

Revolutionizing Education in Türkiye: A Year of Multi-Faceted Improvements by the Ministry of National Education in 2022

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1. The universalization of early childhood education

Research supports the notion that early childhood education plays a crucial role in fostering favorable cognitive and social-emotional development outcomes in children, with enduring positive effects. Studies indicate that children who receive early childhood education are more likely to achieve success in the long term, demonstrate enhanced interpersonal skills, and experience smoother transitions to the labor market (Johnson, 1996; Khan, Tahir & Aurangzeb, 2019; OECD, 2020; Suna & Özer, 2022). Thus, the combination of all these factors makes early childhood education one of the most effective areas of educational investment (Heckman, 2008; Lynch & Vaghul, 2015). Furthermore, expanding (universalizing) early childhood education to encompass the population has been a prominent global education policy objective for many years (OECD, 2020a; Özer, Aşkar & Suna, 2023; UNICEF, 2020).

The Turkish education policy has long incorporated the expansion of early childhood education, as evidenced by several key resources (AÇEV, 2009; Suna & Özer, 2022; Özer, Aşkar & Suna, 2023). National development plans, education policy documents, and strategy reports have increasingly begun to emphasize early childhood education since the 1990s. However, despite the stated objective of providing "at least one year of early childhood education" to every student in the 2000s, the enrollment rates for students in this age group remained low, reaching only 11% until 2010 for 5-year-olds. In this context, it was not until the 2010s that significant progress was made in achieving higher enrollment rates in early childhood education.

To achieve the targeted level for early childhood education dissemination, the Ministry of National Education (MoNE)

launched the "Early Childhood Education Campaign" in 2021 (Özer, Aşkar & Suna, 2023). The first phase of this campaign focuses on promoting early childhood education throughout the country. One of the main challenges in expanding early childhood education in Türkiye is the lack of adequate physical infrastructure.

As part of reaching the targeted schooling rates in early childhood education, MoNE intended to set up 3,000 new kindergartens in 2022. Needs assessments were conducted at provincial and district levels during the planning process, and considering Istanbul's high population density and low enrollment rate, 1,000 of these kindergartens were designated for the city. However, due to the plans developed by MoNE to achieve the OECD average in schooling rates for children ages 3-5, 6,004 new kindergartens have been established, exceeding expectations. Thus, an increase in planned kindergartens has resulted in the opening of 1,010 new kindergartens in Istanbul.

The new kindergarten capacities created by MoNE have significantly contributed to the expansion of early childhood education in Türkiye. This infrastructure has resulted in an increase in schooling for children to the age of 5 from 65% to 99%, for children to the age of 4 from 16% to 38%, and for children to the age of 3 from 9% to 16%. By undertaking these steps within the scope of campaign, it was also possible to achieve the target of "at least one year of early childhood education for every student" by the age of 5. MoNE's goal to further increase schooling rates in 2023 by ensuring that the necessary infrastructure is in place. By 2023, infrastructure supports plans to increase schooling from 16% to 50% at age 3, 38% to 70% at age 4, and 100% at age 5.

2. Increasing access to education

Access to education, considered a fundamental human right, is a crucial indicator of equality of opportunity in the field of education (Lewin, 2015; UNESCO, 2017). The concept of equality of opportunity is incomplete without ensuring access to education irrespective of one's socio-economic background. Thus, one of the main objectives of MoNE is to optimize schooling rates and expand access to education services for all members of society.

MoNE has set an ambitious target of achieving schooling rates of 95% and above at all levels of education from early childhood education through upper-secondary education by 2022. To achieve this goal, substantial investments have been made in early childhood education infrastructure, along with financial assistance to ensure accessibility to education for students facing socioeconomic disadvantages. Furthermore, priority has been given to

early childhood education in the "Village Life Centers" initiatives, mentioned in the following sections, to ensure that students with low populations were able to participate in education.

Several mechanisms have been employed simultaneously to enhance access to primary and secondary education in Türkiye. Firstly, the restriction on the minimum of students required to open primary schools was lifted, thus paving the way to establishing primary schools in low-population areas on demand. Secondly, the records from the Central Population Administration System (MERNIS) and MoNE were integrated to facilitate the monitoring of students' access to education. Thirdly, the implementation of the "Early Warning and Monitoring System" has paved the way

to identify students who may be considering dropping out of school hence providing early intervention opportunities.

These policies have significantly contributed to the increase in school enrollment across all levels of education in Türkiye. For example, early childhood education schooling increased from 65% to 99%, primary education to 99.64%, and secondary education from 90% to 98.7%. This has resulted in access to education surpassing the targeted levels at all education levels. In order to further strengthen and enhance the effectiveness of the mechanisms established in 2023, MoNE aims to achieve access rates of 99% and above at all levels, reflecting its commitment to ensuring widespread access to education for all students in Türkiye.

3. Strengthening the vocational education and training system

a. Enhancing apprenticeship training

In today's rapidly changing technological landscape, apprenticeship training has become increasingly important to meet the demands of the labor market (Christensen et al., 2020; OECD, 2017; Özer, 2018, 2019a, 2019b). Apprenticeship education offers students the opportunity to develop vocational skills through on-the-job training (Christensen et al., 2020; Özer, 2020a, 2021a). The purpose of this methodology is to provide students with the opportunity to acquire professional skills directly through practical experience in their chosen field, providing them with valuable real-life job conditions to enhance their learning process.

Intensive on-the-job training in real work environments assists students in acquiring the skills required by the labor market. As a result, graduates who have received apprenticeship training demonstrate higher rates of successful transition from school to the labor market (Özer & Suna, 2020a). Within the framework of vocational education and training, apprenticeship training has the highest employment rates for students in Türkiye. Recent studies conducted by MoNE have found that apprenticeship students have an employment rate of 88%, with approximately 75% of employed graduates working at institutions where they received on-the-job training (MoNE, 2018; Özer & Suna, 2020a).

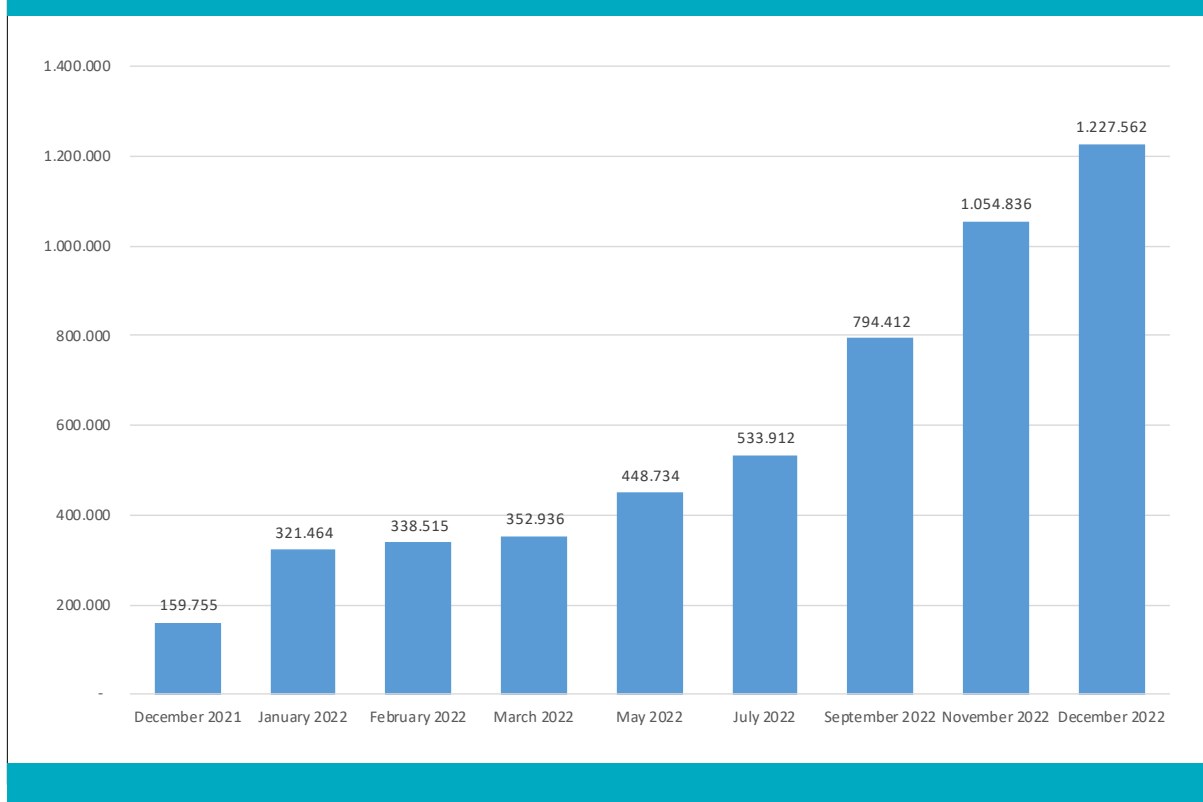
MoNE's efforts to strengthen apprenticeship training in Türkiye have yielded significant results, leading to a remarkable increase in the popularity of apprenticeships in upper-secondary VET. In 2021, apprenticeship training accounted for around 5% of upper-secondary VET in Türkiye, with approximately 159 thousand students enrolled in apprenticeship programs. However, through comprehensive improvements aimed at meeting the labor market's needs for skilled journeymen and masters, the MoNE has made remarkable strides. One notable improvement is the legislative amendments made in Vocational Education Law No. 3308, which have led to increased wages for journeymen who successfully complete the 11th grade. Previously, journeymen received one-third of the minimum salary, but now they receive half of it. According to the same regulation, the state now covers the wages of students undergoing apprenticeship training during their education rather than the companies (Özer, 2022a). To further amplify awareness and understanding of these improvements, a simultaneous information campaign was conducted by MoNE highlighting the improvements made in apprenticeship training as well as the opportunities provided by this training.

These concerted efforts by MoNE have significantly transformed the perception of vocational education and training in Turkish society, resulting in a substantial increase in the popularity of apprenticeship training. Figure 1 illustrates the growing popularity of apprenticeships in

upper-secondary VET. The number of students receiving apprenticeship training has increased from 159 thousand to 1.2 million in 2022. Concretely, after the improvements were made, the number of students who received apprenticeship training increased by more than seven

times. Thus, despite the share of apprenticeship training in vocational secondary education being less than 5% in 2021, it reached 52% in 2022 (Özer & Suna, 2022). A total of 1.5 million students are expected to enroll in the program by 2023, according to the MoNE.

Figure 1: The number of students in apprenticeship programs during 2022



b. Establishing international vocational high schools

In recent years, the global recognition of the importance of VET has grown significantly, driven by changing labor market demands resulting from technological advancements and its role in sustainable development (Commission, 2022; OECD, 2019a). This has led to a rapid surge in the internationalization of various VET systems, which differ significantly from one another and has fostered increased sharing of best practices among countries. Various international organizations, such as the European Training Foundation (ETF) and the European Centre for the Development of Vocational Training (CEDEFOP), carry out projects aimed at increasing the interaction between

VET systems in different countries (CEDEFOP, 2020a; ETF, 2018). The objective here is to disseminate best practices by facilitating mutual learning among VET systems, each of which has its unique characteristics.

Over the past few years, Türkiye has made significant strides in strengthening VET system with a primary focus on enhancing the relationship between vocational education and training and the labor market. This has resulted in the participation of the labor market in all stages of vocational education and training, ranging from curriculum development and teacher training to on-the-job training and infrastructure enhancement. By involving the labor market in the education process, there is now an opportunity to address the longstanding issue of a skills gap in the workforce. MoNE, in collaboration with the labor

market, has updated curricula for all vocational fields, improved infrastructure in VET institutions, enhanced teacher training, and established employment-guaranteed or priority VET programs (Canbal et al., 2020). These efforts have led to a significant change in the social perception of VET, with successful students increasingly showing a preference for VET institutions, despite increased quotas.

As part of its efforts to demonstrate its advancements in VET on a global scale and enable students from different countries to benefit from these opportunities, MoNE has announced the establishment of "International Vocational High Schools" in 2022. This initiative has resulted in the establishment of seven international vocational and technical Anatolian high schools in six provinces including Istanbul, Ankara, Bursa, Konya, Balıkesir, and Ordu. The first students were admitted to these vocational schools in the 2022-2023 academic year and the educational institutions have begun to provide education to students from Albania, Bulgaria, Kosovo, North Macedonia, Serbia, and Bosnia and Herzegovina as of 2023. This project is expected to continue expanding, with an increase in the number of international vocational high schools and a greater diversity of countries participating, thus further promoting international cooperation and exchange in vocational education and training.

c . Establishing vocational training centers within organized industrial zones

The effectiveness of vocational education and training systems' is significantly influenced by their interaction with the labor market as well as their ability to meet labor market expectations (Hanushek, Woessmann & Zhang, 2011; Özer, 2020b). Therefore, countries are increasingly prioritizing the improvement of the relationship between VET and the labor market, aiming to better understand the dynamics of the labor market and respond to its evolving demands (European Parliament, 2019; OECD, 2010). Thus, it is crucial for all stakeholders to develop a mutual understanding in all vocational fields, ensuring that VET system aligns with the needs of the labor market and prepares students for successful careers.

Organized Industrial Zones (OIZ) present great opportunities due to the diverse range of industries they encompass. OIZs bring together production and services from various sectors in a single location, resulting in a wide array of professions. Capitalizing on this situation will present an opportunity to provide training in multiple vocational fields within the OIZs, to utilize the expertise and experience of the OIZ experts, and to leverage the

production areas of the OIZs as training facilities (MoNE, 2019a; Özer, 2019c).

In recognition of the significant potential of OIZs, MoNE took action in 2021 to enhance the quality of VET system. As part of its mission, MoNE established at least one vocational training center (VTC) in every OIZ and industrial estate in Türkiye, or associated them with a vocational training center in close proximity in 2022. This initiative aims to enrich apprenticeship education, which has already undergone important improvements in the physical and human resources available in OIZs. It is anticipated that students who participate in apprenticeship training will gain the skills demanded by the labor market, leading to an improvement in the overall quality of education through the opportunities offered by OIZs.

d . Developing Vocational Training Center Skill Development Programs

VET system with an employment-oriented structure is a viable option for individuals who have completed various levels of education as well as for students who are still of schooling age (CEDEFOP, 2020b; ILO, 2022; van Wieringen & Atwell, 1999). In addition, addressing VET from the perspective of "lifelong learning" requires the goal of making these opportunities accessible to all segments of society. Currently, a large number of on-going-projects in a number of countries allow aging societies to participate in education once again (Eurydice, 2021; Özer & Suna, 2022a).

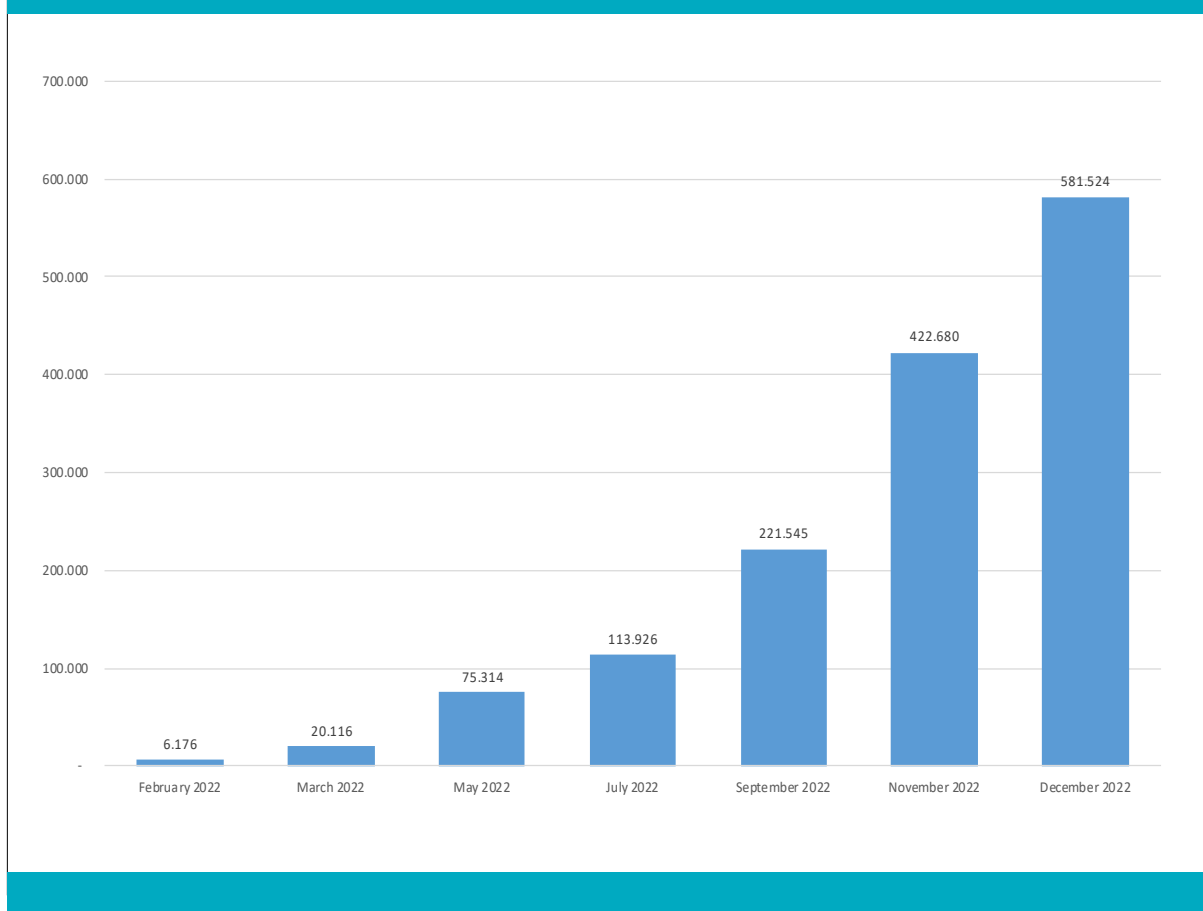
In response to the rapid pace of technological developments, the skills demanded by the labor market are undergoing rapid changes (Bazylik & Gibbs, 2022; Dachs, 2019; Perc, Özer & Hojnik, 2019). Routine jobs requiring low levels of skill are being replaced by automation in the business world (Dahlin, 2019; de Vries et al., 2020). Therefore, it is crucial for individuals to acquire digital competences and complex social skills such as cooperation and empathy (Deming, 2017; ILO, 2021). In light of these changes, it is vital that adults, who are integral members of society, upskill and reskill in order to meet the evolving demands of the business world. As a result, adult education programs play an important role in renewing the skills of aging populations.

In 2022, the Vocational Education Center (VTC) Skill Development Program, implemented by MoNE, marked a significant milestone in adult skills development (Özer & Suna, 2022a, 2023a). This program incorporates the flexible structure of apprenticeship programs within VTCs,

as well as the work-oriented approach to adult education. By offering short-term training programs ranging from six months to eight months, MoNE aims to update the skills of adults according to the demands of the labor market. The program is open to individuals who have graduated from high school and above, serving as a vital mechanism

for those seeking to reskill & upskill. Figure 2 illustrates the notable increase in the number of adults participating in VTC skill development programs, surpassing 580.000 within a short period of time.

Figure 2: The number of students in VTC skill development programs during 2022



Furthermore, recent studies indicate that women are actively engaged in VET, with gender distribution reaching its most balanced level (Özer & Suna, 2022a). The study further indicates that there is a significant demand for graduates with associate's, undergraduate, and postgraduate degrees, with approximately 19% of participants in the first four months coming from

associate's or higher education levels. The demand for employment-oriented mechanisms clearly illustrates the importance of adult skills development in Türkiye. Looking ahead, MoNE aims to diversify and expand the range of training subjects offered in the skill development program in 2023.

4. Achieving greater quality of opportunity in education

a. Providing free supplemental resources

Research has consistently shown that the quality and diversity of educational materials have a significant correlation with student outcomes (Read, 2015; Read & Treffgarne, 2011). Considering that learning is a highly individualized process, this is not surprising from the perspective of a learner. The availability of diverse and high-quality resources contributes significantly to the improvement of students' learning processes. By offering a wider range of resources, educators can better cater to the diverse learning needs of different students (Tiree, Fiore & Cook, 1994).

MoNE has taken a proactive step towards creating alternative learning resources by developing and publishing supplementary materials for students free of charge at the end of 2021. This initiative is primarily motivated by the creation of alternative learning resources for students who cannot access digital platforms for various reasons or who prefer to use printed materials. In this regard, developed supplementary materials are very important in order to eliminate dependency on external learning resources and minimize potential inequalities.

MoNE has taken significant steps in ensuring access to supplementary resources for students. Building on the success of the free textbook distribution program that has been in place since 2003, MoNE has made preparations to print and deliver approximately 100 million supplementary resources to students by 2022. Remarkably, MoNE exceeded its target by printing and distributing 160 million free resources throughout the year. In response to the high demand from students and teachers, MoNE has further increased the availability of printed supplementary materials in 2023, with 200 million resources now available at no cost to students. Furthermore, school libraries have been provided with these supplementary materials, ensuring wider access for students across the country.

b. Opening of Village Life Centers

The rural-to-urban migration trend in Türkiye, which originated in the 1950s and has continued to escalate, has had profound implications for both education and

social dynamics (Sevinç, Kantar Davran & Sevinç, 2018). Metropolitan cities, such as Istanbul, have experienced rapid population growth (Zdemir & Sertakaya Doan, 2022), necessitating the provision of services to cater to the expanding population. The impact of mobility on education has been particularly notable since the 1950s, with declining rural populations resulting in many former educational buildings being repurposed or left abandoned.

Numerous initiatives have been implemented over the years to address the educational access challenges faced by declining and dispersed rural populations (Özer, Gençoğlu & Suna, 2021). Projects such as mobile teacher classrooms and mobile classroom applications, etc., are some of the ways in which their access to education is supported through projects. While these efforts, along with increased infrastructure investments, have resulted in improved schooling rates in rural areas over the past two decades, the rates still remain relatively low in comparison to other regions.

MoNE took a significant step in 2022 when it initiated the transformation of school buildings, which had become idle due to migration, into "Village Life Centers", that would be inclusive for all stakeholders (Özer, 2022a, 2023a). After the transformations, Village Life Centers were reorganized as early childhood education centers, primary schools, secondary schools, and public education centers depending on their physical infrastructure. With these adjustments, students in different educational levels and their families will have access to a single educational environment. Furthermore, with the removal of the minimum number of students requirement, MoNE has eased the process of establishing primary schools in low-populated areas.

Within the scope of this project, MoNE is aiming to open 2,000 Village Life Centers throughout Türkiye to disseminate all these improvements. With the positive feedback obtained from the field, 2,400 Village Life Centers were built in 2022, exceeding the original goal by a substantial margin. In 2023, MoNE aims to have all the suitable buildings transformed into Village Life Center.

c . Free Summer School Program in Public Schools

The COVID-19 pandemic has had a negative impact on education worldwide (Chaturvedi, Vishwakarma & Singh, 2021; Pokhrel & Chhetri, 2021; Özer & Suna, 2020b). Many schools across the world have been closed, and face-to-face instruction has been suspended, leading to a shift toward distance education methods (Engzell, Frey & Verhagen, 2021; Goudeau et al., 2021; Munoz-Najar et al., 2021; Patrinos, Vegas & Carter- Rau, 2022). While distance education has provided important opportunities for continuing education during these challenging times, it has also exacerbated existing inequalities (Goudeau et al., 2021; Grewenig et al., 2021; Özer et al., 2020). The gap in digital literacy among students and their access to resources at home have played a decisive role in this period, leading to an enlargement of existing gaps between students. As a result, the "equalizing" environment of schools has been disrupted, and inequalities in education have been exacerbated.

As the pandemic gradually receded and the process was brought under control, the disparities became further apparent with the opening of schools. According to numerous studies conducted during and after the pandemic, achievement gaps and learning losses among students have increased (Dorn et al., 2021; Lewis et al., 2022). In response to these challenges, there have been various mechanisms and methods developed by education systems to compensate for the increasing inequalities during the pandemic (UNESCO, 2020). Several international organizations involved in the field of education have also made recommendations regarding the development of compensation mechanisms for the education system. In the absence of support mechanisms and compensatory education, inequalities among students will increase even more.

Various measures have been implemented to mitigate the adverse effects of the pandemic on education (UNESCO, 2020). The most common of these practices are extending the duration of the education period and creating educational opportunities outside regular school hours (Saturday classes, free summer school applications, study hours, etc.) as well as providing various personal learning opportunities. These compensatory measures differ across education systems, with each system adopting its own strategies to address the challenges posed by the pandemic.

In an effort to address the learning losses and inequalities resulting from the pandemic, MoNE introduced a program offering free summer schools in public schools. In 2022, nearly 1 million students received summer school scholarships in the four fields of science, art, mathematics, and English. These summer schools not only aim to help students compensate for their educational losses but also provide opportunities for social and emotional skill development, as well as experiencing the school routine during the summer break.

In response to the positive response received from the summer school program, MoNE has launched a new initiative called "winter school program" during the semester break. Furthermore, MoNE announced that the summer school application will not be specific to 2022, but will be a permanent offering. The goal of the summer school is to increase participation in 2023 by enriching the programs offered.

d . The provision of guidance and psychological counseling

The availability and quality of counseling services are essential for maintaining the well-being of students (Alexander et al., 2020; Gysbers & Henderson, 2012). When students are consistently supported psychologically and are aware that their problems will be addressed, they are more likely to feel a sense of belonging to the school and to develop positive attitudes toward learning (Brooks, 2021). Accordingly, psychological counseling services play a crucial role in creating a positive school climate contributing to the overall safety and supportiveness of schools (Hernandez & Seem, 2004). Furthermore, psychological counseling processes have played an important role in providing support against the psychological problems caused by the COVID-19 pandemic (Alexander et al., 2020).

Guidance services play a vital role in helping students recognize their skills and make informed choices based on their interests, achievements, and other personal characteristics (Plant, 2004). The quality of guidance services provided in both the educational and vocational fields is crucial in shaping the educational and vocational preferences of students (Eriksson, Högdin & Isaksson, 2018; Plant, 2004). Therefore, it seems necessary to improve the quality of guidance services to ensure that students have a clear understanding of their own competencies and conscious orientations in education and employment.

MoNE intends to increase the effectiveness of guidance and psychological counseling services by revising them to address the evolving threats that students face today. These services contribute significantly to combatting physical and psychological addictions, which have been on the rise globally. The prolonged exposure to screens and disruption of students' school schedules during the COVID-19 pandemic increased the risk of digital addiction in particular (Pincus et al., 2020). In order to combat physical and digital addictions, MoNE has ensured that school psychological counseling services are used effectively. The initial goal of providing psychological support to 7.5 million students, 150 thousand teachers, and 1 million parents received psychological support in the fight against addiction, set at the beginning of the year, was surpassed in 2022. As of 2023, more than 19 million students, 1.2 million teachers, and 5 million parents in the education system are expected to receive psychological support trainings.

e . Opportunities for individualized digital learning

Developing educational technologies has enabled students to experience a personalized learning environment (Major, Francis & Tsapali, 2021; Twyman, 2018). As a result, these technologies developing educational technologies have enabled students to experience a personalized learning environment (Major, Francis & Tsapali, 2021; Twyman, 2018). As each student has unique learning deficiencies, these mechanisms allow for a fully personalized educational plan to be developed. The use of this technology to support formal education activities may be able to increase the efficiency of education. This is the reason why personalized digital education platforms have become increasingly popular (Major, Francis & Tsapali, 2021; UNICEF, 2022). As each student has unique learning deficiencies, these mechanisms allow for a fully personalized educational plan to be developed. The utilization of such technology to support formal education activities has the potential to enhance the efficiency of education, making personalized digital education platforms increasingly popular (UNICEF, 2022).

MoNE developed the Student/Teacher Support System (ÖDS) to address learning deficiencies among students, and implemented it in 2022. By collecting the items used in the supplementary resources published monthly by MoNE in a large pool, ÖDS determines the learning deficiencies of students across different fields. Based on this information, personalized recommendations, including educational

materials and online course videos published by MoNE, are provided to students to address their specific learning needs. Accordingly, the system uses a personalized approach both in identifying learning needs and in providing suggestions.

It is important to note that ÖDS goes beyond providing suggestions for students' learning needs, as it also offers options for teachers. With the platform, teachers can design supportive materials to identify their students' learning deficiencies and monitor their development. Therefore, ÖDS provides teachers with the opportunity to monitor their students' progress outside of the classroom.

f. Mathematical Campaign

Mathematics serves as a cornerstone for rational thought and a deeper understanding of the world (OECD, 2018a). It also provides a fundamental infrastructure for understanding relationships between variables, establishing cause-effect relationships, and developing a critical perspective (Su, Ricci & Mnatsakanian, 2016). Furthermore, mathematical thinking plays a pivotal role in developing analytical thinking, critical reasoning, and 21st century skills in this context (Rizki & Priatna, 2019). In the past, international monitoring research has studied the importance of mathematics skills and the relationship between them and other skills.

On the other hand, mathematics has been one of the fields in which Turkish students have shown relatively low performance for a number of years, as indicated by national-level transition exams and international achievement monitoring research (MoNE, 2021; Mullis et al., 2020; OECD, 2019b). As evidenced by the PISA and TIMSS cycles of 2018 and 2019, significant performance improvements in mathematics have remained more limited over the last 20 years (Mullis et al., 2020; OECD, 2019b). The findings of this study are similar to those of the exams used in the transition from secondary education to higher education and the application of the TMF-ÖBA program developed by MoNE (MoNE, 2019b; ÖSYM, 2021).

As part of the "Mathematical Campaign" initiative, MoNE intends to eliminate mathematics limitations, improve student performance, and cultivate a positive attitude toward mathematics. To achieve these goals, innovative methods such as gamification, the development of innovative educational materials, and the exploration of various mathematics fields in teaching mathematics. Through these efforts, it is possible to change the current

perception of mathematics and integrate it more into our daily lives.

To maximize the impact of the mathematics campaign, MoNE has developed the Mathematics Digital Platform. A variety of topics are discussed on this platform, which can be accessed at <https://matematik.eba.gov.tr/icerik/matematik-dijital-egitim-platformu-764>. This platform covers a wide range of topics, including the history of mathematics, 3D games, and the discovery of formulas. The platform also offers online training for students, teachers, and parents. It is intended to develop Turkish and Foreign Language platforms by 2023 in addition to the Mathematics Platform, which is attracting great interest from all education stakeholders.

g. Free school lunches

A well-balanced and nutritious diet is recognized as a crucial factor in the physical and psychological development of students (Egan et al., 2019). Extensive research has demonstrated that healthy and adequate nutrition has a significant impact on child health and academic performance (Egan et al., 2019; WHO, 1999). International organizations, including the World Health Organization, have emphasized the strong connection between nutrition and development. Upon the suggestions of these organizations, major projects are carried out to distribute free school meals to students (Global Child Nutrition Foundation, 2022; Guio, 2023; Illoken et al., 2021). However, it is important to note that nutrition can become a source of inequality due to socioeconomic disparities among families, potentially leading to developmental differences among students.

As part of its initiatives to promote vocational education and training and early childhood education, MoNE has implemented a program to provide free meals to students with the support of VET institutions. Since 2022, approximately 1.8 million students per day have been receiving free meals, up from the initial capacity of 1.5 million meals due to infrastructure improvements, investment and human resource enrichment. In addition, as part of its efforts to further strengthen early childhood education and support children's development, the MoNE has extended the provision of free school meals to all students enrolled in early childhood education programs.

Based on the planning conducted, it was determined that daily production capacity should be increased to 5 million so that all students in early childhood education, as well as the current students who have been provided with food, would be able to receive meals. By increasing the

production capacity of educational institutions throughout Türkiye, the necessary infrastructure was prepared for the delivery of 5 million meals.

h. Minimizing the opportunity differences between schools

Students' attitudes toward school and educational performance are closely related to the quality of their educational environments (Barrera-Osorio, Fasih, & Patrinos, 2009; The World Bank, 2013). An educational environment with a richer infrastructure and more interaction opportunities for students helps them feel comfortable and amplifies their learning (Barrett et al., 2019). Therefore, the goal of creating a positive school climate is to ensure that all students experience these characteristics. This involves establishing standards for the educational environment in all schools and improving the environment in a manner that enhances continuous learning making a significant contribution to the quality of education.

Over the past few years, MoNE has undertaken large-scale projects to improve the infrastructure and physical environment of schools such as the "1,000 Schools in Vocational Education and Training" and "10,000 Schools in Primary Education" projects, which have provided multi-dimensional support to schools (Özer, 2022b). Additionally, improvements to school environments have extended beyond these projects. For the first time in 2022, a direct budget was sent to all schools. This budget has been utilized for small-scale maintenance and repairs, as well as the purchase of stationery and cleaning supplies, directly benefiting schools. As of 2022, approximately 7 billion ₺ have been allocated to provide schools with a better learning environment.

i. Installation and enrichment of library resources

Reading is widely recognized as a fundamental academic and social skill in the 21st century (Delgadova, 2015; Hanover Research, 2016; Kiszczak, 2019). Students who acquire strong reading skills throughout the learning process are likely to excel in other subjects as well (Caponera, Sestito & Russo, 2016). Moreover, the amount of information produced by rapid technological advancements today is constantly increasing, and the presentation of information primarily through written and visual materials emphasizes the importance of reading skills (OECD, 2021).

In addition to the impact of reading skills on academic and social skills, there is a growing number of projects that are being implemented to develop these skills (Ferrer & Staley, 2016; Greaney, 1996). Many countries conduct studies monitoring students' reading skills and evaluating their relationship to various factors (Darr, 2017; International Consultative Forum on Education for All, 2000; NMSSA, 2015). Several international follow-up studies have demonstrated that the diversity and richness of reading resources are significantly related to students' reading skills (Brozo, Shiel & Topping, 2007; Heppt, Olczyk & Volodina, 2022). Consequently, as the diversity of reading sources increases, this diversity is reflected in student performance.

Recognizing the critical importance of reading skills, MoNE has taken significant steps to promote reading through the "No School Without a Library" project. Within a span of three months, 16,361 libraries were established and equipped with reading materials. Additionally, schools that already have libraries were included in the project, and their reading resources were expanded. Prior to the initiation of the project, it is estimated that school libraries had approximately 27 million books before the project began, but by the end of 2022, this number had increased to over 110 million. Looking ahead, the goal for 2023 is to further augment support for reading resources and increase the total number of books in school libraries to an ambitious target of 150 million. This concerted effort underscores the commitment of MoNE to enhance reading opportunities for students across the country.

j. School-based large-scale projects

There has long been evidence that school climate influences many educational outcomes (Greenway, 2017; Konold et al., 2018; Teng, 2020). As defined by the OECD, a positive school climate fosters students' sense of belonging, positive attitudes towards education, self-confidence, and peer relationships, and ultimately leads to higher academic achievement (Dinçer, 2021; Konold et al., 2018; OECD, 2019c; Teng, 2020). Moreover, studies have also shown that a positive school serves as a protective factor against early drop outs (Daily, 2020). Given the manifold benefits associated with a positive school climate, it has become one of the primary areas of investment in educational systems.

There is no doubt that enhancing school climate is a complex undertaking that requires comprehensive improvements across multiple dimensions, beyond just

physical infrastructure (Voight & Nation, 216). In order to cultivate a positive school climate, it is necessary to provide support programs for disadvantaged students, mechanisms to foster parental participation in education, safe, rich educational environments, and educational opportunities for teachers (Fisher & Fraser, 1991; Haynes, Comer & Hamilton-Lee, 1989; OECD, 2012).

The "school-based improvement" approach implemented by MoNE, focusing on vocational high schools through the "1,000 Schools in Vocational Education & Training" project, demonstrates a holistic approach to improving school climate. By addressing both infrastructure needs and academic support programs, the project aims to tackle multiple challenges faced by these schools, such as low student performance, high dropout and absenteeism rates, and infrastructure requirements (Özer, 2022b). Teachers working in schools within the scope of the project received field training, pedagogical training, first aid training, and addiction awareness training. To increase parents' participation in education, priority was given to non-formal education programs. Practically, almost 25% of VET high schools and 38% of VET students and teachers are included and benefit from multi-level support through the project (Özer, 2022b).

The approach used in the "1,000 Schools in Vocational Education & Training" project contributed greatly to improving the climate of the schools involved. A similar approach was used to strengthen primary education institutions in 2022 as a new project called "10,000 Schools in Primary Education". As part of this project, the needs of the ten thousand schools were determined, and then improvements were made to the physical infrastructure, for students, teachers, and parents similar to those in the "1,000 Schools in Vocational Education & Training" project.

k. Renovation of school buildings

Schools are not just educational environments, but also serve as hubs for various activities for all segments of society (OECD, 2004). Consequently, it is essential that all educational institutions, especially those located in disaster-prone areas; provide a safe environment in which to educate students (OECD, 2004, 2017; UNCRD, 2008). With increasing waves of migration into cities, many countries face the need for new school construction and expansion of existing schools (OECD, 2004). Therefore, it is imperative to ensure that both newly constructed and existing educational buildings are protected against disasters to safeguard the continuity of education. The recent earthquake disaster in Kahramanmaraş serves as

a stark reminder of the significance of adhering to safety standards and ensuring swift resumption of education (Özer, 2023b).

As a result of accelerating the building reinforcement works that MoNE had been conducting for years, it aims to complete the retrofitting of 650 schools for which the decision was taken to reinforce in 2022. The target number of 870 buildings was increased in 2022 as a result of the necessary investments and infrastructure preparations. During the retrofitting process, all major and minor repairs were completed on 870 buildings. In 2023, MoNE plans to complete the retrofitting of all buildings that had been designated for strengthening.

1. Building new classrooms

Indicators of educational quality include the number of classrooms and the average number of students per classroom (NCES, 2022; OECD, 2006). Using these variables as indicators of quality because smaller class sizes allow teachers to provide more individual attention to students (Allen et al., 2013; Wang & Calvano, 2022). This can be particularly beneficial for disadvantaged students, as they may require additional support, which can be better addressed in smaller classrooms (Laitsch, Nguyen, & Younghusband, 2021). As a result, less crowded classrooms are important for enhancing student-student interaction and enhancing academic performance.

The construction of new classrooms in Türkiye is a very important measure to increase the quality of education where the population of school-age children is continually growing. Despite the increasing student population, creating adequate educational environments and reducing the average number of students per class requires significant investment and planning. There were just over 300 thousand classrooms in Türkiye at the beginning of the 2000s, and the number has increased to over 857 thousand. The large investments made in the last 20 years and the planning at the provincial and district levels have resulted in the average class size in all educational levels approaching the OECD averages, despite an increase in the student population to 19 million. In 2022, all schooling levels will have an enrollment rate of over 98%, and the average number of students per class will be similar to that of OECD countries.

To further improve the situation achieved over the past two decades and to further reduce the number of classrooms, MoNE intends to build 10,000 new classrooms by 2022. This initiative aims to achieve the OECD average for class sizes at all educational levels, despite having a larger student population compared to many other countries. As part of its efforts to reduce average class sizes to the lowest possible level at all levels, MoNE conducted evaluations at the regional, provincial, and district levels, and constructed 12 thousand new classrooms during the year, exceeding its target. Building on this success, MoNE plans to construct 15,000 new classrooms by 2023 using the same approach, to further reduce average class sizes to the lowest possible level at all levels of education.

5. Increasing production capacity and training R&D activities

a . A significant increase in revolving fund revenues

VET is a form of education where students develop their vocational skills through on-the-job training, with the production process playing a crucial role in their skill acquisition journey (CEDEFOP, 2021; Özer, 2020a, 2020b). The production process plays a significant role in assisting students in mastering their field of expertise during the skill acquisition process. The contribution of the production within VET to the students is important, but the contribution to the national economy is equally important (Nilsson, 2010). Firstly, students who develop their skills

through these productions contribute to the sustainability of the development by providing the labor force required by the market. Additionally, all stakeholders, including students and teachers, provide financial gains from the productions (CEDEFOP, 2020c; Özer, 2020a). Lastly, VET offers a flexible and production-oriented structure that can be organized quickly for the production of products needed on a national level. This has been particularly evident in the wake of recent events such as the Covid-19 pandemic and the earthquake on February 6, 2023, where VET high schools have emerged as key producers of urgently required products for the country (Özer, 2020c, 2023b).

A significant improvement in vocational secondary education has been the increase in production capacity (Özer, 2020a, 2021a). VET institutions that do not have revolving fund enterprises have received support from MoNE to establish such enterprises. In addition, revolving funds were used to improve the infrastructure of upper-secondary VET institutions to increase production capacity. These investments and efforts led to a revolving fund income of 1 billion 162 million ₺ at the end of 2021, up from 248 million 608 thousand ₺ in 2018. In 2021, teachers earned approximately 115 million ₺ and students earned approximately 49 million ₺. With MoNE's increased support for revolving fund production, the institution set a production target of 1.5 billion ₺ in 2022 and provided educational institutions with the necessary infrastructure support. The increased support in 2022 resulted in a production of approximately 2 billion ₺ of revolving funds, which was above the target and contributed to the national economy. An estimated 100 million ₺ was given to students and 200 million ₺ was given to teachers as a contribution.

b. Increasing the production of intellectual property

In the modern world, there has been a shift in the nature of production from physical to intellectual dimensions, and the context in which production takes place is evolving (Coombe & Turcotte, 2012; de Cock Buning, 2016). It is the innovative perspectives that lead to this production that has gained importance in the context of this change, rather than the concrete outputs of the production (Özer & Suna, 2022b). Advancements in technology have reached a point where it is possible to replicate physical production outputs rapidly. As a result, it has become unclear who or which institution originally produced the product, and what concept or idea it was conceived upon.

It is at this point that intellectual property becomes extremely important for claiming ownership of productions and claiming rights to various types of productions (Saha & Bhattacharya, 2011). Patents, utility models, brands, and designs are currently used to assert production ownership (Saha & Bhattacharya, 2011; Van Dusen, 2013). The certification of productions by these means can be used by individuals and institutions to claim ownership rights, as well as to ensure that innovative ideas are protected.

Türkiye has recognized the importance of intellectual property and has begun to set targets in this regard in the 2000s (Özer & Suna, 2022b). In the 11th Development Plan, quantitative targets regarding the intellectual property were established, and the steps necessary to achieve

these targets were outlined. As of 2021, MoNE has started to provide multidimensional support for the evaluation of productions in educational institutions within the framework of intellectual property. As a result, teachers were trained in the development and implementation of projects related to intellectual property, and an "Intellectual Property Office" was established within MoNE in collaboration with the Turkish Patent and Trademark Office. Furthermore, quantitative targets have been set for intellectual property outputs, and production has progressed in line with these targets.

As a result of concerted efforts, intellectual property outputs in educational institutions have increased significantly. In contrast to the limited number of less than 10 registered products in 2017 and prior years, a target of 7,500 registrations by 2022 was set. In this process, MoNE has exceeded its target by effectively using all educational institutions, especially VET institutions, Science and Art Centers (BİLSEM), and technical institutes resulting in the registration of 8,300 products during the year. Furthermore, 162 registered products have been commercialized. As part of its extensive support for intellectual property, MoNE has set the goal of registering at least 10 thousand products in 2023 and commercializing at least 5% of these products.

6. Promoting lifelong learning

a . Enhancing public education courses

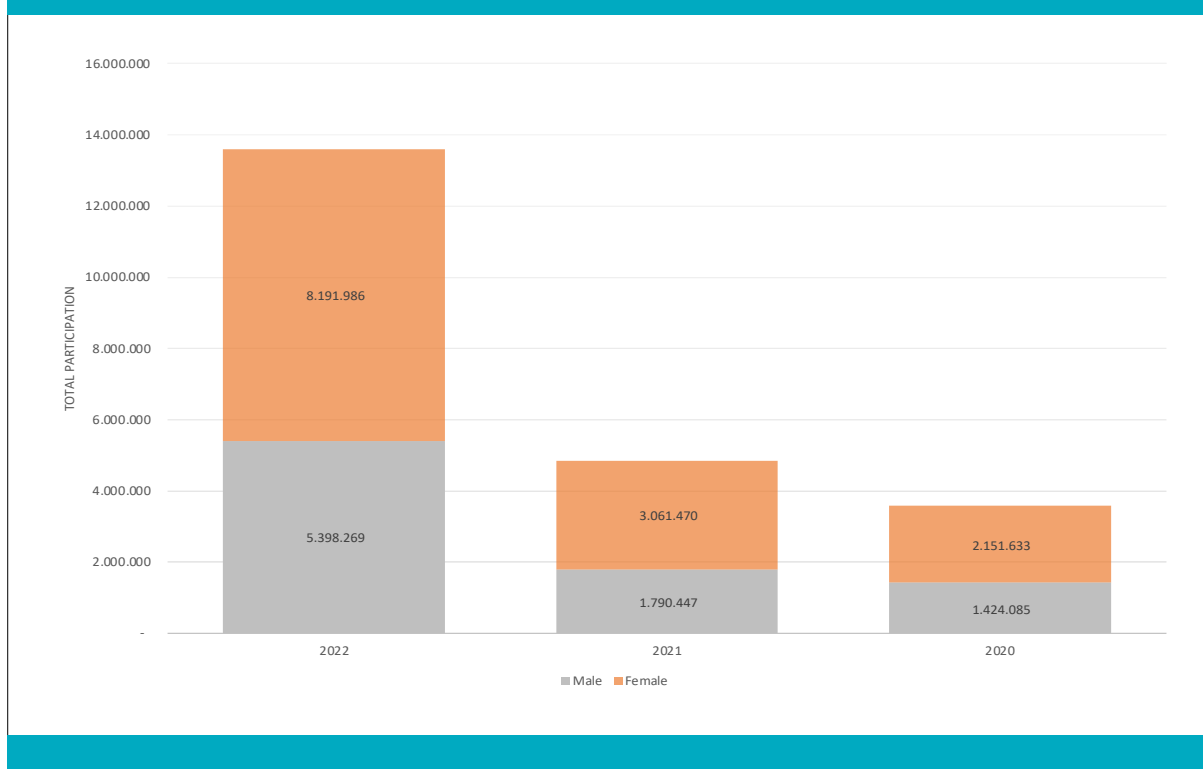
The participation of adults in education is an important area of development in Türkiye, considering the significant proportion of the population that falls into this category (Eurydice, 2021; OECD, 2020b; Özer & Suna, 2022a). It has been noted in recent international large-scale studies that the average basic skills of adults between the ages of 16 and 64 in Türkiye are relatively low, and they participate in adult education at a significantly lower rate than average (Eurydice, 2021; OECD, 2020b). As a result of these findings, it is evident that policies to promote adult education in Türkiye are important (Özer & Suna, 2022a).

Adult education has been offered in Türkiye through public education courses for many years as part of lifelong learning. A key objective of MoNE has been to provide adult learners with skill development through the use of educational institutions for many years. MoNE, however,

has taken a significant step by taking the feedback of adults in the region more into consideration when determining which courses will be offered within the scope of public education courses in the region at the end of 2021, increasing the capacity and diversity of education significantly. Furthermore, MoNE has conducted awareness campaigns on public education courses using provincial organizations and its social media accounts.

The efforts of MoNE in improving public education courses and raising awareness about adult education have resulted in a significant increase in participation (Özer, 2022a). First and foremost, the total number of participants has greatly increased since 2022, and it is hoped that 12 million citizens, at least one million each month, will participate in public education courses. Due to the actions taken by MoNE, the target set exceeded and reached 13,590,255 citizens in 2022 with a major share of females as seen in Figure 3.

Figure 3: The total participation to public education courses by gender between 2020 and 2022



MoNE has set a target of 15 million citizens participating in adult education by 2023 using a similar approach. Furthermore, the adaptation of educational content to the digital environment and the implementation of the Adult Education Center Informatics Network (HEMBA) are important steps toward disseminating adult education. Participants of the training will also be able to participate remotely through this platform, and citizens who are unable to physically attend the course will also be encouraged to participate.

b. Family School Project

Extensive research in the field of education has consistently shown that the characteristics of a family have a direct and significant impact on the educational outcomes of students (Center on Education Policy, 2012; Li & Qiu, 2018; Suna et al., 2021). In fact, studies have demonstrated that familial characteristics are associated with student outcomes more strongly than school-related factors (Eriksson et al., 2021; Suna et al., 2021). Several aspects of the student's life are influenced by the characteristics of his or her family. Various aspects of a student's life, such as their learning process, are profoundly influenced by the opportunities available at home and the attitudes of their families.

Researchers have found that the participation of parents in education has a significant relationship with the educational achievement of their children (McNeal, 2014; Topor et al., 2010). Concretely, a family that shows greater interest in its child's education, supports their learning more and closely monitors their performance has a higher probability of

success. In order to participate in educational activities, families must establish a qualified relationship with their children, determine their needs, and possess the competency to provide support to the students. Families must, therefore, have a wide range of skills to effectively participate in the educational process.

MoNE has recognized the important role of families in promoting adult education and enhancing the academic performance of students. In line with this, the "Family School" project has been initiated to encourage families to participate in education and acquire academic and social skills simultaneously. As part of this project, training will focus on family communication management and effective communication, the use of technology, moral development, stress management, healthy nutrition, the environment, and first aid. In addition to these subjects, participants may also receive training in basic literacy skills and basic cognitive skills.

The "Family School" project initiated by MoNE has gained significant momentum, with over 137 thousand families reached during the first month of implementation in seven pilot provinces, and expanding to reach 1 million 110 thousand families across all 81 provinces within a year. This surpassed the initial target of 1 million participants in 81 provinces set for the project. As part of the study, participants are required to complete 56 hours of training in 12 areas, including those previously mentioned. During 2023, MoNE increased its total participation target to 2.5 million to enhance the inclusiveness of the project, which has received a great deal of interest from families.

7. Improving the professional development of teachers

Studies conducted in the field of education have revealed that a limited number of factors are associated with educational outcomes, including teacher characteristics (Chatty, Friedman & Rockoff, 2014; Oppen, 2019). Many education systems have revealed relatively strong relationships between student performance and teacher characteristics as a result of large-scale assessments (OECD, 2018b). Since the teacher is responsible for directing the learning process, the influence of teacher characteristics on student performance should be readily apparent. To ensure student success, approaches that will improve teacher characteristics and support their professional development are essential. In many education systems

today, teacher training and professional development are among the most important policy areas (OECD, 2018b).

Professional development of teachers takes place primarily in two ways; teacher training before starting the profession (initial teacher trainings) and after entering the profession (in-service trainings) (Boeskens, Nusche & Yurita, 2020). According to studies in the literature, teacher training, regardless of the quality of the training, decreases unless it is accompanied by in-service training tailored to the teacher's needs (Boeskens, Nusche & Yurita, 2020). To maintain teachers' pedagogical skills and field knowledge, quality and inclusiveness of in-service training are essential.

By the end of 2021, MoNE introduced a new approach to in-service training with the aim of supporting teachers' professional development. This approach encompassed both physical participation in trainings and enhanced opportunities for distance education through the establishment of the Teacher Information Network (ÖBA). A major benefit of the new approach is the provision of a budget to schools to meet the training needs of their teachers. MoNE allocated an important amount of budget to schools for teacher training in 2022. Consequently, school administrations have the authority and budget to determine and meet the training needs of their teachers. Secondly, teachers' opinions were taken into consideration more in determining the topics to be opened within the scope of in-service trainings, and the trainings were enriched according to the feedback of the teachers. Then, all materials developed for teacher professional development were brought together in ÖBA, and its infrastructure was strengthened. As discussed in detail in the next section, participation in the trainings developed

for teachers wishing to become specialist teachers and head teachers within the scope of the Teaching Profession Law (ÖMK) has greatly increased the inclusiveness of professional development trainings. Teachers' options for participating in in-service training have been enhanced in this context, which is intended to increase their participation.

MoNE has greatly increased teacher participation in training as a result of its new approach to professional development. Almost all teachers at all levels of the education system have received at least one professional development training. Secondly, the new approach resulted in an increase of 44 hours per teacher in 2021 to 250 hours in 2022 as a result of the new approach. In 2023, MoNE plans to increase the average teaching hours per teacher to 350 hours by continuing to send budgets to schools, enriching ÖBA content, and enhancing the capacity of physical education.

8. Enacting an Independent Law for Teaching

Teaching plays a crucial role in society as it encompasses the requisite skills for the profession and has a profound impact on the quality of education (OECD, 2005). As a result, the qualifications of teachers have a direct impact on the educational process and, in turn, on the development of all segments of society. Given the significant role played by the teaching profession, teachers are held in high esteem within society, leading to the emergence of a law that delineates the parameters of the profession. In many policy documents developed in Türkiye to date (see the Education Council decisions, national development plans, etc.), it has been stressed that a law specific to the teaching profession should be passed to establish the framework of this profession (Özer, 2022a).

The introduction of the Teaching Profession Law (ÖMK), which was prepared by MoNE in 2021, came into effect on February 14, 2022. For the first time in Türkiye, MoNE has defined teaching as a specialty field and separated it from other areas of public responsibility. Teachers' career paths were outlined in the law, as well as the conditions for entry into the profession. A notable feature of the ÖMK is that it recognizes teaching as a viable career path,

wherein experienced teachers can attain the titles of "expert teacher" and "head teacher" upon successful completion of training programs, without any quotas limiting the number of eligible candidates. The titles in question are not subject to any quotas, thus, all teachers who wish to apply and meet the criteria may do so. This has resulted in Türkiye becoming one of the countries that have defined and structured the teaching profession as a career path with independent legislation. With the new titles, teachers' rights are also improving significantly, and the "limited development of personal rights from start to retirement" expressed by the OECD is also overcome (Kitchen et al., 2019). Following the implementation of the ÖMK, approximately 95% of teachers who met the required criteria applied for the position of expert teacher and head teacher. The titles of "expert teacher" and "head teacher" have been awarded to more than 580,000 teachers who have completed the training and passed the exam successfully. In 2023, MoNE has set the goal of extending the scope of this law defining teaching and improving teachers' rights through new regulations in addition to their rights.

9. Establishment of an academy for managers

The impact of school administrators' leadership behaviors on the quality of educational processes in schools has been widely acknowledged for many years (Dimmock, 1995; Mincu, 2022). School administrators' support for teachers and students, as well as the school of a consistent and safe environment, play a significant role in improving the school climate (Pont, Nusche & Moorman, 2008). In light of this, all stakeholders in education are affected by the behaviors and preferences of school administrators.

In addition to the efforts to enhance the professional development of teachers, MoNE in Türkiye has taken steps to improve the leadership skills of school administrators by establishing the "Administrative Academy" in 2022. In order

to improve the leadership skills of school administrators and to disseminate good practice examples in educational administration, this academy has initiated several training programs. School administrators will receive training in 'history, culture, and civilization awareness' following the establishment of the academy. In 2022, 4,000 school administrators have already received training in education history, culture, and civilization through the academy. MoNE has set a goal to ensure the participation of all school administrators in Türkiye in the Administrators Academy trainings by 2023, demonstrating its commitment to advancing the professional development of school administrators in the country.

10. Enhancing special education practices

a . Establishing public education centers for disabled adults

Lifelong learning is crucial for adults to adapt to evolving life circumstances (Benavot et al., 2022; UNESCO, 2021). To achieve equality of opportunity, the dissemination and inclusiveness of lifelong learning activities to all segments of society are very important (United Nations Economic Commission for Europe, 2010). Particularly, people with disabilities may encounter various disadvantages and limitations when it comes to accessing adult education (UNESCO Institute for Lifelong Learning, 2020). The ability to overcome these limitations and equip disabled adults with skills contributes significantly to their social integration and employment prospects.

A significant milestone has been achieved with the establishment of "Public Education Centers for the Disabled Adults" which cater to people with disabilities aged 18 and above. This program is designed to provide adults with disabilities the opportunity to benefit from the vocational skills development programs offered by public education centers. The centers provide training that takes into account the disabilities of participants as well as their individual needs. Within a year, MoNE ensured that at least one Disabled Public Education Center was operating in each province. Additionally, MoNE has taken proactive measures to facilitate

transportation to these centers by offering free transportation services to disabled citizens and their families, which makes it easier for them to access these services. By 2023, MoNE has set a goal to expand the Disabled Public Education Centers to all districts in the country, further promoting opportunities for disabled adults to benefit from vocational skills development programs and enhance their social integration and employment prospects.

b. Enhancing special education

Education environments play a significant role in influencing students' educational approaches as well as educational performance (Barrett, 2019; Fisher, 2001). Enriched educational environments have been shown to facilitate effective learning and increased student engagement. When students have special educational needs, the quality of the educational environment becomes even more critical (Agarwal, 2020). Therefore, it is imperative that educational environments are structured to meet the unique needs of students with special educational needs and cater to diverse educational requirements. International organizations have also recognized the importance of educational environments for students with special educational needs (OECD, 2021b).

During 2022, MoNE intended to enhance the special education applications to improve the opportunities it provides to

students with disabilities. Standards were established for five skill areas, namely visual arts, music, physical education and sports, sensory and movement development, and gardening and animal care. These five areas were standardized in 2022, and 345 schools for special education practice established 788 skill practice areas. A total of 899 thousand special education materials have been developed and delivered to schools in accordance with the standards for the development of these areas. Using the same approach, MoNE plans to increase the number of skill areas in special education practice schools to 10 by 2023.

c. Enhancing the number of science and art centers

The tradition of implementing special programs for students with higher skills compared to their peers has a long-standing history (Gallagher, 1994; Mitchell & Williams, 1987). Research has shown that gifted students possess unique learning characteristics that differentiate them from their peers (Munro, 1996). This context suggests that identifying gifted students and providing them with additional educational programs that meet their needs has the potential to result in important outcomes.

Science and Art Centers (BILSEMs) have supported gifted students in Türkiye for many years. BILSEMs are institutions with strong infrastructure and a variety of academic and artistic programs that provide additional educational support to students outside of the classroom (Özer, 2021b). In BILSEMs, students receive education in areas where they possess high skills in line with their areas of talent. Teachers nominate students who are believed to have special abilities, and then these students are subjected to cognitive ability tests. The talent/skill commission assesses the potential of prospective students in the arts. Students who are successful as a result of the evaluations are registered in BILSEMs (Özer, 2021b).

BILSEMs play an important role in the education of gifted students. However, although BILSEM programs have been implemented for many years, the total number of BILSEMs in Türkiye and the number of students supported through BILSEMs seem to be partially limited. For example, there are 61 BILSEMs in Türkiye in the 2010-2011 academic year, with more than 9 thousand students benefiting from these institutions. By the 2019-2020 academic year, the number of BILSEMs increased to 181 and more than 62 thousand students benefited from BILSEMs (Özer, 2021b).

BILSEMs will be disseminated throughout Türkiye as a result of an important decision made by MoNE in 2022. This project intends to increase the number of BILSEMs from 225 by the end of 2021 to 350 and to increase the number of students who will benefit from these institutions. Having made the

necessary planning and investments, MoNE reached its target number of 375 BILSEMs exceeding it by 15%. The number of students utilizing these institutions has increased from 67 thousand to over 86 thousand since the prevalence of BILSEMs has increased. As of 2023, MoNE has set a target to establish at least one BILSEM in each district in Türkiye.

d. Enhancing the number and strength of guidance research centers

Counseling services offered in schools contribute to student well-being and a positive school climate in many ways (Alexander et al., 2022). Research indicates that psychological counseling services can increase students' engagement and psychological resilience, leading to higher educational success in the long run (Brooks, 2021; Edwards, 1995; Setiawati, 2021). Furthermore, it is also essential to identify students with special educational needs based on the quality of the services provided. A student with special educational needs can only be provided with an educational environment that meets their own needs when their educational needs are correctly identified. It is the responsibility of Guidance Research Centers (RAMs) in Türkiye to determine and plan the special education needs of students. The RAMs develop plans for providing counseling and guidance to schools in their regions, for preparing guidance programs, and for identifying and meeting the needs of the region by collaborating with psychological counselors in local schools. RAMs provide psychosocial and psychoeducational services to both parents and students. RAMs provide psychological services based on school psychological counseling processes and assume an important role in identifying and meeting needs in the region under their responsibility.

It is critical to strengthen the staff of RAMs and increase their prevalence in psychological counseling services, given RAMs' important role in these services. As part of these efforts, MoNE has made the necessary arrangements for the appointment of physiotherapists for the first time in these centers. As a result of these arrangements, 260 physiotherapists have been recruited and assigned to RAMs, which will enhance the capacity of RAMs to provide comprehensive and inclusive services to students with special needs.

Another objective of MoNE was to increase the number of RAMs throughout the country. To achieve this goal, psychological counseling services will be strengthened holistically. It is planned to increase the number of RAMs from 243 to 275 by the end of 2022 in order to achieve this goal. MoNE's planning and investments resulted in an increase in RAM to 286 and exceeded the target. By 2023, MoNE aims to increase RAMs to 300 by using a similar approach.

11. The dissemination of environmental and climate change awareness

As a consequence of human activities that have destroyed nature, the environment has suffered significant damage. According to the World Economic Forum (WEF), as of 2020, 83% of all mammals and approximately half of all plants are either extinct or on the brink of extinction. Particularly, the rapid population growth and the increased production to meet the needs of this population, along with changes in consumption habits, have caused the greatest damage to the environment (Roach, Goodwin & Nelson, 2019; WEF, 2020). This situation has been the trigger of climate change today, and the earth has reached the highest temperature values in history. The effects of climate change are now clearly evident. In the last 50 years, disasters due to climate change increased threefold compared to the previous 50 years (United Nations, 2021). The current global problems make it imperative to raise awareness of environmental and climate issues as soon as possible and to spread them to all segments of society. It is for this reason that many countries in the OECD and EU region engage in large-scale projects (ETF, 2022; European Commission, 2019). It is the primary objective of these projects to raise the awareness of nature in education, to gain skills for protecting the environment as defined as 'green skills', and to keep the damage to the environment as low as possible in education and the workplace (ETF, 2022).

The "Environmentalist 1,000 Schools" project was launched by MoNE in 2022 in order to take an important step in the process of gaining awareness of nature, enabling students to learn by doing and by living, and initiating the Green Transformation from schools. At least one school in each province in Türkiye will undergo the necessary transformations to become an environmentally friendly school as part of this project. Furthermore, rainwater treatment systems were installed in 1,000 schools, and solar panels were installed in schools. The practice of organic farming was carried out in schools with the necessary physical facilities. Moreover, 'zero waste libraries' have been established in these schools. The implementation of all of these measures contributes significantly to the fact that schools consume the least amount of energy and store a variety of natural resources.

Through their exposure to nature-sensitive technologies, students studying in these schools directly support energy storage.

In 2022, MoNE took another important step in the curriculum to increase environmental awareness and raise awareness of climate change. MoNE has expanded the scope of the 'environmental education' course at the primary and secondary school levels and rearranged it to 'environmental education and climate change'. As part of the restructuring of the course, issues related to climate change, greenhouse gases, and global warming were included. The course will provide 2 hours of instruction each week, a total of 72 hours of instruction in grades 6th, 7th, and 8th. This curriculum update was achieved through collaborative efforts between the Ministries of Agriculture and Forestry, Energy and Natural Resources, and Environment, Urbanization and Climate Change.

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