the 8th grade, it is more than 4 times. According to the economic social situation (ESCS) PISA index, it is emphasized that the share of 15-year-olds in Turkey in the lowest international decile of the ESCS index is 6 times higher than the OECD average (OECD, 2022a).

Table 10. Variation in Turkey's Socio-economic Background According to TIMSS 2019

	4th Grade	8th Grade
Türkiye	3,5	3,2
OECD	2,5	2,2

(OECD, 2022a).

According to TIMSS 2019 data, it is seen that Turkey has a student profile with a higher level of diversity compared to the OECD average.

Table 11. Variation in Turkey's Socio-economic Background According to PISA 2018

Türkiye	1,39
OECD	0,88

(OECD, 2022a).

According to PISA 2018 social and cultural situation index, more variations are observed for students in Turkey compared to the OECD average. It can be concluded that this situation makes it difficult to provide equal education to each individual. The presence of more disadvantaged students also prevents good results (OECD, 2022a).

3.1.3. Current situation of early childhood education and care (ECEC) in Turkey

It is stated that children have historicallly shown less participation in ECEC in Turkey compared to OECD countries. When they start to participate, it is observed that duration of participation is shorter. According to TIMSS 2019 results, it is seen that 34% of 4th grade students in Turkey did not attend ECEC or attended ECEC for less than 1 year. It is strongly stated that the performance of individuals who attend pre-school is also better (OECD, 2021). It is expressed that the participation of children in the 3-year-old group in education in Turkey is 8%. In OECD countries, it is stated that the participation rate of 3-year-olds is 56%. According to PISA 2018 data, it is seen that 37% of students do not attend ECEC (OECD, 2022a).

Table 12. 4th Grade ECEC Participation, TIMSS 2019

	No participation.	Less than one year.	One year.	Two years.	Three years.	4 years or more.
Türkiye	28,1	5,8	41,8	16,0	4,6	3,6
OECD	4,0	1,6	7,8	12,0	30,7	43,9

(OECD, 2022a).

According to TIMSS 2019 data, the participation of 4th grade students in ECEC in Turkey is far behind compared to OECD countries.

Table 13. 8th Grade ECEC Participation, PISA 2018

	No participation.	Less than one year.	One year.	Two years.	Three years.	4 years or more.
Türkiye	35,5	1,5	36,0	17,8	5,6	3,6
OECD	4,7	1,5	13,6	23,9	29,9	26,4

(OECD, 2022a).

According to the results of TIMSS 2019 results, a similar situation is observed in PISA 2018 results as well. Türkiye exhibits comparatively lower participation in ECEC when compared to OECD countries. It is indicated that only 6% of students in the 15-year-old age group have attended at least 3 years of early childhood education, while the participation rate in OECD countries stands at 30% (OECD, 2022a). Furthermore, it is emphasized that there exists a strong correlation between students' socio-economic

background and their participation in ECEC (Özer and Suna, 2021). Analysis of the PISA 2018 and TIMSS 2019 data reveals that disadvantaged students exhibit lower participation in ECEC, which consequently reflects on their overall educational attainment.

3.1.4. Gender

According to the TIMSS 2019 exam, boys in Grade 4 perform better than girls in mathematics and science. It is stated that this situation is similar in other countries as well. Starting from 8th grade, girls in Turkey surpass boys in mathematics and science. On a global level, gender inequality decreases as children continue their education. A similar situation exists in Turkey concerning the success of girls. On the other hand, according to PISA 2018 data, girls perform better than boys in reading and science skills. Boys perform better in mathematics skills. Gender distribution inside and outside school in Turkey is seen as one of the factors that can affect student success. When Türkiye first participated in PISA 2003, the representation rate of girls in PISA sample was stated as 45%. It is emphasized that the representation rate of girls increased in PISA cycle reaching 49.6% in 2018. It is stated that this situation partly explains Türkiye's rise in participation and performance (OECD, 2019b).

3.1.5.School environment and resources

3.1.5.1. Performance gap between schools and socio-economic status

According to TIMSS 2019 data, secondary school students in Türkiye are socio-economically stratified between schools in their first year. There is a very high socio-economic variation between schools in Türkiye. More than half of the variation in mathematic and science performance in 4th grade occurs between schools. This variation in Türkiye is above the average of OECD countries and is the highest among all countries participating in TIMSS 2019 exam. In secondary schools in Turkey, low-performing and disadvantaged students or high-performing and advantaged students are grouped in separate schools. It seems that the lack of admisssion policy for secondary schools leads to variation primarily based on geographical location. Children and families from disadvantaged backgrounds reside in the same neighborhood and attend the same schools. This situation deepens the variation (OECD, 2019b; OECD, 2022a).

At the 8th grade level, it is emphasized that although the performance gap between schools due to socio-economic status decreases slightly, it is still well above the OECD average. On the other hand, the performance gap

between schools in the 15-year-old group in Turkey is one of the highest rates among OECD countries. This difference is 26% points higher than the OECD average. It is stated that selective school admission policies are partially effective in this difference at the high school level. Cosequently, the high performance gap between schools in Türkiye inevitably leads to a high level of high and low performance isolation index. In this case, high and low performing students receive clustered education in separate schools. The high-performance isolation index in Turkey is one of the highest among OECD countries(OECD, 2019b; OECD, 2022a).

3.1.5.2. School location

In Turkey, students mostly receive education in urban areas. It is stated that less than 1% receive education in remote rural areas. It is stated that those who receive education in urban areas perform better than those in rural areas. On the other hand, within the scope of TIMMS 2019 and PISA 2018 exam results in Turkey, performance gaps between rural and urban areas seems quite high. Relevant data are shown in the table and table 14 and table 15 below (OECD, 2022a).

Table 14. 8th Grades Performance Gaps between Urban and Rural Areas in Mathematics and Science Skills, TIMSS 2019

	Mathematics	Science
Türkiye	87	75
OECD	30	20

(OECD, 2022a).

It is seen that there is significant performance gap between the areas within the scope of TIMSS 2019 results in Turkey.

Table 15. Performance Gaps between Urban and Rural Areas in Reading, Science and Mathematics, PISA 2018

	Reading	Science	Mathematics
Türkiye	46	40	41
OECD	23	19	20

(OECD, 2022a).

It is seen that there is significant performance gap between the areas within the scope of PISA 2018 results in Turkey. We can conclude that performance gaps between the areas in Turkey are well above the OECD average.

3.1.5.3. School Resources and School-based Support

3.1.5.3.1. Students-Teacher Ratio

Table 16. Student-Teacher Ratio Difference in Advantageous and Disadvantaged Schools in Turkey, PISA 2018

	Difference
Türkiye	-3,2
OECD	1,2

(OECD, 2022a).

It is known that the students-teacher ratio in Turkey (13.5) is close to the OECD average (13.3). On the other hand, it is observed that there is a higher number of students per teacher in disadvantaged schools. The table 16 above illustrates this disparity.

3.1.5.3.2. School resources

Table 17. 8th Grade Difference in Educational Resources Shortage between Advantaged and Disadvantaged Schools, TIMSS 2019

	Difference
Türkiye	1,1
OECD	0,7

(OECD, 2022a).

The problem of insufficient resources persists in rural areas compared to urban areas. In Turkey, there is a notable deficiency of resources, particularly in disadvantaged schools. The problem of insufficient resources persists in rural areas compared to urban areas (OECD, 2022a).

As seen in the Table 17, a greater difference is observed in our country while the difference in resource shortage is to a certain extent in OECD

countries This situation indicates that sufficient educational resource has not been equally provided to all schools.

Table 18. Difference in Percentage of Students Provided Academic Support Students Between Advantaged and Disadvantaged Schools According to Administrators' Opinions, PISA 2018

	Seperate room for homework	Staff providing academic help	Peer-to-peer tutoring
Türkiye	28,6	20,7	0,3
OECD	6,7	-6,0	12,7

(OECD,2022a).

As can be seen in the table, the differences between schools providing academic support practices for students in our country are quite different in terms of providing separate rooms and provided study support by education staff at school.

It is stated that advantaged schools in Türkiye support students better with more seperate room for study and more staff suppoting academic help (OECD, 2022a).

3.2.Some Current Policies Implemented to Improve Inequality of Opportunity in Education in Turkey

3.2.1. National Monitoring and Evaluation Unit

In 2019, the "National Monitoring and Evaluation Unit" was established by the Ministry of National Education. The purpose of this relevant unit is to conduct monitoring and improvements based on various indicators in the field of education Monitoring and evaluation of actions regarding achievement gaps are also carried out by this unit (Özer, Genç and Suna, 2020). It is stated that the relevant unit makes diagnostic statements regarding curriculum achievements in the fields of Turkish, mathematics and science. In this context, 350 thousand students in 4th, 7th and 10th grades were taken as a sample in 2019, refpresenting all levels (OECD, 2020; OECD, 2023).

Assessments were made for Turkish, mathematics and science courses. Assessments also include a survey containing background information about the student and surveys administered to teachers and administrators. Then, an evaluation was carried out on Turkish language skills in reading, writing,

speaking and listening in the 7th grade. Furthermore, a computer-based pilot evaluation study was conducted in 15 provinces (OECD, 2020; OECD, 2023). In addition to these practices, assessment studies were carried out for Turkish, science, mathematics and foreign language courses in support and training courses (Özer, Genç and Suna, 2020).

3.2.2. Projects for Early Childhood Education

Early childhood education is seen as a very important stage in supporting individual learning from the early years. It is stated that the enrollment rate for 3-5 year olds has made a significant progress in Turkey (OECD, 2023). It is known that many projects were carried out in preschool education. Within the scope of the 2023 vision, it was discussed that compulsory education should be included in the 5-year-old group and that disadvantaged children should also benefit from preschool education. Projects were carried out with UNICEF in the 2012-2015 period to ensure the participation of disadvantaged children in education (Özer, Gençoğlu, and Suna, 2020).

As part of this endeavor, it is noted that children's educational materials, clothing, and other essential needs were provided. It is stated that 20 thousand children were able to access education with this support. It is emphasized that material support was provided under the name "my play chest" to areas where transportation to school is difficult. Mobile classes, transportation center kindergarten classes and summer schools were also provided in disadvantaged regions. Furthermore, it was possible to open classes in the villages by ensuring that 3, 4, and 5-year-olds receive education in the same class (Özer, Gençoğlu, and Suna, 2020).

With the 2021 Early Childhood Education Campaign, access has been increased in less populated areas. Efforts have been made to eliminate differences in access due to low socio-economic reasons. In this context, projects for the renewal and reuse of unused school buildings under the name of "Village Life Centers" have been initiated. In the first year, 2 400 centers were created. Furthermore, it is stated that 500 million Turkish Liras of support was provided to families for their children's education expenses with the Preschool Children Support Project (Özer, Aşkar and Suna, 2023). The Project for Improving Quality and Access in Early Childhood Education, executed in 2020, led to the establishment of 300 containers and 600 preschool classes (UNICEF, 2022).

It is stated that, with the projects implemented and the educational mobilization, there have been serious improvements in pre-school enrollment rates. It is stated that the 3-year-old schooling rate has reached 21%, the

4-year-old schooling rate has reached 42% and the 5-year-old schooling rate has reached 99.86% (MEB, 2023a).

3.2.3.Support and Training Courses

Support and training courses refer to the support given to students academically at a specific time. Studies realeted to courses are conducted by the General Directorate of Secondary Education. Courses are offered by both public and private middle schools and high schools. Courses are organized for voluntary students aiming to reinforce their knowledge and address any learning gaps they may have. Joint exams are conducted at the end of each term to assess and evaluate the students' progress. In addition, courses are also offered for mathematics and English subjects during the summer holidays. The determination of which subjects will be covered in these courses and in which grade levels is made by the Ministry of National Education (Ministry of National Education, 2023b).

Courses are held in schools and educational institutions that have suitable physical facilities and student potential. Courses are opened by official secondary schools, imam-hatip secondary schools, special education secondary schools with a general primary education program, special education vocational schools, special education vocational high schools, secondary education institutions and public education center directorates. Priority is given to the school's own students for enrollment in these courses.. Subsequently, students can be accepted from the registration area, the neighboring registration area and the other registration area. Classes can be created with readiness exams. For the 2023-2024 academic year, it has been decided that courses will be offered only at the 8th, 11th, and 12th-grade levels.. It is stated that they have the right to choose a maximum of 6 courses in the 8th and 11th grades and 8 courses in the 12th grades (Ministry of National Education, 2023b).

3.2.4. Remedial Education Programme in Primary Schools

Remedial Education Programme is expressed as a preventive program that provides both academic and psychosocial support for for students who have not achieved the targeted learning outcomes in the areas of Turkish and mathematics. The program is for 3rd grade students. These students include those who are not in the special education category but require academic support, as well as children of immigrant families, those under protection, and refugees. It is stated that a curriculum-aligned individualized program is implemented for the students who have fallen behind. (Ministry of National Education, 2019b; Özer, Gençoğlu and Suna, 2020).

Within the program, between 10 and 160 hours of training are provided per week. Turkish and mathematics courses can be taken separately or together. A method from simple to complex is followed is implemented. Lessons can be scheduled during weekdays or weekends within the school planning. The student group can be planned to be a maximum of 10 people (Ministry of National Education, 2023c; Özer, Gençoğlu and Suna, 2020).

3.2.5. 1000 School Projects in Vocational Education

In order to support vocational education, the Ministry of National Education has established research and development centers in 40 vocational and technical Anatolian high schools with well-defined capacities. In addition to this, 1000 vocational education institutions that are disadvantaged in terms of attendance, school dropout rates, and academic performance have been identified. It is aimed to provide support to these schools. The Ministry of National Education (MEB) initiated the "1000 Schools Project in Vocational Education" in the year 2020. With the 1000 school project in vocational education, it is aimed to increase the quality of vocational education and reduce the achievement gap between schools. The project duration is determined as 1 year. Within the scope of the project, it is aimed to support all components of education. In this context, educational and personal development support was provided to families, students, and teachers (Ministry of National Education, 2021).

Support provided to students in basic skill areas: It is seen that students starting vocational education continue their education with many learning deficiencies which adversely affect vocational education. Basic skill deficiencies are getting deeper. At this point, it is aimed to provide support at many points in order to eliminate the relevant deficiencies:

1. A support program for skill deficiencies has been implemented in the fields of science, mathematics and Turkish.

2. Providing material support to schools within the scope of the program.

3. Providing additional support to relevant schools within the scope of support and training courses.

4. Providing project support to these schools by Science and Art Centers.

5. Offering various forms of support to srudents in selected schools, including first aid kit training and sports activities (Ministry of Education, 2021).

3.2.6. Integration of Refugee Students into Education

Turkey continues to host the largest number of refugees worldwide due to the increasing global population forced to flee their homelands because of conflicts, violence, and persecution. Turkey currently hosts approximately 3.6 million registered Syrian refugees and nearly 320,000 people of other nationalities (UNHCR, 2023). Considering the number of refugees, the importance of addressing their educational needs becomes increasingly significant.

Many projects have been carried out by the Ministry of National Education to integrate refugee children into education. Some of these projects are:

1. Project to Increase The Integration of Syrian Children into the Turkish Education System (2016-2018): It is a project also supported by the European Union. The project includes issues such as language support for Syrian children, extra lessons to catch up with their peers, transportation and educational material support, teacher training and awareness raising. The project was implemented in 24 provinces where Syrian children are most concentrated. The enrollment rate for Syrian children increased from 37% in 2015/16 to 63% in 2019/20. It is stated that the project has been extended until 2023 (OECD, 2020).

2. Integration of Syrian Students into Vocational Training Programs: Supported by the German development bank and the European Union, this project involved updating the infrastructure of vocational education institutions and was implemented in eight provinces (OECD, 2020).

3. Accelerated Learning Program for Protected Syrian Children in Non-Formal Education UNICEF Support (2017-2019): It includes providing education to Syrian children aged 10-18 outside of formal education. It is stated that at the end of 2018, 5 616 children were reached. In addition, complementary financial support was also provided (OECD, 2020).

4. PIKTES and Integration Classes: It is emphasized that the Integration of Foreigners into the Turkish Education System Project (PIKTES) has been implemented in Turkey to respond the needs in this regard. Within the scope of this project, the aim is to improve the adaptation of foreign students and their Turkish language skills. The project has aimed to prepare target students for academic education by improving their language skills, as outlined in the directive numbered 2020/7 (Özer, Gençoğlu and Suna, 2020).

3.2.7. Girls' Participation in Education

Despite continuous improvements between 2013 and 2020, historically girls' enrollment rates are far behind boys in the same age group. On the other hand, in 2020, the enrollment gap between male and female students decreased to less than one percent in different age ranges. These changes in enrollment rates have largely resulted from government policies related to supporting girls' access to education (OECD, 2023).

1. Project to Increase the Enrollment Rate of Girls I (2011-2013): It was aimed to increase girls' access to education. The project targeted 16 regions with the lowest enrollment rate. The project aims to increase girls' participation in primary and secondary education, raise family awareness, and strengthen labor market connections. Many applications were included within the scope of the project. It is stated that it includes workshops, trainings, field findings in the context of guidance and consultancy, incentives for families to send their children to school, and teaching material support (IT resources, professional equipment). In addition to these, grants were provided for researching factors related to school dropout and absenteeism, as well as training and completion courses to prevent early school leaving for girl (Human Resources Development Operating Structure, 2018).

2. Project to Increase the Enrollment Rate of Girls II (2015-2017): It is stated that after the success of the 1st project, the second project was started. In this context, it is stated that the project included social assistance activities, purchase of additional land for schools, and material support for pilot schools. Furthermore, home visits were conducted to persuade families to send their daughters to school reaching a total of 15,990 families. In addition, the project primarily targeted increasing participation rates in vocational education, as well as at all levels of secondary education. There were many practices in this context. School and community activities, family meetings to raise awareness, capacity building for guidance and gender equality and consultancy, and provincial visit teams providing support for early school leaving were among the practices (Human Resources Development Operating Structure, 2018; OECD, 2020).

3. Project to İncrease School Attendance And Schooling Rates (2021): It is emphasized that the schooling rate of girls has increased with the projects carried out. On the other hand, there was a focus on conducting studies to ensure equal access and address issues such as school dropout, absenteeism, and grade repetition, school drop-out, absenteeism and grade repetition. In this context, 50 schools were determined in 14 provinces. Prevention,

intervention and compensation practices were carried out. Girls were determined as the target group (Ministry of National Education, 2022).

4. Discussion and Suggestions

In recent years, Turkey has been seen to have implemented many practices to ensure participation in education, improving performance rates and equality of opportunity in education. Although Turkey has made significant progress in relevant areas, it seems that there is still a need for support practices to ensure equal opportunities in education and reduce achievement gaps. In this context, steps should be taken to set goals and ensure continuity in goal-oriented practices.

Efforts to enhance the success of underperforming students and reduce achievement inequalities should commence from early childhood education and continue throughout secondary education (Vidal, 2020). It is essential to provide support until the end of secondary education. Consistent efforts are required to address variables that negatively impact learning. Consequently, a national policy needs to be adopted on this issue. The socioeconomic and sociocultural differences among students in the country should be given significant consideration (OECD, 2022b).

Within the framework of relevant data, an inclusive education system from pre-school to the end of secondary education should be centered in Turkey. It should be aimed to increase the quality at all levels of education. In this context, especially schools need to be supported economically. Support can be directed, especially, towards disadvantaged schools in resource distribution. By improving schools, inequalities in student background can also be compensated. In addition, study support groups can be created in schools for students who are falling behind. The implementation of projects focused on students' academic and social development should be increased. Through these measures, the quality of education can be enhanced, leading to improvements in achievement inequalities.

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