Yükseköğretim Dergisi
Journal of Higher Education (Turkey)

Davetli Derleme / Invited Review

www.yuksekogretim.org

The Contribution of the Strengthened Capacity of Vocational Education and Training System in Turkey to the Fight against Covid-19

Türkiye'de Güçlenen Mesleki Eğitim Kapasitesinin Covid-19 ile Mücadeleye Katkısı

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Özet

Eğitim, Covid-19 pandemisinin neden olduğu olumsuzluklardan en fazla etkilenen alanlardan birisi olmuştur. Ülkeler eğitimin kesintiye uğramaması için uzaktan eğitim ile öğrencilere destek olmaya çalışmaktadır. Türkiye'de de benzer durum söz konusu olup Milli Eğitim Bakanlığı hem internet üzerinden eğitim platformunu kullanarak hem de televizyon yayınları ile uzaktan eğitim desteği sağlamaktadır. Diğer ülkelerle karşılaştırıldığında ve eğitim sistemindeki öğrenci sayısı dikkate alındığında Milli Eğitim Bakanlığı uzaktan kitlesel eğitim desteğini başarılı bir şekilde yürütmekte ve sürekli yenilikler ve iyileştirmelerle uzaktan eğitim kalitesini de artırmaktadır. Diğer taraftan, Milli Eğitim Bakanlığı son yıllarda mesleki eğitimi güçlendirmek için çok önemli adımlar atmış ve mesleki eğitim hem öğrenciler ve öğretmenler hem de sektörler açısından daha olumlu bir noktaya ulaşmıştır. Covid-19 salgını ile mücadele günlerinde mesleki eğitim, acil ihtiyaç duyulan tıbbi ve medikal ürünlerin üretilmesine ve dolayısıyla kolayca erişilmesine çok önemli katkı sağlamıştır. Bu çalışmada Türkiye'de mesleki eğitimin mevcut yapısı, dört temel sorun alanı, *2023 Eğitim Vizyonu*'ndan sonra mesleki eğitimde yapılan iyileştirmeler ele alınmakta, Covid-19 ile mücadelede mesleki eğitimin katkılarına değinilmekte ve mesleki eğitimin daha fazla güçlendirilmesi için öneriler geliştirilmektedir.

Anahtar sözcükler: Covid-19, eğitim politikası, mesleki eğitim, okul ayrıştırması.

Abstract

Education is one of the most heavily affected sectors by the negative consequences of the Covid-19 pandemic. Countries make an effort to support their students via distance education solutions and to avoid the interruption of education. The same predicament is experienced by Turkey, where the Ministry of National Education (MoNE) presents the distance education via both its online education platform and television broadcasts. Considering the number of students in Turkey and the situation in other countries, MoNE is observed to have been successfully delivering mass distance education support and increasing the quality of its distance education through continuous innovations and improvements. In addition, MoNE has taken some important steps to strengthen the vocational education and training (VET) system in Turkey, elevating VET to a much more favorable status for students, teachers and various sectors. In the days of struggle with the Covid-19 pandemic in Turkey, VET has made a great contribution to the manufacturing of some urgently needed medical products, ensuring their ready availability. In this study, the current structure and the four major problems of VET in Turkey are discussed, the improvements made in VET after the introduction of *Turkey's 2023 Education Vision* are reviewed, the contribution of VET to the fight against the Covid-19 pandemic is analyzed, and some suggestions are made on further strengthening the VET system in Turkey.

Keywords: Covid-19, education policy, school tracking, vocational education.

Covid-19 continues to affect life negatively all over the world (Burgess & Sievertsen, 2020; WHO, 2020). Behavioural patterns are changing in all areas of life to ensure survival in response to the Covid-19 pandemic. While measures to prevent the spread of the epidemic have been implemented all over the world, various projections are made about how world is going to be like after the pandemic (Foreign Policy, 2020). Countries are also trying to strengthen their systems to ensure that patterns developed during the pandemic in each sector continue to exist at a certain ratio after the pandemic in order to provide 'system immunity' to subsequent attacks.

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Yükseköğretim Dergisi / Journal of Higher Education (Turkey), *10*(2), 134–140. © 2020 Deomed
Geliş tarihi / Received: Nisan / April 25, 2020; **Kabul tarihi / Accepted:** Nisan / April 29, 2020
Bu makalenin atıf künyesi / Please cite this article as: Özer, M. (2020). 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. doi:10.2399/yod.20.726951

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As the Covid-19 pandemic has had a negative impact on the functions of all sectors, education also had its share. Educational institutions have been gradually closed at all educational levels from primary to higher education (Organization for Economic Co-operation and Development [OECD], 2020; Saavedra, 2020). A sizeable population around the world –around 1.5 billion students and 63 million educators– have stayed away from their conventional education environment (UNESCO, 2020a, 2020b). While education is generally supported by distance education tools, discussions on how to assess academic achievement for such a large-scale population have also begun (European Training Foundation [ETF], 2020; Ozer, 2020a; Reimers, 2020). Especially since high-stake exams have been cancelled, there may be a delay in exam-based processes until these exams can be readministered, and alternative measurement and evaluation processes may have to be developed instead.

On the other hand, vocational education and training (VET) has had a special place in education systems for decades. VET has arisen as a new type of education, especially since the demand for the new skills emerging in the labour market after the industrial revolution could not be met by the traditional education system (Benovat, 1983; Grubb, 1985; Trow, 1961). In order to make room for VET in the education systems besides academic or general education, *school tracking* practices started to be implemented, and VET has been performed in the same school or in separate schools with curriculum differentiation. School tracking practices are implemented with various age groups in the world. For example, school tracking is carried out as early as at the age of 10 in Germany, while it is applied at the age of 15–16 in most of the OECD countries (Woessmann, 2009). Students are separated into different school types according to their preferences, their academic achievement levels or their performance in the exams. Especially in recent years, VET has not been preferred by high performing students all over the world and the fact that it has become the compulsory choice of low performing students and families from lower levels of education have brought about the debate as to whether VET is a means of social stratification (Brunello, 2004; Hanushek, Schwerdt, Woessman, & Zhang, 2017; Hanushek & Woessmann, 2006; Marks, 2006; Ozer & Perc, 2020; Reichelt, Collischon, & Eberl, 2019; Roemer, 1998; Woessmann, 2009; Zimmer, 2003).

Therefore, the effects of school tracking on academic achievement have become a major subject in educational discussions in recent years. The effects of school tracking in these discussions are examined based on the age of tracking, the number of the tracked schools, and the percentage of curriculum differentiation in tracked schools (Reichelt et al., 2019). Especially in the early ages, the academic achievement of students is highly dependent on the socioeconomic status of their families, and school tracking, which is implemented based on the academic achievement clustering students in different school types according to the socioeconomic level of their families, which worsens the education and opportunity inequality (Marks, 2006; Reichelt et al., 2019). Thus, students with relatively low socioeconomic levels are clustered in certain types of schools, which affects the educational environment is negatively, and those who graduate from these schools have limited access to higher education and prestigious professions (Gamoran & Mare, 1989; Müller & Shavit, 1998; Shavit, 1984; Shavit & Müller, 2000). In other words, the social classes that are formed according to the economic levels are reproduced by the school tracking mechanism, and thus the social classes are maintained through education (Bourdieu & Passeron, 1990).

Although school tracking was carried out for the benefit of VET at the beginning, VET has turned into a type of education that has been most negatively affected by school tracking over the years. At the same time, automation, supported by artificial intelligence technologies, has started to become widespread in the production and service sectors (Acemoğlu & Restrepo, 2018; Perc, Ozer, & Hojnik, 2019). This new situation led to a serious transformation in the skill sets demanded from VET in the labour market. The academic and general skills that facilitated adaptation to new situations and lifelong employment, rather than job-specific skills have started to be included more in the new skill sets (Ozer & Perc, 2020; Sahlberg, 2007), which has made the paradox of VET in all countries more obvious. Despite the fact that relatively low performing students are clustered in VET, new VET demands high performing students so that they can have the new skills when they graduate.

Serious revisions are made in the VET systems around the world in order to improve VET the steps taken in this direction, especially in 2018 in Turkey after the *2023 Education Vision* announced by the Ministry of National Education (MoNE), has led to a comprehensive transformation to align VET with the new situation emerging in the world (Ozer, 2018, 2019, 2019b; Ozer & Suna, 2019, 2020). VET which has been strengthened in just 2 years has been an important and active actor in coping with the epidemic by producing the items needed for the prevention and spreading of Covid-19 pandemic, from cleaning materials to mask production, from face shields and disposable aprons/overalls to respirators, sterilization devices and mask machines (Ozer, 2020b).

Therefore, in this study VET at secondary level in Turkey is discussed, the steps taken for the solution of problems under the scope of *2023 Education Vision* are reviewed its role in prevention of spreading Covid-19 is reviewed and the steps to be taken in order to have a stronger VET in the future are discussed.

Current Structure of Vocational Education and Training in Turkey and Its Major Problems

The current structure of VET in Turkey and the major problems are discussed in this section. The VET in Turkey is given at secondary education and higher school levels, and two different options are offered for the students at the secondary education level (Ozer, 2018, 2019, 2019b). In vocational and technical Anatolian high schools (VTAHs), which students mostly prefer, there are two separate programs in the form of Anatolian technical program (ATP) and Anatolian vocational program (AVP). ATP focuses more on academic education in VET and on training the students for VET in higher education level. Within the scope of ATP programs, a four-year education with only 40 days of workplace training/internships is performed. In the AVP programs, more practical and job-specific vocational training is offered and workplace training is carried out in the last year for at least three days a week. Vocational and technical Anatolian high schools provide VET in 54 different fields and 203 branches.

On the other hand, in vocational training centres (VTCs) where traditional apprenticeship-mastery training is performed, students receive education at schools once or twice a week for four years, while other days they receive on-the-job trainings in companies. Students who succeed at the end of the third year receive a apprenticeship certificate, and graduates who complete four years of training successfully receive a certificate of mastery. The graduates with the mastery certificate are entitled to start a workplace. In addition, students in VTCs earn at least one third of the minimum wage every month and are insured against occupational diseases. VTCs provide VET in 27 different fields and 147 branches.

Students in VET in Turkey constitute approximately 35% of all students in secondary education. Approximately 2 million students receive VET in secondary education, of whom approximately 5% are enrolled in VTCs. Approximately 350 thousand students graduate from VET every year, although it varies by years (Ozer & Suna, 2019).

Many problems are discussed about VET in Turkey, but they can be combined into four major problems. First major problem is the relation of the number of students in VET with labour market demands (Ozer & Suna, 2020). It is clear that student supply is larger than the demand for VET in Turkey. Considering that VET is an expensive type of education in terms of infrastructure and human resources and the resources are limited, the effort to create more supply than the demand affects the quality of VET negatively. Due to the number of students surpassing the demand, VET has become a type of education that anyone can enrol without any academic achievement condition, and this transformation negatively affected the perception of VET. On the other hand, supplying more graduates than the actual demand in the labour market results in two negative consequences for the graduates. On the one hand, since the graduates are more than demanded in any field in the labour market, their employability decreases, on the other hand, since there is not enough employment opportunities in the labour market, the graduates are forced into employment out of their field of study. As a result, VET graduates lose their confidence in the labour market and skill mismatches arise in the labour market, which reduces productivity (OECD, 2018, 2019).

The second structural problem associated with VET is related to the structure of the labor market. Unlike other types of education, VET is a type of education that is deeply related to and directly affected by the labour market. The strength of the link between VET and the labour market varies by country according to the history of industry, the structure of institutions, and the structure of labor market regulations (Raffe, 2007). Therefore, countries which have a weak relationship between VET and employment approach VET with an "education logic", and countries which have a strong relationship, as in Germany, approach VET with an "employment logic" (Fuller, 2015). In countries that approach VET with the employment logic, VET is strictly standardized with the participation of all stakeholders in the labour market, and a great value is attributed to qualifications and certification of graduates. Therefore, transition from school-to-work is very easy for young graduates in these countries and also youth unemployment ratios decrease (Allmendinger, 1989). Thus, when countries such as Germany, Austria, Switzerland and Denmark, which have successful VET systems, are examined closely, it can be seen that the labor market values and appreciates professional vocational certification and it is structured in a way that graduates are punished with low wages in case of working outside the field of study (Solga, Protsch, Ebner, & Brzinsky-Fay, 2014). However, In Turkey, rewarding mechanisms for improving the personal rights of VET graduates is not established, and consequently there is no remarkable difference in terms of wages whether the graduates work in- or out of their field of study (Ozer & Suna, 2020). This decreases the reputation of VET in the society and strengthens the flow of low performing students into VET. Therefore, the structural problem in the labor market is still unresolved, and it is not even considered as a problem in the labor market. Therefore, the problems related to VET in Turkey have always been evaluated within the educational boundaries of VET itself, and the supportive mechanisms which need to be structured in the labor market to reach a solution have never been discussed. Despite the fact that VET in Turkey is expected to align with the employment logic, making the necessary regulations in the labor market within the scope of this logic has so far been avoided.

The third structural problem associated with VET is related to the share of the private sector in VET in Turkey. All over the world, 40–50 years ago, VET was provided by the public institutions and government actively involved in production and service sectors. Thus, VET was provided by the public institutions, and employment was provided by the government. In the course of time, the governments have not only withdrawn from the production and service sectors, but also VET has become the responsibility of the private sector. The share of private sectors in VET is over 50% in continental Europe (Ozer & Suna, 2020). Therefore, after this transformation, the education provider and the employer have largely remained the same in these countries. However, while the production and service sectors have been transferred from government to the private sector in Turkey, the VET continued to remain in public institutions as a responsibility of the government. The private sectors in Turkey have not taken this burden from the government and they do not share the responsibility on this issue. The share of the private sectors in VET was below 1% until the 2012–2013 academic year in Turkey (Ozer, 2019a). VTAHs established by the private sector in organized industrial zones in 2012 were included in the scope of governmental incentives, and in 2016, they were expanded to include those outside the organized industrial zones. However, despite all these incentive mechanisms, the share of the private sectors in VET is still below 10% in Turkey (Ozer & Suna, 2020).

Finally, the transition from vocational secondary education to vocational higher education constitutes another major problem. Vocational higher education mainly consists of two years of education in vocational schools of higher education (MYOs). MYOs have a significant student capacity in the higher education system and the problems related to vocational secondary education are also valid for the MYOs. The problem areas and solutions for the MYOs have been discussed for years like vocational secondary education (Günay & Ozer, 2014, 2016; Gür et al., 2012). In this context, transitions between vocational secondary education and vocational higher education specifically for the MYOs were discussed, and additional scoring practices were attempted, including transition without examination (Ozer, Çavuşoğlu, & Gür, 2011). Currently, there is a need for a rational re-evaluation of the transition between the two levels of education. There is no recognition mechanisms in place for vocational secondary education graduates about the equivalency of the courses they already completed successfully or the duration of education when they enrol in the vocational programs related or unrelated to their field of study for four years. Therefore, the structure and duration of the education of vocational secondary education graduates when they enrol in MYOs with examination should be re-evaluated under the scope of assessment and recognition of prior learning which is also frequently cited in the *Turkish Qualifications Framework*.

2023 Education Vision and Improvements in Vocational Education and Training

After announcing the *2023 Education Vision*, MoNE has approached the problems related to VET in a multidimensional and systematic way (Ozer, 2018, 2019a, 2019b; Ozer & Suna, 2019, 2020). It has taken the first step by redefining the relationship between MoNE and vocational sectors. The relationship, which was previously established within the framework of infrastructure support and student scholarship, has largely evolved to conducting the entire process of education. As such, the training curriculum is updated in collaboration with workplaces where students are provided with on-the-job training and professional development training of vocational teachers is delivered by the private sector. In addition, scholarship opportunities provided to successful students have been expanded graduates have been given employment priority. In this context, cooperation with the leading representatives of all 54 sectors in the field of VET in Turkey has been established in a short time, and the private sectors have participated actively in the VET processes at this scale for the first time.

In VET high schools, production can be made within the scope of revolving funds, and as a result of this production, students can receive additional wages as much as the minimum wage in proportion to their contribution to production, and teachers can receive additional wages up to two minimum wages. MoNE has focused on increasing the production capacity, which increases the practical training opportunities in VET high schools, and has implemented regulations that will remove the obstacles to increasing production in a short time.

Two important steps have been taken to strengthen the capacities of VTCs, where the employment ratio of graduates in their field of study is approximately 88% and thus they serve their purpose and functions. Students in VTCs were required to enrol in open high school and complete particular courses while they continue their training in order to obtain a high school diploma when they graduate, even though they complete four years of post-secondary education. In order to eliminate this burden, a flexible structure has been created and the students in VTCs have been given the opportunity to receive a high school diploma if they take particular courses and successfully complete them in the days they come to school.

On the other hand, although the private sectors have managed to establish VTAHs, they could not establish VTCs. Sectors often demanded to establish VTCs in the organized

industrial zones and factories and to train the human resource they need. In order to solve this problem, the regulation made in Private Education Institutions Law No. 5580 gives right to private sectors to establish VTCs with the approval of MoNE. With this regulation, private sectors have the opportunity to train the apprentices and masters they need.

MoNE mapped out Turkey's vocational training in 2019 in order to settle the supply-demand balance in VET on a rational ground. The map includes the capacities, employment opportunities, future investment plans of the sectors in all provinces, and the coherence of this information obtained from the sectors at the provincial level with the VET. MoNE has started to restructure the capacity of VET based on this database, which allows regional analyses of education and employment.

The steps taken by MoNE to strengthen VET have yielded solid results in a short time. As a result of these collaborations, the curriculum in 54 fields and 203 branches was updated and aligned with the *National Occupational Standards*. The capacity of teachers' on-the-job and professional development trainings has increased considerably, and the number of teachers receiving training has increased 700% in a year. On the other hand, the amount of scholarship for VET students has increased 600% in the last year. Students' preference of VET has also grown stronger and the number of students who selected VTAHs increased by 17% in the last year. New improvements in VTCs have led to a 62% increase in the number of students enrolled in these centers.

As a result of the regulations that encourage increasing the production capacity in VET, the income from the production within the scope of revolving fund in VET institutions has increased approximately 40% in one year and reached 400 million TL. The income of VET students from production within the scope of revolving funds increased by 50% in same time interval.

MoNE, on the other hand, tended to establish VTAHs that would contribute positively to the perception of VET and have potential to be a role model. To this end, a serious step in the defence industry has been taken in collaboration with ASELSAN and ASELSAN Vocational and Technical Anatolian High School was established in Ankara. Furthermore, MoNE collaborated with Istanbul Technical University (ITU), one of the most powerful higher education institutions in engineering education in Turkey, and ITU Vocational and Technical Anatolian High School was established in Istanbul. ASELSAN and ITU Vocational and Technical Anatolian High Schools have received applications exceeding the determined quotas and these institutions have received students from the top 1% achievement ranking. It is the first time that students enrol in VET high schools from this academic performance level, thus VET high schools have begun to attract high performing students.

Vocational Education and Training in Coping with the Covid-19 Pandemic in Turkey

Beyond all improvements, strengthened VET has emerged as an important actor in the fight against the Covid-19 pandemic in Turkey. In the early days of the pandemic, the cleaning and easy accessibility of medical supplies to prevent the spread of the epidemic became very important, and at this stage, MoNE was able to tap into the increased production capacity of the VET, which was has strengthened remarkably in the last two years (Ozer, 2020b).

MoNE has prioritized meeting the cleaning materials and disinfectant needs of the schools and reached the production capacity that can meet the needs of all 54 thousand schools in 81 provinces in a short time. Thus, MoNE has doubled the number of VTAHs and met the demands further than the needs of schools in their provinces. 6 million liters of hypochlorite disinfectant, 150 thousand liters of hand disinfectant and 4 thousand liters of cologne have been produced and delivered to the end users.

The production of masks, which is the most important product in the fight against Covid-19, has begun rapidly in 50 VTAHs and 10 million surgical/medical masks have been produced and delivered within a month to their intended destinations, especially healthcare professionals. On the other hand, the production of face protection shields and disposable gowns/overalls for protecting healthcare workers has started and a monthly production capacity of one million has been reached in both products in just one month.

MoNE, on the one hand, increases the production capacity of these products day by day and on the other hand, it focuses on the production of the medical devices needed in the centers of excellence created in provincial VTAHs. The priority is given to four products: surgical mask machine, respirator, mask machine for masks with N95 standard, and sterilization device. These R&D have been able to produce all the four products in a short period of time, and increased the monthly production capacity to 20 million, especially in mask production. Applications for certification were made for other products; and mass production will be launched according to the need.

The production of medical equipment and supplies in VTAHs in Turkey have attracted attention in the international arena. International media organizations such as CNN, BBC and New York Times have reported that vocational schools have been turned into production bases in Turkey (Damon & Tuysuz, 2020; Gall, 2020).

Conclusion

VET in Turkey has always been at the centre of many discussions for years. External interventions have been critical in the history of VET. In particular, the intervention known as 'coefficient regulation', which restricts access of VET graduates to higher education, has lowered the perceived value of VET and accelerated its transformation into a type of education that high performing students no longer prefer. On the other hand, placement of students in all schools based on examination performance increased the clustering of low performing students in VET institutions (Suna, Tanberkan, Gür, Perc, & Ozer, 2020).

In order to save VET from the negative effects of these important interventions, a number of important projects have been implemented by MoNE. Especially in recent decades, strengthening VET has gained a particular importance in government agenda and it has been given continuous support. The most important deficiency in these steps towards improvement is that the problem is considered solely as an education problem, without considering the transition to the labor market and higher education. However, VET is a type of education that is shaped by the labor market, directly affected by the labor market, and gains value through access to higher education. Therefore, in order to improve the VET system, the steps that will increase the quality of education should be supported with steps towards the labor market. Similarly, steps should be taken regarding the recognition and rewarding, at the level of higher education, of vocational skills acquired in vocational secondary education.

MoNE has adopted a holistic approach towards strengthening VET after the *2023 Education Vision*, and the steps in this direction have not only solved many problems but also facilitated the solutions of other problems related to the education system. Especially in the days of coping with the Covid-19 pandemic, the results of improvements have shown the importance of a strengthened VET system.

While strengthening VET can provide the qualified human resources demanded by the labor market at the required level, it can also play an active role in the field with its production capacity in global pandemics like Covid-19, and can serve a very important function in overcoming the first shocks of such large-scale pandemics.

Still, no matter how much VET is strengthened, there will be no permanent improvement when the labor market does not have the necessary rewarding mechanisms for VET. For this reason, improvements in VET require a holistic approach that takes into account both education and the labor market. Especially in the labor market, the rapid establishment of rewarding mechanisms for VET graduates in employment will make the improvements permanent.

To conclude, there is a VET system in Turkey whose relationship with industry is becoming stronger and has begun to be preferred by the high performing students in national examinations. However, the future of VET depends on the employment ratio of graduates, the relevancy of their job to their field-of-study and the improvement of their wages. In addition, it is necessary to re-establish the link of VET curricula with the academic skills, taking into account the technological transformations at the global scale. There is no reason to worry about the future of VET if continuous improvements are maintained in these issues.

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