



| Research Article / Araştırma Makalesi |

## Applicability of Structuring at Local Level in Vocational and Technical High Schools in Turkey

### Türkiye’de Mesleki ve Teknik Liselerde Yerel Düzeyde Yapılanmanın Uygulanabilirliği

Ayşe Somuncu<sup>1</sup>

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1. Vocational training
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#### Abstract

Starting from the 2012-2013 school year, the mandatory education has been extended to 12 years in Turkey. With this policy, students prefer attending general high schools rather than vocational high schools. Even though the companies are in need of young entry-level professionals, the university graduates suffer from unemployment. Due to the lack of financial support the vocational high school education is not able to provide enough graduates for the labor market. This situation causes families and students to have a negative perception towards vocational education.

Vocational education needs a local level structure that is congruent with the demands of the educational sector. What is necessary for structuring at the local level is; Circular No. 2016/21 dated 22.11.2016 has been determined in the Vocational and Technical Education School Administrative Board. Provincial Vocational Education Boards were established by Law No. 3308. The Ministry of National Education should strengthen the local level by delegating authority to these boards. As in the education systems of Finland, South Korea and Germany which are examined in this research, the Ministry of National Education can audit these authorities. With Law No. 5508, incentives are given to schools in the industrial zones and students in private vocational high schools. With the same law, private vocational training centers can be opened. Localization of vocational education will contribute to the increase in sector investments at the regional level with the effect of incentives.

#### Öz

Türkiye’de 2012-2013 öğretim yılından itibaren zorunlu eğitim süresi 12 yıl olmuştur. Uygulama sonrası genel liselere eğilim artarken, mesleki ve teknik liselere azalmıştır. Piyasada çoğu alanda ara elemana gereksinim varken, üniversite mezunları işsizlik sorunu yaşamaktadır. Meslek liseleri ise; finansman eksikliği nedeniyle, sektörün istediği mezunu verememektedir. Bu durum ailelerin ve öğrencilerin mesleki eğitime karşı olumsuz algı taşımalarına neden olmaktadır.

Mesleki eğitimin piyasanın istekleriyle uyumlu, yerel düzeyde bir yapılanmaya gereksinimi vardır. Yerel düzeyde yapılanma için gerekli olan; 22.11.2016 tarihli 2016/21 sayılı Genelge Mesleki ve Teknik Eğitim Okul Yönetim Kurulu ‘da belirlenmiştir. 3308 sayılı Kanunla İl Mesleki Eğitim Kurulları oluşturulmuştur. Milli Eğitim Bakanlığı’nın bu kurullara yetki devri vererek yerel düzeyi güçlendirmesi gerekmektedir. Araştırmada incelenen Finlandiya, Güney Kore ve Almanya ülkelerinin eğitim sistemlerinde olduğu gibi Milli Eğitim Bakanlığı bu yetkilerin denetimini yapabilir. 5508 sayılı kanunla organize sanayi bölgesindeki okullara ve özel meslek liselerindeki öğrencilere teşvik verilmektedir. Yine aynı kanunla özel mesleki eğitim merkezleri açılabilir. Mesleki eğitimin yerelleştirilmesi teşviklerin de etkisiyle bölgesel düzeyde sektör yatırımlarının artmasına katkı sağlayacaktır.

## INTRODUCTION

With globalization, crises are experienced simultaneously all over the world. In the economic dimension of these crises, layoffs and unemployment are experienced. Unemployment is one of the most important problems of countries. In this case, vocational training in the fields needed at the country level gains importance. Education is a process of preparation for a profession and social life. Every individual can come out of the education system he entered at a young age, having acquired the necessary features for society and work. This issue is important for community leaders in terms of ensuring the welfare and peace of the community. In this direction, vocational education; is the education that provides the individual with knowledge, skills and work habits related to a particular profession in business life and develops the individual's abilities in various aspects (Alkan, Doğan, Sezgin, 1996, p.6). Since Turkey has a young population, the education of the young workforce is important. It is necessary, to determine in which areas the young workforce needs vocational training, to prepare its training plans according to the demands of the society and the sector, and to conduct vocational training with respect to the work area (MEB, 2014, p. 5).

The fact that Turkey has a young population is an advantage in the process of joining the European Union and harmonization policies. Because the certificates and documents obtained in education in the member countries of the European Union are valid. This situation increases the importance of vocational education. In developed countries, the secondary education system is organized as general secondary education and vocational secondary education in a vocational education-oriented structure (Özyılmaz, 2013, p.205). Thus, the need for entry-level staff required by the sector is met by the employment of vocational high school and vocational school graduates, not college graduates. Students cannot be fully employed due to the fact that vocational education institutions in Turkey do not comply with the demands of the sector. Families do not want their children to receive vocational education due to the low employment rate of vocational high school graduates and the fact that they have less chance to switch up into a university than general high school graduates. This situation causes a decrease in the number of vocational high school students. Structuring the education in vocational high schools in line with the sector and according to local requirements will increase employment opportunities after graduation. Giving some of the managerial power to local governments by centrally managed education system in Turkey will lead to an increase in effectiveness and efficiency, and the public services to approach the public and reach a more democratic structure. Therefore, bureaucracy process will be shrunk (Görgülü, 2019, s.74).

In this research, the general structure and problems of vocational education are discussed. The concept of localization in vocational education organizations is emphasized. It is aimed to make practical suggestions for Turkey by including the applications in Finland, South Korea and Germany, which are successful in PISA exams, which are known for their localization practices in vocational education. This research is a literature (literature review) study. It was tried to reach the relevant sources by conducting a literature study on the subject. It is thought that it will contribute to the literature by examining the localization studies in vocational education in the recent period.

### General Situation of Vocational and Technical Education System in Turkey

Vocational and technical education in Turkey is carried out with formal and non-formal education programs. Formal vocational education takes place in vocational and technical high schools that implement various programs. According to the circular sent by the Ministry of National Education (MEB) to 81 provinces; 22 school types affiliated to the General Directorate of Vocational and Technical Education were restructured under the names of "Vocational and Technical Anatolian High School" and "Multi-Program Anatolian High School" without any change in the education period and the rights and authorities of their graduates. Starting from the 2014-2015 academic year, the implementation started gradually, starting from the 9th grade. 9th grade programs are common in all high schools. In vocational and technical high schools, students choose a field in the 10th grade. Students will study the subjects of the programs they choose in the 11th and 12th grades (Ministry of National Education Regulation on Secondary Education Institutions, 2013, Article: 31). Students who do not want to continue formal education after secondary school or who drop out of the system for any reason, continue to vocational open education high school and open education high school. Students who continue vocational open education take their vocational courses through face-to-face education in vocational and technical high schools. Apprenticeship, journeyman and mastership trainings are held in vocational training centers, which are non-formal education institutions. The functions of vocational training centers are regulated in the Vocational Education Law No. 3308. The apprenticeship age is between 14-19 years. Those over the age of 19 can also receive apprenticeship training if they have not received apprenticeship training before. Since compulsory education was prolonged to 12 years in 2012, apprentices who do not want to continue formal education have to enroll in open education high school or vocational open education high school. Apprenticeship has been included in the scope of compulsory education (Law No. 6764 Amending the Decree-Law on the Organization and Duties of the Ministry of National Education and Some Statutory Decrees, 2016).

As of the 2014-2015 academic year, with the circular sent by the Ministry of National Education to 81 provinces, the types of schools affiliated to the General Directorate of Vocational and Technical Education were structured as "Vocational and Technical Anatolian High School" and "Multi-Program Anatolian High School" (MEB, 2014). Vocational high school 12th grade students receive vocational training two days a week at school and three days at enterprises. Vocational high school students studying in the fields of hotel management receive theoretical training at the school in October-April of the academic year, and do internships

at the end of the 10th and 11th grades in the summer months. Technical high schools have to do 300 hours of internship during summer holidays and weekends.

In the development plans and councils, decisions were taken emphasizing on the structuring and development of continuous vocational and technical education. The number of students in vocational education high schools has not reached the desired level. Changes in the education system in recent years have caused changes in the number of students in vocational and technical education high schools. In Table 1, the number of students and teachers in vocational high school and general high schools, as well as the number of those schools with respect to years are given.

**Table 1. Number of vocational and technical high schools, general high schools, students and teachers by years**

ACADEMIC YEAR	GENERAL SECONDARY EDUCATION				VOCATIONAL AND TECHNICAL SECONDARY EDUCATION			
	NUMBER OF SCHOOLS	NUMBER OF TEACHERS	NUMBER OF STUDENTS	% *	NUMBER OF SCHOOLS	NUMBER OF TEACHERS	NUMBER OF STUDENTS	% **
2010 - 2011	4.102	118,378	2,676,123	56	5,179	104,327	2,072,487	44
2011 - 2012	4.171	122,716	2,666,066	56	5,501	113,098	2,090,220	44
2012 - 2013	4.214	119,393	2,725,972	55	6.204	135.502	2,269,651	45
2013 - 2014	3,744	117,353	2,906,291	54	7.211	161,288	2.513.887	46
2014- 2015	3,995	123,160	2,902,954	51	5.106	175,218	2,788,117	49
2015- 2016	5311	151458	3,047,503	52	5,239	184,232	2,760,140	48
2016- 2017	5225	147,052	3,138,440	54	5.851	185,988	2,713.530	46
2017- 2018	5717	159,579	3,074,642	61	4.461	140,404	1,987,282	39
2018- 2019	6242	175,275	3,250,334	64	4640	149,147	1,799,391	36

(\*) Percentages of General Secondary Education Students by Years

(\*\*) Percentages of Vocational Secondary Education Students by Years

Source: Ministry of National Education (MEB Formal Education Statistics, 2008,2014,2015,2018,2019)

Eight years of compulsory education came to an end with the Law No. 6287 on the law on amending certain laws on Primary Education dated 30.03.2012. The 12-year compulsory education period, which lasts in three levels of 4+4+4, has been determined by this law. With the start of the 4+4+4 compulsory education in the 2012-2013 academic year, students who fail to enter Anatolian High Schools etc. with the Transition from Basic Education to Secondary Education (TEOG) exam are redirected to vocational and technical education. As seen in Table 1, this situation has led to an increase in the number of students in vocational and technical education. Since the TEOG exam has been abolished in the 2018-2019 academic year, the High School Transition System (LGS) has started to be used for placement into high schools. Placements are carried out by two types in LGS. The first is placement in schools that accept students by exam, and the other is placement based on address. In vocational and technical high schools, the courses related to the knowledge and skills required by the field are of importance. Afterwards; due to the lack of employment opportunities in the field, students and families prefer general high schools in order not to risk their chances of getting into a university. Therefore, as seen in Table 1, the percentage of vocational technical education students, which was 49% in the 2014-2015 academic year, decreased to 36% in the 2018-2019 academic year.

According to article 12 of the Law 5580 on Private Education Institutions, a legal structure has been established for financial support to private vocational high schools opened in industrial zones and whereabouts of these areas. This practice started in ten occupational fields in the 2012-2013 academic year. Different amounts of incentives have been given per student studying in these fields. Another incentive paid to the private sector through vocational training is the fee paid to students participating in skills training. It is envisaged that students participating in skills training will be paid a fee of not less than 30 percent of the monthly minimum wage (Article 25 of Law No. 3308, amended by Article 45 of Law No. 6764). Two-thirds of this payment is paid by the state for workplaces employing less than twenty personnel, and one-third for workplaces employing twenty or more personnel. This payment is paid from the fund created by the provisions of the Unemployment Insurance Law.

### Localization

In the history of Turkish National Education, vocational and technical education institutions opened in the Ottoman Empire in the 19th century have been an important step towards starting formal vocational and technical education. Since most of the vocational and technical education institutions were closed in 1916, nine boys' art schools and four girls' art schools were transferred to the Turkish Republic period. The reason why these schools can continue their activities is; These institutions were affiliated to special provincial administrations in 1913 (Altan and Tosun, 2015, p. 432).

Since there was no unit related to vocational technical education in the first years of the Republic, vocational technical schools and vocational courses were managed dispersedly by different ministries and institutions. In 1931, with the Law No. 1867 on the Administration of Art and Boarding Schools, the provinces were divided into nine regions and regional art schools were established. It was decided that the expenses of the male art schools in each region would be covered by the province. Since the

schools were transferred to the Ministry of National Education with the law numbered 2765, enacted in 1935, the practice of regional art schools came to an end (Ekinçi, 1990, p. 65).

During the Ottoman Empire period, it is known that foundations and guild-type structures in social services are predominant, e.g. for educational services, especially in terms of financing. In the first years of the Republic though, municipalities and special administrations have had a significant impact on education. Special provincial administrations and municipalities were heavily responsible for opening schools, inspecting them, determining teachers' salaries, preparing the education budget and determining the education taxes to be collected from the public (Bucak, 2000: p. 51).

The practice of educational zones in the past is an indication that education is being tried to be localized. Recently, the centralized structure in the Turkish education system is a problem of public administration. Due to the developments in the world and the problems in the Turkish education system, models such as localization in education management, decentralization and school-based administration have come to the front for more effective and efficient education (Kurt, 2006: p.70).

Decisions on the localization of education were also taken in the development plans. For example, the 7th Five-Year Development Plan (1996-2000) states that "Necessary arrangements will be made for restructuring the national education on the basis of service; transforming the central organization into a high-level decision-making body that will deal with macro-level strategic plans, curriculum, research-development, supervision and coordination; reducing bureaucracy; ensuring the active participation of both the provincial units of the ministry or the local governments and families in the education service process. In the 8th Five-Year Development Plan (2001-2005) period, due to insufficient resources or the insufficient use of existing resources, and insufficient development of cooperation with industry, it has been stated that technical education falls short of the plan targets, and that it is insufficient to develop vocational education programs of the quality and type required by the labor market. It has been stated that an education system will be created that will increase the demand for vocational education.

Decisions on localization were also taken at the councils. For example, in the 15th National Education Council held in 1996, "The Central Organization of the Ministry of National Education should be restructured with all its units. The desired structural change in secondary education should be started from the base, and the change in the central organization should be replanned depending on the change in it. By reducing the scope of the central government, legal arrangements should be made to ensure the participation and contribution of local governments. At least 5% of the revenues of the Small and Medium Enterprises Development and Support Administration (KOSGEB) should be transferred to the Budget of the Ministry of National Education in order to develop vocational education. Within the framework of delegation of authority to local governments, local units should have a say in the distribution of teachers and the planning of investments. In terms of proper use of resources, local structuring in education should be adopted, and the participation of administrators, teachers, students, parents, unions and vocational organizations in education management should be ensured. In the 16th National Education Council held in 1999, a decision was made to "increase the authorities and responsibilities of local governments and schools".

Localization is the transfer of all or some of the powers and responsibilities of the central government regarding the execution of public activities to local governments, autonomous institutions and/or the private sector. Localization policies of developed and developing countries have affected the education sector just as much as other sectors, and the local system has begun to be implemented intensively. Thus, it has been ensured that the central government supports education with models such as decentralization, local administrations, and school administrations that transfer the authorities and responsibilities to local administrations (Uzun, 2015, p.1). If the education system focuses on a centralized structure, many problems will arise from theory to practice. When local authorities are included in the process in a province, they will provide both material and moral support to education because they know the needs of the region and know their people. Officers in the provinces turn into officials writing to the headquarters and waiting for a reply. The centralized structure hinders their creativity. While localization in education will ensure participation, it will prevent paperwork and waste. The plans and programs made in the center are generally insufficient to address the problems of the local environment. Delegation of authority can remove the limitations in overcoming this problem (Özyılmaz, 2013: p. 78). Localization is grouped in three different ways in the literature (Bucak, 2000):

1. *The width of authority* that expresses the decisions taken by the provincial administrator on behalf of the central administrator. Here, it is the process of establishing lower-level administrative units (provincial organizations of the center) within the central government units. It is the form of establishing provincial and district directorates affiliated to the Ministry of National Education. Therefore, this model is also called the branch model (Odabaş, Tekdere,, Akdere, 2016, p.3).
2. *Transfer of authority, which* meets the situation where the authority is given to the provincial manager for a short time in taking some decisions, that is, the loan of power and authority by the central authority to semi-autonomous organizations and lower levels of the administrative units. Decisions can be made at the local level, but these decisions can be overturned or changed by the centre. The power is in the hands of the center while delegating authority to semi-autonomous organizations or sub-units of the administration (Edquist, 2005: p.10). In areas where management is ineffective and rising costs cannot be controlled, governments can create flexible organizations to delegate authority. The method is generally preferred in the creation of regional development, transportation projects and private school areas. It is applied in education, especially at the level of vocational education and higher education. In Turkey, this education service is offered by the Higher

Education Council (YÖK) and Universities, which are semi-autonomous public institutions (Odabaş, Tekdere, Akdere, 2016, p.3).

3. *Decentralization* style in which the powers of the central and local government are separated. Decentralization is seen as the most important model of administrative localization. In this way, the transfer of responsibility and authority takes place without any control of the central government. In decentralization, local governments have come to have a series of functions that can collect, increase and spend their income within the borders of the region. Although it is not possible to regain power at this level, there is a partial adherence to the center. The model results in the strengthening of local governments. The concrete example to be given in the Turkish Education System for this type of decentralization is the provision of curriculum, revenue collection, etc., powers of the central organization of the Ministry of National Education to be given to the special provincial administrations and municipalities (Yolcu, 2010: p. 255-256).

## General and Vocational Education in Finland, South Korea and Germany

### Finland

The fact that Finland is always in the first place in PISA, the Program for International Student Assessment, makes the country a focal point in education. Finland, with its differences and features, implements an education model that aims to learn in accordance with the purpose and constantly tries to improve this model. The system, which aims to make students participate in the classroom, includes courses that guide the profession instead of the usual curriculum courses. For example; The "Working in a Cafe" course enables a student to develop language and communication skills while at the same time providing knowledge about the economy. Students receive education in the field they are interested in, and theory and practice are combined. For example, no student will seek an answer to the question "In which area of my life will the Modern Atomic Theory be useful for me?" (Sacu, 2016).

Since there is no discrimination between boys and girls in professions, co-education is carried out in workshops such as carpentry, tailoring, home economics. Special attention is paid to these courses in Finland for the preservation of cultural values. For example, in the home economics class, male and female students make traditional tarhana soup together. It is emphasized that these courses will be compulsory, not optional, in the next curricula change (Özdemir, 2017, p.74).

Compulsory education in Finland starts at the age of 7 and lasts for 9 years, where students can choose the school they want within the boundaries of their municipality. In the last stage of compulsory basic education, students move on to either general high school or vocational high school through some tests they are subject to. In this selection, only individual abilities are taken into account, and no central examination is applied to students at this stage or before. After compulsory basic education, approximately 95% of students attend high school. High school education is divided into two as general and vocational. The rate of those who go to general high school is about 55%, while the rate of those who go to vocational high schools is around 40%. Both training processes take 3 years. In general high school education, there are mostly courses preparing for university education, and in vocational high schools, there are courses for vocational life (Kavi, 2014).

There is flexibility in the Finnish education system that allows switching between general and vocational education. Vocational education is planned in a way that supports each other with sector practices. Along with the education, there is an obligation to work and do internship for several years. While this situation increases the effect of vocational education, the system provides an increase in the quality and quantity of the required workforce (Ertürk Kayman, 2017, p.51). The Finnish Ministry of Education and Culture has authorized 150 different institutions and organizations to offer vocational training. This authority is given to institutions that have the competence and capacity to prepare the student according to the needs of vocational life. Authorized institutions are mostly municipalities or municipal federations. The Ministry determines the general objectives, structure and standards of vocational education at the national level (Kavi and Kocak, 2017, p. 1318).

The Finnish education system has a stable structure built on equality, flexibility, creativity as well as teacher professionalism and mutual trust. At the same time, the system creates an environment that provides a high level of learning opportunities in line with the importance it attaches to learning and teaching (Sahlberg, 2010, p.46). The teacher is an important element in the Finnish education system. The prestige of the profession is equivalent to the profession of medicine in Turkey. It is difficult to be a teacher in the country and all teachers have double major diplomas (Özdemir, 2017, p.64).

According to Sahlberg (2011:34-37); "The main factor in the success of the education system is the teachers. In Finland, the teacher education process and the selection of teachers are carried out with great care. All teachers must be graduates of the faculty of education, and except for the field of kindergarten teaching, all teachers must have a master's degree. At the same time, diploma grades must be high. Having strong social aspects is an important requirement. Teacher candidates are passed through difficult exams while being selected. For this reason, one out of 10 teachers is accepted as a primary school teacher every year, and only 5 thousand of the 20 thousand candidates who apply for all teaching branches are found suitable for teaching.

The way teachers are appointed to schools, which is an important element of education, takes place at the local level. Since the schools are affiliated to the municipalities, the municipality elects the school principal in big cities. And the principals determine school teachers. In small cities, the municipal council determines the teacher (Özdemir, 2017, p. 64).

## South Korea

The South Korean education system is structured as 6+3+3+4. It has 9 years of compulsory primary and secondary education that continues with 3 years of high school education which includes vocational education. The next 4 years are in the form of college or university education. Vocational education is structured at the high school level and is one of four different types of high schools in the country. Other high schools are academic high schools, science high schools and private high schools (Kim, 2006: p.178; cited in Çevik, 2015, p.80). In South Korea, during high school education, students are given the chance to choose academic or vocational education, and students are encouraged to specialize at an early age. (Gönel, 2000, p. 139).

The Ministry of Labor is the responsible agency for the formulation and implementation of vocational education policies in South Korea. It is the ministry's mandate to review and revise vocational training laws and regulations in the light of innovations, to identify training facilities, to designate certification and training courses, to subsidize training costs and to provide training allowances. In addition, the ministry develops a series of policy measures to expand the education infrastructure, such as evaluating educational institutions, managing public education institutions and giving incentives to private education institutions. Since 1995, vocational training has been carried out under the employment insurance law under the name of vocational skills development project. Vocational high schools in Korea provide advanced general education as well as vocational training in agriculture, technology, commerce, fisheries and oceanography, industry and home economics. There are 6 types of vocational high schools in Korea. These are (Kim, 2006: 179; cited in Çevik, 2015, p.80);

- **Agricultural vocational high schools:** It provides knowledge and skills for agricultural field applications.
- **Technical vocational high schools:** It provides the necessary knowledge and skills in the field of technical industry.
- **Commerce vocational high schools:** It is designed to provide the skills applied in the field of information processing and business management.
- **Fisheries and ocean science vocational high schools :** Basic education is given on subjects such as marine agriculture, production and marketing, storage and safe transportation.
- **Vocational high schools:** These are the schools where two or more vocational courses take place in the fields of agriculture, commerce, fisheries and industry.
- **Comprehensive high schools:** These are schools where general and vocational education are carried out together, where the aim is to create equal opportunities for young people in rural areas or small to medium-sized cities.

Vocational training programs in Korea are run by public and private sector providers. Therefore, vocational education providers, as government and employers, are responsible for the training of trainees. Training is provided for priority sectors (in key industry areas such as manufacturing). These training companies receive subsidies from the government in return for the training opportunities they offer to their trainees. Professional skills development project under the Employment Insurance Act, the education system is generally divided into public and private vocational education institutions. Reforms such as the establishment of polytechnic colleges and joint vocational training institutes are within the scope of public vocational education. Public institutions also provide personnel transfer in response to the changing workforce demands of the industry under the control of the Korean Chamber of Industry and Commerce. In-plant vocational training institutions, categorized as private vocational training institutions, made the largest quantitative contribution to the training of craftsmen during industrialization. Authorized vocational training institutions prepare qualified workforce that cannot be obtained in the country in public and in-plant vocational training (Ra and Kang, 2012, p.62).

In South Korea, the Local Autonomy Law came into force in 1991. The Ministry of Education has delegated some of its administrative and financial powers to local units. In this direction, training offices were established in the local organization. Members working in these offices are selected by the selection committee formed by the school councils established in all primary, secondary and high schools in the region. Members are selected from individuals with at least five years of educational experience and their term of office is 4 years. The number of members varies between 7 and 15 people, depending on the characteristics of the region. As of 2018, "There are 17 provincial education offices and 182 district education offices in South Korea. Each local education office has a board of directors, an independent executive body, a decision-making body and an education inspector" (MOE, 2017; cited in Gülsoy Kerimoğlu, 2019, p.75).

In South Korea, vocational and technical teachers are trained at the Korea University of Technology and Education for four years to obtain theoretical and practical expertise (Çevik, 2015, p.82).

## Germany

Germany has the world's fourth and Europe's largest economy. Its employment rate is among the best economies and it has the lowest youth unemployment rate. This positive indicator is an indicator of the usefulness of the "dual vocational training" system, which has been implemented in Germany for a long time and adapted by many countries to their own conditions (Tatsachen, 2020). Thanks to the dual system, Germany has low youth unemployment and high-level skills. German dual system of vocational and technical education; offers the opportunity of career, employability, as well as an excellent skill development by providing vocational qualifications. The main feature of the dual system is cooperation between small and medium-sized companies on the

one hand and public vocational schools on the other. This cooperation is regulated by law. Vocational education in Germany is based on the Vocational Education Act of 1969, which can be updated according to current conditions. While the law plans to train young people in nationally recognized occupations, it covers a tightly organized structure between government, federal states and corporations. (Yalçın, 2011, p. 512). The regulation of education in Germany is under state control in accordance with the Federal Constitution and state laws. The obligations of the government were transferred to the states. The regulation and management of the education system is the responsibility of the states. With regulations, primary and secondary schools were left to local governments, and colleges to state governments (Kantos, 2013, p. 53). There is a three-tier structure responsible for the management of schools. State governments form the upper level, independent offices that regulate the educational and cultural affairs of the region where the school is located form the middle level, and local school offices form the lower level. The responsibility of vocational education schools lies with the states (Kasapçopur, 2007, p. 70). There are 16 states in Germany and a union was established in 1971 with a contract between the states for the recognition of compulsory education and examinations. Compulsory education in Germany is between the ages of 6 and 18. 9 years of this period (10 in some states) are completed in schools and the rest in vocational schools (ATO, 2017, p.16).

There are three types of schools in secondary education. Firstly, the Hauptschule; these schools are “the schools where students with low achievement levels attend primary school. In these schools, general culture and vocational preparation training is given”. Second place is Realschule schools; “It is a school that prepares students with medium success in basic education for a higher education institution that provides vocational education”. Third, Gymnasium schools are “in primary education; it is the school where students who are at the level of higher education are directed. This school ends with the successful passing of the “Abitur (maturity)” exam” (Kantos, 2013, p. 56). Secondary education consists of the Gymnasium Oberstufe and universities. Those who successfully complete the 10th grade in the Gymnasium or successfully complete the “Realschule” by studying a second foreign language or receive the “Hauptschule” 10-B diploma are entitled to continue to the second level of secondary education. At the end of this training, students are entitled to receive the document called “Abitur” or “Allgemeine Hochschulreife”, which provides continuation of higher education (Mainz Consulate General Education Attaché, 2001, 5, cited by Kantos, 2013, 54). All primary school graduates, regardless of their success, are admitted to the dual system vocational schools that only prepare them for the profession. “Abitur is applied at the end of general secondary education, and a final exam is applied at the end of vocational secondary education. Students in the dual system take the vocational proficiency exam. According to the evaluations of the teachers at the school, the students who do not pass these exams only receive a secondary education completion certificate; they cannot obtain an abitur diploma or professional competence certificate”. Those who pass the Abitur exam can enter all universities and all higher education programs (Bal and Başar, 2014, p.13).

Those who pass the Abitur (Maturity) exam can attend vocational education institutes called Wissenschaftliche Hochschulen or technical colleges called Technische Hochschulen in Germany, which train vocational and technical teachers (Bolat, 2016, p.50). These schools last 4.5 years. Practical teaching (internship) is included in the education. The education period of vocational school teaching lasts for four and a half years and includes education covering the science of education, the science of profession-economics and the applied teaching (internship) period. Teacher candidates are required to take written and oral exams in addition to the diploma they have received from the university or the certificates they have received from equivalent institutions. Those who pass the written and oral exam take the first state exam. After the exam, they start the internship period, which lasts 18-24 months. After the internship, they take the second state exam, and those who pass this exam can work as a teacher with the titles of vocational and technical education school teacher (Gewerbelehrer) or trade school teacher (Diplom-Handelslehrer) (Hippach-Schneider, Krause & Woll, 2007, p.42; Keçici, 2011, p. 122; Aykaç, Kabaran and Bilgin, 2014, p.286 Bolat,2016, p.51). Teachers are generally employed by the state and have civil servant status according to the law (Aykaç, Kabaran, & Bilgin, 2014, p. 288).

### **Comparison of Vocational and Technical Education at the Secondary Education Level in Turkey with Other Countries for Structuring at the Local Level**

With the implementation of 12-year compulsory education in Turkey, there have been a decrease in the quality of education. Students who do not want to receive general high school education still tend to general high school. There is a agglomeration in general high school education, and the number of vocational high school students is decreasing. The lack of a stable structure in education and the change in education practices with every changing Minister of National Education has caused a decrease in trust in the education system. In our education system, an understanding of rote structure still prevails, students are competing with each other via central exams. There is no structure for generating ideas. Students tend to receive a uniform education, they do not tend to fields according to their interests and abilities.

According to the results of the research conducted by the Ministry of Science, Industry and Technology in Turkey in 2012; the need for professional and technical skills at a rate of 53.4% in micro-sized companies, 56.52% in small-scale companies, 61.8% in medium-sized companies and 56.7% in large-scale companies. When research results and labor market requirements are evaluated, the need for skills such as critical thinking, decision making, problem solving, collaborative work, communication, management/leadership, foreign language and innovation is growing (MEB, 2014, p.21). For this reason, vocational orientation studies are gaining importance in line with the interests and abilities of individuals.

In European countries, courses for students to get to know the professions are implemented within the compulsory education programs. The partnership of the school and local companies enables teachers and students to spend time at their workplaces. Studies show that young people care about real workplace information and interaction with employees (Gülmez, 2014, 97). For example; working in a cafe training in Finland.

This is also the case in Germany. Students are separated into secondary education according to their interests and abilities, not according to their academic achievements. In Germany, certain conditions must be met in order to transition to and graduate from high school. Similar systems are used in many countries of the world. For example; In order to start high school in Sweden, a student must be successful in Swedish, English and Mathematics. In Denmark, students who pass the school leaving examination after secondary school continue to high school. This means that not every student can attend and graduate from high school (Kavi & Kocak, 2018, p. 1327). In the German education system, there is a dual system that every individual who wants to receive vocational education can benefit from. Businesses in the dual system consider it the best model for vocational training and personnel recruitment. Countries with dual education, such as Germany, Austria, Switzerland, Luxembourg and Denmark, provide tools and advisory services to other countries to help implement the principle of dual education. The system is an organization in which workers, employers and government work together. Education based on the learning-by-doing model is one of the building blocks of the German education system. Germany's dual system is similar to the apprenticeship system model coming from the old and mature Ahi-Order system that is experienced from Ottoman era. In addition to vocational education, general cultural education had been also provided in the Ahi-Order. Cultural education was carried out by highly educated people and teachers of the time (Şahinkesen, 1991, p. 391).

Teacher is an important factor in vocational and technical education. Looking at teacher training at the school level, Korea University of Technology and Education in South Korea, Vocational Education Institutes in Germany undertook this task. In Germany, teacher candidates can start their profession with a three-stage exam after their university degree. In Germany, the practical training period of teacher candidates is of great importance. In the Finnish education system; success stems from teachers and being a teacher is quite difficult. Candidates are graduates of education faculties and must have a master's degree. Having good social aspects and passing tough exams are mandatory conditions for becoming a teacher.

Vocational Education Faculties, Commerce and Tourism Education Faculty and Technical Education Faculties that train teachers for vocational secondary education in Turkey were closed and replaced by technology faculties and tourism faculties; with the attached decision of the Higher Education Council (YÖK) dated 13.11.2009 and numbered 27405, dated 2.11.2009 and numbered 2009/15546. After the transformation process of these schools, the need for teachers was met with pedagogical formation education in accordance with the teacher assignment strategy of the Higher Education Council. There is uncertainty for the teacher requirement of vocational secondary education institutions. In the future, this situation may cause negativities in vocational education policies.

The study of Somuncu (2019a) was applied to 428 administrators/teachers working in official vocational and technical education institutions selected from nine districts in the center of Ankara. In the research, the majority of teachers (65%) think that it is wrong to open Technology Education, and Tourism Faculties instead of Vocational and Technical Education and Commerce Tourism Education Faculties that train teachers for vocational and technical education. Majority of the teachers (63%) do not find it appropriate for graduates of Technology, Economics and Administrative Sciences, Gastronomy and similar faculties to become teachers in vocational high schools by completing the "Secondary Education Field Teaching Non-Thesis Master's" program in Educational Sciences Institutes. Participants (64%) do not find it appropriate for undergraduates or graduates of faculties of Economics, Administrative Sciences, Gastronomy and similar faculties to take pedagogical formation in education faculties and become teachers in vocational and technical education high schools, as a result of the closure of faculties that train teachers for vocational and technical education with the Council of Ministers Decision No. 2009/15546. Most of the teachers (68%) think it is wrong that the students of the Faculties of Technology are unable to take pedagogical formation courses in education faculties, whom were studying in the aforementioned faculty as a result of the closure of the faculties that train teachers for vocational and technical education, with the decision of the Council of Ministers. Again, the majority of the participating administrators/teachers (82%) think that closing the faculties that train teachers for vocational and technical education will in future cause a shortage of teachers who know the field.

### **Localization Studies in the Vocational Education System**

The purpose of vocational education is to train entry-level staff for sectors. For this reason, schools should cooperate with the sectors on the knowledge and skills that should be given in the education of students. Vocational education is constantly developing and changing with the developing technology. The participation of enterprises, municipalities, related sectors, relevant institutions and organizations is required for entry-level staff training, which is required by the market. Today, education financing is made by families and companies in developed countries, and in developing countries, new taxes are imposed and private schools are encouraged. Educational services are carried out by both the public and private sectors (Hocanin, 2004, p.110). Local participation in the financing of vocational education is important because of the workforce requirements that differ according to the structure of the settlements.

Various studies have been carried out on the localization of education in Turkey. In the Barker Report published in 1951 by the committee lead by James M. Barker appointed by the Reconstruction and Development Bank, it was stated that more responsibility should be given to local organizations (İktisatsozluđu, 2020). In the study titled "Education Report in Turkey" (1990) by TUSIAD, the central government was shown as the most important factor affecting the education system negatively. It has been argued that localization will provide administrative, financial and technical advantages in solving the current problems of education (Balođu, 1990, p.187).

According to Cord (1997) Feasibility Study in Secondary Vocational Education: nearly three-quarters of the participating groups emphasize the importance of restructuring between the Central Organization of the Ministry of National Education and the local level in the program development processes; about two-thirds of business managers and coordinating teachers agree that some of the teaching authority should be delegated to the local level, to schools. According to the results of the research, new regulations should be made to ensure the participation of schools and businesses at the local level in vocational education.

According to Dođu (1997); the over-centralized structure makes it difficult to adapt to rapid changes. The system does not have a flexible structure that can respond instantly to requirements. It prevents the entrepreneurship of administrators and teachers in schools and their decision-making even on practical issues. This situation makes it difficult to work in partnership with the businesses. The central organization of the Ministry of National Education should make high-level policy and general strategy decisions, and the details should be decided and carried out at the local level within the main framework given by the center. Participation at the local level is insufficient.

In the suggestions of Kazu and Demirli's (2002) research, it is important to expand the jurisdiction of school administrations in order to make the necessary adaptations according to the location of the educational institutions for the purpose of maintaining the demand for vocational and technical education institutions. At the same time, local structuring should be carried out by ensuring that relevant institutions and organizations such as employer and worker organizations, academic and research institutions, professional organizations and student-teacher-parent representatives actively participate in the decision-making process at every stage from planning to implementation, including in management and financing.

According to the research of Binici and Ari (2004), the Education System in Turkey is generally of a national nature. This structure needs to change with the local configuration. The "National Council for Vocational Technical Education" should be established and education should be handled in three groups. These should be national schools, local schools (institutions run by Municipalities, Governorships and Special Provincial Administrations but controlled by the Ministry of National Education), schools of foundations and private institutions.

Tepe's research (2007) investigated the non-formal education practices of the municipalities, and within this scope, the non-formal education (ISMEK) practice of the Istanbul Metropolitan Municipality; based on the fact that social development basically starts with development at the local level, which are the closest local government units to the citizens. Among the suggestions of the research; providing additional financing opportunities in such projects by cooperating with institutions such as "Turkish Employment Agency" (İŞKUR), "Small and Medium Enterprises Development and Support Department" (KOSGEB), developing policies regarding non-formal education and assigning duties to local governments in this regard, and support, establishment of education councils with the participation of different institutions and organizations in the provinces, thus ensuring integrity in both formal and non-formal education, especially at the local level, and benefiting from the facilities and opportunities of formal education in non-formal education.

According to the results of Palaciođu and Dayiođu (2017) research; increasing the thematic schools, focusing on practice in education, structuring business practice education as 1 day in 9th grade, 2 days in 10th grade, 4 days in 11th and 12th grades, providing incentives per student (financial incentive, tax deduction, reduction in input costs and etc.), the opening of schools at the local level, and the activation of the Vocational and Technical Education School Administrative Board systems for this.

Turkey Vocational Education Board In Turkey, Provincial Employment and Vocational Education Board is defined on the basis of provinces. The regulation on a district basis has been established with the Vocational and Technical Education School Administrative Board (MTOYK), which is envisaged to be formed with the Circular No. 2016/21 dated 22.11.2016 of the General Directorate of Vocational and Technical Education of the Ministry of National Education. A total of 867 Vocational and Technical Education School Administrative Boards have been formed throughout the province and district.

Provincial Vocational Education Boards have been determined as an organization at the local level in the Vocational Education Law No. 3308. Somuncu (2019a) in her research conducted with 428 administrators and vocational course teachers in 9 districts of Ankara, the participants were asked to express their opinions about the groups or representatives that should be in the Provincial Vocational Education Board; in response to the question asked to the participants, it has been concluded that there should be, a representative of the sector vocational course teacher, a representative of the sector representative from each line of business, a representative of the field chief, a school student representative, a student parent representative, representatives from each union, representatives from non-governmental organizations and industrial zones, master trainer representatives and ministry representatives.

As of the 2017-2018 academic year, apprenticeship training has been included in the scope of compulsory education. Individuals who graduated from secondary school or imam hatip high school can apply for apprenticeship training. Apprenticeship training continues in vocational training centers. The training period is four years, and a journeyman certificate can be obtained with the examination held at the end of the third year, and mastery certificates with the examination held at the end of the fourth year. During this period, students can continue to open education institutions. At the end of four years, they can also get a vocational high school diploma by giving the additional courses. Enterprises employing apprentices pay 30 percent of the minimum wage to the apprentice, and there is a state contribution to this payment. Apprentices attending the center receive theoretical education at school 1 or 2 days a week, and practical training in enterprises 4 or 5 days a week (Law No. 6764 on the Amendment of Some Statutory Decrees with the Decree Law on the Organization and Duties of the Ministry of National Education). In the Official Gazette dated 19 February 2020 and numbered 31044, the definition of vocational training center was added to the Law No. 5580. With the definition of "means a private education institution where apprenticeship, journeyman and mastership training and vocational and technical course programs are implemented", private vocational and technical education centers can be opened. Industrial zones and the private sector were enabled to open private vocational training centers that are suitable for their fields.

There are deficiencies in Turkey regarding the cooperation of schools with the sector. Vocational education programs in Turkey aim to prepare students for higher education. While businesses have a shortage of qualified personnel, vocational and technical schools cannot train students in line with the market's demand. Since there are strong ties between schools and workplaces in European countries such as the Czech Republic, Germany and the Netherlands, their students can be employed after graduation. School-industry cooperation should also be strengthened in Turkey. The sector should support vocational and technical schools with tools and equipment (Gülmez, 2014, p. 125).

The transition to the job market is faster in countries with strong vocational orientation. For this reason, vocational guidance should be made in school systems in accordance with the developmental stages of students. Vocational orientation programs should be designed and implemented to meet the needs of the entire society (Somuncu, 2020, p. 187). The biggest problem in vocational orientation is the negative perception of vocational education in the society. Vocational education is seen as a school where children from low-class families and students who are unsuccessful in academic subjects are directed. The uniformity of the school name also increases this perception. Restructuring the names of schools can reduce this perception. For example; Such as Tourism College, Industry College, Health College ( Kavi and Kocak, 2018 p. 1316, Somuncu, 2019b ). In another solution, the number of thematic high schools can be increased. The qualified personnel required by the sector can be trained in thematic high schools. Depending on the economic characteristics of the regions, thematic high schools can be opened. For example, Animal Husbandry and Animal Products Vocational and Technical Anatolian High School in Kars can provide the training of qualified workforce of that region. Again, thematic high schools can be opened within the entry-level staff of assistant veterinarians, which is a subsidiary of animal husbandry (Doğan, 2016, pp. 122-123).

## CONCLUSION AND RECOMMENDATIONS

Most of the developed countries have solved the unemployment problem with the importance they give to vocational education and have made economic progress. Developments in the world are experienced on a global scale, and all countries are affected by each other. While the epidemics experienced in the past were experienced in a certain region, the corona epidemic disease, which is also named as the covid-19 virus, has affected the whole world. For the production of masks and disinfectants, which were not commonly required before the epidemic and sold at high prices, the production workshops of vocational high schools came into play and produced the masks and disinfectants that Turkey was in very much need. Deputy Minister of National Education Mahmut Özer said, "In vocational high schools, 8 million surgical/medical masks, 5 million liters of hypochlorite disinfectant, 120 thousand liters of hand disinfectant and 3 thousand liters of cologne, 750 thousand face shields and 1 million disposable aprons/overalls are produced, with the coordination of the governorship of each province, has reached the points of need". He also stated that "They established Research and Development Centers in vocational high schools in Istanbul, Tekirdağ, Bursa and Hatay, where they produced surgical mask machine, respirator and N95 mask machine and switched to automation" (AA, 2020). With such exemplary studies, a new vocational high school model is being tried to be created in Turkey. This model will be able to erase the negative perception about vocational high schools. Perception change will increase inducement to vocational education.

In most European countries, education is carried out at the local level. For example, in Germany and South Korea, there are independent offices, local school offices that regulate the educational and cultural affairs of the school district. In the Swedish education system, which is also a European country; Each county council and municipality has responsibilities regarding the qualification of schools, the recruitment of teachers and staff, the implementation of their programs, and the preparation of school budgets, as well as ensuring that educational practices comply with the law, regulations and government programs. All these studies are carried out in a way that ensures equality throughout the country (Kavi and Koçak, 2018, p. 1320). The training activity to be carried out at the local level in Turkey will be more effective as it will take into account the needs of the region. Local administrators and the local public are the most accurate decision makers regarding the conduct of vocational training.

The fact that the municipalities in Turkey have a view different than the central government and that there is the problem of terror in the eastern provinces may cause it to be thought that the municipalities in those regions will organize education in a way

that will support terrorism. These and similar concerns require the education system to be decentralized through the governorship and special provincial administrations, not municipalities. Governorships should be able to work in cooperation with the local public in line with the needs of the region without being too dependent on the central authority. For example, in Denmark, together with municipalities, churches, private institutions and organizations are responsible for education management (Kavi and Kocak, 2018, p.1328).

The Vocational Education Law No. 3308 has brought a solution to this issue. Article 6 of the Law has determined the Provincial Vocational Education Board. In Article 6/a of the Law, it is stated that the governor will determine the mayor or his representative who will participate in the council. In addition, the law states that "The decisions of the provincial vocational education board are implemented with the approval of the governor. The governor presides over the provincial vocational education board when he deems it necessary. It has been determined in the Vocational and Technical Education School Administrative Board, which is envisaged to be formed with the Circular No. 2016/21 dated 22.11.2016. These boards need to gain functionality. The Ministry of National Education needs to put into effect the "delegation of authority" system. It has to delegate some powers to these boards. The Ministry can supervise the work of the board with education inspectors, as in South Korea.

The incentives given to the industrial zone and private vocational high schools according to article 12 of the Law on Private Education Institutions numbered 5580, is  $\frac{3}{2}$  or  $\frac{3}{1}$  of the wage paid to the students who receive vocational training at the workplace with the article 25 of the Law numbered 3308, amended by article 45 of the Law numbered 6764. The follow-up of the functions of the private vocational training centers to be established with the Law No. 5580, in the Official Gazette No. 31044 dated February 19, 2020, and the payment of the 1 by the state, will increase the effectiveness of the practices. All boards established by laws and circulars now require the management of "delegation" of vocational education at the local level. Local structuring will ensure that resources are used on-site.

In the last two years of secondary school, giving practical introductory courses like the "Working in a Cafe" course in Finland, spending time in the workplaces of students and teachers and getting information about the work done can be effective in directing students to professions. Guidance studies should be focused on directing students to professions in line with their interests and abilities. Referrals should be made according to the business lines in each region. Vocational and technical schools should focus on practice, and regional characteristics should be taken into account when creating departments. Business protocols should be established between schools and sector units in order to provide job opportunities after graduation. Research and development laboratories should be established in vocational and technical high schools in cooperation with the sector. Institutions that train teachers for vocational education need to be re-established. An effective vocational training will help solve the unemployment problem and increase the welfare level of Turkey.

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### **Statements of publication ethics**

I hereby declare that the study has not unethical issues and that research and publication ethics have been observed carefully.

### **Researchers' contribution rate**

The study was conducted and reported by the only author in full.

### **Ethical Approval Information**

The article is a literature review, and since the article is not a research paper, Ethics Committee Approval Document is not required. Even though, the study was conducted in accordance with ethical principles.

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