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A ROADMAP TO IMPROVE VOCATIONAL EDUCATION AND TRAINING IN TÜRKİYE

TÜRKİYE'DE MESLEKİ EĞİTİMİ GÜÇLENDİRMEK İÇİN BİR YOL HARİTASI

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ÖZ

Mesleki eğitim ülkelerin kalkınmasına ve genç işsizliğin düşürülmesine en fazla katkı yapan eğitim türlerinin başında gelmektedir. Bu nedenle ülkeler, eğitim sistemlerinde mesleki eğitimi güçlendirmek için sürekli bir çaba içerisindedir. Aksi durum hem işgücü piyasasında hem de eğitim sisteminde büyük maliyetler ödenmesine yol açmaktadır. Son zamanlarda özellikle yapay zekâ ve otomasyon teknolojilerinin yaygınlaşması tüm eğitim sisteminde köklü dönüşümler yapılmasını talep ederken bu dönüşüm talepleri mesleki eğitimi çok daha derinden etkilemektedir. Ülkeler mesleki eğitimi güçlendirmek için hemen hemen benzer sorunları çözmeye çalışmaktadır. Bu bağlamda Türkiye mesleki eğitimde özellikle son yıllarda çok önemli dönüşümler yaparak bu sorunların çözümünde önemli başarılar elde etmiştir. Bu dönüşüm sonunda mesleki eğitime akademik olarak başarılı öğrencilerin yönelimi arttığı gibi mesleki eğitimin ortaöğretimdeki payı da %28'den %52'ye yükselmiş ve OECD ortalamasının üzerine çıkmıştır. Özellikle küçük ve orta ölçekli işletmelerin çırak, kalfa ve usta ihtiyacının karşılanmasında çok dramatik sonuçlar elde edilmiştir. Bu çalışmada bu kapsamda yaşanan dönüşüm kısaca değerlendirilmekte ve mesleki eğitimin çok daha güçlü hale gelebilmesi için öneriler sunulmaktadır. Öneriler, mesleki eğitim merkezlerinin mesleki eğitimdeki payı, bu merkezlerde beceri transferine imkân verecek telafi programlarının geliştirilmesi, mesleki eğitim merkezlerindeki programlarda süre esnekliği, meslek liselerindeki programların gözden geçirilmesi ve mesleki ortaöğretim ve yükseköğretim ilişkilerinin yeniden gözden geçirilmesini kapsamaktadır. Gelinen noktada yeni yol haritası kapsamında atılacak adımlar mesleki eğitimi çok daha güçlü ve dirençli kılacağı gibi özellikle genç işsizliğin azaltılmasında da çok önemli katkılar sunabilecektir.

ABSTRACT

Vocational education and training (VET) ranks among the most significant contributors to the sustainable development of countries and the alleviation of youth unemployment. Therefore, countries are constantly making efforts to strengthen VET systems. An inadequate and ineffective VET system can result in significant costs both in the labor market and the education system. Recently, the widespread adoption of artificial intelligence (AI) and automation technologies has called for radical transformations throughout the education system, profoundly affecting VET. Countries are striving to address similar challenges in improving VET systems. In this context, Türkiye has made significant transformations in its VET systems in recent years, achieving notable success in solving chronic problems. As a result of this transformation, the orientation of academically high-performing students toward VET has increased significantly, and the share of VET track in upper-secondary school has risen from 28% to 52%, and exceeded the OECD average. Particularly, dramatic results have been achieved in apprenticeship training through meeting the apprentice, journeyman, and master needs of small and medium-sized enterprises. This study briefly examines the transformation within this scope and presents recommendations for the acceleration of improvement of VET system. The recommendations include growing role of VET centers (VTCs), developing compensatory programs in VTCs to facilitate skill transfer, introducing flexibility in the duration of VCT programs, reviewing education programs and curricula in VET high schools, and reconsidering the relationship between secondary VET education and higher education. At this point, the steps to be taken within the framework of the new roadmap can make VET much stronger and resilient, especially in reducing youth unemployment.

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Introduction

Vocational education and training (VET) is a type of education which makes significant contributions to the development of countries (Flyinn, 1986; Prashant et al., 2016) and is a specific form of education and training within education systems. In particular, it provides important contributions to reducing youth unemployment by facilitating the school-to-work transition (Benavot, 1983; Grubb, 1985). In this context, 'dual' vocational track in Germany has served as an example for many years in the restructuring of VET systems in diverse countries (Deissinger, 2015; Solga et al., 2014).

The VET system is designed and structured based on the labor market dynamics of countries (OECD, 2020). Therefore, the structure of VET system varies from a country to another based on these dynamics (Hanushek et al., 2011; Ladina and Ursula, 2017; Müller and Gangl, 2003; Müller and Shavit, 1998; OECD, 2020; Özer, 2020a; Rözer and Van de Werfhorst, 2020). In some countries, VET is provided at the upper-secondary education, while in other countries, it is provided at the higher education level. On the other hand, some VET systems take a more flexible approach to professions, emphasizing academic skills and encouraging further education, while countries like Germany, Austria, and Switzerland have highly specific-VET system focusing to facilitate the school-to-work transition (Bol and Van de Werfhorst, 2013a; 2013b; DiPrete et al., 2017; Muja et al., 2019). However, recent studies indicate that, despite initially facilitating the transition from school to work, the second approach can lead to lifelong employment challenges for graduates (Hanushek et al., 2017).

Due to its inherent sensitivity to labor market dynamics, the VET system faces challenges when it comes to fulfilling its core functions, such as reducing youth unemployment and improving skill alignment, if responses to market transformations are not generated as quickly as possible (Anisimova and Efremova, 2021; Levin et al., 2023). Since the advent of AI systems in the labor market, the skill expectations of professions have been transformed in a dramatic manner, and have been discussed for a very long time (OECD, 2023a). While pessimistic predictions forecast the disappearance of many professions in the labor market, optimistic predictions suggest that the transformation in the labor market will also give rise to new professions (Aghion and Howitt, 1990; 1994; Arntz et al., 2016; Bartelsman et al., 2004; Frank et al., 2019; Pajarinen et al., 2015). Moreover, the AI-led transformation in the labor market is so radical and incomparable with previous technological transformations. Therefore, the widespread adoption of AI and automation technologies in the labor market is now encouraging the promotion of VET approaches that are more flexible and support rapid adaptation to change (Acemoğlu and Restrepo, 2018; Özer and Perc, 2020; Perc et al., 2019). Otherwise, despite the initial facilitation of school-to-work transition, the resilience graduates become less resilient to rapidly changing skills.

Meanwhile, school tracking is being reevaluated within the context of new expectations for VET system based on increasing inequalities (Sevilla and Polesel, 2022). Particularly in countries like Germany and Switzerland, where the VET system is often cited as an example, the early tracking of students into VET, allowing intensive VET training for specific professions, however, it further complicates the meeting of new expectations for VET. This is evident in the tendency of academically high-performing students to drift apart from VET and mostly prioritize general 'academic' education through the school tracking practices. This makes it challenging for VET, which is expected to be supported by more academic and generic skills, to meet these new expectations (Deissinger et al., 2013; Özer and Perc, 2020; Suna and Özer, 2021; Woessmann, 2009). Additional evidence indicates that early tracking also led negativities in attainment and wages in the long term (Borghans et al., 2020), and delaying of school tracking caused the reduction of influence of family background on academic performance (Knigge et al., 2022) . Therefore, it is recommended that school tracking be delayed as much as possible, and inclusive comprehensive education be provided until the period of school tracking (Özer and Perc, 2020).

We are now in an era where the skills required for professions are changing substantially due to the advancements in AI and automation technologies (Bessen, 2016; Deming and Kahn, 2018; Frank et al., 2019). There is, therefore, the potential for unexpected increases in unemployment when graduates are not able to acquire and adapt to these rapidly changing skills, or when dynamic mechanisms are not available for upskilling and reskilling (EEPO, 2015; Li, 2020). If skills that emerge in the labor market are not acquired during education or are not quickly acquired later, the likelihood of unemployment increases, or the likelihood of being employed in jobs that require fewer skills and offer lower wages increases (Özer and Suna, 2020).

Therefore, ensuring skill alignment plays a critical role in realizing the expected economic contribution of VET (Çidem et al., 2021; Lopes et al., 2023; Shavit and Müller, 2000; Zhou and Xu, 2023). Consequently, recent approaches in studies related to VET are focused on rapidly adapting to changing skills. In these new approaches, VET aims to approach knowledge and skills more flexibly, while also giving more emphasis to academic and generic skills (Canbal et al., 2020; European Commission, 2022; van der Velden, Buisman and Levels, 2017). This way, especially with the substantial proliferation of AI technologies in the labor market, there is potential support for quickly acquiring the new skills demanded by professions.

This study briefly addresses the transformation in vocational education in Türkiye, particularly in recent years, and discusses the further steps to be taken to ensure the sustainability of the achieved transformation and the expected contributions.

The Transformation in Vocational Education and Training in Türkiye

In Türkiye, upper-secondary VET is provided through Vocational and Technical Anatolian High Schools (MTALs) and Vocational Training Centers (MESEM) after lower-secondary schools (Özer, 2018). Both approaches offer a four-year VET, but MESEM provides a 'dual' VET approach and includes both the school education (theoretical education) and a workplace training (on-the-job training). In MESEMs, students receive education at the school for 1-2 days a week and at the workplace for the rest of the week.

Türkiye's VET system faces challenges similar to those faced by other countries, and similar solutions are being developed to address these issues (Özer, 2019a; 2019b). The most crucial step taken to restructure the VET has been the comprehensive collaboration of the education stakeholders and the industry stakeholders in each vocational field. This comprehensive collaboration involves continuous curriculum revisions in all vocational fields, planning of students' practical training in workplaces, providing scholarship support to students, coordinating the on-the-job and professional development trainings of VET teachers, and facilitating the transition of students to employment together. This multi-dimensional collaborative effort has been put into effect (Özer, 2020b; 2021a; Özer and Suna, 2023a). Through this collaboration, a comprehensive curriculum revision has been implemented in all vocational fields and branches, emphasizing academic and generic skills, and strengthening skill alignment according to the demands of the labor market (Canbal et al., 2020). The curriculum revision is now being performed periodically. The active participation of labor market stakeholders in all aspects of VET systems contributes to continuously improving the quality of the VET system (OECD 2023b).

Meanwhile, VET has expanded the scope of revolving funds focused on 'learning by doing,' and 55 R&D centers have been established within this framework to promote and encourage a culture of research and development, patenting, utility model registration, trademark and design registration, and commercialization (Özer, 2021a; Özer and Suna, 2019; Özer and Suna, 2022a). To address the infrastructure deficiencies of VET high schools, 1,000 VET schools with diverse disadvantages were identified. Their infrastructures, laboratories, and workshops were strengthened to enrich the learning environments (OECD, 2023b; Özer, 2021b). Additionally, in sectors such as the defense industry, where national focus has grown in recent years but VET was not previously provided, VET opportunities have been introduced in collaboration with the industry for the first time.

While the improvements were briefly presented in the MTALs area, two significant enhancements have also been made concerning MESEMs (Özer and Suna, 2022b; 2022c). Firstly, a flexible structure has been established to allow MESEM graduates to obtain a high school diploma, thereby increasing the value of MESEMs. Secondly, Law No. 3308 on Vocational Education has improved significantly. According to these changes, the employer share of the wage support *(for students' wage)*, which was equal to 30% of the minimum wage in Türkiye that MESEM students received every month for 4 years of education, has been eliminated, and all the share of student wages is now covered by the state. Additionally, the wage for students who become journeymen (after 3 years of apprenticeship training) has been increased from 30% to 50% of the minimum wage in Türkiye.

The comprehensive steps for the improvement of both MTALs and MESEMs have yielded results in a short period. Academically high-performing students have started to prefer MTALs, and for the first time, students in the top 1% performance level and those with a full score in upper-secondary education transition exam have enrolled in VET high schools. The improved capacity of VET high schools has provided significant contributions, especially in meeting societal needs during the Covid-19 pandemic and after the earthquake on

February 6, 2023 (Özer, 2020c; 2020d; 2023a; Özer et al., 2022). In other words, the improved VET system has both become the foundational source of qualified human resources needed by the labor market and also mobilized its production capacity for societal needs, overcoming emergencies and disasters.
A similar improvement has been achieved in MESEMs. As of the end of 2021, approximately 160,000 students were enrolled in MESEMs, and this number has increased to around 1.4 million as of May 2023, following the earlier-mentioned improvements. The fact that approximately 75% the participants is above 18 years old indicates the potential of MESEMs in reducing youth unemployment (Özer, 2023b). These improvements have increased the share of VET in upper-secondary education from 28% to 52% (Özer, 2023b).

Recommendations

In this section, further steps for the sustainability of the VET transformation briefly discussed earlier in Türkiye in recent years are discussed. The recommendations include reconsidering the share of MESEMs in upper-secondary VET system, fractionation of the periods of education programs in MESEMs, development of flexible remedial programs through MESEMs, revision of education programs and curricula in MTALs, and finally, reorganizing the relationship between upper-VET system and higher education.

Increasing the Proportion of Vocational Training Centers (MESEMs)

For long years, upper-secondary VET system has been predominantly associated with MTALs in Türkiye. Consequently, all demands for improvement regarding VET system have been attempted to be achieved through MTALs. This major responsibility has led to deformations in MTAL programs. The first problem is related to capacity of MTALs. The demand to increase the share of VET in upper-secondary education has been attempted through capacity expansion in MTALs, ignoring the supply-demand balance. As a result, excessive capacity production has been progressed for long years in MTALs. Consequently, due to this capacity expansion that neglects the supply-demand balance, the employment rates of VET graduates in their fields of education have declined remarkably. It is important to note that this low rate is often improper review and attributed to the quality of VET system. In reality, the problem is associated with training new and more graduates in every field of VET well much above available job positions (Suna et al., 2020). On the other hand, based on the costly nature of VET system, the efficiency of the investment towards VET improvement has been limited. Another problem is that the unrealistic and excessive growth in MTALs has negatively affected the quality of education in these schools.
Considering the dynamics of the labor market and employment rates, a significant share of the expectations from upper-secondary VET system is associated with MESEMs in Türkiye. These institutions play a particularly substantial role in meeting the human resources demanded by small and medium-sized companies. These companies need MESEM graduates (with apprenticeship training) more than MTAL graduates. However, MESEMs in Türkiye have been neglected for a long time, and their potential contributions were attempted to be met through MTALs. However, significant improvements have been achieved towards MESEMs since 2019. One of the primary steps was addressing the difficulty of receiving a high school diploma despite offering a 4-year education after lower-secondary school. Within this framework, a flexible structure was established, and enabled MESEM graduates to receive a high school diploma. This policy change directly led an increase in the number of students in MESEMs, which had been lower than 90 thousand for a long while, and reached the level of around 160 thousand as of the end of 2021.
The most substantial step towards improving MESEMs was the policy improvements in Law No. 3308 on Vocational Education at the end of 2021. With these policy changes, the entire amount of the monthly minimum wage paid to students in MESEMs for 4 years, which was previously covered by employers, is now covered by the government. Additionally, the students' wage of journeymen's (students with three years of training in apprenticeship program) has been increased from 30% to 50% of the minimum wage. Thus, these dramatic regulations towards MESEMs has increased the attractiveness of these institutions for both students and companies. In a short period of about 1,5 years, the number of apprentices and journeymen, which was 160 thousand, has risen nearly tenfold to around 1,4 million as of May 2023. Thus, this dramatic increase in the number of students in MESEMs will contribute greatly to meeting the needs of small and medium-sized companies for apprentices, journeymen, and masters in the long run. This increase has also reduced the artificial capacity pressure created on MTALs.

At this point, the especially significant growth in MESEMs has also contributed to a rise in the share of VET in upper-secondary education from 28% to 52%. On the other hand, the proportion of MESEM students in upper-secondary VET system has risen from 13% to 53% between end of 2021 and May 2023. This trend has revealed a substantial increase in MESEMs and should be maintained. The proliferation of AI and automation technologies is transforming the expectations for skills and competencies in VET system. For these changes, MTALs are primary the target based on their design. Therefore, as the share of MTALs decreases in upper-secondary VET, meeting this demand for these schools will become achievable, and graduates will acquire strong academic and generic skills, especially in response to these evolving expectations.

Restructuring Vocational and Technical High School (MTAL) Education Programs

MTALs offer two types of education programs: Anatolian Technical Program (ATP) and Anatolian Vocational Program (AMP). While ATP provides more intense theoretical vocational education, AMP places greater emphasis on practical and on-the-job training. In designing stage of programs ATP graduates are expected to continue their VET education in higher education, whereas AMP graduates are primarily intended to transition to labor market and meet the workforce needs of labor market, continuing to higher education as a second alternative. However, MESEM graduates are already meeting the workforce needs of labor market and an overlapping occurs in this context.

On the other hand, students have to perform adequately in a high-stake assessments toreceive education in the ATP programs. Therefore, academically high-performing students tend to group in the ATP programs. Especially after the earlier-mentioned transformation and the increased capacity provided by MESEMs, the need for AMP programs is naturally diminishing. Therefore, at this point, the AMP program in MTALs should be gradually phased out, and education in MTALs should be provided only through the ATP program. This way, maintaining a strong infrastructure in all MTALs and providing an academic and generic skills focus education, will be much more effective. Additionally, the gaps in average academic performance among MTALs can be alleviated to lower levels.

Flexible Education Period for Vocational Training Centers (MESEMs)

The period of education in MESEMs is currently 4 years, and graduation from lower-secondary school is required for enrollment. Providing a 4-year education in all the various VET fields does not allow for a flexible education period in the apprenticeship, journeyman, and master system. Especially in continental Europe, diverse countries have a flexible structure with education period of 2 or 3 years in diverse fields of VET. A similar structure should be established in Türkiye. The period of education could be customized to 2, 3, or 4 years in diverse fields depending on the skills and competencies demanded by the labor market. This way, it will be possible to build a more dynamic and flexible MESEM system.

Flexible Structures in the Relationship between Vocational Upper-Secondary Education and Higher Education

In Türkiye, VET programs are provided both at the upper-secondary education level (MTALs, MESEMs) and through vocational schools (MYOs) at the higher education level. The education period of MYOs is 2 years and it corresponds to ISCED Level 5. After the graduation from 4 years of upper-secondary VET program and receiving VET at a MYO program in their field, there is no change in the period of education. For instance, a student who has completed 4 years of education in the electrical field at the upper-secondary education and then enrolls in the electrical program at any MYO (higher education) will receive the same courses as a student who has not received electrical expertise at the upper-secondary education level and enrolls in the same education program with the same period of education. However, the competency framework is designed for the assessment of previous competencies. There is a clear need to review this structure. Developing a new VET education program that considers previous competences and offers a customized education program, resulting in a 1-1.5 years, will establish a flexible structure in the relationship between upper-secondary VET education and higher education. Such a flexible structure, by recounting previous competencies, will enhance the value of upper-secondary VET system.

Developing Flexible Vocational Training Remedial Programs

The widespread adoption of AI and automation technologies has not only affected VET system but has deeply influenced all aspects of education systems. The increasing dominance of AI-supported systems in the labor market has made it necessary to continuously review the competencies that education systems should impart. As many professions disappear, the skills and competencies demanded for the others are constantly changing, and new professions are emerging. At this point, the changing conditions, expectations and dynamics require a workforce with high adaptability. Therefore, academic and generic skills that enhance adaptability and resilience are becoming much more prominent across all professions. While countries are revising and reforming their education systems to respond to the new situation, they are also creating support mechanisms that enable skill transfer and enhance employability through new certifications.

In Türkiye, there is currently no systemic support mechanism in this context. In particular, support mechanisms that enable skill transfer are crucial in improving the interaction between education system and the labor market, as well as enhancing the resilience of the workforce against changing conditions. Otherwise, when there is no employment opportunity for graduates, it either leads to long-term unemployment or forces individuals into lower-skilled and consequently lower-paid employment.

To improve VET system and alleviate youth unemployment in Türkiye, short-term skill development programs developed in MESEMs for high school graduates or higher education represent an innovative approach. This approach led a new mechanism facilitating the transition of high school and university graduates to new fields through skill development. With this mechanism, short-term, entirely workplace-based training programs lasting 6-8 months has been introduced, supporting graduates the right to become experts in any vocational field and the allowance to establish their own companies.

In 2022, approximately 800,000 young individuals who had previously graduated from academic or VET high school, vocational school (higher education), undergraduate, and postgraduate programs applied for this program, indicating the significant gap in this field. On the other hand, compensatory programs have provided a new avenue for VET high school graduates to transfer their skills to different vocational fields, enhancing their employability. Expanding these programs at different levels will provide crucial support as a new mechanism to increase graduates' resilience and consequently reduce youth unemployment.

Results and Discussion

The rapid technological developments in AI, deep learning, and automation directly impact the labor market. The transformation in AI and related technologies is leading to labor market transformations that are unprecedented and difficult to predict compared to previous technological shifts. As skill sets expected from professions change rapidly, some occupations and jobs disappear, and new occupations and jobs requiring new and emerging skill sets rise. This change forces education systems to continually review and respond swiftly. VET system is particularly a type of education profoundly affected by this challenge. Additionally, VET has the potential to make significant contributions to a country's economic development and is highly sensitive to the dynamics of the labor market.

VET is a significant and major item in the policy agenda for the education systems of almost all countries. Based on the structure and expectations, VET system undergoes frequent revisions. In this context, Türkiye has initiated substantial transformations in VET system, building a dynamic system that is continually updated according to the dynamics of the labor market. Stakeholders from the labor market have actively participated in recent transformation, and are highly satisfied with the initial achievements. Following these significant steps, the share of VET in upper-secondary education has increased from approximately 28% to 52%.

The technological transformation experienced on a global scale has resulted in significant changes to the expectations and desired skills in the Turkish labor market. As in many other countries, the labor market requires a human resource more prepared for this transformation and with general cognitive skills and social-emotional skills. To meet this need, a flexible structure with an appropriate weight to general cognitive skills and social-emotional skills and collaboration with labor market representatives are needed. This study discusses further steps to enforce Turkish VET system, which has made significant improvements in recent years, and to increase the efficiency of current policies.

The most crucial step is the continued increase in the capacity of MESEMs, one of the two channels through which VET is provided. In Türkiye, the labor market predominantly requires graduates from apprenticeship

programs in MESEMs. Following legal regulations, the increase in the number of MESEM students from 160,000 to 1.4 million indicates a critical accomplishment. Sustaining this growth is essential. The requirement for MESEMs to include skills training in companies and the obligation for students to make a training agreement with a company to enroll will facilitate the balance of supply and demand. This growth will alleviate the pressure to expand VET capacity through MTALs, enhancing the potential to provide high-quality education in MTALs that is more compatible with labor market dynamics. On the other hand, gradually phasing out AMP programs within MTALs, which provide practical training but are actually a substitute for MESEM programs, will ensure that this function is fulfilled by MESEMs. Thus, VET will be provided in all MTALs solely through the ATP program.

The two further steps are suggested for even improving MESEM programs; the first one concerns the period of VET programs, and the second one is related to the compensatory training programs they offer. The evolving dynamics of the labor market require the program period in MESEM to be more flexible, covering varying periods (2, 3 or 4 year of education) based on the skill demands of the labor market. In this context, the steps taken will ensure the flexibility of MESEM program periods, enabling the rapid fulfillment of labor market demands.

Countries are developing new mechanisms to support their citizens in enhancing employability and resilience against the evolving dynamics of the labor market. In Türkiye, a new compensatory model was introduced in MESEMs in 2022, allowing young individuals with high school or higher education diploma to become MESEM graduates through short-term compensatory programs lasting 6-8 months. It is crucial to expand the scope and diversity of this compensatory mechanism and enhance it with additional alternatives.

Finally, offering a differentiated associate program in VET high school-to-higher education transition, with a shorter period for students coming from the same field, will improve the VET high school-higher education relationship and ultimately increase the value and coherence of VET system.

The new steps mentioned above will not only enhance the effectiveness and reputation of VET but also make it much more resilient to changing conditions. In particular, graduates who can quickly adapt to changes in the labor markets will be awarded and nurtured. As a result, skill mismatches in the labor markets will gradually diminish. On the other hand, compensation programs provided to those who want to switch fields after graduating from high school or higher education will increase youth employment by offering a flexible skill transfer mechanism. Thus, as VET system strengthens and the options it provides increase, the number of young people in Türkiye who are not in education or employment (NEET) will gradually decrease**.**

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GENİŞLETİLMİŞ ÖZET

Mesleki eğitim ülkelerin kalkınmasında önemli katkılar yapması beklenen ve eğitim sistemlerinde buna göre farklılaştırılmış bir eğitim türüdür. Özellikle, okuldan işe geçişi kolaylaştırarak genç işsizliğin azaltılmasında önemli katkılar sunmaktadır (Benavot, 1983; Grubb, 1985). Bu bağlamda, Almanya'daki dual mesleki eğitim diğer ülkelerin kendi mesleki eğitimlerini yeniden yapılandırmada uzun yıllar örneklik oluşturmuştur (Deissinger, 2015; Solga vd., 2014).

Mesleki eğitim ülkelerin işgücü piyasa dinamiklerine dayalı olarak yapılandırılmaktadır. Bu nedenle mesleki eğitimin yapısı ülkeden ülkeye değişmektedir (Hanushek vd., 2011; Ladina ve Ursula, 2017; Müller ve Gangl, 2003; Müller ve Shavit, 1998; Rözer ve Van de Werfhorst, 2020; Özer, 2020a). Bazı ülkelerde ortaöğretim seviyesinde verilen mesleki eğitim diğer ülkelerde yükseköğretim seviyesinde verilmektedir. Diğer taraftan bazı ülkelerde mesleklere daha esnek yaklaşılır ve akademik becerilere ağırlık verilerek ileri eğitime devamı teşvik ederken, Almanya, Avusturya ve İsviçre gibi ülkelerde mesleklere oldukça özgü olup okuldan işe geçişi kolaylaştırmak üzere yapılandırılmıştır (Bol ve Van de Werfhorst, 2013a; 2013b; DiPrete vd., 2017; Muja vd., 2019). Ancak, son zamanlarda yapılan çalışmalar ikinci yaklaşımın başlangıçta okuldan işe geçişi kolaylaştırmasına rağmen mezunların ömür boyu istihdamlarında sorunlara yol açtığını göstermektedir (Hanushek vd., 2017).

Mesleki eğitim doğası gereği işgücü piyasası dinamiklerine oldukça duyarlı olduğu için işgücü piyasasındaki dönüşümlere hızla cevap üretilmediğinde, genç işsizliği azaltma ve beceri uyumunu artırma gibi temel fonksiyonlarını yerine getirmede sorunlar ortaya çıkmaktadır. Yapay zeka (Artificial Intelligence [AI]) sistemlerinin mesleklerden beceri beklentilerini tamamen değiştirerek işgücü piyasalarında köklü dönüşümlere yol açtığı uzun zamandan beri dile getirilmektedir. Bu bağlamda, çoğu mesleklerin işgücü piyasasında yok olacağını öngören kötümser değerlendirmeler yapıldığı gibi, işgücü piyasasındaki dönüşümün yeni meslekleri de ortaya çıkartacağını belirten iyimser değerlendirmeler de yapılmaktadır (Aghion ve Howitt, 1990; 1994; Arntz vd.,2016; Bartelsman vd., 2004; Frank vd., 2019; Pajarinen vd., 2015). Bunun ötesinde, AI sistemlerinin bu bağlamda işgücü piyasalarında yol açtığı dönüşüm önceki teknolojik dönüşümlerle karşılaştırılmayacak kadar köklüdür. Özellikle AI ve otomasyon teknolojilerinin işgücü piyasalarında yaygınlaşması artık daha esnek ve hızla değişen yeni koşullara adaptasyonu destekleyen mesleki eğitim yapısını teşvik etmektedir (Acemoğlu ve Restrepo, 2018; Özer ve Perc, 2020; Perc vd., 2019). Aksi takdirde, başlangıçta okuldan işe geçiş kolay olmasına rağmen mezunlar hızla değişen becerilere karşı daha az dayanıklı olmaktadır. İşgücü piyasasında yeni çıkan ve dolayısıyla eğitim esnasında öğrenilmeyen beceriler hızla öğrenilmediğinde işsiz kalma riski artmakta veya daha az beceri gerektiren ve dolayısıyla daha az ücret sunan işlerde istihdam edilme riski ortaya çıkmaktadır (Özer ve Suna, 2020).

Bu çalışmada Türkiye'de mesleki eğitimde özellikle son yıllarda bu bağlamda sağlanan dönüşüm kısaca ele alınmakta ve sağlanan dönüşümün ve beklenen katkının sürdürülebilir olmasını sağlamak için atılması gereken yeni adımlar ele alınmaktadır.

Türkiye'de mesleki eğitimde karşılaşılan sorunlar diğer ülkelerde yaşanan sorunlarla örtüşmekte olup benzer sorunlara çözümler üretilmektedir (Özer, 2019a; 2019b). Mesleki eğitimi yeniden yapılandırmak için atılan en önemli adım, eğitimin tüm süreçlerinin her bir mesleki eğitim alanında sektörle birlikte yürütülmesi olmuştur. Böylece tüm mesleki eğitim alanlarında müfredatın sürekli güncellenmesi, öğrencilerin işletmelerde beceri eğitimlerinin birlikte planlanması, öğrencilere burs desteği sağlanması, mesleki alan ve atölye öğretmenlerinin işbaşı ve mesleki gelişim eğitimlerinin birlikte planlanması ve istihdam sürecinin birlikte yönetilmesini kapsayan kapsamlı bir işbirliği yürürlüğe sokulmuştur (Özer, 2020b; 2021a; Özer ve Suna, 2023a). Bu işbirliği ile tüm mesleki eğitim alan ve dallarında akademik ve jenerik becerilere ağırlık verecek ve işgücü piyasası taleplerine göre beceri uyumunu güçlendirecek şekilde kapsamlı müfredat güncellemesi yapılmıştır (Canbal vd., 2020). Bu güncelleme artık periyodik bir şekilde sürdürülmektedir. Mesleki eğitimin tüm süreçlerine sektörün aktif paydaşlar olarak katılımının sağlanması mesleki eğitimin kalitesini sürekli iyileştirmektedir.

Diğer taraftan mesleki eğitimde 'yaparak öğrenmeyi' merkezine alan döner sermaye kapsamında üretim yaygınlaştırılmış ve bu kapsamda özellikle araştırma-geliştirmeyi, patent, faydalı model, marka ve tasarım tescili ve ticarileştirilmesi kültürünü yaygınlaştıran ve teşvik eden 55 AR-GE merkezi kurulmuştur (Özer, 2021a; Özer ve Suna, 2019; Özer ve Suna, 2022a). Mesleki eğitim okullarının altyapı eksikliklerini gidermek için mesleki eğitim veren ve görece diğer okullara göre dezavantajlı olan 1.000 okul belirlenerek altyapıları, laboratuvar ve atölyeleri

güçlendirilerek eğitim ortamları zenginleştirilmiştir (Özer, 2021b). Ayrıca, savunma sanayi gibi güçlenen ancak mesleki eğitim verilmeyen alanlarda da ilk kez sektörle birlikte mesleki eğitim imkânı getirilmiştir.

MTAL alanında kısaca değinilen iyileştirmeler yapılırken MESEM'lerle ilgili de iki önemli iyileştirme yapılmıştır (Özer ve Suna, 2022b; 2022c). İlk olarak, MESEM mezunlarının lise diploması alabilmesine imkân veren esnek bir yapı kurulmuştur. Bu adım MESEM'lerin değerini artırmıştır. İkinci olarak, 3308 sayılı Mesleki Eğitim Kanunu'nda çok önemli değişiklikler yapılmıştır. Bu değişikliklere göre MESEM öğrencilerinin 4 yıl boyunca her ay aldıkları asgari ücretin %30'u kadar olan ücret desteğindeki işveren katkısı kaldırılarak tüm ücretin devlet tarafından karşılanması sağlanmıştır. Ayrıca, 3 yıllık çıraklık eğitiminden sonra kalfa olan öğrencilerin aldıkları ücret asgari ücretin %30'ndan %50'sine yükseltilmiştir.

Hem MTAL hem de MESEM'leri etkileyen bu kapsamlı adımlar kısa sürede meyvelerini vermiştir. Akademik olarak başarılı öğrenciler MTAL'leri tercih etmeye başlamış, ilk kez %1'lik başarı diliminden ve 500 tam puanlı öğrenciler meslek liselerine yerleşmiştir. Meslek liselerinin güçlenen kapasitesi özellikle Covid-19 salgını boyunca ve 6 Şubat 2023 depremi sonrasında toplumsal ihtiyaçların karşılanmasında çok önemli katkılar sağlamıştır (Özer, 2020c; 2020d; 2023a; Özer vd., 2022). Bir başka deyişle, güçlenen mesleki eğitim sadece işgücü piyasasının ihtiyaç duyduğu insan kaynağını yetiştirmekle kalmamış olağanüstü koşulların atlatılmasında da kapasitesini toplumsal ihtiyaçlar için harekete geçirerek seferber edebilmiştir. Benzer gelişme MESEM'lerde de yaşanmıştır. 2021 yılı sonu itibariyle MESEM'lerde yaklaşık 160 bin öğrenci eğitim alırken bu sayı yapılan iyileştirmeler sonunda 2023 Mayıs ayı itibariyle 1 milyon 400 binler seviyesine yükselmiştir. Bu sayının yaklaşık %75'nin 18 yaş üzeri olması MESEM'lerin genç işsizliğin azaltılmasındaki potansiyeline işaret etmektedir (Özer, 2023b). Bu iyileştirmeler mesleki eğitimin ortaöğretimdeki payını da %28'den %52'ye yükseltmiştir (Özer, 2023b).

Bu çalışmada sağlanan bu dönüşümün sürdürülebilir olması için ilave atılması gereken adımlar değerlendirilmiştir. Bu adımların en önemlisi mesleki eğitimin sunulduğu iki kanaldan bir tanesi olan MESEM'lerin kapasitesinin artırılmaya devam edilmesidir. Türkiye'de işgücü piyasası ağırlıklı olarak MESEM mezunlarına ihtiyaç duymaktadır. Bu kapsamda yapılan yasal düzenlemeler sonrası MESEM öğrenci sayısının 160 binlerden 1 milyon 400 binlere yükselmesi oldukça kritik bir başarıdır. Bu büyümenin sürdürülmesi gerekmektedir. MESEM'lerin işletme beceri eğitimini kapsaması ve bir öğrencinin kayıt yaptırabilmesi için bir işletme ile beceri eğitimine yönelik akit yapma zorunluluğu bu büyümenin arz-talep ilişkisi çerçevesinde büyümesini sağlayacaktır. Bu büyüme, mesleki eğitim kapasitesinin MTAL'ler üzerinden yapılması baskısını azaltacak ve MTAL'lerde daha kaliteli ve işgücü piyasası dinamikleri ile uyumlu kaliteli bir eğitim sunulma potansiyelini yükseltecektir. Diğer taraftan, MTAL bünyesinde uygulamalı eğitim imkânı sağlayan, ancak aslında MESEM eğitimi yerine ikame edilen AMP programlarının kademeli bir şekilde kapatılması bu işlevin MESEM'ler tarafından karşılanmasını sağlayacaktır. Böylece, tüm MTAL'lerde sadece ATP programı üzerinden mesleki eğitim verilmesi sağlanacaktır.

MESEM'lerle ilgili atılması gereken iki ilave adım mesleki eğitim programlarının süresi ve sunacağı telafi eğitim programları ile ilgilidir. İşgücü piyasasının gelişen dinamikleri MESEM'lerdeki tüm program sürelerinin tek tip olarak 4 yıl olmaktan çok işgücü piyasası beceri taleplerine göre değişen süreleri kapsamasını gerektirmektedir. Bu kapsamda atılacak adımlar MESEM program sürelerinin çok daha esnek olmasını sağlayacak ve işgücü piyasası taleplerinin hızla karşılanmasını sağlayacaktır.

Ülkeler yeni işgücü piyasası dinamiklerine karşı vatandaşlarının istihdam edilebilirlikte dirençliliklerini artırmalarını desteklemek için becerilerinin transferine imkân veren yeni mekanizmalar üretmektedir. Türkiye'de MESEM'lerde 2022 yılında geliştirilen ve lise ve üstü eğitim mezunu gençlerin 6-8 aylık kısa süreli telafi programları sonunda MESEM mezunu olabilmelerinin sağlamaya yönelik yeni telafi modeli, bu kapsamda yeni bir açılım yapılmasını mümkün kılmıştır. Bu telafi mekanizmasının kapsamı ve çeşitliliğinin artırılması ve ilave açılımlarla desteklenmesi oldukça kritiktir.

Son olarak, mesleki ortaöğretimden mesleki yükseköğretime geçişte MYO programlarında alan mezunu öğrenciye farklılaştırılmış bir MYO programının sunulması ve süresinin de alan dışı gelen öğrenciye göre kısa olması mesleki ortaöğretim-yükseköğretim ilişkisini güçlendirecek ve nihayetinde mesleki ortaöğretimin değerini artıracaktır. Ayrıca, mesleki eğitimden işgücü piyasasına geçişi kolaylaştıracağı gibi işgücü piyasasında beceri uyumsuzluklarını da azaltacaktır.