



School-Based Improvement in VET: “The 1,000 Schools in Vocational Education and Training Project”

Mahmut ÖZER^{a*}

a Prof. Dr., Ministry of National Education, Ankara/Turkey(<http://orcid.org/0000-0001-8722-8670>) *mahmutozer2002@yahoo.com

Review Article

Received: 20.01.2022

Revised: 11.03.2022

Accepted: 12.04.2022

ABSTRACT

Vocational education and training (VET) faces a significant transformation after the 2000s, due to the widespread use of automation and artificial intelligence-based production technologies. VET also has other troubles including higher student flow to academic track and higher rate of socioeconomically disadvantaged students in VET institutions. In this context, it is of great importance to improve the school climate of VET institutions. The “1,000 Schools in Vocational Education and Training Project” was initiated by the Ministry of National Education (MoNE) in order to extend the paradigm shift in recent years in VET. This study aims to evaluate how school-based improvements are made across Turkey in the project. The project, which is the largest-scale programme for the improvement of Turkish VET system, covered approximately 25% of VET high schools in Turkey. Within the scope of the project, 1,000 disadvantaged schools based on education indicators were selected. As a part of a multi-staged support; more than one hundred thousand students attended academic support programs, and more than four hundred thousand students attended psychosocial support and trainings for coping with addiction trainings. The number of participants in pedagogical and leadership skill programme for teachers and school administrators has exceeded three hundred thousand. Parents’ participation in open secondary schools, open high schools and vocational courses was encouraged, and more than eleven thousand parents attended these trainings. Within the improving of schools’ physical infrastructure, new laboratories and libraries were established and workshops were renovated in schools. The project has proven that the school climate can be improved via a multi-staged support and it has become a practical model for the “10,000 Schools in Primary Education Project”.

Keywords: Vocational education and training, educational equality, academic support, school climate.

Mesleki Eğitimde Okul Temelli İyileştirme: “Mesleki Eğitimde 1.000 Okul Projesi”

ÖZ

Mesleki eğitim, 2000’li yıllar sonrasında otomasyon ve yapay zekâya dayalı üretim teknolojilerinin yaygınlaşması nedeniyle önemli bir değişim sürecinden geçmektedir. Yükseköğretimin evrenselleşmesi ve sağladığı imkânlar dolayısıyla öğrencilerin akademik eğitime yönelmesi mesleki eğitime öğrenci akışını azaltmakta, mesleki eğitimde sosyoekonomik açıdan dezavantajlı öğrencilerin yoğunluğunun daha fazla olmasına yol açmaktadır. Bu bağlamda mesleki eğitim kurumlarının kendi ihtiyaçlarını merkeze alacak şekilde okul ikliminin iyileştirilmesi büyük bir önem teşkil etmektedir. Millî Eğitim Bakanlığı, son yıllarda mesleki eğitimde başlattığı paradigma değişimini daha da ileriye taşımak ve tüm mesleki eğitim kurumlarına yaygınlaştırılması amacıyla Mesleki Eğitimde 1.000 Okul Projesi başlatılmıştır. Bu çalışma, 2021 yılı içinde başarıyla gerçekleştirilen projede yapılan okul temelli iyileştirmelerin ayrıntılarıyla değerlendirilmesini amaçlamaktadır. Türkiye’de mesleki eğitimin iyileştirilmesi için yapılmış en büyük ölçekli projesi olan çalışma, tüm mesleki ve teknik Anadolu liselerinin yaklaşık %25’ini kapsamına almıştır. Proje kapsamında eğitim göstergelerine göre dezavantajlı olan 1.000 okul seçilmiş, ihtiyaçları gözetilerek okul ikliminin güçlendirilmesi sağlanmıştır. Öğrencilere yönelik akademik destek programlarına yüz binden fazla, psikososyal destek ve bağımlılıkla baş etme eğitimlerine ise dört yüz binden fazla öğrenci katılmıştır. Öğretmen ve okul yöneticilerine yönelik pedagojik ve liderlik becerilerine dair eğitimlere katılım sayısı üç yüz bini aşmıştır. Velilere ulaşılarak açık ortaokul, açık lise ve halk eğitim kurslarına katılımı teşvik edilmiş, on bir binden fazla velinin bu eğitimlere katılımı sağlanmıştır. Okulların fiziki altyapısının iyileştirilmesi için yeni laboratuvarlar kurulmuş, atölyeler yenilenmiş ve tüm okullara kütüphane kurulumu yapılmıştır. Proje, mesleki eğitimde okulların ihtiyaçlarını merkeze alacak şekilde bir iyileştirme yapılabileceğini göstermiş ve “Temel Eğitimde 10.000 Okul Projesi”ne öncü olmuştur.

Anahtar kelimeler: mesleki eğitim, eğitimde fırsat eşitliği, akademik destek, okul iklimi.

To cite this article in APA Style:

Özer, M. (2022). School-based improvement in VET: “The 1,000 schools in vocational education and training project”. *Bartın University Journal of Faculty of Education*, 11(2), 268-279. <https://doi.org/10.14686/buefad.1096198>

1 | INTRODUCTION

Schools are central environments for education and affect the teaching processes with their quality (Maxwell et al., 2017; McMahon, Wernsman, & Rose, 2009). Therefore, schools’ characteristics determine the approaches of the stakeholders involved in education, including students, teachers, school administrators and parents (Cotton, 1989; Doran, 2004; Finn & Voelkl, 1993). Thus, improvement of the school infrastructure and climate has a great potential for increasing educational performance (Barrera-Osorio, Fasih, & Aprinos, 2009; The World Bank, 2013).

The school is at the center of education and the improvement of its’ physical facilities and climate is reflected in educational outcomes (Holzberger et al., 2020; Schneider, 2002; Sweetland & Hoy, 2000). Therefore, improvement of the schools’ infrastructure is among the factors that lead to better educational outcomes (Barrett et al., 2019). On the other hand, research since the 1950s has revealed that the impact of school climate is stronger on educational outcomes (Anderson, 1982; Cohen et al., 2009; Thapa et al., 2013).

School climate, the quality of students' school life including academic and social interactions at school, is decisive for students' educational outcomes (Kwong & Ryan, 2015). Research indicates that improving school experiences and belonging provide multi-dimensional benefits to students (Kutsyuruba, Klinger, & Hussain, 2015). Students in schools with a positive climate have higher achievement, positive attitudes towards education and school, and higher well-being (Kutsyuruba, Klinger, & Hussain, 2015; Lombardi et al., 2019; MacNeil, Prater, & Busch, 2009; Zysberg et al. Schwabsky, 2020).

The importance of school climate is well-known in educational research, however, it is a challenging task for educational authorities to improve the school climate. Because students’ experiences at school are affected by many factors and it is necessary to consider these factors in making improvements. In this context, diverse practices to support the school climate are suggested such as increasing student-teacher and peer interaction, developing activities to develop social skills, creating a safe environment, providing academic and social support to disadvantaged students (Linda-Darling and Cook-Harvey, 2018).

While efforts to improve the school climate directly contribute to student outcomes, non-school factors have the opposite function, leading to the gaps between students, even widening them (Berliner, 2009; Hampden-Thompson & Johnston, 2006). These factors are beyond students’ personal control and the widening of differences among students may lead to an increase in inequalities. Particularly students from low socioeconomic status (SES) may face educational difficulties due to limitations (Thomson, 2018).

Improving the school climate has a particular importance for disadvantaged students (Berkowitz, 2020; OECD, 2012). Education is the most important tool that countries use for providing a better future to disadvantaged students by compensating their drawbacks (Caillods, 1998). In all education systems, some students fall behind their peers for various reasons and face disadvantages (OECD, 2012). These students show more problematic behaviors such as high school drop-out, discipline problems and lower educational commitment (Banerjee, 2016; OECD, 2012). A positive school climate is of great importance in changing students' educational behaviors, enabling them to be more successful and increasing their sense of school belonging (Arum & Velez, 2012; OECD, 2012).

Supporting disadvantaged students by improving the school climate also provides significant social benefits. A more supportive, safer and interactive environment can mitigate the effects of socioeconomic differences among students (Berkowitz, 2016). Thus, the positive school climate is a powerful tool in coping with the early dropout (Kotok, Ikoma, & Bodovski, 2016), and it has an important potential for increasing disadvantaged students’ employability (Crans et al., 2021). Considering that human capital is among the most important resources that countries have (Becker, 1962; Özer, 2021a), improving the school climate is a key factor for national development.

Promoting the positive school climate is even more important in the vocational education and training (VET) systems. Firstly, increases the rate of socioeconomically disadvantaged students among VET students is higher than academic education in many countries, including Turkey (Foley, 2007; Özer, 2020, 2021b; Suna et al., 2020; Traqueia. et al., 2020). Second, the practical training in VET requires frequent improvement of physical infrastructure and materials. Third, the diversity of vocational fields under the roof of VET leads to a remarkable variation in schools’ needs. Therefore, it is critical to support the infrastructure and climate of VET institutions.

While VET systems need rich physical infrastructure and a positive school climate, they experience an important transformation process (UNESCO, 2012; Zhao, 2021). The rapid spread of technologies based on automation and artificial intelligence forces VET systems to adapt and transform (Özer and Perc, 2020; Perc, Özer and Hojnik, 2019). As a result of this change, the expectations of the labor market from VET systems have also changed (Özer, 2019a, 2020b). General cognitive skills, social skills such as adaptation, cooperation, and digital skills are prioritized in the transformation of VET (Barrera-Osorio, Kugler, & Silliman, 2021; ILO, 2021). These changes aim to train a human resource who can quickly adapt to the changes, have effective reasoning skills and work efficiently with others.

The VET system in Turkey has been undergoing a paradigm shift in Turkey in recent years. Numerous solid steps have been taken to renew the VET system based on the current needs of global transformation (Özer, 2018, 2019b). The Ministry of National Education (MoNE) has led these changes to make the VET system competitive on a global scale. The improvements included all elements of the VET system to lead a holistic improvement at national level (Özer, 2020a, 2020b, 2021b). Strengthening relations with labor market, expanding employment-priority or guaranteed VET programs, revision of education programs and curricula, increasing the compatibility between vocational fields and the labor market demands, supporting Research and Development (R&D), establishing prestigious VET high schools, and improving the conditions of vocational training centers (VTCs) regarding journeyman and mastership trainings are the prominent ones among these improvements (Özer, 2020a, 2020b, 2021b).

These improvements have led to solid outputs in the VET system in a short period. The number of students -including students with high academic performance- who prefer the VET track has increased significantly (MEB, 2020a, 2021). After these improvements, VET institutions started to produce innovative products, increased revolving funds greatly, and for the first time, exported their products (Özer, 2021c). Based on increasing production capacity and support, VET institutions have become main producers of the needed materials during the Covid-19 epidemic (Özer, 2020c). MoNE has initiated the “1,000 Schools in Vocational Education and Training Project” in order to disseminate these improvements to all VET institutions and to encourage a school-based improvement culture (Özer, 2021b, 2022). This project provides multidimensional support to particular VET high schools with various disadvantages, and enables these educational institutions to benefit from the recent improvements in the VET system. The project has become one of the most comprehensive projects in the Turkish VET system with a budget of approximately 1 billion TL including more than 600,000 students, more than 40,000 teachers and nearly 3,000 school administrators. This study aims to evaluate how school-based improvements are made within the scope of the project in detail.

SCOPE OF THE “1.000 SCHOOLS IN VOCATIONAL EDUCATION AND TRAINING” PROJECT

An analytical approach was used in determining the VET schools to be included in the project. In this manner, all VET high schools in Turkey are listed with their infrastructure deficiencies, student preference rates, mean academic achievement, grade repetition rates, disciplinary problems, absenteeism and drop-out rates. Additionally, provincial MoNE managers gave the feedback about the selected schools. Consequently, 1.000 VET high schools were selected through these parameters and the provincial managers’ opinions. Figure 1 shows the rate of the schools, students and the teachers that were supported within the scope of the project in the VET system.

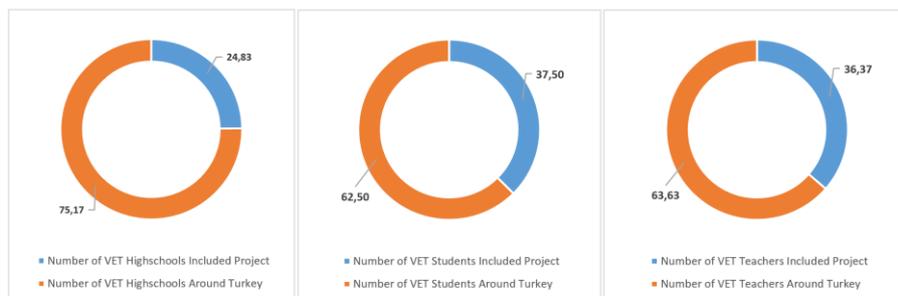


Figure 1. Rate of Schools, Students and Teachers Supported under the 1,000 Schools in Vocational Education and Training Project*

*Total number of students, teachers and schools is taken from the Ministry of National Education Formal Education Statistics: 2020-2021.

As seen in Figure 1, the project covers 1.000 VET high schools with 601.669 students and 48.959 teachers. In order to evaluate the scale of the project, formal education statistics of MoNE regarding the 2020-2021 academic year were used as a criterion. In this period, there were 4.027 public VET high schools, a total of 1.604.276 students received education and 134.609 teachers worked in these schools (MEB, 2021a). The project covered 25% of the public VET high schools in Turkey, approximately 38% of the VET students and 36% of the VET teachers. Inclusion rates of stakeholders indicated that the project is highly comprehensive.

Figure 2 shows the provincial distribution of the students and selected schools within the scope of the project.

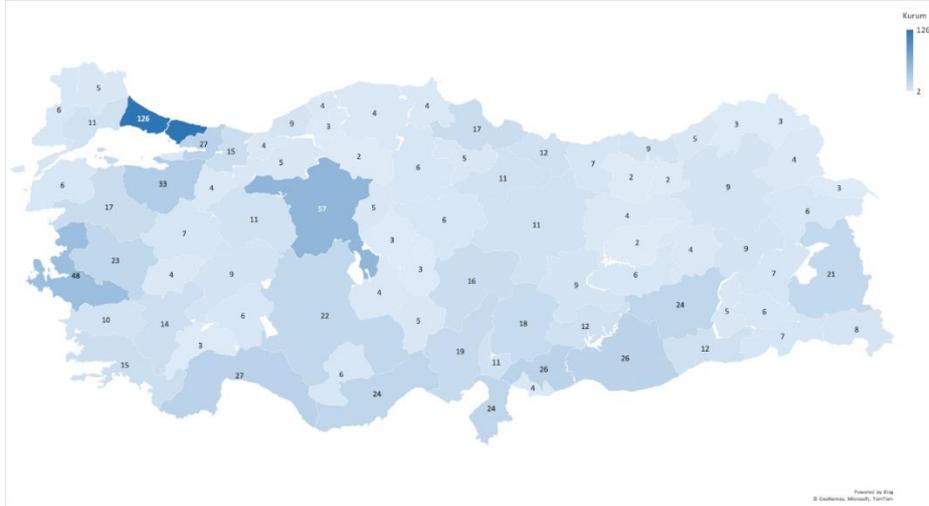


Figure 2. a. Distribution of Schools in Project



Figure 2. b. Distribution of Students in Selected Schools in Project

*Total number of students, teachers and schools is taken from the Ministry of National Education Formal Education Statistics: 2020-2021.

As seen in Figure 2, the schools included in the project spread over 81 provinces of Turkey. After Istanbul, Ankara, İzmir, Bursa and Antalya, where the total number of VET high schools is relatively high, provinces such as Gaziantep, Şanlıurfa, Diyarbakır and Hatay are high in the ranking indicating that the rate of disadvantaged schools is higher in these regions. The relatively high rate of schools included in the project in these provinces enabled more students, teachers, school administrators and parents to benefit from the project support. Therefore, the project is quite inclusive in terms of both the representation of VET high schools and the distribution of these schools across Turkey.

SCHOOL-BASED SUPPORT WITHIN THE SCOPE OF THE PROJECT

The school climate is affected by many factors, comprehensive support is vital to the schools for a holistic improvement (Carter, 2018). In this direction, the MoNE has planned to support the educational institutions and stakeholders in multiple stages. In the first step, the needs of the schools are discussed and the required infrastructure support is evaluated within. Then, the supporting strategy for diverse stakeholders including students, teachers, school administrators and parents was specified. Thus, the support given to schools and education stakeholders has been discussed under improvements on the physical infrastructure of schools, support for students, support for teachers and school administrators, and support for parents headings.

IMPROVEMENTS ON THE PHYSICAL INFRASTRUCTURE OF SCHOOLS

One of the priorities of the project is the improvement of the physical facilities of the school environments. In this context, the physical infrastructure of 1.000 schools are improved significantly. The physical improvements included the small and large-scale renovations of schools, painting and cleaning, structure strengthening and restructuring of available areas.

Within the scope of improving the infrastructure; new laboratories were established, current workshops were renovated, and schools were equipped with new computers, digital blackboards and libraries. In this context, physics-chemistry-biology laboratories and 554 new workshops were established. Approximately 10 thousand digital blackboards were installed in 403 schools that needed these boards.

The revolving fund incomes are important for the increasing practical training and financial support of disadvantaged students. Thus, increasing the capacity of revolving fund incomes is defined as a target within the scope of the project. The increase in the revolving fund allows students to perform practical training and to earn from the production and services within the scope of VET education. According to this target, 544 new workshops and laboratories were established, and 282 workshops and laboratories were renovated. As a result of the improvements, the revolving fund income of 516 schools, whose production capacity was increased, reached approximately 13 million TL in 2021. Approximately 439 million TL was spent from the project budget for physical reinforcement of schools and infrastructure improvements.

In order to ensure the continuity of the physical improvements and increase the interaction between VET schools, the Inter-Institutional Sharing Project (Kurumlararası Paylaşım Projesi, KUPA) was initiated. VET schools were informed about the training materials which were available but not used in other VET institutions. The MoNE Information Technologies Department developed software for KUPA, and VET schools were encouraged for registration and sharing the available sources with other VET schools.

SUPPORT FOR STUDENTS

a. Support for Academic Skills

Academic achievement is among the basic education indicators representing educational performance. In Turkey, students' academic achievement has been tracked through large-scale assessments for monitoring and selection purposes (MEB, 2019, 2020b; Suna, Özer, & Tanberkan, 2020; Yalçın & Tavşancıl, 2014). The results of these large-scale studies show that the academic performance of VET students is lower than those in academic schools (MEB, 2019, 2020b; Suna, Özer, & Tanberkan, 2020; Yalçın & Tavşancıl, 2014). The comparatively lower achievement of VET students is also observed in diverse countries due to the fact that the rate of socioeconomically disadvantaged students in VET schools is higher and the practical education is prioritized in VET.

Supporting VET students' academic skills is important in two aspects: First, as stated earlier, the rate of socioeconomically disadvantaged students in VET institutions is relatively high. This increases the importance of academic support and remedial opportunities in these institutions. Secondly, academic support has an important role for students who want to continue tertiary education to achieve similar academic skills with those who graduated from academic educational institutions. Thus, it is important to provide academic support for students in VET institutions in the context of equal opportunity in education.

The first academic support provided to the students is presenting remedial education for students. In this context, the learning gaps of these students were determined by a standardized assessment tool, and then a remedial

program was initiated. The remedial program was structured to meet the specific needs of the group. Considering that the learning is a hierarchical process, first identifying the current learning gaps, compensating for these gaps, and then supporting new learnings provide significant benefits for disadvantaged students.

Two different approaches were conducted concurrently to support the academic skills of the students. The first, 40,951 students participated in remedial programs specially developed for participants. Secondly, the practices within the scope of Support and Training Courses (DYK), which have been implemented by the MoNE for years, were also carried out in 81 schools within the scope of the project. 62,283 students benefited from 6,544 DYK courses in schools within the scope of the project. The General Directorate of Secondary Education (ÖÖGM) and the General Directorate of Assessment and Examination Services (ÖDSHGM) developed education materials for providing academic support to these students. In this perspective, 358,831 educational materials were delivered to the students. Those materials included books, tests, fascicles and physical teaching tools.

One of the other aims of the project is using students’ vocational skills and transforming these skills into concrete outputs. The practice-oriented education in VET provides an important opportunity for students and teachers to develop projects and products which stand for intellectual property. MoNE developed a training programme regarding intellectual property, and students and teachers participated in these trainings. In this training, students were informed about the benefits of intellectual property and industrial rights, the criteria they need to consider in production and the application processes. Thus, these training sessions were beneficial for students and teachers to learn how to transform their ideas into a project and product, and how to register these products officially. Science and Art Centers (BİLSEMs), which are highly experienced in project and product development, played an active role in providing the training needed. The teachers in BİLSEMs shared their experiences on the production and registration of patent, utility model and design-trademark.

b. Support for Social, Cultural and Sporting Skills

The main purpose of education is to develop students' cognitive and social-emotional skills concurrently. In this context, education becomes an important tool in ensuring the multi-aspect development of the individuals. Thus, the support to students within the scope of the project was structured to improve their academic, social, cultural and sportive skills concurrently. The number of students participating in these activities is presented in Figure 3.

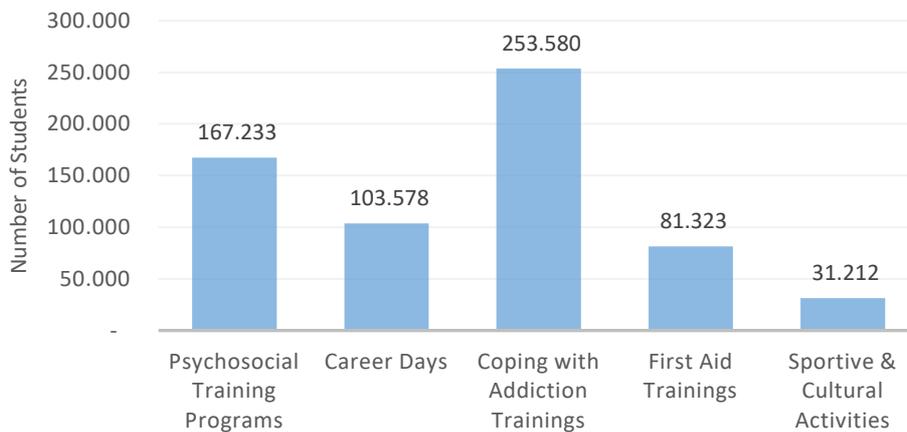


Figure 3. Student Activities within the Project and Participation of Students*

*The number of students is calculated by combining different trainings offered for the same purpose.

One of the priorities of the project is to increase the psychological resilience of students and support their well-being during the Covid-19 pandemic. For this purpose, school counselors were trained on “Psychological Resilience in Schools”. Students are encouraged to participate in psychological resilience and wellbeing programs at their school. As a result of these efforts, 131,925 students participated in the psychological resilience and wellbeing programs, and 35,308 students participated in the Covid-19 psychoeducation program at their schools.

One of the important aspects of the project is to increase the interaction between diverse secondary education institutions by building educational bridges. VET high schools were associated with Fine Arts High Schools in their own or nearby provinces. The students in Fine Arts High Schools showed artistic performances in diverse fields, and gave training to students in VET high schools. Developing students' sportive skills has been determined as a goal and 126 Youth Centers have been established in cooperation with the Ministry of Youth and Sports. In these centers, sports and cultural activities were performed with the participation of 16,185 students. Within the scope of the project, 1,584 students were taught to swim.

Students' social skills and their participation in social activities are also significantly related to educational outcomes (MEB, 2021b). In addition, studies show that socioeconomically disadvantaged students benefit inadequately from social and cultural activities. In order to compensate for the disadvantages in VET and to increase the participation of VET students in these activities, the participation of the students in activities such as cinema, theater, museum and exhibition was encouraged. During the one-year period of the project, 15,027 students participated in these cultural activities.

It is beneficial for students to explore available career paths and to meet successful people in different fields so that they can make conscious career choices. During the project, 5,429 career days were organized and 103,578 students met with successful professionals in different fields. In the selection of people who will participate in the career days, professionals who are successful in science, art, culture, sports and industry were preferred.

Addiction is among the threats to the physical and psychological health of students. Beyond addictions to harmful products such as drugs, tobacco products, and alcohol, negative consequences of digital addiction also threaten the youth. In particular, the Covid-19 pandemic has the potential to increase the screen use and game addiction as well as digital bullying. In this context, training on coping with the physical and digital addictions were conducted with the participation of 131,925 students. Again, for the same purpose, MoNE cooperated with the Green Crescent, and 121,655 students participated in training in coping with addictions.

SUPPORT FOR TEACHERS AND SCHOOL ADMINISTRATORS

Teachers mediate the student learning and directly affect the quality of the educational process (Margrain, 1978). In fact, there is a general consensus that teacher qualifications are the most determining variables on students' outcomes (Rice, 2003). Based on the research results, investments in teacher training have remarkably increased in many countries (Özer, Suna, & Sunar, 2021).

One of the important dimensions of the project is to support the knowledge and pedagogical skills of the teachers. First of all, 32,984 school administrators and 280,058 teachers participated in the training regarding project awareness and efficiency, personal development and leadership skills. Training on first aid was carried out with the participation of 45,037 teachers. 20,439 VET teachers attended the on-the-job and professional development training. In addition, 157 school counselors successfully completed the "Turkey Fight Against Addiction" practitioner training course.

SUPPORT FOR PARENTS

It is known that the academic achievement of the children with high parental involvement and higher education levels on the side of parents is significantly higher than other students (Gooding, 2001; Topor et al., 2010). Therefore, the education level of the family and involvement in education are very decisive on student achievement. Thus, the education level and participation of the families are considered an important dimension in the project.

First of all, MoNE reached the students' parents in the schools within the scope of the project. Families were informed about the scope of the project and the benefits of graduating from higher education levels. By interviewing the families, they were prioritized to enroll in open secondary school or open education high school according to their demands. Additionally, parents were asked about the vocational skills they would like to acquire and related training sessions were provided through lifelong learning courses. 9,228 parents participated in the training for families, and a total of 11,058 parents were enrolled in open secondary school, open education high school and vocational training courses.

Finally, the “Vocational High School Students Meet with Families” project, which has been successfully implemented by the MoNE for years, was included in this project. The VET students used their vocational skills to meet the basic needs of the parents within the scope of the project. In this context, the VET students worked intensively to meet the needs of the parents from painting and whitewashing to the repair of furniture, and the distribution of some products produced for the elderly people. Within this context, a total of 21,390 VET students visited 13,892 families in diverse provinces of Turkey.

4 | DISCUSSION & CONCLUSION

VET systems face a major transformation due to the technological changes experienced after the 2000s around the world. The employment opportunities provided by higher education on a global scale increase the tracking of students towards academic education. On the other hand, automation and artificial intelligence-based technologies change the skills that VET graduates are expected to gain (Acemoğlu & Restrepo, 2018; Özer, 2020b). In addition, the concentration of socioeconomically disadvantaged students in VET and the practices of school tracking increase the number of students who need additional support (Özer, 2020a; Suna & Özer, 2021).

These difficulties faced by VET have increased the importance of supporting educational institutions with diverse mechanisms. Thus, the school-based planning and improvement is vital for achieving a holistic improvement in VET institutions. Approaches for school improvement focus on strengthening the school with all its aspects. Otherwise, the improvements are likely to reveal only partial results and inadequate impact.

MoNE took a major step in school-based improvement in 2021 with the “1,000 Schools in Vocational Education Project”. The project was among the largest-scale projects and provided support to all education stakeholders. During the implementation of the project, all the stakeholders involved in education were trained, and the physical infrastructures and opportunities were improved. As suggested by the OECD (2012), multidimensional support for education stakeholders is one of the most effective ways to increase education quality by overcoming the disadvantages.

Supporting VET institutions is also important in terms of mitigating the achievement gap between schools, which is one of the chronic problems of the Turkish education system. As it is known, VET high schools are among the comparatively low-achieving educational institutions in Turkey for many years (MEB, 2019, 2020; Suna, Tanberkan, & Özer, 2020; Yalçın & Tavşancıl, 2014). In fact, achievement gaps between schools arise in primary education, increase their strength over time and become more visible in secondary education after school tracking (Özer, 2021a).

The “1,000 School Vocational Education and Training Project” is critical to show that multidimensional support can be provided to schools by taking into account their needs across Turkey. The context of the project was not limited to a single province or region, in contrast, was extended to more than 30% of VET education in Turkey. Considering the contribution of this project to schools, the Ministry recently initiated the “10,000 Schools in Primary Education Project” in 2022 (MEB, 2022). In this project, a similar approach is adopted focusing on the needs of the school and empowers all stakeholders.

The “1,000 Schools in Vocational Education and Training Project” has become a major step taken by the MoNE in recent years to support students. Because large-scale projects such as the “Remedial Education & Support Programme in Primary Education (İYEP) and Support and Training Courses (DYK) continue to be implemented by the MoNE (Özer, 2022). In addition, the production and printing of monthly educational resources, the establishment of libraries in all public schools, and the increase in schooling rates in pre-school education also help to alleviate the achievement gaps between schools (MEB, 2022; Suna & Özer, 2022). These contributions and projects are also in coherence with the OECD suggestions for school improvement and supporting disadvantaged students (strengthening school leadership; stimulating a supportive school climate; attracting, supporting and retaining high quality teachers; ensuring effective classroom learning strategies, and prioritizing linking schools with parents and communalities) (OECD, 2012). These projects are also in line with the projects on supporting disadvantaged students via extra-classes, academic supports, and their social skills via social clubs and activities in UK and US as Hamilton Project (Ander, Guryan & Ludwig, 2016; Cullen vd., 2018). Therefore, the MoNE’s improvements focus on schools will contribute to the holistic development of educational quality in the long run.

REFERENCES

- Acemoğlu, D., & Restrepo, P. (2018). *Artificial intelligence, automation and work*. NBER Working Paper 24196. National Bureau of Economic Research.
- Ander, R., Guryan, J., & Ludwig, J. (2016). *Improving academic outcomes for disadvantaged students: Scaling up individualized tutorials*. Brookings. [brookings.edu/wp-content/uploads/2016/07/Full-Paper-1.pdf](https://www.brookings.edu/wp-content/uploads/2016/07/Full-Paper-1.pdf)
- Anderson, C. S. (1982). The search for school climate: A review of the research. *Review of Educational Research*, 52(3), 368–420.
- Arum, R., & Velez, M. (Eds.) (2012). *Improving learning environments: School discipline and student achievement in comparative perspective*. Stanford University Press.
- Banerjee, P. A. (2016). A systematic review of factors linked to poor academic performance of disadvantaged students in science and maths in schools. *Cogent Education*, 3(1), 117844.
- Barrera-Osorio, F., Fasih, T., & Patrinos, H. (2009). *Decentralized decision-making in schools: The theory and evidence on school-based management*. World Bank.
- Barrera-Osorio, F., Kugler, A. D., & Silliman, M. I. (2021). *Hard and soft skills in vocational training: Experimental evidence from Colombia*. NBER Working Paper Series – 27548. https://www.nber.org/system/files/working_papers/w27548/w27548.pdf
- Barrett, P., Treves, A., Shmis, T., Ambasz, D., & Ustinova, M. (2019). *The impact of school infrastructure on learning: A synthesis of the evidence*. The World Bank Group. International Developments in Focus. <https://files.eric.ed.gov/fulltext/ED604388.pdf>
- Becker, G. S. (1962). Investment in human capital: A theoretical analysis. *Journal of Political Economy*, 70(5), 9–49.
- Berkowitz, R., Moore, H., Astor, R. A., & Benbenishty, R. (2016). A research synthesis of the associations between socioeconomic background, inequality, school climate, and academic achievement. *Review of Educational Research*, 87(2), 425–469.
- Berkowitz, R. (2020). School matters: The contribution of positive school climate to equal educational opportunities among ethnocultural minority students. *Youth & Society*, <https://doi.org/10.1177/0044118X20970235>
- Berliner, D. C. (2009). *Poverty and potential: Out-of-school factors and school success*. Arizona State University Education Policy Research Unit. <https://files.eric.ed.gov/fulltext/ED507359.pdf>
- Cailloids, F. (1998). *Education strategies for disadvantaged groups: Some basic issues*. International Institute for Educational Planning Contributions - No. 31, UNESCO. <https://unesdoc.unesco.org/ark:/48223/pf0000114204/PDF/114204eng.pdf.multi>
- Carter, P. L. (2018). The multidimensional problems of educational inequality require multidimensional solutions. *Educational Studies*, 54(1), 1-16.
- Cohen, J., McCabe, E. M., Michelli, N. M., & Pickeral, T. (2009). School climate: Research, policy, practice, and teacher education. *Teachers College Record*, 111(1), 180–213.
- Cotton, K. (1989). *Expectations and student outcomes*. School Improvement Research Series, <https://educationnorthwest.org/sites/default/files/expectations-and-student-outcomes.pdf>
- Crans, S., Gerken, M., Beusaert, S., & Segers, M. (2021). The mediating role of social informal learning in the relationship between learning climate and employability. *Career Development International*, 26(5), 678-696.
- Cullen, S. M., Cullen, M. A., Dytham, S., & Hayden, N. (2018). *Research to understand successful approaches to supporting the most academically able disadvantaged pupils*. UK Department for Education. https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/915619

[/Research_to_understand_successful_approaches_to_supporting_the_most_academically_able_disadvantaged_pupils.pdf](#)

- Darling-Hammond, L., & Cook-Harvey, C. M. (2018). *Educating the whole child: Improving school climate to support student success*. Learning Policy Institute. https://learningpolicyinstitute.org/sites/default/files/product-files/Educating_Whole_Child_REPORT.pdf
- Doran, J. (2004). Effective school characteristics and student achievement correlates as. *Electronic Theses and Dissertations, 2004-2019*. 182.
- Finn, J. D., & Voelkl, K. E. (1993). School characteristics related to student engagement. *The Journal of Negro Education, 62*(3), 249-268.
- Foley, P. (2007). *The socio-economic status of vocational education and training students in Australia*. National Centre for Vocational Education Research. https://www.ncver.edu.au/_data/assets/file/0013/3406/sp407.pdf
- Hampden-Thompson, G., & Johnston, J. S. (2006). *Variation in the relationship between nonschool factors and student achievement on international assessments*. US Department of Education National Center for Educational Statistics. https://eprints.whiterose.ac.uk/72575/1/Non_school_factors.pdf
- Holzberger, D., Reinhold, S., Lüdtke, O., & Seidel, T. (2020). A meta-analysis on the relationship between school characteristics and student outcomes in science and math –Evidence from large-scale studies. *Studies in Science Education, 56*(1), 1-34.
- ILO (2021). *Digitalization of national TVET and skills systems - Harnessing technology to support LLL: An enquiry and action framework*. https://www.ilo.org/wcmsp5/groups/public/---ed_emp/---emp_ent/documents/publication/wcms_826682.pdf
- Kotok, S., Ikoma, S., & Bodovski, K. (2016). School climate and dropping out of school in the era of accountability. *American Journal of Education, 122*(4).
- Kutsyuruba, B., Klinger, D. A., & Hussain, A. (2015). Relationships among school climate, school safety, and student achievement and well-being: A review of the literature. *Review of Education, 3*(2), 103-135.
- Kwong, D., & Ryan, J. (2015). School climate for academic success: A multilevel analysis of school climate and student outcomes. *Journal of Research in Education, 25*(2), 68-81.
- Lombardi, E., Traficante, D., Betton, R., Offredi, I., Marisa, G., & Mirta, V. (2019). The impact of school climate on well-being experience and school engagement: A study with high-school students. *Frontiers in Psychology, 10*, doi=10.3389/fpsyg.2019.02482
- MacNeil, A. J., Prater, D. L., & Busch, S. (2009) The effects of school culture and climate on student achievement. *International Journal of Leadership in Education, 12*(1), 73-84.
- Margrain, S.A. (1978). Student characteristics and academic performance in higher education: A review. *Res High Educ, 8*, 111–123.
- Maxwell, S., Reynolds, K. J., Lee, E., Subasic, E., & Bromhead, D. (2017). The impact of school climate and school identification on academic achievement: Multilevel modeling with student and teacher data. *Frontiers in Psychology, 8*, doi: 10.3389/fpsyg.2017.0206.
- McMahon, S. D., Wernsman, J., & Rose, D. S. (2009). The relation of classroom environment and school belonging to academic self-efficacy among urban fourth- and fifth-grade students. *The Elementary School Journal, 109*(3), 267-281.
- MEB (2019). *PISA 2018 Türkiye raporu*. Eğitim, Analiz ve Değerlendirme Raporları Serisi No: 10. MEB Yayınları.
- MEB (2020a). *2020 yılı Liselere Geçiş Sistemi (LGS) kapsamında ilk yerleştirme sonuçları*. Eğitim, Analiz ve Değerlendirme Raporları Serisi No: 14. MEB Yayınları.

- MEB (2020b). *TIMSS 2019 Türkiye raporu*. Eğitim, Analiz ve Değerlendirme Raporları Serisi No: 15. MEB Yayınları.
- MEB (2021a). *2021 yılı Liselere Geçiş Sistemi (LGS) kapsamında ilk yerleştirme sonuçları*. Eğitim, Analiz ve Değerlendirme Raporları Serisi No: 18. MEB Yayınları.
- MEB (2021b). OECD Sosyal ve Duygusal Beceriler Araştırması Türkiye raporu. Eğitim, Analiz ve Değerlendirme Raporları Serisi No: 19. MEB Yayınları.
- MEB (2022). *Yüz yüze eğitime dönüşte 180 Gün: 6 Ağustos 2021 – 6 Şubat 2022*. MEB Yayınları.
- OECD (2012). *Equity and quality in education: Supporting disadvantaged students and schools*. OECD Publishment.
- Özer, M. (2019a). Reconsidering the fundamental problems of vocational education and training in Turkey and proposed solutions for restructuring. *İstanbul Üniversitesi Sosyoloji Dergisi*, 39(2), 1–19.
- Özer, M. (2019b). Background of problems in vocational education and training and its road map to solution in Turkey's Education Vision 2023. *Journal of Higher Education and Science*, 9(1), 1–11.
- Özer, M. (2020a). *Türkiye'nin mesleki eğitim ile imtihanı*. Maltepe Üniversitesi Yayınları.
- Özer, M. (2020b). Türkiye'de mesleki eğitimde paradigma değişimi. *GEFAD / GUGJEF*, 40(2), 357-384.
- Özer, M. (2020c). The contribution of the strengthened capacity of vocational education and training system in Turkey to the fight against Covid-19. *Yükseköğretim Dergisi*, 10(2), 134–140.
- Özer, M., & Perc, M. (2020). Dreams and realities of school tracking and vocational education. *Palgrave Commun*, 6, 34.
- Özer, M., Suna, H. E., & Sunar, L. (2021). Türkiye'de mesleki ve teknik eğitimde hizmet içi öğretmen eğitimine yönelik öğretmen görüşlerinin değerlendirilmesi. *Marmara Üniversitesi Atatürk Eğitim Fakültesi Eğitim Bilimleri Dergisi*, 54, 1-22.
- Özer, M. (2021a). *Eğitim politikalarında sistemik uyum*. Maltepe Üniversitesi Yayınları.
- Özer, M. (2021b). *A new step towards narrowing the achievement gap in Turkey: "1.000 Schools in Vocational Education and Training" Project*. Maltepe Üniversitesi Yayınları.
- Özer, M. (2021c). Türkiye'de mesleki eğitimi güçlendirmek için atılan yeni adımlar. *Uluslararası Türk Eğitim Bilimleri Dergisi*, 9(16), 1-16.
- Özer, M. (2022). *Türkiye'de eğitimin evrenselleşmesi*. Maltepe Üniversitesi Yayınları.
- Perc, M., Özer, M., & Hojnik, J. (2019). Correction: Social and juristic challenges of artificial intelligence. *Palgrave Commun*, 5, 100.
- Rice, J. K. (2003). *Teacher quality: Understanding the effectiveness of teacher attributes*. Economic Polict Institute.
- Schneider, M. (2002). *Do school facilities affect academic outcomes?*. Educational Resources Information Center, United States Department of Education.
- Suna, H. E., Gür, B. S., Gelbal, S., & Özer, M. (2020). Fen lisesi öğrencilerinin sosyoekonomik arkaplanı ve yükseköğretime geçişteki tercihleri. *Yükseköğretim Dergisi*, 10(3), 356–370.
- Suna, H. E., Tanberkan, H., & Özer, M. (2020). Changes in literacy of students in Turkey by years and school types: Performance of students in PISA applications. *Eğitimde ve Psikolojide Ölçme ve Değerlendirme Dergisi*, 11(1), 76-97.
- Suna, H. E., & Özer, M. (2021). The impact of school tracking on secondary vocational education and training in Turkey. *Hacettepe Üniversitesi Eğitim Fakültesi Dergisi*, 36(4), 855-870.
- Suna, H. E., & Özer, M. (2022). The relationship of preschool attendance with academic achievement and socioeconomic status in Turkey. *Eğitimde ve Psikolojide Ölçme ve Değerlendirme Dergisi*, 13(1), 54-68.

- Sweetland, S. R., & Hoy, W. K. (2000). School characteristics and educational outcomes: Toward an organizational model of student achievement in middle schools. *Educational Administration Quarterly*, 36(5), 703–729.
- Thapa, A., Cohen, J., Guffey, S., & Higgins-D’Alessandro, A. (2013). A review of school climate research. *Review of Educational Research*, 83(3), 357–385.
- Traqueia, A., Nogueira, S., Barbosa, B., Costa, F., Dias, G. P., Filipe, S., Melo, A. I., Rodrigues, C., & Santos, C. A. (2020). Vocational education and training vs. general education: The influence of the socioeconomic context on students’ choices. *INTED2020 Proceedings*, 8450-8455.
- The World Bank. (2013). *School-based education improvement initiatives: The experience and options for Sri Lanka*. The World Bank Discussion Series Report No. 58. <https://openknowledge.worldbank.org/bitstream/handle/10986/16561/777590NWP0p113001300IDU0Report0Copy.pdf?sequence=1&isAllowed=y>
- Thomson, S. (2018). Achievement at school and socioeconomic background—an educational perspective. *NPJ Science of Learning*, 3(5).
- Topor, D. R., Keane, S. P., Shelton, T. L., & Calkins, S. D. (2010). Parent involvement and student academic performance: A multiple mediational analysis. *Journal of Prevention & Intervention in the Community*, 38(3), 183–197.
- UNESCO (2012). *Transforming technical and vocational education and training: Building skills for work and life*. Main Working Document TVET 3-3. <https://unesdoc.unesco.org/ark:/48223/pf0000216065>
- Yalçın, S., & Tavşancıl, E. (2014). The comparison of Turkish students’ PISA achievement levels by year via data envelopment analysis. *Educational Sciences: Theory and Practice*, 14(3), 961- 968.
- Zhao, J. (2021). *Vocational education paradigm transformation through information technology: An innovation case study of China*. IGI Global.
- Zysberg, L., & Schwabsky, N. (2021). School climate, academic self-efficacy and student achievement. *Educational Psychology*, 41(4), 467-482.