

Osnabrücker Schriften  
zur Berufs- und Wirtschaftspädagogik

Anastasia Goncharova

Vocational Education and Training in Russia  
German Dual System as a Transfer Model for the  
Development of Russian Vocational Education

# Osnabrücker Schriften zur Berufs- und Wirtschaftspädagogik

Volume 1

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# Vocational Education and Training in Russia

German Dual System as a Transfer Model for the Development of Russian Vocational Education



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Diese Arbeit wurde im Januar 2018 an der OVGU Magdeburg als Masterarbeit im Studiengang *Betriebliche Berufsbildung und Berufsbildungsmanagement* eingereicht.



2020 Berufs- und Wirtschaftspädagogik, AG Prof. Frommberger, Osnabrück

### **Bibliografische Informationen der Deutschen Nationalbibliothek**

Die Deutsche Nationalbibliothek verzeichnet diese Publikation in der deutschen Nationalbibliographie.

Detaillierte bibliografische Daten sind im Internet unter <http://dnb.de> abrufbar

## Vorwort

Die Weiterentwicklung der beruflichen Bildung gewinnt weltweit an Bedeutung. Insbesondere die Bekämpfung der hohen Jugendarbeitslosigkeit sowie die wachsenden Fachkräftebedarfe haben in den letzten Jahren zu vielfältigen Reformanstrengungen im Feld der Berufsbildung geführt. Eine besondere Bedeutung wird international mittlerweile solchen Ansätzen zugemessen, mit denen eine Verbindung des schulischen und betrieblichen Lernens in der beruflichen Bildung umgesetzt wird. Ein Beispiel hierfür ist das „Duale System“ der Berufsbildung in Deutschland, das in den internationalen berufsbildungspolitischen Debatten als ein gutes Vorbild für die Weiterentwicklung nationaler Berufsbildungsstrukturen gilt. Manchmal wird vor diesem Hintergrund aus deutscher Sicht auch von dem „Exportschlager Duales System“ gesprochen

Doch ist der Transfer gewachsener Berufsbildungsstrukturen auf andere kulturelle Kontexte überhaupt realistisch? Welche Erfahrungen werden in verschiedenen Ländern mit den Versuchen gemacht, das deutsche „Duale System“ der Berufsbildung zu implementieren? Und wie können Berufsbildungsansätze erfolgreich weiterentwickelt werden, mit denen das schulische und betriebliche Lernen verbunden wird? Frau Anastasia Goncharova richtet vor diesem Hintergrund einen wissenschaftlichen Blick auf die Entwicklungen in ihrem Heimatland Russland. Auch in Russland finden Reformen in der beruflichen Bildung statt, und zwar unter besonderer Berücksichtigung dualer Berufsbildungsansätze. Frau Anastasia Goncharova untersucht diese Reformentwicklungen. Sie analysiert die Berufsbildung als Teil des Gesamtbildungssystems in Russland und bearbeitet konkret die Frage, ob und inwieweit das deutsche „Duale System“ auf Russland tatsächlich übertragen wird bzw. übertragbar ist. Frau Goncharova zeigt an ihrem Beispiel eindrucksvoll, wie weit die berufsbildungspolitischen Ansprüche und die realen Fortschritte auseinander liegen können. Sie untermauert damit ausdrücklich das Erfordernis, die Weiterentwicklung der beruflichen Bildung grundsätzlicher zu denken und umzusetzen, und zwar unabhängig von idealtypischen Vorstellungen und viel konkreter in Anknüpfung an gewachsene Strukturen.

Dietmar Frommberger



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## List of acronyms and abbreviations

ASI	Agency for Strategic Initiatives
AusbEignV	Ordinance on Trainer Aptitude (Ausbilder-Eignungsverordnung)
BBiG	Vocational Training Act (Berufsbildungsgesetz)
BIBB	Federal Institute for Vocational Education and Training (Bundesinstitut für Berufsbildung)
BMBF	Federal Ministry of Education and Research of Germany (Bundesministerium für Bildung und Forschung)
CEDEFOP	European Centre for the Development of Vocational Training
ECTS	European Credit Transfer System
FGOS	Federal State Educational Standards (Federal'nyj Gosudarstvennyj Obrazovatel'nyj Standart)
FIRO	Russian Federal institute of Education Development (Federal'nyj Institut Razvitija Obrazovanija)
Rosstat	Federal State Statistics Service (Federal'naya Sluzhba Gosudarstvennoi Statistiki)
FUMO	Federal Educational-Methodological Associations (Federal'nye Učebno-Metodičeskie Ob'edinenija)
GOVET	German Office for International Cooperation in Vocational Education and Training
iMOVE	International Marketing of Vocational Education
ISCED	International Standard Classification of Education
NPO	Primary Vocational Education (Natschalnoje Professionalnoje Obrasowanije)
OECD	Organisation for Economic Co-operation and Development
R&D	Research and Development
SME	Small and Medium Enterprises
SPO	Secondary Vocational Education (Srednee Professionalnoe Obrazovanie)
UNESCO	United Nations Educational, Scientific and Cultural Organization
UNEVOC	Centre for Technical and Vocational Education and Training
VET	Vocational Education and Training
WSI	WorldSkills International
YGE	Unified State Exam (Yediniy Gosudarstvennyy Ekzamen)

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# 1 Introduction

The quality of the vocational education and training (VET) is directly connected to the skills of the work force. A well-functioning VET system ensures the ability of the human resources to match the needs of the labor market. Therefore, VET is one of the key factors, enhancing a country's economic performance and competitiveness, as well as its innovative and technological potential.

In recent years, the German dual VET model has gained considerable international attention for its success. It is seen by the national experts as one of the crucial factors of the German high-performance economy and social stability. Its main characteristic is an effective combination of a practice-oriented training in a company and a theoretical learning in a vocational school. Low unemployment rates among young people, strong innovative and technological orientation of the production processes and a high recognition of German specialists around the world are only a few positive outcomes of an effective dual approach.

By contrast, the Russian system of VET is currently facing serious challenges. For two decades after the collapse of the Soviet Union and until recently there was a strong tendency in professional education toward a tertiary academic education. The non-tertiary VET confronts a low recognition in society and an unwillingness of the young people to participate in it for a long period of time. As a result, serious mismatches between the needs of the labor market and qualifications of the workforce emerged. The employers are still confronted with the consequences of this tendency, having problems to fill the available vacancies with appropriately qualified personnel. At the same time there is a heavy surplus of the specialists with the tertiary education in the market. Many of them experience difficulties to find a job matching their education level and expectations, and finally fill the places with lower qualification requirements. Quality and image of the vocational education must be improved to turn it into an attractive alternative pathway for the young generation. Therefore, a reformation of the VET policies became crucial for the future economic growth and prosperity of the country.

With the rise of globalization and international cooperation between countries, the interest toward the foreign educational systems is constantly growing. Many countries cooperate in the field of educational transfer. Germany is one of the most active supporters and participants of the international cooperation and the educational transfer. Already since 1950s the German organizations and companies started to bring the successful experience in the sphere of vocational education abroad (Federal Institute for German Office for International Cooperation in Vocational Education and Training [GOVET], n.d.). In 2013, the Federal Government of Germany has adopted a new strategy for international cooperation in the field of VET and established GOVET as a central partner for international cooperation in the area of VET. Currently, Germany is cooperating with many countries around the globe interested in adopting various aspects of the German dual approach in VET. Searching for the best solutions for the further development of the national VET system, Russia as well demonstrates interest in the German experience. In the recent years, several projects between Russia and Germany were launched with a purpose to adopt dual structures into the Russian VET system.

The VET systems of different countries vary significantly. The complexity of the VET models is a result of different historical developments, social structures, traditions, prosperity of the

country and other factors. Additionally, a VET system is positioned between labor market and education spheres. Consequently, it is an area, where interests and influence scopes of different institutions and actors interact (Dieter & Clemens, 2015). Therefore, a reformation of a VET system and an export of a new education model or its elements should be carried out carefully. Dieter (2013) defines a transfer process as a procedure of choosing and adjusting rather than coping a system or its elements. It should be performed oriented on the needs and special characteristics of the “transfer-taker”. An education transfer between countries implies adjusting the system or its elements to the national economic, cultural and political context. In order to be able to estimate the chances of a dual model transfer into the Russian VET system it is required to investigate specific conditions of the national context first.

During the last decades a series of articles have been dedicated to the Russian VET (Höhns, 2004; Smirnov, 1995; Zolotoreva & Oleynikova, 2014). Due to the rapid changes of economic and political conditions, some of these publications have lost their actuality over the time. Other publications offer rather a brief insight into the Russian VET, than a profound evaluation of the VET system and its recent developments. A good overview of the Russian VET is provided by the International Centre for Technical and Vocational Education and Training of the United Nations Educational, Scientific and Cultural Organization (UNESCO-UNEVOC, 2012). However, it does not reflect the most current changes in the Russian legislation, which led to significant transformations in the structure of the national VET system. Furthermore, many government programs, initiatives and projects, introducing changes in VET, are currently in place. The German and English literature has not reflected them sufficiently yet.

A number of short, descriptive reports about German-Russian VET cooperation were published by the GOVET in the last years. Except for this, only few publications addressing a transfer of German dual structures into the Russian VET have appeared recently. A Russian country study, conducted by Hones and Wolf (2011) for iMOVE (International Marketing of Vocational Education), provides a good description of the Russian VET. However, the study is oriented on the German education and training providers wishing to enter the Russian educational market. Therefore, studies on dual system as a model for the reformation of Russian VET are still lacking.

#### *Objective of the research:*

The aim of this master thesis is to present a profound overview of the Russian VET system as well as to discuss a potential of the education transfer in the field of VET, more precisely, of the German dual structures into the Russian VET system. The paper should analyze in what form and to what extend the dual approach is being integrated in the Russian education system and what the future perspectives of its further development are.

#### *Approximate framework of this master thesis:*

The introduction chapter presents the problem background and motivation for the research. In the second chapter the theoretical background and a key terminology on the topics of VET, the duality in education systems and the education transfer will be introduced. The chapter will provide a profound literature review on the concept of policy transfer and present one of the most prominent models of the educational transfer. In addition, the German dual system of VET will be presented, including its main principles, objectives and elements. Furthermore, a short insight into the research on the dual system as a transfer model will be given.

The next chapter should picture the current economic, demographic and social framework conditions of Russia. A reflection of the context conditions is important because VET is embedded and influenced by them. Therefore, an understanding of the context conditions of the country is important for the following observation of the educational transfer.

In the fourth chapter of the thesis the Russian education system will be presented, its structure and main developments will be described. This chapter should illustrate the education structure and the place of VET in it.

The fifth chapter will be dedicated to the Russian VET. It will present the understanding of VET in Russia and the classification of its forms. Furthermore, special attention will be dedicated to the development of the Russian VET over time, as well as to the accumulated problems and current challenges. Furthermore, the chapter will provide an overview of the process of modernization and reformation of VET. The important government strategies, initiatives, changes in the legislative and institutional framework as well as involved actors and their roles in the process will be presented. At last, an overview of the organization of VET will be given.

The sixth chapter will be dedicated to the educational transfer. It should outline the current developments in the Russian-German cooperation in the field of VET. Over the last decade several projects, aiming to archive the transfer of the German dual system to the Russian VET was implemented. The results and challenges of this cooperation should be reflected in this chapter. The transfer of the dual approach to Russia will be observed through the theoretical framework on the policy transfer. The chapter will continue with the discussion of a potential for further integration and expansion of the dual model into the Russian VET system. Finally, a conclusion, whether the German dual system is the right prototype for the further development of the Russian VET, will be drawn.

The seventh chapter should summarize the results of the thesis.

#### *Research method:*

Documentary and literature analysis will be used as a research method for this master thesis. German, Russian and English literature dedicated to the researched topic will be reviewed and evaluated. Furthermore, various documents, legislative texts, statistics and “grey” literature, relevant to the VET and education transfer in Russia, will be analyzed.



## 2 Terminology and theoretical framework

This chapter should present a theoretical framework for the areas of vocational education and policy transfer in the field of education and give a short but insightful description of the German dual VET system, its institutional settings, main elements and principles.

### 2.1 Vocational education and training

#### 2.1.1 Definition of VET

National vocation education and training (VET) systems are very diverse. According to Billet (2011a), VET is probably the most heterogeneous education sector (p. 3). Comparison of national definitions of VET demonstrates inconsistency in its description. For this reason, an effort to find a common, unitary understanding of VET, which would suit to describe diverse vocational education systems around the world is hardly feasible. Nonetheless, global agencies, such as the European Centre for the Development of Vocational Training (CEDEFOP), the Organization for Economic Co-operation and Development (OECD), and the United Nations Educational, Scientific and Cultural Organization (UNESCO) offer international definitions of VET to enable international cooperation and research and to have a basis for understanding of foreign education systems. There are several alternative terms used to describe this educational field: technical and vocational education and training, technical-vocational education, further education and training, vocational and technical education, career and technical education (MacKenzie & Polvere, 2009).

A simple and short definition is offered by the CEDEFOP: VET is “education and training which aims to equip people with knowledge, know-how, skills and/or competencies required in occupations or more broadly on the labor market”. In this context, VET is defined through its purpose: To prepare people for work. This very general understanding of VET can seem inadequate since all the education and training sectors after the compulsory school education aim to prepare individuals for the world of work. This definition does not necessarily exclude an academic education, which is usually observed as an alternative education path. In other sources, VET is often referred to as a post-compulsory education and training outside the academic sector of education (Billett, 2011b, p.3; MacKenzie & Polvere, 2009, p.79).

Vocational programs are usually categorized into initial and continuing VET (OECD, 2010, p.26). Initial VET refers to qualification programs, which are usually developed for young people at the beginning of their career and should prepare them for the first entrance into the labor market. Continuing VET programs are mainly designed for employees to further develop their skills and competencies or for those who lost their jobs to improve their chances for a new employment. This thesis focuses on the initial VET.

Although international organizations emphasize the importance and role of VET for economic development and social prosperity of the countries more and more often, its relevance still varies significantly across different countries.

#### 2.1.2 Purposes of VET

As the definition implies the main purpose of VET is to assist individuals in preparation for the working life. Billet (2011a) argues that VET has a variety of purposes (p. 4). However, according to the author it has four central educational provisions:



1. Preparation for work, including assisting individuals in the selection of the occupation which is interesting and suitable for them.
2. Initial preparation of individuals for work, including development of the knowledge and skills necessary to practice the selected occupation successfully.
3. A continuous development of individuals during their professional life aimed at the advancement of their skills and competencies as well as acquisition of new ones in order to suit changing work requirements in the selected occupation field
4. Provision of qualifications, allowing a transition to a different profession when individuals choose or are forced to change their initial occupation (Billett, 2011a, pp. 4–5).

### **2.1.3 Vocational versus academic education**

Historically, VET has been seen as an alternative to academic education (Keating, Volkoff, Perry & Medrich, 2002, p. 168). Usually, their difference is determined in the relation to different learning goals. So, one of the distinctions between academic and vocational education is that the former usually prepares students for a broader field of possible occupations, while VET is designed to provide students with knowledge and skills specific for a particular occupation or trade. The central purpose of VET is to develop practical, job-specific skills of the students.

In the early 1970es, UNESCO developed an International Standard Classification of Education (ISCED) to facilitate a collection and an analysis of educational statistics on both national and international levels. The latest revised version of it, approved by the UNESCO's General Conference in 2011, is the most recognized and used classification of education fields. ISCED 2011 allows to analyze and compare educational systems of different countries. Therefore, it can be useful for understanding national varieties in the definition of VET.

The classification includes nine levels of education:

Level 0 - Pre-primary education

Level 1 - Primary education or first stage of basic education

Level 2 - Lower secondary or second stage of basic education

Level 3 - (Upper) secondary education

Level 4 - Post-secondary non-tertiary education

Level 5 - First stage of tertiary education

Level 6 - Second stage of tertiary education (UNESCO Institute for Statistics, 2012).

ISCED 2011 distinguishes between general and vocational education, which are referred to as academic and professional at a tertiary education level. According to ISCED 2011, VET can take place at secondary, post-secondary and tertiary levels of education. The upward differentiation of VET, especially the emergence of VET at the tertiary level is a relatively new phenomenon which is a result of changing world of work and human resource requirements (UNESCO-UNEVOC, 2006).

Conditions of work and skill requirements are currently undergoing profound changes due to the rapid economic and technological development. Therefore, a traditional distinction between white-collar occupations, which involve mainly intellectual or mental work, and blue-collar occupations, which usually require technical skills to perform manual work, is not clear anymore (UNESCO-UNEVOC, 2006). Increasingly, work requirements for all occupational fields include intellectual aspects and various soft- and hard-skills. As a result, both, academic and vocational education are expected to prepare knowledge workers, who are able to adapt to rapidly changing job conditions and requirements, to sustain their learning capacity and to meet the challenges posed by the transition from the industrial age to the information age (UNESCO-UNEVOC, 2006; OECD, 2010).

Bosch and Charest (2010) argue that the difference between vocational and academic education usually lies in its social status of VET, as well as the earlier specialization for occupation. Often VET faces lower recognition and is seen as a pathway for the ones who failed in general education (Bosch & Charest, 2010). Still, there are big differences in the social status of VET in different countries. Normally, it is determined by the opportunities, which VET opens to its students. A social recognition of VET is higher if it provides smooth entrance to the employment, an access to well-paid jobs with complex and interesting tasks and opportunities for professional development (Bosch & Charest, 2010, p. 23). For instance, VET in Germany and Switzerland enjoys a high recognition not only inside the countries but internationally as well.

Although VET can play a central role in preparing the workforce for the labor market, it is often overshadowed by general academic education (OECD, 2010). In recent years, the problem of a low social status of VET became very relevant for many countries. It causes various difficulties in the labor market. Many countries suffer from the surplus of specialists with academic degrees and a shortage of workforce in the occupational fields of the VET area. Furthermore, since VET provides the workforce for the labor market it is closely connected to the quality of produced goods and services of the country. Together with other factors, it influences national economic performance and competitiveness. Increasingly, countries are recognizing that strengthening of VET is one of the effective tools for improving the situation in the labor market and enhancing their own economic performance (OECD, 2010). Therefore, they are trying to increase the image and quality of vocational education. With growing international cooperation, adopting successful experiences and practices from abroad becomes currently one of the popular solutions.

#### **2.1.4 Classification of the VET systems**

Eichhorst et. al. (2012) offer a classification of national VET variations, distinguishing between five different system types:

##### **1. Vocational/technical schools**

Many countries have a large vocational schooling system as a part of their upper secondary education. Here, VET can be either a part of a compulsory schooling or a part of post-compulsory education. The curriculum usually includes both general and occupation-related contents. Therefore, the initial school education is characterized by the duality between general and vocational education. Such systems can be found for example in some Middle East and Northern African countries, Eastern European countries and in most southern European countries. Usually a recognition of vocational education in these countries is low and perceived as a “second-choice” education.

##### **2. Vocational training centers**

Vocational training is organized at vocational training centers. This model is used in Latin America. Both public and private companies can participate in the training and, therefore, this system is demand driven. The government does not specify the curriculum. As in the dual system, work-based training is followed by theoretical learning.

##### **3. Formal apprenticeship**

Here training-on-the job is usually complemented by the institutional instruction. As a result of the training, students receive a license which allows them to practice the profession. In the result of the training students receive a license which allow them to practice the profession. The apprenticeship system is applied in the UK, the US, Australia and in South Africa. Practical training can be followed by a formal off-the-job learning. Still, the training process is concentrated in a firm. Therefore, apprenticeship is normally separated from formal education.

#### 4. Dual apprenticeship system combining school training with a firm-based approach

An effective and strongly regulated combination of practical training in a company and theoretical learning in a vocational school is a central element of the dual system. Besides, it is characterized by a strong involvement of social partners and a high degree of formalization. Dual vocational preparation is common in Germany, Switzerland, Austria and Denmark. Due to its effectiveness in combating youth unemployment and other positive outcomes for the labor market, many countries consider using it as a prototype for developing and improving their VET. Since the focus of this thesis is on the transfer of the German dual system to Russia, the German version of VET will be more precisely presented in the following chapter.

#### 5. Informal-based training

It is a traditional informal way of skill acquisition, which is still widely spread in India and many African countries. The training occurs outside the formal schooling as an agreement between a craftsman and a trainee. Usually, the vocational preparation is fully work-based. Despite its informal character, the apprenticeship can follow locally standardized structures and duration.

Additionally to these five forms, a new hybrid form, combining elements of vocational and academic education has arisen at the tertiary education level in recent years (Graf, 2015). A work-based academic education program appeared in Germany, Switzerland and Austria because of growing demand for higher skills. Dual academic programs completely change the picture of VET as being a pathway for academically weaker young people. On the contrary, such hybrid programs can attract the best-performing high school graduates.

## 2.2 Education policy transfer

Many researches see policy transfer as one of the key research areas in comparative education (Perry & Tor, 2008, p. 510, 2008; Steiner-Khamsi, 2004, p. 201), which's relevance is constantly growing with accelerating globalization processes and ever closer cooperation between countries (Phillips, 2009, p. 1072). In the context of education transfer research, the term "policies" summarizes the variety of education-related elements and best practices, which can be a subject of international educational transfer (Barabach & Wolf, 2011, p. 284). According to Barabach and Wolf (2011) not only structures or a curriculum, but educational objectives, strategies, standards, or action plans can be transferred on the national or international levels as well.

The transfer of education practices has a long history. Already centuries ago explorers traveled to different parts of the earth to learn from the successful experiences of other nations in the field of education. Since the early nineteenth century the concept of the education transfer has a fundamental importance in the field of comparative education (Beech, 2006). One of the first scholars, who implicitly discussed a question of education transfer in his works was Jullien de Paris (1775-1848). He is acclaimed to be a "father" of the comparative education (Kaloyannaki & Kazamias, 2009, p. 11). Julien systematically collected facts and observations on education-related questions in different European countries and arranged them into comparative tables. In his "*Plan and preliminary views for a work in comparative education*" (1817), Julien argued that educational comparisons could motivate "borrowing" of good practices from one another and therefore be useful for reforming and improving the contemporary European education (Kaloyannaki & Kazamias, 2009, p. 13).

Educational policy transfer is a very broad field within a comparative education research. The term educational policy transfer refers to the movement of education-related ideas, policies, concepts or practices from one time and place to another (Beech, 2006; Perry & Tor, 2008). It can take place on the local, regional, national or cross-national level. In the context of international policy transfer, "place" usually refers to a nation state. A variety of alternative terms can be found in the literature of comparative education to describe the process of bringing specific education

practices from one country to another. Among them are “borrowing”, “export”, “implementation”, “transfer” or “copying”. Researchers have explored the policy transfer and similar alternative concepts, like policy transfer, export, import, borrowing, lending, learning, reform import and export or cross-national attraction (Barabasch & Wolf, 2011; Lewis, 2007; Phillips & Ochs, 2003; Tanaka, 2005). Although all the terms reflect the same process, there are slight differences in the interpretations depending on the term used by the scholars. Perry and Tor (2008) classified a variety of theoretical perspectives on educational transfer into four main categories: social positivist, dependency, culturalist and transcendental (p.513).

A significant part of contemporary research on education transfer adopts the culturalist approach, which focuses on the nation-state when analyzing and explaining educational transfer (Perry & Tor, 2008, p. 515). Researchers belonging to this perspective concentrate in their conceptual models at the national economic, political, social and cultural aspects of educational policy change. Due to the limited size and the scope of this thesis, an overview of explanatory frameworks on educational transfer will be restricted to the most relevant for VET policy transfer.

### **Concept of the policy borrowing by Phillips and Ochs**

Since the end of the 1980es, Phillips and Ochs have been investigating the question of policy transfer in education (Phillips, 1989, 1992; Phillips & Ochs, 2003). In their research, Phillips and Ochs mainly use the term “borrowing”, which is a “conscious adaption in one context of policy observed in another” (Phillips & Ochs, 2004, p. 774). The definition underlines the purposeful and voluntary character of the borrowing process which is just one of the possible paths in the spectrum of educational transfer (Phillips, 2009, p. 1070).

In 1987, Phillips introduced the concept of “cross-national attraction”, which addresses the motives of countries to transform their home educational policies and adopt the policies of other countries. In their earlier research, Phillips and Ochs sought to analyze what attracts and motivates home investigators to learn from foreign education experiences using the historical approach. They profoundly explored the evidence of German influence on educational developments in England over the past two hundred years.

In 2003, the authors presented a complex model of the educational borrowing process, which combines their previous work on policy transfer (Phillips & Ochs, 2003). The model is composed of four principal stages: cross-national attraction, decision, implementation and internalization (see Figure 1).

According to the model, the policy-borrowing process starts with a cross-national attraction, initiated by an inner-state impulse. They can be triggered by various events inside and outside the country, for instance, such as economic change, innovation in knowledge and skills or negative external evaluation. Impulses are preconditions for change. They can motivate national actors to explore foreign educational models to find a solution for emerging challenges within the own system. Phillips and Ochs (2003) pointed out six categories of educational policy features, *foci of attraction*, which can be of interest in this context and therefore become a subject of the borrowing process:

1. Guiding philosophy or ideology of the policy
2. Ambitions/goals of the policy
3. Strategies for policy implementation
4. Enabling structures
5. Educational processes
6. Educational techniques.

Phillips (2015) emphasizes that these system elements are embedded into the complex mix of historical, economic, social, political, demographic, historic and administrative contexts (p.144).

Consequently, the transfer process cannot be carried out independently, without taking their influence into account.

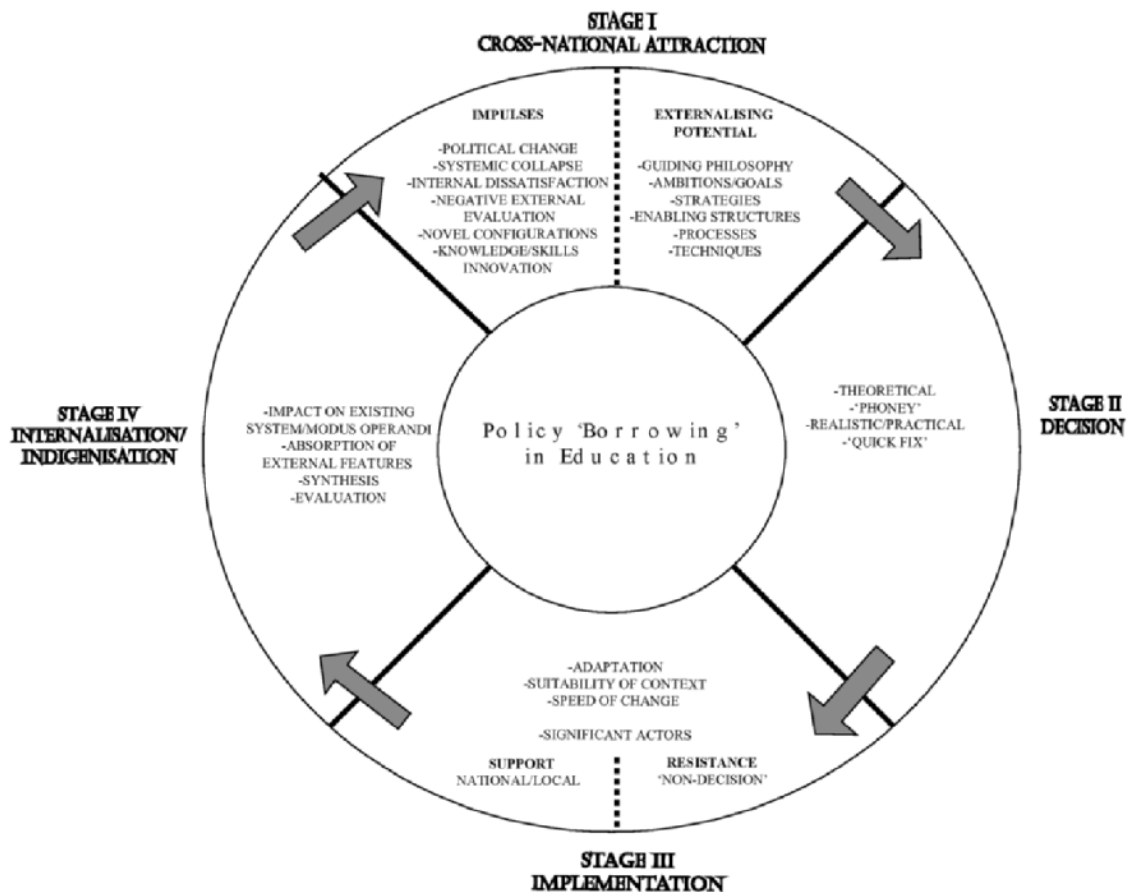
In the second stage, the decision-making process on the implementation of the elements of the foreign education system takes place. It includes diverse measures through which responsible national actors attempt to start a change. The authors pointed out four distinct categories of the decision-making process.

In the third step, the borrowed elements are implemented into the national education system. Again, national context factors play a significant role here, and determine the success of the adaption process. How smooth and quick the process proceeds will depend on the attitudes of the “significant” national actors (individuals and institutions), who possess the power to resist or accelerate the change. In case of strong resistance, the borrowing process is likely to stop.

When the adaption is successfully completed, it finally comes to an internalization stage. Here, the adopted elements become a part of the national education system. The results of the policy transfer can already be observed and are evaluated.

**Figure 1**

*Stages of the policy borrowing process*



*Note:* Reprinted from "Processes of Policy Borrowing in Education: some explanatory and analytical devices", by D. Phillips and K. Ochs, 2003, *Comparative Education*, 39 (4), p. 452. Copyright 2003 by Taylor & Francis Ltd. Reprinted with permission.

According to Phillips (2009), this is not a universal model perfectly applicable in every case of education policy transfer, but rather a good orientation tool for the researchers, who are studying educational transfer in a variety of contexts (p.1072).

The authors emphasized the crucial importance of context conditions in the policy transfer processes. These can have a huge impact on all four stages of the borrowing process and should be examined in both the importing and exporting countries (Phillips & Ochs, 2003, p. 457). Phillips encourages researchers to develop their theoretical model further and develop a framework for an analysis of context conditions (Phillips, 2009, p. 1073).

The policy transfer framework of Phillips and Ochs has been actively discussed and further developed by a number of scholars, including Wolf and Barabasch (Barabasch & Wolf, 2011; Wolf, 2011). The authors profoundly address the importance of context factors in the educational policy transfer process. Their approach offers a strong framework for the analysis of the context conditions in which elements of a national educational system are embedded (Barabasch & Wolf, 2011). Phillips and Barabasch (2011) extended the four-stage model by incorporating the concept of a *Work Culture* in it and, therefore, made it especially applicable to the VET area. The scholars define vocational education and training as a reproduction of a workforce for production and service, which is organized outside the academic field. There is a strong reciprocal relationship between VET and other social spheres. The authors underline a strong interrelationship between VET and economy which is expressed in six dimensions of a *Work Culture* (Barabasch & Wolf, 2011, p. 287). Due to this connection, *Work Culture* can affect the transfer of VET elements from one country or system to another. The approach seeks to provide a useful framework for deeper understanding and analysis of mechanisms and principles of a foreign VET system. Through the *Work Culture* framework, a broad generalized context presented by Phillips and Ochs (2003) is narrowed down to six dimensions:

1. Work regime

Work regimes of a national state are connected to the education system and recruiting mechanisms and, therefore, have an influence on the organization of VET. Regulatory patterns and forms of work organization in a company can vary from strongly hierarchic to flat. Besides, work regimes determine how strong the employees are involved in the in-task organization and assignment.

2. Labor legislation

A further relevant area for the organization of VET is labor legislation. Social security guarantees can be provided by different legal entities and controlled by different legislation rules. In Germany, for instance, social security for workers is provided by the principle of autonomy of collective bargaining and collective labor law, while in France the state is a “decisive authority”.

3. Technological development and application processes

Skilled workers are directly involved in the production, where modern technologies and procedures are applied. Therefore, they have to be accordingly qualified to be able to perform their tasks. As several studies demonstrated, cultural meanings can prevail over logical decisions aligned with corporate objectives and efficiency goals. Furthermore, the development of recent technologies and products is also subjected to specific cultural patterns.

4. Constitution of social actors

Here, the role of central collective and individual social actors involved in the formation of production relations should be analyzed. Strong collective social actors, such as trade unions, can have a significant impact on the VET formation. Besides, it is important to observe values and cultural systems of the individual actors, as well as their understanding of good living standards. The acquisition of professional qualifications and further professional activity are closely linked to the development of individual identity and self-image.

## 5. Social security

This category reflects how the aging, sick or socially disadvantaged are taken care of by the social security system. There is a connection between vocational education and social security since it does or does not grant an access to social protection during and after the training. Furthermore, the reception of VET value is higher if it increases the individual chances for stable social and economic future.

## 6. Administrative-institutional order

The administrative-institutional order of the VET system is the last work culture dimension, which authors of the framework included in the analysis of the transfer context. It should be analyzed who the most significant actors and institutions are which participate in the decision-making process and how they make important arrangements in the VET area (Barabasch and Wolf 2011).

Allan and Clark (1981) argued that the transferable policy should be evaluated with regard to its innovative character as well as potential effectiveness and the actual current need of the taking country (as cited in Barabasch and Wolf 2011). Thus, a policy transfer process is usually preceded by a long preparation period. Since policy transfer normally requires a large input of time, human and financial resources, it is important to be able to predict the possible chances for success and the challenges ahead. The approach of *Work Culture* can be a valuable tool for this purpose because it enables a qualified assessment of potential policy transfer activities in the field of VET. Through a better orientation and understanding of foreign VET, involved actors are enabled to adapt educational policy more effectively. However, the authors of the model emphasize that it is a theoretical framework and cannot provide determined statements about success or failure of a transfer (Barabasch & Wolf, 2011, p. 288). Furthermore, Barabasch and Wolf (2011) agree with Phillips that national actors of an importing country play an important role in the educational transfer since a success of a transfer process depends on their motivation and self-involvement (p.284-285).

## 2.3 The dual VET system of Germany

### 2.3.1 Main principles of the German dual VET

Kutscha (2006) explains three main principles on which German dual system is based:

#### 1. Duality principle

Duality principle is a core of the German initial VET. It refers to a vital for vocational competence combination of practical occupation-related learning in a work process and school-based structural learning in a vocational school (Kutscha, 2006, p. 47). Furthermore, it includes private–public duality of the governance structure (Solga, Protsch, Ebner, & Brzinsky-Fay, 2014, p. 1). Kutscha (2006) emphasizes that the duality refers first of all not to an organizational but to a competence aspect of VET, resulting from the combination of the two learning modi.

#### 2. Vocational principle

Vocational principle (“Berufsprinzip”) implies that vocational education aims at the development of a complex qualification, which shall serve as a basis for a broad spectrum of professional occupations, rather than for a narrow-enclosed work activity.

#### 3. Consensus principle

Consensus principle reflects the strategy of the decision-making processes. The purpose of the negotiations is to reach an agreement satisfying all involved parties rather than being met by a majority vote. With regard to dual VET, consensus principle applies to a cooperation between

government actors and representatives of social partners and businesses, between federal government and federal states as well as to a collaborative work of federal states (Kutscha, 2006, p. 47). According to Euler (2013), consensus principle strengthens the acceptances of VET, since it includes labor market organizations and social partners in the decision-making processes (p. 36).

### **2.3.2 Place in the education system**

The dual system is situated on the level of an upper secondary education. Except for in the dual system, vocational education can be obtained in full-time vocational schools or in dual programs on the tertiary level. Furthermore, there are special prevocational programs for the ones who didn't manage to get a training position. Around 70% of young people, who left schools without a lower secondary degree, enroll in prevocational measures (Solga et al., 2014, p. 3). Currently, around 15% of age cohort choose school-based vocational education (BIBB, 2016, p. 11). In the recent years, dual university programs, combining academic and vocational education, are expanding and becoming more differentiated. In spite of a growing propensity of the young generation to choose general upper secondary schooling and tertiary education paths, the dual system is still remaining a core path for young people after school (Solga et al., 2014, p. 15). So, in 2015, more than half of the year cohort (52,4%) entered the dual vocational education (BIBB, 2017, p. 9). Currently, the German VET system provides around 330 recognized dual training occupations (BIBB, 2017, p. 9). In comparison to other countries, this number is very high (Euler, 2013, p. 49).

### **2.3.3 Main objectives of VET**

According to Euler (2013), the German VET is oriented on the achievement of a complex three-fold central objective: Promotion of economic prosperity, social integration and individual development (p.18). These goals represent the interests of a society, of an individual and of a business sphere. Vocational education should support individuals in developing necessary skills to succeed on the job and in other aspects of life as well as to provide them with an opportunity to fulfill their full potential. Furthermore, VET should facilitate an integration of young people into society in general and, more specifically, into the world of work. The economic goal refers to the ability of the VET system to provide a sufficient and appropriately skilled workforce for the national labor market. The Vocational Training Act (Berufsbildungsgesetz, BBiG) specifies the economic goal of the initial VET: It shall provide an individual with skills, knowledge, qualifications (vocational competence) and experience which are crucial to engage in a chosen occupational activity (BBiG, § 1). Moreover, vocational training should not be mainly oriented on the fulfillment of the current needs of a single company. It shall rather impart flexibly applicable skills, which enables individuals to accommodate and to adapt their vocational competence in the changing world of work.

### **2.3.4 Legal regulation**

The dual system is based on a number of standards and regulations to ensure its effective functioning and the high-quality level. The Vocational Training Act is a central legal document, which codifies the key provisions of VET, including:

- Rules concerning the organization of VET
- Regulations for the training relationships, right and duties of participating parties
- Requirements for training premises and training staff
- Examination regulations
- Duties of the competent bodies and authorities, responsible for VET monitoring.



As the Vocational Training Act states, the companies are allowed to participate in the training only under certain conditions. Nature and conditions of the company should allow trainees to acquire the necessary knowledge, competences and skills (BBiG, § 27). However, if the resources of a company are limited, there is still an opportunity to participate in VET if required training contents can be provided in inter-company vocational training facilities.

Furthermore, to ensure a high-quality training, there are specific legal requirements for the company employees who tend to participate in VET as trainers (BBiG, §§ 28-30). Trainees can be trained only by the employees, who possess necessary personal and technical qualifications. To demonstrate their suitability, they are required to pass a special examination, testing their personal aptitude, professional competences and pedagogical skills, according to the Ordinance on Trainer Aptitude (AusbEignV, § 4). As for vocational school teachers, they are usually required to have a university degree (Euler, 2013, p. 52).

Furthermore, learning and training processes are partly regulated and follow specific education standards. Training regulations for the companies and framework curriculum for the vocational schools are based on requirements of the work practice. The curricula are developed in the negotiation process between social partners, business community and government under the guidance of the BIBB (GOVET, 2016). They serve as a guideline for both learning venues and guarantee a high-quality learning and training process through the coordination of learning contents. Training regulations include a description of competencies which apprentices should develop, minimum requirements for the teaching process and examination standards. They are designed to give companies a definite flexibility in the training process and, therefore, to allow a wide spectrum of companies to participate in VET. At the same time, regulations help to ensure that learning outcomes correspond to the national standards.

### **2.3.5 Cooperation of actors and their competences**

A close partnership between government and businesses in the organization of VET is a further central element of the dual system (Euler, 2013, p. 36). State governments are responsible for the organization of the school-based learning at vocational schools, while businesses provide the work-based training. Social partners, among them labor unions, employer associations and work councils, are engaged in the development and improvement of training guidelines, monitoring the in-company training and examinations (GOVET, 2016). The federal government has negotiating and coordinating functions. Other important actors of the dual system are chambers. Among their various responsibilities are an evaluation and certification of the companies and trainers for in-company training, consultation of companies on VET, training of the trainers and an organization of assessment.

A further essential feature of the German VET is that its functioning and the majority of the decision-making processes are supported by the profound research activities (Euler, 2013, p. 59). One central responsible actor is the Federal Institute for Vocational Education and Training (Bundesinstitut für Berufsbildung [BIBB]). It uses various statistical, planning and monitoring tools and procedures to conduct in-depth analysis and research in the field of VET. Besides the BIBB, there is a vast amount of institutions, involved in the research of VET, which appeared in the recent years (Euler, 2013, p. 59). A big part of the research takes place at national universities. The purpose of vocational training research is to facilitate further developments of VET and ensure that it meets current and future economic, societal and technical requirements as well as promotes the transfer of knowledge and technology (BBiG, § 85).

Further, a cooperation between government and businesses includes the aspect of VET financing. While firms bear all the costs of in-company training and pay wages to their trainees, state governments sponsor learning at vocational schools. In some cases, companies receive

subsidies from the federal government to cover a part of their training costs (Solga et al., 2014, p. 10).

A vast number of actors is involved in the dual VET and only the central and most important of them were described above.

### **2.3.6 Organization of training process**

An application for dual VET programs occurs through the companies and is similar to the job application process. There are no formal eligibility criteria for an access to the dual vocational training. Theoretically, even those who dropped out from schools can enter it. In reality, the dual VET is market-driven and for that reason is highly competitive. Since a company selects the best candidates out of the applicants' pool, those without school certificate seldom manage to get a training place or enter the most unattractive occupational fields (Solga et al., 2014, p. 8).

Officially, vocational training starts after the signing of the training contract between a company and a trainee. It is provided and registered by the chambers and serves as a legal basis for in-company training (GOVET, 2016).

Dual VET programs last between two and three and a half years. Usually, they are designed in a way that around 70% of VET is dedicated to the in-company training and 30% to learning in a vocational school. So, VET participants spend three to four days a week in a company, where they acquire practical skills in a real work environment, and one to two days in a vocational school, where they are provided with occupation-related theoretical knowledge.

At the end of the training period, VET participants must pass the final exam, organized by relevant chambers. The examination board consists of the representatives of employers, employees and vocational school teachers (GOVET, 2016). To ensure high acceptance and recognition of the VET nationwide, the examination standards are the same across the country.

## **2.4 The dual system as a transfer model**

Many countries are currently struggling with such problems as high unemployment rates among young people, lack of specialists with an appropriate skills level, demand and supply mismatches on the labor market. Reconsidering their internal policies, they often look abroad to find effective solutions. Learning from the best practices of others is common in the field of education, including VET. Governments of different countries have demonstrated the willingness to adopt successful VET practices from abroad (Keating et al., 2002, II). Due to its effectiveness, the German dual VET system is internationally well-known and highly regarded. Therefore, it is often considered by other countries as a potential transfer model for the reformation of their national VET systems. Often a transfer of the German dual VET system is seen as a means for addressing specific economic and social problems in the country. Countries willing to learn from the successful practices of the dual VET first of all see it as a tool to reduce youth unemployment and to ensure a successful reparation of workforce contributing to the economic growth and innovation (Euler, 2013, p. 10).

For many years already, Germany is actively cooperating with various countries around the world in the field of VET and educational transfer. Since the 1950es German organizations and companies started bringing their successful experiences abroad and support other countries in the development of their national VET systems. In 2013, the Federal Institute for Vocational Education and Training established the German Office for International Cooperation in Vocational Education and Training (GOVET) as a central contact partner for national and foreign actors interested in the international cooperation in the field of VET.

There are five fundamental features of dual VET, which constitute a basis of international cooperation and advisory measures of Germany in this field:

- Cooperation of government and industry

- Learning within the work process
- Acceptance of national standards
- Qualified vocational education and training staff
- Institutionalized research and consultation (GOVET, n.d.).

The transferability of the German VET has been actively discussed in the scientific literature over the recent years. Euler (2013) underlines that it is necessary to evaluate how realistic the transfer is. Educational practices, elements and principles which are effective in Germany may not be effective in other countries (p. 50). Billett (2011a) criticizes that in the practice of education transfer global agencies often recommend developing countries to transfer the dual model of VET, which is successful in many developed countries. However, this objective according to the scholar, has a small chance for success because these countries usually do not have the required institutions and infrastructure (Billett, 2011a, pp. 6–7). At the same time, a creation of necessary conditions is usually hardly possible in their national context due to the limited resources and can take decades to be realized.

Therefore, a transfer of the education policies is a very complex process, which usually requires an intensive and careful preparation. The policy makers of a transfer-taking country should precisely analyze the present situation and evaluate the available resources, upon which a new framework could be built (Eichhorst et al., 2012, p. 29).

The dual system in Germany is a result of many years of development and has been shaped by national legal regulations, pedagogical principles and institutional structures and traditions (Euler, 2013). The dual system is based on the specific institutional framework. The complexity of it cannot be easily copied or replicated by another country. There is a number of crucial preconditions for a successful functioning of the German VET system. A strong cooperation between government and enterprises is an essential basis for the institutional framework, development and adjustment of the curriculum, certification of the competencies as well as financing of the dual VET. Except for that, the dual system strongly depends on the support from the following groups of actors and their roles in the process:

- Young people and their parents should see VET as an attractive alternative to the higher academic education
- Government should provide further opportunities for young people who fail to enter dual VET (provide vocational schools and teachers outside the dual system) or/and to establish preparatory training for them to succeed later.
- Employers should demonstrate willingness to train young people according to the established curriculum and to send them to the vocational schools
- Trade unions should agree that Dual VET participants receive lower payments in comparison to the regular contracts (Eichhorst et al., 2012, pp. 15–16).

Consequently, the success of the transfer of the dual model depends on the willingness and ability of these actors to fulfill these roles.

## 3 Russia country profile

As it was discussed in the previous chapter, the development of the well-functioning vocational education and training system and the success of educational transfer can depend on various context factors, such as demographic situation and economic development.

The purpose of this chapter is to present a country profile of Russia to describe a context in which its VET system is functioning. An understanding of the national economy, demographic developments and migration trends are important to comprehend and discuss developments in the sector of VET. The situation on the labor market and employment problems, which have significant consequences on the social security system of a country, are closely connected to the educational aspects. Therefore, this chapter should provide a good background for the further discussion.

### 3.1 Geographic position

Russia is the largest country in the world. Its vast territory expands from the Baltic Sea in the West to the Pacific Ocean in the East and from the Caucasus Mountains in the South to the Arctic Ocean in the North. About one third of its territory is situated in Europe and about two thirds in Asia. Most western parts of Russia, the Kaliningrad Region, is an exclave and separated from the mainland by two East European countries. The capital city Kaliningrad is the only Russian port in the Baltic sea. Due to its geography, Russia is rich in natural resources, has extensive biological diversity and very various climate conditions.

### 3.2 State structure

According to the *Constitution of the Russian Federation* (Constitution of RF), Russia is a democratic federal state with a republican form of government (art. 1) and a President as a head of state (art. 80).

The state power in the Russian Federation is divided into legislative, executive and judicial. The bodies of the three branches are independent (Constitution of RF, art.11). The legislative power is represented by the Federal Assembly (Federal'noe sobranie), the Russian parliament, which is composed of the Federation Council (Soviet Federatsii) and the State Duma (Gosudarstvennaya Duma). Additionally, the legislative power includes Legislative Assemblies (Zakonodatel'nye sbraniya) of the subjects of the Russian Federation. The Government of the Russian Federation is head of the system of executive authorities of the Russian Federation. The judicial power is exercised by the Supreme Court, the Constitutional Court and other federal courts.

The federal structure is very complex and consist of 85 units, usually referred to as subjects of the Russian Federation: republics, territories, cities of federal importance, regions, autonomous areas and an autonomous region (Constitution of RF, art.5, art.65). The republics, which are 22, have the right to adopt their own constitution and to establish their own state language (Constitution of RF, art.66, art.68). Other federal units do not have this right.

### **3.3 Economic conditions**

Since the collapse of the Soviet Union, Russian economy has undergone profound changes. Over the last two decades the country has been moving from a planned and globally isolated to a market-oriented and globally opened economic system.

After the challenging 1990es came the first longer stable period of economic growth which started in the beginning of 2000. Since that period, the Russian economy is strongly oriented on the export of raw materials, such as oil, gas and different kinds of metal (Ruth & Grollmann, 2009, p. 24). This dependence on the export of raw materials makes Russian economy and national currency vulnerable to global economic crises and volatile commodity prices (Rostovtseva, 2016, p. 10). The largest industrial sectors in Russia, according to their share in the industrial production, are petroleum and coconut oil industry, metal production and processing, food industry, transport industry, chemical industry, electro industry, machinery and equipment and building industries (Hones & Wolf, 2011, p. 10).

The recent period was hard for the Russian economy. A significant recession in 2014-2015 was caused by the low oil prices and economic sanctions imposed by the European Union and several other trade partners as a reaction to geopolitical tension with Ukraine. As a result, the investment activity went down and domestic consumption and import seriously diminished (OECD, 2017c). Nevertheless, by late 2016, the economy started to recover due to the supportive government policies and rising oil prices. According to the forecast of the World Bank (2017), the economic growth of Russia is expected to slowly increase in the next two years by 1.4% which is, however, lower than average in the European and Central Asia regions (p. 80). The central negative factors, which may decelerate the recovery of the economy in the next years, are the renewed decline of commodity prices, continuing geopolitical tensions, slow implementation of structural reforms and a demographic pressure. Moreover, the banking sector of Russia remains vulnerable to the global financing conditions.

#### **Situation on the labor market**

In recent years, the Russian labor market has been performing relatively well with a low unemployment rate of 5,5% in 2016 (Federal State Statistics Service [Rosstat], 2017). Even in the time of crises, the situation on the labor market remains stable, mainly due to possibilities for companies to flexibly adjust wages, cut working hours and use temporary or non-standard labor contracts. However, this flexibility produces a negative effect on the quality of jobs, working condition and could lead to skill mismatches. Employees are often unsatisfied with low wages, bad opportunities for career advancement and poor working conditions. As a result, low incentives jobs lead to a high labor turnover. Thus, since the year 2000 around 30% of the workers leave their jobs every year in search for better opportunities. This proportion is especially high in low-performance firms, which survive crisis times through the wage cuts (Demmou & Wörgötter, 2015).

The situation on the labor market will be further discussed in the chapter dedicated to the Russian vocational education and training.

### **3.4 Innovation and modernization of the economy**

Due to a number of factors, Russia has a good innovation potential. From the Soviet Union times, Russia inherited a large scientific base and still demonstrates good performance in specific technology and science fields (Demmou & Wörgötter, 2015, p. 35). Furthermore, because of a very high participation in the tertiary education, a considerable proportion of the workforce is highly-qualified and well-prepared to be involved in innovative activities. 54% of 25-64 year old Russians had a tertiary education in 2013 (OECD, 2016b).

Still, although the government recognizes the importance of innovation for the future economic development, Russian innovativeness indicators remain relatively low in comparison to

other OECD countries. Hence, in 2016 only about 4% of the Russian export comes from high, and further 19% from the medium-high research and development (R&D) intensive industries with a slight but stable growth of the proportion in the recent years (OECD, 2017a). One of the reasons for that is a strong orientation of the country's trade on the export of raw materials and commodities. This weakens the necessity for intensive R&D activities and, therefore, decelerates the transition toward knowledge-based economy.

Although the government has increased the R&D expenditures during the last years, they remain significantly lower the OECD average. In 2014 the gross domestic expenditure on R&D was 1.09%, in comparison to the OECD average of 2.38% (OECD, 2017c). Business contributes particularly sparsely to R&D. In Russia, only 0.3% of gross expenditures on R&D originates from the business. In the majority of other OECD countries, the business sector is the main contributor to the R&D (Demmou & Wörgötter, 2015, p. 37).

An important characteristic of the innovation development policies of Russia is that they are highly concentrated on the support of publicly owned organizations (Demmou & Wörgötter, 2015, p. 37). Therefore, the role of the private sector remains weak. While in other OECD countries, small and medium enterprises (SMEs) are recognized as important engines to enhance innovation, in Russia privately owned companies remain closed toward innovation: Only 1.6% of SMEs invest in innovation. One of the main hurdles toward more innovation activities in SMEs is the lack of capital within the company and bad availability of external finance resources (Demmou & Wörgötter, 2015, p. 39). Furthermore, only 10% of manufacturing firms are involved in some kind of innovative activities. This is a very low indicator in comparison to other OECD countries. In comparison, in Germany, more than 80% of the companies are engaged in innovation (Demmou & Wörgötter, 2015, pp. 35–36).

In recent times, the Russian Government has particularly stressed the necessity for a stronger innovation orientation of the national economy. Furthermore, it is recognized that the transition of the economy toward an innovative socially-oriented development model is crucial for consolidating and strengthening the geopolitical role of Russia on the international arena (Ministry of Economic Development of Russian Federation, 2011). Without reformation of the system, Russia could lose its remaining scientific potential and be incapable of generating new innovative knowledge and reaching global leadership in key technological spheres. Learning from the negative consequences of the strongly export-oriented economy, the Government set modernization of Russia and diversification of the economy as primary objectives for the following decades in order to decrease the dependence on natural resources and their export (OECD, 2017c). Several important programs and strategies were introduced in the recent years.

In 2010 the Strategy of Innovative Development of the Russian Federation “*Innovative Russia – 2020*” was adopted. It sets very ambitious goals, which must be reached within a period of ten years. Among them are the goals:

- To increase a share of innovatively active enterprises fivefold to 40-50%
- To increase a share of the high-tech sector in the national GDP one and half times
- To have a significant share of 5-10% in the global markets of high-tech and intelligent services by 2020.

In the context of the strategy, specific targets and guidelines are developed for the following addressers to comprehensively impact and enhance the innovativeness of the Russian economy: private business sector, individuals, government, infrastructure, science and politics (Ministry of Economic Development of Russian Federation, 2011).

Business is finally recognized as a main driver of innovation. In 2010, the government launched an ambitious project *Skolkovo*, sometimes referred to as a Russian “*Silicon Valley*”. The mission of the project is to establish a modern scientific and technological innovation center with favorable

conditions for entrepreneurship, from which innovative technologies are developed and commercialized. Since the launch of the *Skolkovo* project in 2010, around 2,000 startups from Russia and other countries were qualified to receive the Project Participant Status (Skolkovo Innovation Center, 2017, p. 6). They enjoy a variety of privileges such as: Grant financing, tax incentives, simplified technical regulations, access to the services of Skolkovo R&D centers and many further prerogatives (Demmou & Wörgötter, 2015, p. 41). The five key R&D clusters of the innovation center are Information Technologies, Energy Efficient Technologies, Space Technologies and Communications, Nuclear Technologies and Biomedical Technologies.

Although the *Skolkovo* project is a huge step toward a stronger innovation in privately owned companies and effective competition it demonstrates some shortcomings of the innovation policies of Russia. First, it is oriented only on the high-tech sector and does not address the need for innovation in the low and medium technology sectors. Furthermore, it is an instrument to stimulate innovation in a very limited amount of companies. Therefore, there is a need for development of further measures and initiatives which would be available for a much wider range of businesses.

There is a number of studies which demonstrate that competition is one of the key factors for productivity growth through innovation, especially in the long-run perspective (Ahn, 2002). Furthermore, good environment conditions for business attract domestic and foreign investments, enhance international business cooperation and, therefore, open doors to the new experiences and knowledge. According to the research, various barriers for entrepreneurship and competition, ineffective law enforcement (for example, intellectual property law) and corruption are among the main obstacles hindering the innovation (Demmou & Wörgötter, 2015, p. 37). Therefore, when developing new programs and projects it is necessary to introduce the instruments to fight corruption and existing barriers to facilitate a healthy competition between businesses in Russia. Consequently, although Russia has a strong innovation potential, until today it is far from achieved.

One the key challenges for the achievement of these innovation goals is a global competition for the human resources and investments, which become more and more flexible and mobile due to globalization processes. Therefore, the countries with attractive policies for talented specialists and good and secure climate for the business and investment tend to win in this race for the best resources. Since strong human potential in the science, education and technology spheres is very important for transformation toward the innovative economy, Russia has to become an attractive place for the highly qualified workforce and introduce a number of strong incentives to prevent brain drain.

### **3.5 Population**

#### **Ethnic structure**

Due to its vast territory and long history, Russia is a very heterogeneous country with remarkable ethnic, cultural and religious diversity. It is particularly observed in the North Caucasian Republics, where people belonging to a big amount of diverse ethnic groups live close to each other but carefully preserve their cultural identity, language and customs. Around 80% of the country's population are Russians. Other 20% belong to around 180 other ethnic groups (Limonov & Nesena, 2016). The homogeneous composition of the population with the strong predominance of the Russian ethnic group can only be found in the Central and Northwest regions, while all other regions, especially the North Caucasus, Siberia and Ural region have a complex ethnic composition of the population. Since 2005, a steady growth of urban population can be observed in Russia. In 2015, 74% of the population lived in cities (Federal State Statistics Service, 2015). In addition, the distribution of the population is very uneven as well. So, the European part of Russia (the Central and South parts) is much more densely populated than the Ural, Siberia, North and North-West regions.

## Demographic situation

Russian population reached its peak at the beginning of 1990es and started shrinking soon after the collapse of Soviet Union. So, in 1993 the population of Russia estimated to 148.6 million people (Rosstat, 2015). In the following years, a constant decrease in population was observed. Only in 2010, the situation stabilized and since 2012 the population started slowly growing again. According to Rosstat (2017), the permanent population of Russia on July 1, 2017, amounted to 146.8 million people.

Since the fall of the Iron Curtain, the Russian society has gone through certain processes of social modernization. Changed lifestyles and working culture, shifts on the values and appearance of the new needs, changing the attitude toward the role of the woman in the family and at work, the disappearance of the social security existing in the Soviet Union have significantly affected a family image and reproductive behavior of the young generation. More and more women strive for career, education and economic independence. As a consequence, the average age of women giving birth for the first time is constantly increasing. The global tendency of developed countries and countries with transitional economy toward one-child families can be observed in Russia as well (Kortneva, 2015, p. 72). Kortneva (2015) argues that difficult times of socio-economic crises have additionally aggravated the situation, which can be observed in the increased number of divorces, reproductive health deterioration, increasing the extramarital birth rate and relatively high mortality rate (p. 74). Due to all these processes, the demographic sphere of the country has undergone a number of negative transformations.

According to the prognosis of the Rosstat (2015), the slight increase of population can be expected till 2030. However, this forecast is not very positive, since migration flows are expected to bring the main contribution to the population growth, while the natural population increases, the difference between the death and the birth rates is predicted to be negative.

The growth of the birth rate could be observed since the beginning of the 2000s till 2016, when it significantly dropped (Rosstat, 2015). However, even positive birth rate in the previous 15 years was insufficient to ensure a stable population growth, since the natural increase of the population was slightly positive only in the period between 2013 and 2015. Currently, natural decrease of population can be observed again. Furthermore, experts predict that the tendency of low birth rates and natural decrease will aggravate in the next decades. Experts point out several reasons for these trends: The tendency toward higher motherhood age, decreasing fertility rates and increasing life expectancy (Rosstat, 2017). In addition, a life expectancy is expected to increase from the current 72.26 to 75.79 years by 2035. As a consequence, a population of working age would be shrinking and age dependency ratio would increase.

The Russian Government and experts recognize the current demographic situation as one of the most critical problems of the country. In the long run, it could negatively influence the economic prosperity, competitiveness and stability of the country, as well as endanger the welfare of its citizens (Kortneva, 2015, p. 74). That is why a large number of programs and measures to regulate and improve the demographic situation have been introduced in the recent years.

One of the most significant programs, called "*Maternity capital*", was launched in 2007. It aims to support young families with two and more children. The monetary support is provided at the birth or adoption of a second or subsequent child, which can be spent on either the improvement of the living conditions, child education, integration into society of children with disabilities and several other options. In 2017 the size of "*Maternity Capital*" was around 453,026 Rubles, which is 15 average monthly salaries in this year ("Programma 'Materinskij kapital' ", n.d.).

## Living standards

Since the hard times after the collapse of the Soviet Union, experts indicate a positive development in the quality of Russian citizens' life (OECD, 2016a). However, a distribution of income and,



therefore, of purchasing power varies significantly across the country (Hones & Wolf, 2011). The highest incomes are in the Moscow region where most financial and industrial groups are concentrated. As a result, the purchasing power here is the highest as well. Furthermore, the salaries are high in sparsely populated North and Asia regions, which are rich with natural resources. In contrast, the incomes and purchasing power are the lowest in the southern regions of Russia, especially in the Caucasus, where the majority of the population are employed in tourism or agriculture. The average household net-adjusted disposal income per capital (the amount of money that a household earns each year after taxes) is significantly lower than the OECD average of USD 29,016 and equals to USD 17,006 a year (OECD, 2016a).

## **Migration**

Migration has an immense importance for Russia. With current low birth rates, it provides more than 90% of the total population growth (Scherbakova, 2014). Just in the period from 1992 until around 2010 the population of Russia increased by seven million people due to net migration, which compensated the natural decrease of the population by almost 60% (Mau & Kuz'minov, 2013). According to the experts, without immigration the permanent population of Russia in 2011 would be seven and a half million less and would shrink by another ten million in the ten years following. In the last years, the net migration remained positive and equal to an average of 280 000 a year (Rosstat, 2015). A relatively young age structure of immigration has a positive effect on the problem of population aging (Mau & Kuz'minov, 2013). Furthermore, the biggest proportion of immigrants come to Russia for the purpose of work and, therefore, the labor market has a constant influx of a working force. Accordingly, around 2.5% of the total number of employed in the economy are migrants. Temporary labor immigrants usually occupy unattractive, low paid and low-skill jobs with bad working conditions.

According to the OECD (2013), in 2013, Russia was on the second place after the United States of America on the number of foreign-born citizens. Immigrants originate mainly from Ukraine, Kazakhstan, Uzbekistan, Tajikistan, Armenia and others of the Commonwealth of Independent States (OECD, 2017b). The migration from the other regions of the world remains very low. Generally, the new post-Soviet generation of immigrants has a lower level of education, skills and knowledge of Russian language in comparison with the older generation. In the last years, citizens from the CIS states represented the biggest proportion of the labor immigration (around 90%) since they are eligible for a visa-free entry to the country and can speak the Russian language.

In spite of the positive net migration in the last decade, Russia has a low migration attractiveness for the high-skilled. As a research conducted by Commander and Denisova (2012) demonstrated, currently migration is not able to solve the problem of the skill gaps in the innovative sectors of the economy (p. 9). Due to poorly functioning migration policy, which's modernization started as late as in 2007, the current number and quality of migration do not correspond to the needs of the national economy. At the same time, social and economic costs of the migration processes have been increasing over time. The current migration policies fail to ensure a successful integration of immigrants. Many of them face various administrative obstacles and have difficulties to regulate legal status or obtain a temporary residence and work permit even after living in the country for several years. This leads to massive illegal migration and, as a consequence, an isolation and growth of anti-immigrant moods among the native population (Mau & Kuz'minov, 2013).

The Russian government aims to develop a series of complex measures to improve the efficiency of regulating migration. One of the most important changes, which should be pursued in the following years, is the shift of the emphasis toward long-term permanent migration of highly qualified specialists, academics, students, scientists and skilled labor in the most demanded fields. New migration policies should, furthermore, facilitate attraction of migrants from the developed countries (Mau & Kuz'minov, 2013). With the introduction of the legal amendments to the

*Legislative Regulation Of The Legal Status Of Foreign Citizens In The Russian Federation*, a number of simplified rules was established for applying for a work permit by highly qualified foreign specialists and quotas for this group of immigrants were canceled (Bisson, 2016). Although the introduction of these changes demonstrates a definite progress in pursuing the goals of the new direction of the migration policies, some contradictions exist. For instance, in order to be qualified for this kind of work permit, the salary of a foreign citizen should amount to definite amounts determined in the law for different profession groups. These wage requirements are usually significantly higher than worker's average salaries in these occupation fields. Only foreign citizens, who are involved in the Skolkovo Project do not need to fulfill salary requirements (Federal Law no.115-FZ, art. 13\_2, sec. 2).

It is still too early to evaluate the effectiveness of the new legislative amendments since the migration processes of the recent years were significantly affected by economic and humanitarian crises. However, it is clear that reforming national migration policies is not the only and not the ultimate solution for the improvement of the country's attractiveness for specific groups of international migrants. In the modern world, skilled labor is a very mobile and precious resource. The majority of the developed countries face a deterioration of their demographic situation today or expect it in the future and realize the necessity of migration as an important partial solution for it. The European Union, Canada, Australia and other developed countries have already reformed their migration policies to facilitate migration and attract qualified specialists from around the world. Their huge advantage in comparison to Russia is a more stable and developed economy and usually better social security systems. Furthermore, the knowledge and use of English and other foreign languages among Russian population is very limited. For that reason, engagement in qualified jobs, entrepreneurship activity or integration in the society for foreign citizens without knowledge of the Russian language is difficult. Therefore, in order to attract appropriately skilled international migrants Russia has not only to eliminate administrative obstacles but improve its economic climate, entrepreneurship conditions in general and move toward higher modernization, internationalization and innovativeness.

### **Chapter conclusion**

For 20 years, Russian economy has been in the process of transformation and faced various challenges. Future economic development and the potency of the national social security system depend on the country's human potential. To successfully bring ambitious and intensive plans of modernization, innovation and technological development into the reality, the labor market needs appropriately skilled workers, who are able to apply and effectively use the newly introduced technologies (Hones & Wolf, 2011, p. 14). Furthermore, good level of the skills among different groups of workers is a precondition for the ability to diversify the economy, which is a further significant goal set by the government (Commander & Denisova, 2012, p. 2). Whether Russian economy will be provided with a sufficient amount of skilled workforce depends severely on the appropriate functioning of the education system and, in particularly, on the quality of vocational education.



## 4 Russian Education

Vocational Education and Training is incorporated in a complex education system and closely related to other elements and levels of it. Therefore, it is important to look at the education structure as a whole before concentrating on the VET. This chapter should present an insight into the current situation of the Russian education as a whole and indicate its main challenges.

### 4.1 Current challenges in the education sphere

In the time of the Soviet Union, Russia had one of the strongest education systems and scientific complexes in the world (Leonidova, 2013). The removal of the “*Iron Curtain*” confronted the education system of the country with serious challenges. It was necessary to integrate the education system into the global system while at the same time ensure its competitiveness on the global arena (Kuprijanov, Vilenskij, & Kuprijanova, 2014). The radical political changes of the 1990es, followed by profound social and economic transformations caused a serious decline in the education financing by the government. As a consequence, the quality of the education dropped. As Leonidova (2013) indicates, the Russian education system in the 1990es was oriented on survival rather than on the evolvement (p. 7).

The problem of insufficient government investment in the sphere of education remains relevant still. Although the Russian government is constantly talking about the importance of the development of the education sphere for the modernization goals of the country and launched a number of federal programs to improve the quality of education, the public investment in the education has not changed considerably in the previous years and even slightly dropped (Bondarenko, Gokhberg, & Zabaturina, 2017). This could be explained by economic difficulties caused by currency instability and international sanctions. Still, the underfinancing of the education system contradicts the government’s goal of developing a strong human potential through education in order to modernize the country and make it less vulnerable to outside economic factors. In 2012, the total public spending on education as a percentage of GDP was equal to 3.9% and 10.9% as a percentage of the total public expenditure. Both indications were considerably behind the OECD average of 5.6% and 12.9% respectively (OECD, 2014). Moreover, Russia had the fifth lowest position in OECD rank of the Education Investments as a percentage of the total public expenditures.

A further serious problem of the education sphere is corruption. Many socio-political spheres suffer from this negative phenomenon, which, according to the expert’s opinion, is one of the main reasons for social and economic instability in modern Russia. Acts of corruption in the education system have dangerously far-going consequences. Logunova and Logunova (2016) indicate that the whole generation believe that personal respect is not a result of the own hard work, but rather can be reached through favoritism and bribery. It creates a disbelief among the young population in quality and advisability of the education. Diplomas and certificates lose their significance and validity on the labor market, which, in turn, negatively influences both employers and employees. It is important to mention that the government acknowledges this problem. A number of measures were introduced over the last years to fight the corruption problem in education. In 2016, the President Vladimir Putin has signed “*A national plan for the period 2016-2017 for counteracting the corruption*” (Decree no. 147), according to which leaders on different levels were to be checked for

corrupt activity. In spite of some developments, this problem could take years if not decades to be solved, since corruption exists on all levels of the decision making, from the ministries to schools (Logunova & Logunova, 2016).

Attraction and retention of the teaching and training personnel is a further serious problem, which exists since the beginning of 1990es. Low wages in the education sector led to a decline in the prestige of the pedagogic work and willingness of young people to choose this career path (Leonidova, 2013). As a result, on all education levels and spheres, there is a shortage of well-qualified talented personnel, including the management level.

A further tendency in the Russian education sphere is an overhang of the higher education in the system of professional education in the post-Soviet period. Thus in 2014, almost three-quarters of secondary school graduates in their year of graduation choose to enter universities (Higher School of Economics, 2016). A high participation of the higher education goes along with the problem of sustaining a high quality of preparation in the higher education (Nikandrov, 2014). This is a serious issue in many universities and post-secondary educational organizations, particularly in non-government ones. Besides, pedagogic personal of the universities often complain about a bad preparation of the new students, as well as lacking motivation, assiduity and poor learning skills. Therefore, the correlation between the education attendance and quality of skills is not automatically given. In 2012, about 94% of the population have at least an upper secondary education, which is very high in comparison to OECD average of 75% (OECD, 2014). Although Russia remains among the first countries in the ranking list on tertiary attainment, the literacy skills among the population with tertiary education are one of the lowest among OECD countries.

## **4.2 Development and reformation of the Russian education**

### **Reformation of the education sphere after the post-Soviet time**

Since the 1990es the education system is being constantly reformed in the attempt to meet changing needs of the society and national economy. The most significant directions of the post-Soviet reforms oriented on the development of the sector of private educational institutions, the abolition of the system of state guarantees for the employment of graduates of VET institutions and universities, involvement of the population in the financing of their own education, reorganization and an adaption of the education sphere toward international and European standards and ensuring the unity of the education standards at different educational levels.

In 1992 the Government issued the federal law *"On Education"*, which aimed to organize and regulate relationships between actors in the education system and ensure its functioning in the difficult times of a crisis. According to Leonidova (2013), the law failed to create a balanced and orderly functioning legislative system and various positive undertakings were restricted by insufficient financing. Reformation attempts of the following years led to a commercialization of the education and a further decline in the education quality.

The new reformation stage is associated with the introduction of the new federal law *"On Education in the Russian Federation"* (Federal Law no. 273) in 2012, which replaced the law *"On Education"* of 1992 and the law *"On Higher and Post-Graduate Professional Education"* of 1996. It prescribes the norms for all levels of education, including preschool and additional education.

The necessity for the introduction of the new law existed for a long time. A large number of amendments, which were introduced into the previous law *"On Education"*, led to the significant transformation of its concept. As a consequence, many norms were duplicated which caused norm conflicts and growing number of difficulties in the jurisprudence during the interpretation of the law. While the old law *"On Education"* regulated mainly managerial and financial-economic relations in the sphere of education, the provisions of the new federal law *"On Education in the Russian Federation"* enfold a much wider range of regulations. It determines more precisely the rights and responsibilities of participants in the educational process and their relationship and regulates the

content of education (incl. requirements for educational programs and standards). Currently, it is a key instrument for regulation of the organizational, economic and legal bases of the education system and functioning of the educational organizations (Kotenev, 2013).

Among the most prominent recent developments in the education system, it is important to mention the unification of the school's examination of the transition between general and professional education and the entrance to the Bologna system.

### **The introduction of the Unified State Exam**

The Unified State Exam (*Yediniy Gosudarstvenniy Ekzamen, YGE*) was introduced as an experiment in several regions in 2001, and in 2008 already all regions joined the YGE. Since it was introduced, there is a constant debate about its expediency for reaching quality education goals. It is often criticized that YGE is a very standardized approach, which is too concentrated on the assessing of knowledge and ignores other important aspects such as creativity (Nikandrov, 2014).

One of the goals for introduction of the YGE was to fight corruption in the education, especially to control universities, which were previously responsible for the entrance exams and election of the students. With the introduction of the YGE, these processes were to be standardized and the university's control over student admission was to be restricted. Therefore, every school graduate should receive equal chances to get a place in a higher education organization. Currently, YGE is the main procedure of admission to higher educational institutions with an exception of several leading universities, which kept the right to determine their admission procedures. However, it is often criticized that YGE is not a reliable instrument of admission to universities since it fails to solve the problem of corrupt activity on the transition point between secondary to tertiary education (Nikandrov, 2014). According to the research conducted by the online media library *Public.Ru*, the corruption was not eliminated but partially moved from the universities to the schools, where it grew 20-25 times since the introduction of EGE (Homichev, 2011).

### **Reformation of the tertiary education**

Since the beginning of the 1990es, there was a wide discourse in political and scientific communities about the necessity to reform the system of the higher education. As a result, the government decided to modernize the higher education in accordance with the standards of the Bologna System (Kuprijanov et al., 2014). For Russia, the entrance of the Bologna Process is an important step contributing to the creation of the national qualification standards. Furthermore, the participation in the Bologna Process should enable the exchange of best practices with European universities, promote inter-institutional cooperation and exchange of experience through the participation in common projects. Besides, it should promote student mobility through academic exchange and introduction of the joint studying programs.

Russia signed the Bologna Declaration in 2003 at the Meeting of Education Ministers of Europe in Berlin. According to the Agreement, the transition toward the two-tier higher education system had to be finished till 2010. To ensure the planned transition the Ministry of Education and Science introduced new Federal State Educational Standards of higher professional education, which reflected the principles of the Bologna Agreement. Further instruments such as the module approach and the European Credit Transfer System (ECTS) are being incorporated into the educational standards for higher education programs. As a result, since 2004 the majority of the Russian higher education organizations have gradually changed their programs to the bachelor and master system (Kuprijanov et al., 2014).

### **Current government programs in the field of education**

To ensure that the education system is being developed in line with the social and economic goals, the Government is regularly launching new programs and projects which define the main directions for the modernization of the Russian education for the following years. The first big

priority project “*Education*” started in 2006. Since that time, new programs are launched every several years. Their priority directions are constantly updated according to the results of the previous programs and new challenges in the education sphere. The most significant currently implemented initiative is the *Federal Program “Development of Education” for years 2013-2020*. The program has two general objectives:

- Ensuring high quality of Russian education in accordance with the changing needs of the population as well as its competitiveness in the international education space
- Increasing the potential of the younger generation in the interests of the innovative socially-oriented development of the country (Ministry of Economic Development of Russian Federation).

On the current day, the program includes eight subprograms, which aim to define the key tasks of the education policies more precisely and present a set of specific measures in order to reach the objectives of the *Federal Program 2013-2020*. The latest of them, “*Federal Targeted Program for the Development of Education for years 2016-2020*”, set the following targets:

- Creation and distribution of structural and technological innovations in secondary vocational and higher education
- Development of modern mechanisms and technologies in general education
- Implementation of measures for the development of the scientific and creative environment in educational organizations
- Development of an effective system of additional children education
- Creation of infrastructure providing an effective environment for training of the workforce, which correspond the needs of the modern economy
- Formation of a system for assessing the quality of education and educational outcomes (Decree no. 497).

Moreover, the program addresses the life-long learning. Until 2020 the infrastructure of continuing education must be improved to increase the human resource potential of the Russian economy and provide better opportunities for personal and professional development of the skilled adult population. Russia is still far behind the majority of the developed countries in relation to the life-long learning.

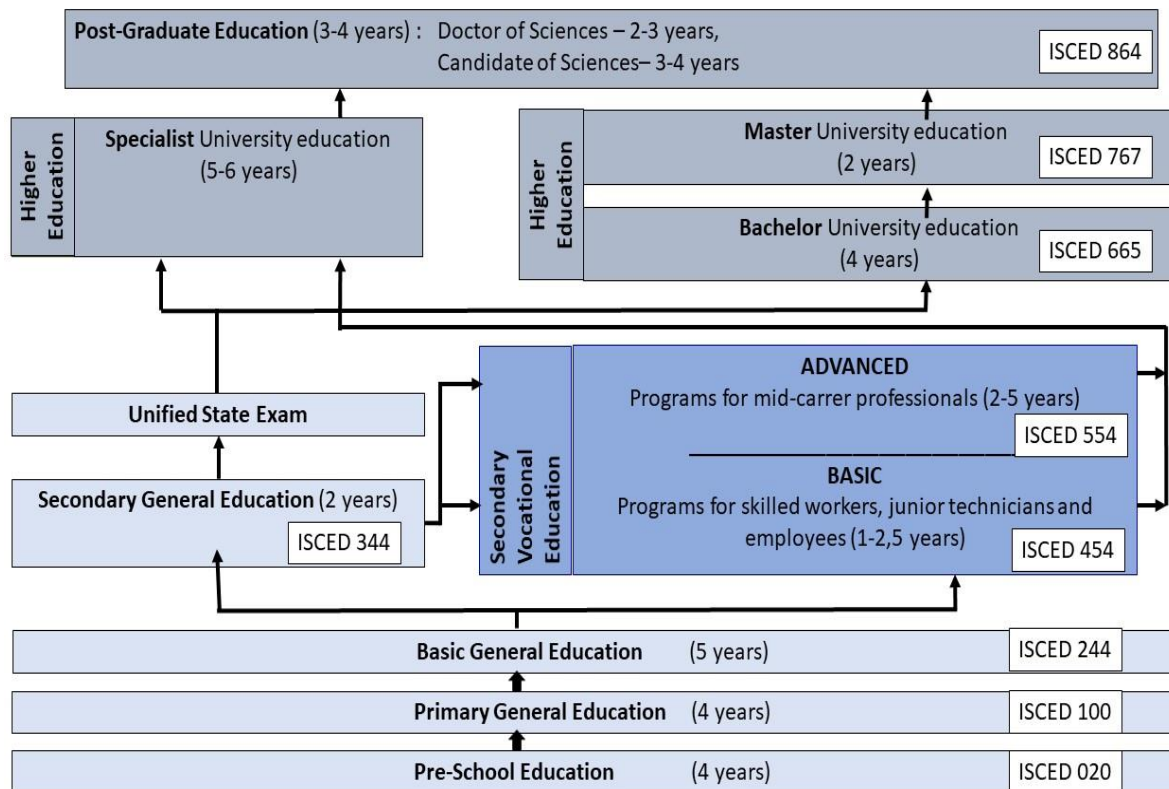
### **4.3 Structure of the education system**

The Russian education is divided into the following categories: general education, professional education, supplementary education and professional training (Federal Law no. 273, art. 10, sec. 2).

According to the art. 5 of the federal law “*On Education in the Russian Federation*”, a right for education is guaranteed in Russia to every person. Pre-school, primary general, basic general and secondary general education and secondary vocational education are free for everyone. The higher education is only partly free. A distribution of free places in the higher education is determined on a competitive basis and only eligible for citizens who acquire an education of this level for the first time.

**Figure 2**

*Diagram of Russian education system*



*Note:* Adapted from "Levels of education in the Russian Federation", by National Information Center (n.d.). Retrieved December 28, 2017 from <https://nic.gov.ru/en/inrussia/eduinfo/levels>.

The new law has introduced some structural changes in the educational system. The basic education programs are divided into the two main categories, namely, general and professional education. Figure 2 demonstrates the educational levels in the Russian education system and their place in the ISCED classification.

### General education

General education consists of four levels:

1. Pre-school education
2. Primary general education
3. Basic general education
4. Secondary general education.

Pre-school education is not compulsory. It is provided by the licensed institutions, such as kindergartens, day nurseries and early development centers. When children reach the age of 6 or 7 years, they enter the formal school. Primary general education comprises grades 1-4, usually from the age 7 to 10 years. The basic general education takes 5 years to complete and includes grades 5-9. The secondary general education comprises grades 10 and 11. At the end of the 11<sup>th</sup> grade students have to pass a Unified State Exam. The Russian Language and the Mathematics are compulsory disciplines, while other subjects can be elected by the students according to their interest or further professional intentions. Based on the Unified State Exam, school-leavers are eligible to enter the higher education level.

According to the art. 66, sec. 5 of the federal law "On Education in the Russian Federation", the primary and basic education are compulsory without age limit, while the secondary general education remains compulsory till the child reaches the age of 18 years.



## Professional education

The professional education includes the following levels:

1. Secondary vocational education
2. Higher education - bachelor's degree
3. Higher education - specialty, master's degree
4. Higher education - training of highly qualified personnel.

The structure of the professional education changed considerably with the introduction of the law “*On Education in the Russian Federation*”. It legislatively incorporated bachelor and master levels into the system of higher education. Specialty degree still remains valid and is located on the second level of higher education along with master’s degree (see Figure 2). The system of postgraduate education level was abolished as a separate level of education and is now considered as a third level of the higher education. A postgraduate education is now not solely considered to be a preparation for a dissertation defense. Graduates, who successfully pass the final certification, are issued with a separate diploma on the completion of the corresponding postgraduate program, residency or assistant internship. From the legislative point of view, it can be seen as a significant novelty (Kotenev, 2013).

Along with basic programs of the general and professional education, there is a sphere of supplementary education in the structure of the education system. It includes supplementary general education programs, which can be received parallel with general education, and supplementary professional education programs of further professional development and professional retraining (Federal Law no. 273, art. 12, sec. 4).

## 5 Vocational education and training system of Russia

The purpose of this chapter is to give a profound insight into the Russian VET system. The way the national VET system of Russia is organized and functioning nowadays is a result of the recent and ongoing reformation. The chapter will start with a presentation of the conditions in which the VET system has been developing for two decades in order to give a better understanding of what motivated a profound reorganization and reformation of VET.

This thesis focuses on the field of initial VET, which, as it was indicated in the second chapter, leads to a first formal vocational qualification and usually takes place before or simultaneously with the first entrance into the professional employment. Therefore, this chapter will concentrate on this level of preparation in the Russian VET system. However, an overview of the entire Russian VET will be given at the beginning of the chapter.

### 5.1 Difficulty to define Russian VET

A definition of VET was discussed in the second chapter of this thesis. It was indicated that it is usually seen as an alternative to academic education, especially in relation to the educational goals. However, in the federal law “*On Education in the Russian Federation*”, three levels of academic education belong along with the secondary vocational education to the education type which is literally translated as *professional education* (professional’noe obrazovanie). The translation of the term in the English scientific literature is confusing. Some authors use the term of VET, relating to the system of *professional education*, which as above indicated includes both secondary vocational and higher education levels (Germaidze & Obshivalkina, 2014; UNESCO-UNEVOC, 2006; Khairullina et al., 2015). From this point of view, a notion of professional education is equated with the notion of vocational education. Other authors use the notion of the VET solely for the first, non-academic level of professional education in Russia, which is the so-called secondary vocational education (Zolotareva & Oleynikova, 2014).

At the same time, the sector of the further vocational education is not included in the professional education system and seen by the law as a separate education sector. A further separated sector in the system of education is a professional training (professionalnoe obuchenie).

This master thesis tends to analyze the transfer opportunities of the dual German VET system to Russian VET. In contrast to Germany, where the notions of vocational education and training (Berufsausbildung) and higher education (tertiäre Bildung) have a clear separation, in Russia they are unified under one notion. Therefore, for the purposes of this thesis, the focus in this and following chapters will be set on secondary vocational education in Russia. This education field is situated outside the academic sector and can be compared to the German VET definition. However, before concentrating on the secondary vocational education, all vocational education programs of Russia will be briefly presented in the following sub-sections.

## 5.2 Classification of VET

The following educational areas can be classified as VET, according to the wide definition of CEDEFOP<sup>1</sup> as education and training preparing for the specific occupation or in general to the labor market:

### Secondary Vocational Education

Secondary Vocational Education (*Srednee Professionalnoe Obrazovanie*, SPO) is a first level of the professional education in Russia. According to the law “*On Education in the Russian Federation*” the secondary vocational education "... is aimed at solving the tasks of intellectual, cultural, and professional development of a person and preparation of skilled workers, technicians and mid-level professionals in all major activity areas in accordance with the needs of the society and the state, as well as satisfying each individual's need to deepen and expand their education"<sup>2</sup> (Federal Law no. 273, art. 68).

Before 2013, there was a distinction between the Primary Vocational Education (*Natschalnoje Professionalnoje Obrazovanie*, NPO) and the SPO. The new educational law has abolished the notion of NPO. According to the art. 108, sec. 2 and 3 of the federal law "*On Education in the Russian Federation*", the NPO established under the no longer valid law "*On Education*" from the year 1992 is equated to the SPO according to the programs for the training of skilled workers. Thus, persons who possess diplomas of the NPO are currently considered to have SPO under the programs for training for skilled workers.

All SPO programs are divided into two groups based on the preparation levels:

- First stage - programs of preparation of skilled workers and junior technicians
- Second stage - programs of preparation of mid-level professionals and technicians (Federal Law no. 273, art. 12, sec. 3).

The terminology of the Russian VET programs is very confusing when it is placed in the system of international classification. So, according to the ISCED, the basic SPO programs of the Russian VET system belong to the post-secondary, non-tertiary education (ISCED level 4). The advanced SPO programs are classified as short-cycle vocational tertiary education (ISCED level 5), which is the lowest level of the tertiary education. This level is more complex than secondary (ISCED 3) or post-secondary non-tertiary education (ISCED 4) but less than the tertiary education of the ISCED level 6, which is bachelor's or equivalent level (UNESCO Institute for Statistics, 2011). In summary, although vocational education programs are called secondary vocational education programs, they correspond to the post-secondary education level defined by the UNESCO International Standard Classification of Education.

### Higher vocational education

Programs of higher vocational education include three levels: bachelor's degree, master's degree and training of highly qualified personnel. A classification of these programs as vocational education programs according to the widely used international definitions of VET is hard, since educational programs of the majority of the higher education institutions in Russia impart mainly theoretical and conceptual knowledge in a wide field and include no or only short practical phases. However, certain types of universities have a narrow vocational specialization: inter alia, fine arts institutions, pedagogical, medical, engineering and law higher educational organizations.

In the course of the reformation and modernization of the professional education in Russia a new form of professional education appeared - applied bachelor. It is located at the junction between the secondary professional education and the first level of the higher education. Applied

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<sup>1</sup> See chapter 2

<sup>2</sup> Free translation by the author, Goncharova Anastasia

bachelor programs should combine the acquisition of practical skills and of profound theoretical knowledge. This level of vocational education is still not integrated into the classification of the ISCED framework but could more likely belong to the ISCED level 6 (bachelor's or equivalent level).

Applied bachelor as a form of professional education appeared in a form of an experiment in around 50 educational organizations of secondary professional and higher education in 2010 after the Government issued a Decree no. 667 *"On the experiment on the creation of applied bachelor in educational institutions of secondary vocational and higher professional education"*. The purpose of the experiment was to test a new alternative for the future development of the professional education and to solve the problem of the unattractiveness of the SPO, as well as of too theory-oriented higher education. A second phase of the experiment started in 2013/2014 academic year, in accordance with the State Program *"Development of Education for 2013-2020"*. It aimed to continue the approbation and introduction of applied bachelor programs. In the form of the pilot programs, 44 higher educational institutions started student preparation in 60 various programs. Within the scope of the experiment, universities were involved in approbation of the new Federal State Educational Standards (FGOS) for practice-oriented programs and participated in the development of the methodological basis for them (Ministry of Education and Science of the Russian Federation, 2013a).

### **Professional training**

This educational sector does not belong to the system of the professional education. According to the art. 73, sec. 1 of the federal law *"On Education in the Russian Federation"*, professional training is aimed at the acquisition of a professional competence, including the ability to work with specific equipment, technologies, hardware-software and other professional tools by individuals of various ages. The professional training can take place in organizations carrying out educational activities, such as vocational training centers or in the form of self-education (Decree no. 701). There are no requirements concerning educational levels for the participation in vocational training. One of the important objectives of professional training programs is to restore the competitiveness of unemployed citizens by providing them with the opportunity to acquire a new profession and improve their qualifications for subsequent employment.

There are three types of the professional training programs:

1. Preparation programs in professions of industrial and clerical workers for individuals who did not acquired these professions earlier
2. Retraining programs for industrial and clerical workers, who already have one or more professions (occupation position). It is oriented at the obtainment of a new profession (or occupation position)
3. Programs of professional development for individuals who already have the profession of worker, with a purpose of the improvement of their professional knowledge, skills and abilities in the existing profession of a worker without increasing the educational level (Federal Law no. 273, art. 73).

Professional training ends with a qualification exam (Federal Law no. 273, art. 74). Individuals who successfully passed the exam are awarded a new qualification grade, based on the results of vocational training, and a certificate of the profession of a worker. A list of professions requiring professional training is approved by the Ministry of Education and Science of the Russian Federation. An important distinction of the professional training from the secondary professional education is that it does not lead to a change in the education level (Federal Law no. 273, art. 74, sec.1).

### **Continuing Vocational Education and Training**

Continuing Vocational Education and Training (*Dopolnitelnoe Professional'noe Obrazovanie*) is a part of the supplementary vocational sector along with the supplementary general education. It is aimed at individuals, who have already completed a secondary vocational or higher education level. The purpose of these programs is to fulfill educational and professional needs and professional development of individuals, ensuring that their qualifications match the changing conditions of the professional and social environment.

### **5.3 Historical development and accumulated problem**

#### **Historical background**

A vocational education system which was formed in the Soviet Union had a strong legacy (Ruth & Grollmann, 2009, p. 29). By the beginning of the 1980s, an efficiently functioning system of primary and secondary vocational education was formed, responding promptly to the social and economic needs of the country. A workforce for all branches of the national economy was trained in more than 500 specialties (Skorobogatov & Iukov, 2017). Educational schools were attached to the enterprises for which they were training a workforce. Therefore, there was a strong connection between the vocational education and the national companies. This system provided an adequate level of practice-orientation of the vocational education. This allowed graduates to easily adapt to the workplace environment and to get involved quickly in the performance of the standard production tasks, determined by the conditions of the technological process (Leibovich, 2016).

Socio-political and economic changes, which came at the end of the communist era and after the founding of the Russian Federation in 1991, provoked significant changes in the economic structure. A stable planned economy collapsed and a new labor market with new demands began to shape. A well-established system of training, based on the industrialization of the economy, was almost completely destroyed (Skorobogatov, A., Iukov, E., 2017). Important elements of the VET of the Soviet time, namely smooth transition to work and intensive practical training, were eliminated (Ruth & Grollmann, 2009). Furthermore, a traditionally strong link between vocational schools and enterprises were ruined. Privatized enterprises no longer considered it as their duty to participate in the training of skilled workers. As a consequence, the majority of the large training centers in the enterprises were closed (Leibovich, 2016). As a result of these developments, by the middle of the 1990s, the national systems of NPO and SPO entered a crisis phase. Many of the VET educational organizations were in a survival state. A big proportion of the educational organizations of the initial and secondary vocational education closed.

#### **Accumulated problems and current challenges**

By the end of the 2000s, a number of serious problems, caused by various internal and external factors, accumulated in the national VET system. The majority of them remain acute until today. Among them are:

1. Underfunding of the vocational education sector

The problem of the underfinancing of the education sphere, which was mentioned in the previous chapter, was particularly acute in spheres of the vocational education. SPO educational organizations are mainly financed from the federal and regional budgets. Although a number of educational reforms and programs were launched in recent years, the problem of underfinancing remains acute. For instance, in 2016, the budget spending on the SPO was a quarter lower than in 2010, considering the inflation. The government's investment in the sphere of SPO has significantly reduced in comparison to other education spheres. Thus, the share of federal expenditures on SPO among all education spheres dropped by more than six percentage points over the last seven years, from 7,94% in 2010 till 1,66% in 2016 (Analytic Center for the Government of the Russian

Federation, 2017). The funds of population and business in the vocational education remain insignificant.

## 2. An unsatisfactory condition of material and technical basis of SPO educational organizations

This problem is a result of underfinancing of the VET sphere. By the beginning of the 1990es, the public investment in renovation and building of the new material and technical basis, corresponding to the current technological developments, practically ceased. Until today, due to a lack of financing, many educational organizations are not able to modernize their material and technical base on a regular basis. The amount of state funding is not sufficient to cover even 50% of the current needs of the vocational schools (Germaidze & Obshivalkina, 2014, p. 51). As a result, only in seldom cases participants of the initial and secondary VET had an opportunity to train on the equipment, corresponding to the advanced technologies (Agency for Strategic Initiatives, n.d.b).

## 3. Insufficient practical training

Often, practical training in the companies is organized in a short period and has a formal character, and, therefore, trainees are not able to practice theoretically learned knowledge in the necessary extent and master skills, which are essential for a future job (Agency for Strategic Initiatives, n.d.b).

## 4. Slow process of modernization of the professional standards

The implementation cycle of professional and educational standards from the development to the moment of approval and implementation is too long and can take up to seven years. Besides, a lack of the quick and effective instruments for introducing the changes into the professional standards cause their obsolescence and noncompliance with rapid technological developments and economy requirements (Agency for strategic initiatives 2012-2017)

## 5. Bad cooperation and interaction of enterprises and educational institutions, including the question of the co-financing of the training

## 6. Unsatisfactory situation with the pedagogic personnel

There is a problem of an aging of the pedagogic personnel. Furthermore, VET educators often lack competencies necessary for the modernization of VET. So, in 2016 only every fourth trainer was younger than 35 (Analytic Center for the Government of the Russian Federation, 2017). According to Leibovich (2016), a generation of pedagogic and managing personnel in the sphere of SPO formed in the period of the last 25 years, is not appropriately adapted for work under the requirements set for the VET by the current economic and social goals.

The problem of the unattractiveness of pedagogic work exists in all education spheres as is mentioned in the previous chapter. However, the attraction of the training personnel to the sphere of SPO is particularly hard. The wages of the pedagogic personnel of SPO remain lower than the wages of their colleges in the higher education. As a result, the sector of SPO faces the outflow of the youngest and most promising workforce (Germaidze & Obshivalkina, 2014).

## 7. Low attractiveness

Together with the commercialization of the education sphere came a strong orientation of the young people toward university education and consequently a low prestige of SPO.

Mau and Kuz'minov (2013) distinguish historical and economic reasons for a strong tendency toward higher education among the population since the beginning of the 1990es:

1. The first ones are explained by the historical development of the country in the last decades. In the Soviet Union time, the higher education was officially free (since 1956) but accessible only for a small group of the population: Only 25% of young people entered the universities.

At the same time, scientists and teachers had a high recognition and respect in the society. After the introduction of the law “*On Education*” in 1992, which led to the liberalization of education, higher educational institutions were allowed to offer programs on a paid basis. As a consequence, it became more accessible and young people, who would not pass the hard competition for budget places in the Soviet Union. Many families saw it as a chance for their children for a better future and in less than 20 years the number of university students increased several times. Consequently, the mass higher education rate nowadays is a result of a high demand for paid programs.

2. In the Soviet Union, not only higher education but technical and vocational education as well had a high quality and was widely spread. The government praised the importance of the skilled occupations for the economic strength of the country. Furthermore, salaries of skilled workers were relatively high and could even reach a level of an engineer’s wage. With the collapse of the Soviet Union, the situation changed. Since the beginning of the 1990es, a constant growth of the premium for higher education could be observed. The difference in the earnings of the graduates of VET programs and of higher education institutions became significantly bigger over the time. The salaries of the workforce with the primary vocational education (currently integrated into the secondary vocational education system as a training of the skilled workers) became as low as salaries of a non-qualified workforce. In a situation where the majority of the young population graduate from the universities, the absence of the higher education became a bad signal about a potential employee in the eyes of an employer (Mau & Kuz’minov, 2013, pp. 282–284).

Another factor, which determines the preference of higher education is a reservation of the mixed recruitment system for the armed forces of the Russian Federation. The recruitment system combines the service on the basis of conscription and service on a voluntary basis (under the contract). Students of the higher educational organizations receive a respite from the military duty for the time of their studies. Rules for the secondary vocational education are stricter. Students usually get a respite only till they reach the age of 20 years. For some young people, this factor can play a role while choosing an education path. According to Mau and Kuz’minov (2013), elimination of the mixed recruitment system could reduce a demand for higher education in favor of SPO by at least 20-25% (p. 294).

Furthermore, Germaidze and Obshivalkina (2014) argue that appearance of a bachelor level in the system of the tertiary level of education has exacerbated a problem of a low attractiveness of VET (p. 53). Practice-oriented applied bachelor programs, according to the authors, put expediency of the secondary VET programs in question. Although this tendency is relatively new, there is a probability that applied bachelor programs can eventually replace a significant part of the secondary VET programs in the future.

A strong preference of university education led to a problem of negative selection of the VET programs among young people. In the structure of the professional education participation, 2/3 of all students study in higher education programs. Furthermore, only 1/4 of the VET students choose these programs purposefully. Currently, the main contingent entering the vocational education programs have basic general education, which does not allow them to enter the university (Mau & Kuz’minov, 2013)

A rash aspiration to get the higher education led to the phenomena, where it has become a social imperative and an indispensable condition for any career (Mau & Kuz’minov, 2013, p. 281). Shortly before the collapse of the Soviet Union, there were about 600 post-secondary schools. In contrast, in modern Russia, there are about 3000 educational institutions offering post-secondary and tertiary educational programs. This is a huge increase, in spite of the fact that the population of the country decreased by half (Nikandrov, 2014).

## **Consequences for the labor market**

Above discussed problems in the field of VET led to an unsatisfactory level of preparation of the workforce and negatively influenced the situation on the labor market.

The preponderance of the higher education in the system of professional education over the past 10-15 years caused serious imbalances in the system of preparation of workforce for the labor market. A serious deficit of the well-qualified skilled workers and the overhang of the workforce with the higher education provoke a serious skill mismatch. The problem is that high education level does not automatically ensure high-level skills and optimal preparation for the job. Teaching and learning methods in Russian universities and professional schools are too theory oriented. Consequently, young people entering the labor market have no or insufficient practical knowledge and experience in order to quickly integrate into the working life. Mau and Kuz'minov (2013) point out that the labor market is overfilled with people with a university degree, who have well-developed social competencies and high demands but weak professional preparation. They expect high salaries and quality of the working conditions. Mau and Kuz'minov (2013) argue that in a number of such jobs in the current economy, not more than 30% come with such conditions and the number is not likely to grow considerably in the following years (p. 287). As a consequence of the overhang of university graduates in the labor market, many of them are employed in low-skilled jobs (Demmou & Wörgötter, 2015, p.15).

A survey of recruitment firms in Russia, conducted by Commander and Denisova (2012) demonstrated that companies often face difficulties to find appropriately skilled personnel. Although the percentage of tertiary educated people is high, companies experience the biggest difficulties trying to fill vacancies which demand high skill levels. As the survey indicated, there are variations of a scale of skill shortage across regions. Thus, firms operating outside the biggest labor markets of Moscow and St. Petersburg regions encounter hiring challenges more intensely. Difficulties of recruitment and skill shortages are widely perceived by the companies as a major barrier to growth.

Except for that, experts indicate both quantitative and qualitative gaps between the needs of the economy in specialists of the middle level and their real availability as well as compliance of their qualifications with the requirements of employers. In some fields of the industry, this gap reached 70%. Depending on the industry field, this gap equals to 30-70%. Particularly acute is this tendency in the high-tech industries (Ministry of Education and Science of the Russian Federation, 2013b).

### **5.4 Reformation of the vocational education**

The accumulated problems created an urgent need for a fundamental reformation of the VET system. The modernization and reformation of the whole system of education started in the 1990es and continues actively till nowadays. New legislative acts and amendments to the existing laws, new programs and projects addressing VET appear periodically. Together with them emerge new actors and organizations responsible for the development and monitoring of the SPO system.

The development of the education policy takes place under the influence of the global challenging factors. Among them are:

- Globalization of the economy and internationalization of the education, which trigger academic and labor mobility and therefore the necessity for comparability of qualifications of the workforce;
- Rapid technological development and innovation processes, leading to rapid changes in the industrial production, economy and social sphere. As a consequence, many professions become obsolescent and new professions emerge. All professions need a constant modernization in order to catch up with the emerging technologies;



- Negative demographic trends and their influence on the labor market situation;
- Global and national economic crises and the threat of unemployment change the models of work and demand a willingness from individuals to constantly develop their professional competencies, acquire new areas of expertise. At the same time, the education system should provide opportunities for a life-long learning (Ministry of Education and Science of the Russian Federation, 2013b).

#### 5.4.1 Central instruments and goals of the VET reformation

##### Federal strategies and programs

Targeted federal programs and strategies are important instruments for the modernization and reformation processes of the national VET system. Through these instruments, the Government provides a policy guide for all sphere of education. Strategies and targeted programs issued and updated on a regular basis, serve as a mechanism of ensuring continuity of the state policies in the field of education, allowing adjustment of the accents in planned and ongoing projects based on the current state priorities. Furthermore, they do not only serve as effective tools for innovative development of the education sphere but also important means of coordinating the activities of the Russian government at the federal, regional and local levels (Decree no. 497). Federal programs mentioned in the previous chapter include provisions concerning vocational education and play a role in policy guidance for VET development. Some of the programs set VET in focus, other contain provisions concerning VET in a complex of measures oriented in the education system as a whole. The government programs are often accompanied by the introduction of the new regulatory acts.

A broad objective set for the vocational education in the context of the State Program "*Development of Education*" for the period 2013-2020 was to increase its contribution to the socio-economic and cultural modernization of the country and the competitiveness of the national economy as well as to provide the economy with the appropriately trained workforce (Decree no. 792-r).

A more specific plan for the implementation of this challenging goal is reflected in the *Strategy for the development of the workforce preparation system and development of applied qualifications in the Russian Federation for the period till 2020* (Ministry of Education and Science of Russian Federation, 2013), which was adopted by the Ministry of Education and Science of the Russian Federation in 2013. The strategy represents a coordinated set of measures at the federal and regional levels which determined the main directions of state policy for the training of skilled workers and middle-level specialists for a long-term perspective.

Realization of the Strategy is based on the six central principles:

- Strong public-private partnership
- Strengthening the role of public institutions
- Internationalization of vocational education
- Continuity of the vocational education and training system
- Coherence with measures of state policy in the sphere of economy, industry, labor and social protection
- Information openness of the VET system.

In addition, the strategy underlined the importance to expand the opportunities for students to acquire applied qualifications. To realize this goal a proportion of practice-oriented undergraduate programs (applied bachelor programs) and SPO programs in the total volume of educational programs must increase significantly.

Problems of the sphere of professional education, including SPO, were furthermore addressed in the "*Strategy 2020: A new growth model - a new social policy*" (Strategy 2020), prepared on the instruction

of the Russian government by experts under the leadership of the Higher School of Economics and the Russian Academy of National Economy and Civil Service. In the result of the analysis of the most crucial problems, a number of measures were offered for the further development of VET:

1. Improvement of the policy for the attraction of the trainers and teachers. Predominantly, their salaries should reach at least 150% of the average salary in the region;
2. Development and extension of the applied bachelor programs, which provide an opportunity for younger people to obtain a higher education degree with simultaneous acquisition of the practical skills. Experts argue that this could not only help to supply the labor market with the workforce with the necessary skills but also to narrow the gap between the social status of vocational and higher education;
3. Ensuring better transparency of the work of educational organizations;
4. Creation of the independent institution for qualification assessment. People should receive an opportunity of recognition of their qualification independently from the education (formal or informal) (Mau & Kuz'minov, 2013, p. 298).

Another important instrument in the field of SPO with a guidance character is *“The set of measures and their target indicators, aimed at development of the SPO system for the period 2015 – 2020”*, introduced by the Decree no. 349-r. The provisions of the *“Strategy for the development of the workforce preparation system and development of applied qualifications in the Russian Federation for the period till 2020”* were reflected in the set of measures. Among the wide range of measures, a priority is set on the development and implementation of the new educational standards, based on the provisions of the professional standards for the 50 most promising and demanded professions on the labor market requiring secondary vocational education. A list of professions was prepared by the Ministry of Labor of Russia in cooperation with the Ministry of Education and Science of Russia, the Agency for Strategic Initiatives, the Councils for Professional Qualifications of the National Council for Professional Qualifications, employers' associations, trade union associations, educational authorities and other interested organizations. In 2015 the list was approved by the Decree no. 831 of the Ministry of Labor and Social Protection *“On approval of the list of the 50 most demanded in the labor market, new and promising occupations requiring secondary vocational education”*.

Further provisions in *“The set of measures and their target indicators, aimed at development of the SPO system for the period 2015 – 2020”* are:

- Actualization and approbation of training models for teaching and training personnel for the system of vocational education
- Subsidy support for regions for the implementation of local programs for the development and modernization of vocational education
- A gradual introduction of a practice-oriented (dual) learning model in vocational education
- Introduction of the amendments to the Russian Tax Code aimed at favoring the companies which participate in the dual training model
- Development of the measure for improving the participation of employers in the supervisory boards of VET organizations
- Organization and realization of regional, national and sectorial competition of professional skills
- Development and realization of an information campaign aimed at the improvement of the prestige of VET
- Development of measures for better professional orientation in general education schools
- Development of mechanisms for assessment and certification of VET qualifications
- Annual monitoring of the VET quality (Decree no. 349-r).

Furthermore, a special attention is dedicated to the development of SPO in the “*Federal Targeted Program for the Development of Education for years 2016-2020*” (Decree no. 497). Among other provisions, the program set the goal that until 2020, a share of educational organizations in which young people are trained in the 50 most demanded SPO professions in the labor market (TOP 50), in compliance with world standards and advanced technologies, should reach at least 50%.

Both, “*The Strategy for the development of the workforce preparation system and development of applied qualifications in the Russian Federation for the period till 2020*” and “*The Federal Targeted Program for the Development of Education for years 2016-2020*”, underline the necessity to increase the prestige of vocational education among the population and to support talented young people choosing the VET path. Russia did one of the important steps toward reaching this goal when it joined the international non-profit movement **WorldSkills International (WSI)** in 2012. The main objective of the WSI movement is to raise the status of skilled work and professional training around the world and to improve professional standards of VET professions. The movement has carried out international skill competitions for more than 40 years, where young talents from all over the world can demonstrate their competencies and trainers can exchange experience and best practices as well as become familiar with the new training methods and international professional standards. A WSI movement became very popular in Russia. WorldSkills competitions are held on the national and regional level. According to the Agency for Strategic Initiatives, a stable increase of the number of young people interested in obtaining vocational education can be observed in the regions where WorldSkills competitions take place. The movement is seen by the experts as one of the most effective tools for addressing the continuing decline of the attractiveness of the skills professions and backwardness of the national professional standard in Russia. In 2014 the *Union Agency of development of professional communities and skilled workers - WorldSkills Russia* was established. The purpose of this organization is the development of a system of professional education in accordance with the standards of WSI to provide the economy with qualified workforce (Agency for Strategic Initiatives, n.d.c).

### **Federal State Educational Standards**

An important tendency in the modernization of the Russian VET is connected to the unification and standardization of the requirements toward educational programs, their results and quality (Analytic Center for the Government of the Russian Federation, 2017). One of the most significant steps in ensuring the quality of the Russian VET is a modernization of the *Federal State Educational Standards (FGOS)*. FGOS provide a set of requirements that are mandatory for the implementation of educational programs of different levels, from the primary general to higher professional education by educational institutions that have state accreditation. The purposes of the FGOS are defined in the art. 11 of the law “*On Education in the Russian Federation*”. They must ensure:

- The unity of the educational space of the Russian Federation
- The continuity of the educational programs
- The variability of the learning content and the possibility to form educational programs with various levels of complexity, taking into account the individual need and abilities of the learners
- State guarantees of the education quality on the basis of the unity of mandatory requirements concerning conditions for the implementation of basic educational programs and the results of their development.

Initially, the FGOS were introduced in the normative framework of the Russian education after the introduction of the Law “*On Education*” of 1992 with the purpose of establishing a set of rules for every organization tending to realize educational activity on the basis of educational

programs. Over the last 25 years, several generations of FGOS for vocational education were introduced.

Since 2011 the Russian professional education functions on the basis of the third generation of FGOS (FGOS-3). The focus of the FGOS-3 requirements is set not on the content of educational programs but on the results of learning and training activities.

A conceptual basis of the third generation of FGOS is the modular-competence approach. In the previous generation of standards, subjects were the main structural elements. The structural elements of FGOS-3 are professional areas, represented in the form of modules, required to master specific types of professional activity. Thus, subjects were combined into professional modules. FGOS-3 have learning outcome orientation, based on a competence-based approach. They determined which general and professional competencies must be developed during the learning process.

Currently, the Federal Institute of Education Development is working on the concept of the new generation of FGOS (FGOS-4). FGOS-4 will be developed in preparation fields, combining professions and specialties according to the commonality of the relevant professional competencies. The professions and specialties will be unified into groups. It is planned that every FGOS is used as a basis for the development not of a single, but of many educational programs for professions and specialties which are part of the relevant preparation field. Furthermore, requirements for educational programs for skilled workers or junior technicians and programs of preparation of mid-level professionals or technicians for the same profession will be formulated in one FGOS, ensuring the continuity of the educational programs. This approach should allow reducing the number of educational standards from more than 600 (FGOS-3) to around 150 (FGOS-4). Moreover, the continuous modernization and expansion of the SPO educational programs in accordance with the requirements of economy and employers should become easier and less time-consuming (Federal Institute of Education Development, 2015).

The FGOS-3 were developed in the absence of the professional standards, which are a new form of determining the quality of an employee's qualification. Their preparation started in 2012. Instead of professional standards, qualification guides, information on the requirements of enterprises and expert's opinions were used during the development of FGOS-3. Therefore, VET specialists did not have a consistent and unified source information to refer to while developing FGOS for educational programs of SPO. Employer's communities were weakly involved in the development of the educational standards and programs. The FGOS-4 (a project) intend to address these deficiencies in the process of development of educational standards (Leibovich, 2016).

Furthermore, FGOS-4 intend to introduce new requirements toward the learning outcomes, which are defined as a sum of an educational qualification and a professional qualification. An educational qualification is reflected in the ability of individuals to independently continue their own education, self-education, professional development and enables life-long learning. It is provided by a combination of competencies, which allow individuals to assess the results of our professional activities, to manage information, in particular, to determine its deficit, to find the necessary information, to structure it and to be able to use it effectively in the working process. Requirements for educational qualifications are described through general and general professional competences, general professional knowledge and skills. The professional qualification is determined by a complex of generalized labor functions and labor functions contained in the professional standards. FGOS-4 do not intend to specifically determine the results of the development of the professional qualification but provide methodological requirements for their determination on the basis of the relevant professional standards. Therefore, educational programs should be developed by the educational organization on the basis of these requirements (Federal Institute of Education Development, 2015).

A further aspect of VET which is addressed in FGOS-4 is qualification standards for the pedagogical personnel. FGOS-4 intend to determine that teachers should have secondary vocational or higher education, which corresponds to the sphere they teach. A further compulsory condition is an experience in organizations of the relevant professional field. Besides that, teachers shall participate in professional development programs at least once in three years. These high requirements toward qualification of the teaching personnel were included in the FGOS to ensure the quality of the vocational education programs (Vasileva, 2016). The introduction of the FGOS SPO-4 is planned for 2018-2020.

### **Changes in the legal regulation**

Legislation on vocational education in Russia includes laws and other regulatory acts of various levels and content:

- Federal laws, such as the law “*On Education in the Russian Federation*”
- Normative acts adopted at the level of subjects of the Russian Federation
- Sub-legislative acts, such as Presidential decrees, amendments to the existing laws, etc.
- Departmental regulatory acts, such as decrees of the Ministry of Education and Science of the Russian Federation
- Local normative acts of educational institutions of vocational education.

As it was indicated earlier, the federal law “*On Education in the Russian Federation*” is a central legislative act in the field of education, including VET, defining the main principles of state policy in the education sphere. Further regulatory acts have complementary, concretizing and auxiliary functions. With the entry into force of the new law on education started a new reformation stage of the vocational education, associated primarily with the changes in the VET structure (Vasileva, 2016). The adoption of the federal law “*On Education in the Russian Federation*” entailed mass amendments on the legislative acts of the regions. Since 2013, educational organizations are working to bring the names, charters of educational organizations, licenses for educational activities and certificates of state accreditation in accordance with it.

One of the central normative acts, regulating organizational aspects of SPO the “*Order for the organization and implementation of educational activity in educational programs of the secondary vocational education* was approved in 2013”, introduced by the Decree no. 464 As the name suggests, the order is a crucial orientation document regulating educational processes in SPO educational organizations. Various aspects of the organization of educational activity are adopted from the relevant articles of the law “*On Education in the Russian Federation*” and brought together here. Except for that, the order includes general organizational rules, concerning student admission, examination procedures, maximum academic load, final certification and a number of further aspects.

Rules for implementation of educational programs of the professional training is regulated by a separated document, “*Order for the organization and implementation of educational activity in educational programs of professional training*”, approved by the Decree no. 292.

#### **5.4.2 Central actors in the sphere of VET**

A big number of actors are involved in the organization and reformation of the SPO. The most important of them are presented below.

The Ministry of Education and Science is a central federal body, responsible for development and implementation of the state policies in the field of VET as well as for its normative and legal regulation. The competencies of the Ministry cover not only VET but spread at all education levels as well as spheres of scientific, innovative and technical activity, intellectual property and social support of young people in all levels of education system. This facilitates the compliance of state policies in the fields of science and education.

*The Department of the State Policy in the Sphere of Vocational Education and Training* is a subdivision of the *Ministry of Education and Science of the Russian Federation* responsible for a sphere of vocational education.

Among the competency areas of the department are:

- Normative legal regulation in the sphere of secondary vocational education, vocational training and further vocational education
- Preparation of professional standards in the field of education and science
- Coordination of the activities of the federal educational and methodological associations in the system of secondary vocational education
- Monitoring of the SPO quality
- Monitoring of the employment of the SPO graduates
- Creation of interregional competence centers for SPO
- Implementation of the priority project "*Workforce for advanced technologies*" (Ministry of Education and Science of the Russian Federation, n.d.a).

*The Ministry of Labour and Social Protection of the Russian Federation* has an influence on the national system of SPO as well since it coordinates and funds the activities, aimed at the development of professional standards and supports the development of the *National System of Qualifications and Competencies*.

*The Agency for Strategic Initiatives (ASI)* was established by the Government of the Russian Federation in 2011 as an autonomous non-profit organization to promote social and professional mobility of the young people in the sphere of medium-sized businesses and the social sector. Among other measures, the Agency should provide an assistance in initiating and promoting socially significant business projects to improve the business environment in Russia and the conditions for human resource development. One of the central ASI initiatives is "*Human resource provision for industrial growth*". It sets a goal to provide the Russian industry with a sufficient and appropriately qualified labor force until 2020. A modernization of the national SPO system is seen as a main focus area for reaching the objective of the initiative.

In accordance with the provision of the federal law „*On Education in the Russian Federation*" (art. 19, sec. 2), the *Ministry of Education and Science* established 42 *Federal Educational-Methodological Associations in the System of Secondary Professional Education (FUMO)*. They were created with the purpose to improve a participation of the pedagogical and scientific personnel as well as representatives of employers in the processes of modernization of the SPO system.

The main tasks of the FUMO are:

- Participation in the conception of the FGOS
- Provision of the methodological support during the implementation phase of FGOS SPO
- Preparation of the proposals on optimization of the list of SPO professions and specialties
- Development and organization of the expertise of the exemplary education programs' draft projects
- Monitoring of the FGOS realization based on the results of the state accreditation of educational activities
- Provision of scientific and methodological support during the development and implementation of educational programs
- Participation, together with employers' associations, in the development of the evaluation tools for assessing the knowledge, skills and competencies of students
- Participation in the assessment of the quality of education

- Involvement in the development of further education and retraining programs and in the development of professional standards (Ministry of Education and Science of the Russian Federation, n.d.b).

Currently, the central task of FUMO is the development and actualization of FGOS for the 50 most demanded and promising professions and specialties.

## 5.5 Organization of VET

### Educational organizations

The secondary vocational education can be obtained in educational organizations, as well as outside of them (Decree no. 464, art. 3). It can be educational organizations of SPO or of higher professional education.

In 2014, about 4,000 professional educational organizations were registered in Russia, including 1,300 organizations, which only implement basic SPO programs for skilled workers or employees. In addition, SPO programs are being implemented in more than 400 educational institutions of higher education. The total number of young people enrolled in SPO educational programs amounted to 2.8 million people in 2014, including 0.5 million people in institutions of the higher education (Government of the Russian Federation, 2015).

SPO educational institutions realize educational programs according to the list of the SPO professions and specialties approved by the *Ministry of Education and Science of the Russian Federation* in the Decree no. 1199 “*On approval of the list of professions and specialties of secondary vocational education*” in 2013.

SPO educational programs can be carried out by the educational organization independently or through a network form, using the resources of several educational organizations (Decree no. 464, art. 13). Introduction of FGOS-3 SPO, which initiated the structuring of educational programs according to professional modules, created the prerequisites for the implementation of educational programs in a network form. In reality, not all regional educational organizations have sufficient resources to realize educational programs according to the requirements of FGOS. This problem has stimulated the development of the infrastructures for the realization of educational programs according to the network principle (Golovina, 2014, p. 2).

The implementation of the educational programs according to the network principle can be realized on the basis of the so-called resource centers. Currently, a formation of the resource centers is a crucial tool for the promotion of the public-private partnership in the field of VET. They represent a concentration of financial, human, material and methodological resources based on the separate SPO educational organizations according to professional areas. These centers are provided with a modern material and technical base which can be used simultaneously by several educational organizations. Resource centers allow conducting practical training in new professions and in those, which require practical training on modern, expensive or high-tech equipment. The networking form is seen by Golovina (2014) as the most effective form for optimization of the regional SPO since its responsibility for its organization is currently transferred from federal subordination to the jurisdiction of regions (p. 6). However, the realization of the educational programs according to the network form can be complicated, if it is weakly and ineffectively coordinated. Furthermore, there is a risk of the resistance against the necessary reorganization of the work processes from a management level of SPO educational organizations and their pedagogic personnel. Except for that, their legal status remains unclear (ebd.).

Additionally to resource centers, six interregional competence centers were founded in the recent years. Creation of the centers took place in form of the open competition of national regions in the course of the “*Federal Targeted Program for the Development of Education for years 2016-2020*”. Their main goal was to create conditions for providing training for the most demanded and promising

SPO professions and specialties. Centers serve as a platform for a development and approbation of experimental educational training programs for these professions and specialties. Besides that, the preparation of the national team for national and international WorldSkills competitions is realized on their basis (Ministry of Education and Science of the Russian Federation, 2015).

### Access and duration

Free accessibility of the secondary vocational education was not legislatively guaranteed by the previous law “*On Education*”. The new law “*On Education in the Russian Federation*” introduced some changes concerning accessibility and financing of the VET. According to the art. 68 sec. 4 of the law, every individual has a right to get a free secondary professional education, financed from the funds of the federal, regional and local government budget appropriations. A repeated acquisition of SPO is to be paid. However, an individual who has already finished an SPO program for skilled workers of junior technicians (basic SPO level) is eligible to participate in an SPO program for mid-level professionals (advanced SPO level) for free. Although an access to the SPO is free for the first time, VET educational institutions are allowed to conduct entrance examinations for occupations and specialties that require certain creative abilities, physical or psychological qualities from the applicants.

An admission to the institutions of the secondary vocational education is realized on the basis of the basic general education (9 classes) or on the basis of the secondary general education (11 classes). However, students who have not reached the basic general education, enter the SPO educational programs integrated with educational programs of basic general and secondary general education. These are mainly the SPO programs in the field of arts.

The duration of the SPO programs is determined by the FGOS and depends on the previously achieved education level, on the required final certification and on the profession itself (see tables 1 and 2). Furthermore, SPO participants can usually choose between a traditional full-time presence form, extramural and a mixed form of programs. The two latter forms require usually from one to one and half years longer to complete.

<i>The level of education, necessary for admission</i>	<i>Name of the qualifications</i>	<i>Duration of the full-time programs</i>
Basic general education	car mechanic	2 years 10 months
Secondary (complete) general education	car driver gas station operator	10 months

*Table 1: Duration of SPO for skilled workers and junior technicians on the example of the profession “car mechanic”. Modified based on the FGOS SPO „car mechanic” (Decree no. 701)*

<i>The level of education, necessary for admission</i>	<i>Name of the qualification</i>	<i>Duration of the full-time programs</i>
Basic general education	Computer Systems	3 years 10 months
Secondary (complete) general education	Technician (basic preparation)	2 years 10 months
Basic general education	Specialist in Computer	3 years 10 months
Secondary (complete) general education	Systems (advanced preparation)	4 years 10 months

*Table 2: Duration of SPO for mid-level professionals on the example of the specialty “computer system and complexes”. Modified based on the FGOS SPO “computer systems and complexes” (Decree no. 849)*

Duration of the professional training programs is not strictly regulated and determined by a concrete educational program which is developed by an educational organization according to the



professional standards (if present) or qualification requirements (Federal Law no. 273 art. 73, sec. 8).

### **Educational programs SPO**

According to the art. 68, sec. 3 of the federal law “*On Education in the Russian Federation*” the acquisition of secondary vocational education on the basis of the basic general education is carried out with simultaneous acquisition of the secondary general education within the corresponding educational program of the secondary professional education. In addition to the SPO final exam, students have the right to pass the final certification of the secondary general education and receive a corresponding certificate. Therefore, SPO educational programs are integrated into the compulsory education, unless students have already reached the general education level before beginning a SPO educational program.

Educational programs of secondary professional education are developed by the educational organizations on the basis of the requirements of the relevant FGOS for the secondary general and the secondary vocational education and so-called exemplary basic educational programs (Federal Law no. 273 art. 12, sec. 5, 7).

FGOS SPO includes the following requirements for the educational programs:

- 1) Structure of the main educational programs (including the ratio of the obligatory part of the basic educational program and the part formed by the participants in the educational relations) and their scope;
- 2) Conditions for the implementation of basic educational programs, including personnel, financial, material and technical and other conditions;
- 3) Results of the basic educational programs.

As long as FGOS-4 are not implemented, SPO educational organization should orient their curriculum development on the requirements of FGOS-3.

Because of big differences in economic, demographic, cultural and social conditions of the regions, education programs are implemented taking into account the individual regional characteristics (UNESCO-UNEVOC, 2012). To realize this need, educational organizations should annually update SPO educational programs considering the development of science, technology, culture, economics and the social sphere.

An SPO educational program includes a curriculum, plan of an academic year, programs of subjects, courses, disciplines (modules), evaluation and methodological materials and other components. The curriculum of the SPO educational program determines the content, complexity, sequence and distribution of study subjects, courses, disciplines and modules, practical part, other types of educational activity of students and the form of their intermediate certification for the periods of study (Decree no. 464 art. 12). Since FGOS serve as a framework document, SPO educational organizations have the right to develop and implement various educational programs with a different curriculum, based on the same FGOS.

Significant changes in the requirements toward SPO educational programs, especially in relation to the curriculum and the distribution of study hours, are expected when the new FGOS-4 will be officially implemented. They will become more practice oriented. Besides classroom learning, trainees should dedicate up to 60% of the total workload to practical and laboratory classes and extracurricular independent work. Furthermore, the variable part of the curriculum should reach 60% (Blinov, 2015).

FGOS-4 will not include names of disciplines and modules anymore but set requirements toward their development. These will be reflected in the exemplary basic educational programs, which will be developed along with the FGOS-4. Their drafts will be prepared by participants of the relations in the field of SPO and then forwarded for expertise to FUMO. The names and

content of these discipline and modules will be reflected in the exemplary programs, but the final decision on naming the disciplines, their structure and content will remain in the competence of educational organizations. The measurement system of the training load will be modified as well. Thus, FGOS-4 set a transition from the amount of hours per discipline to a credit point system with a floating size of 30-34 hours. This change tends to make an educational program more flexible and easier to organize for the pedagogic personnel (Federal Institute of Education Development, 2015).

With the development of FGOS, especially FGOS-4 and FGOS TOP 50, the role of the exemplary educational programs becomes more significant. The global tendency of rapid technological developments and changing labor market demands brings with it the necessity for a constant and frequent renewal of the professional and therefore educational standards. With the system of educational standard, where for every profession and level of preparation a separate professional standard is prepared and procedures of actualizing the standards are very long, it is very complicated to ensure that all professional standards correspond to the current technological developments and needs of the national economy. Introduction of the exemplary educational programs is an important partial solution for this challenge. It will be easier to incorporate changes in professional standards at the level of exemplary programs, whose adjustment does not require complex legal procedures (Federal Institute of Education Development, 2015)

### **Chapter conclusion**

The Russian system of VET is currently in the process of an intensive reformation. One of the key goals of the government is to reduce the gap between the structure and quality of education and the current needs of the labor market. A number of federal programs and reforms took place in recent years to improve the efficiency and quality of skill provision. A wide complex of measures is mainly oriented first on the introduction of the new educational and professional standard, promotion of practice-oriented VET formats, such as applied bachelor programs, strengthening private-public partnership and improvement of the prestige of the SPO.



## 6 Policy transfer to Russia

In the process of reformation of the national VET system, Russian policymakers and experts in the field of VET do not only rely on their own experience but actively search for the successful practices from abroad and opportunities for international cooperation and transfer as well. Along with a number of other initiatives, a nation-wide project "*Training of Workers Qualified for High-Tech Industries on the Basis of Dual Education*" was launched in 2014. In the context of this project, an approbation of the German dual system took place in several Russian regions. This chapter intends to understand the process of the transfer of the German dual model to Russia through the scope of the model of education transfer of Phillips and Ochs (2003). In addition, the adaptability of the dual approach and perspectives of its further influence on the formation of the Russian VET system will be discussed.

### 6.1 Process of the policy transfer

The four-stage model of Phillips and Ochs (2003), which describes the process and the content of the educational transfer, was presented in the second chapter. According to this model the four stages of the transfer cycle are the cross-national attraction, decision, implementation and internalization.

#### I Cross-national attraction

The process of educational transfer starts, according to the authors of the theory, with cross-national attraction. It is usually initiated by the inner-state impulse. In case of Russia, several impulses could trigger the cross-national attraction:

- The change from the planned to market-oriented economic system and, therefore, the necessity to modernize the system of VET corresponding to the new conditions
- Accumulated problems in the system of VET and its resulting ineffectiveness
- An internal dissatisfaction of various actors with the national VET (young people and their parents, teachers, the government and businesses)
- The inability of the VET to fulfill its most important task of providing the labor market with an appropriately skilled workforce able to work with modern technologies and promote innovation.

The government understood that a weakly functioning system of VET could seriously complicate the achievement of the ambitious long-term goal of transitioning toward an innovation-based economy. Technological development requires the workforce of all levels of qualification, including skilled workers and mid-level specialists, capable to work with new technologies and promote innovation at a workplace.

From the beginning of the 1990es, Russia was actively learning from the foreign successful experiences in the fields of education for modernization of the national education system. There are a number of reasons why German experience in the field of VET attracted the attention of Russian actors involved in the development of VET education policies. The preference of the dual system as a model for future development of the national VET is explained by its ability to effectively respond to the skill need of the labor market and to ensure a smooth transition from

the VET to the world of work. In the recent years, the Russian Government underlines the importance of the stimulation of a strong public-private partnership in the training of the qualified workforce. In the “*Strategy for the development of the workforce preparation system and development of applied qualifications in the Russian Federation for the period till 2020*” it is emphasized that consolidation of the resources of business, educational organizations and the state should play a crucial role in the development of the national VET system (Ministry of Education and Science of the Russian Federation, 2013b). However, effective instruments of the public-private partnership were missing. Therefore, a successful German experience in the involvement of the business sector in the training of the workforce motivated the Russian actors to intensify the cooperation. Besides, in Germany VET enjoys high reputation in society and is in great demand among young people. In Russia, the unwillingness of young people to participate in VET is a serious obstacle in the way of the development of VET which creates mismatches on the labor market.

## II Decision

In the decision-making stage government or other competent bodies search for opportunities to start a policy transfer.

A transfer of the German experience in the field of VET to Russia started many years ago. Already in 1993, a cooperation agreement was signed between the *German Federal Institute for Vocational Education and Training (BIBB)* and the *Institute for the Development of Vocational Training of Russia* (Strategische Partnerschaft, n.d.). After this, already in the 1990s about twenty various projects aimed at a modernization of the Russian vocational education took place. A Russian-German working group was established in 2005 to exchange experiences and mutual support in the sphere of VET. The introduction of the elements of dual approach started selectively on the basis of the subsidiaries of the German companies in some Russian regions, which had problems to find sufficient workforce in the local labor markets. For example, in the Russian region of Kaluga dual VET programs were launched in 2010 already as a cooperation of Volkswagen Group Rus and two vocational schools, which are Kaluga College of Information Technologies and Management and Kaluga Polytechnic College (Investment Portal Kaluga Region, n.d.). Except for Volkswagen Group Rus, some other German companies, for instance, Kalibrix, Knauf, Festo and Siemens tried to implement some elements of the dual approach in the Kaluga Region, as well as in the cities Nizny Novgorod and Ekaterinburg. However, such initiatives had a low-scale character and were weakly supported by the Government. Companies complained about the high cost of such initiatives and low qualification level of the training personnel (GOVET, 2014).

An intensive cooperation between countries in the field of VET started in 2011 when the *BIBB* and the *Russian Federal Institute of Education Development (FIRO)* signed a cooperation agreement. One year later, the *Russian Ministry of Education and Science* and the *Federal Ministry of Education and Research of Germany (BMBF)* signed a *Memorandum of Understanding* with an intention to support the introduction of the dual approach of VET in Russia. An important step toward the realization of this objective was made in November 2013 when the supervisory board of the *Agency for Strategic Initiatives* approved the project “*Training of Workers Qualified for High-Tech Industries on the Basis of Dual Education*”. Its main goal was a development, approbation, implementation and dissemination of a model of the dual system of education in the selected pilot regions of Russia.

Therefore, many important decision-making actors from both countries have actively supported the transfer of the German model of VET to Russia and the initiation of the nationwide project for the approbation of the dual approach.

## III Implementation

In the third step, the adaptation of the educational policies takes place. How effective and quick the adaptation of the elements of the foreign system goes, depends as much on the contextual

factor as on the attitudes of “significant actors”, people and institutions of the taking-country, toward the change. If national actors demonstrate strong resistance the implementation is likely to stop.

The realization of the project “*Training of Workers Qualified for High-Tech Industries on the Basis of Dual Education*” started in 2014.

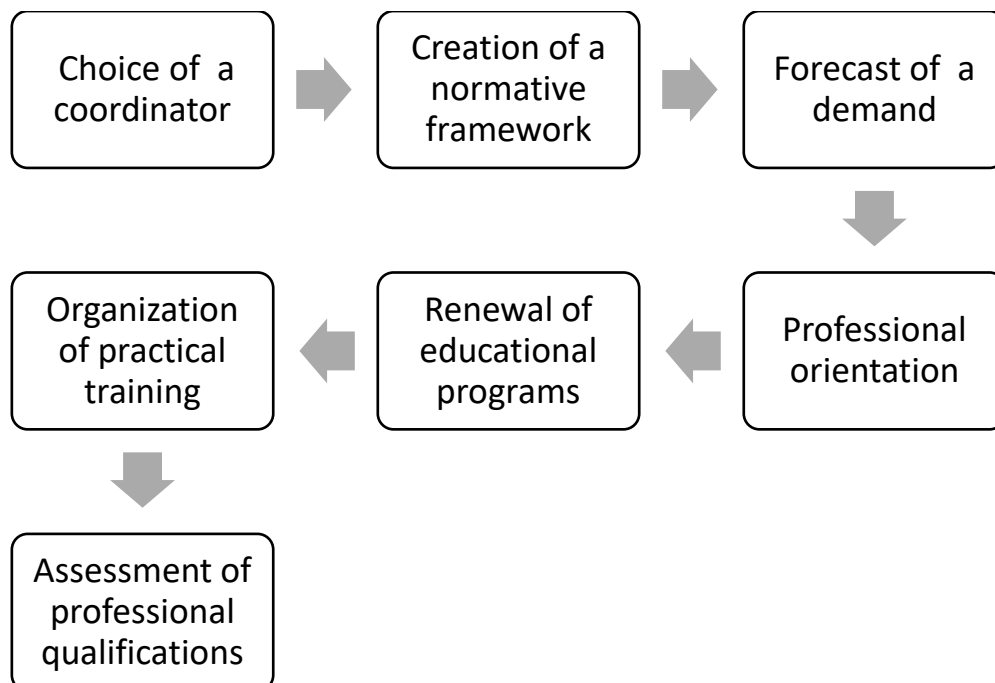
Since the Russian VET system is strongly decentralized, regions have a strong influence on the realization of the transfer. The motivation of the Russian regions especially of their governments, vocational schools and enterprises, to participate in the pilot projects was high. This is because many regions had a sharp shortage of well-skilled workers in the industries they specialize at. The project was a good chance to try a new effective approach. 23 Russian regions competed for participation and finally, 10 of them were chosen. One year later three more regions joined the project.

In the first year, collective bodies of project management were established in the pilot regions. Thereafter, regulatory documents, necessary for the realization of the project were developed. To be able to realize the practical component of the educational programs, the Government amended FGOS SPO for professions in which young people were trained in the context of the project. The participating companies were involved in the development of the educational programs and determination of the requirements toward final examination. Mentors for trainees at the companies and vocational school teachers took part in the special further training programs (Agency for Strategic Initiatives, 2016).

Regions followed the following general scheme for the implementation of the dual model of education, demonstrated in the Figure 3:

**Figure 3**

*General scheme of dual education model implementation*



*Note:* Adapted from "Methodological recommendations on the implementation of the dual model of training highly skilled workers. Version 2.0", by Agency for Strategic Initiatives, 2016, Moscow.

151 educational organizations of SPO and higher vocational education, more than 1,000 companies and more than 57,000 students participated in the realization of the project (Agency for Strategic Initiatives, n.d.a).

However, during the implementation of educational programs according to the dual principle regions used various strategies, constellations of actors and responsibilities. Here are some examples of successful practices of regions and enterprises demonstrating the variety of used implementation approaches (Agency for Strategic Initiatives, 2016):

#### *Belgorod region*

In this region, employers and their associations played a special role in the realization of the project. The government of the Belgorod region officially delegated the management of all 36 vocational educational organizations to employers with the participation of municipalities. The *Department of Internal and Workforce Policy* was appointed as a process coordinator. The task of determining the volume, directions of training as well as requirements for qualifications performed eight councils of employers, created according to the sectorial principle. The councils consisted of the representatives of the companies, public associations of employers, trade unions and sectoral departments of the region. The number of “anchor” employers, which are directly involved in the training, was 26 in 2015. In addition, there were 871 company-partners, which did not provide training but participated in the formation of the training order and financing. Furthermore, the region has succeeded in the field of career orientation of young people.

#### *Perm region*

In the Perm region, too, employees acted as customers and vocational schools as contractors carrying out their order of targeted workforce preparation. The role of coordination center between the business and the sector of vocational education played a regional *Chamber of Commerce and Industry*. The Chamber consolidated the workforce demand of the regional enterprises. On this basis, the *Ministry of Education* of the region determined the number of the budget SPO places in vocational schools. Besides that, employers were involved in the accreditation of the educational programs and, thereby, had an opportunity to impact the quality of VET.

#### *Tatarstan region*

In this region, the dual model is recognized as the most promising form of VET for skilled workers and mid-level professionals. A successful implementation of the project was mainly possible due to the activity of the scientific and educational clusters, which include regional enterprises, vocational schools and sometimes universities. Cluster are organized according to the industrial sectors and serve as the main tool for coordinating the interests and the activities of business and education sectors as well as of the state. The coordination councils of the clusters managed the implementation process of the dual model. Various VET-related aspects are regulated within the clusters: determination of the labor market needs, formation of the educational order, coordination of the SPO organizations, integration of the resources of the cluster participants, organization of the practical training for VET participants, evaluation of the quality of VET as well as the assistance of the VET graduates in finding an employment. In the Tatarstan region, the dual model was mainly used in the applied bachelor programs. Educational organizations prepared contracts on cooperation in the realization of the dual education and developed educational programs together with the training enterprises. In the training companies, every VET student had a mentor, which was chosen among the most qualified employees of the company.

#### *Novosibirsk region*

The development of the VET system in this region as well as in Tatarstan connected to the work of the scientific-educational clusters, which represent the system of concentration of material, intellectual and methodological resources of the local enterprises and educational organizations for preparation of the human resources for the real work conditions. By 2017, 14 sectorial clusters were functioning in the region. The Novosibirsk region is especially successful in attracting the

medium and small enterprises in the realization of the new forms of VET and the approbation of the dual model.

#### *Pervouralsk New Pipe Plant*

The *Pervouralsk New Pipe Plant* is one of the leading manufacturers of the steel pipes in Russia. Before the company started the implementation of the dual VET, it had been actively cooperating with the Pervouralsk Metallurgical College in the realization of the practice oriented SPO programs already. In 2012, the Ministry of General and Vocational Education of the region, the plant and the college have signed an agreement on joint development and implementation of the dual model of VET. In the following year a working group, consisting of the representatives of the plant, the college and the Ministry, have developed a program for the realization of the dual model of VET under an intensive consultation of the German experts. Since then, the college realizes VET programs according to the dual principle in 11 professions and specialties. The plant has its own educational center. The theoretical learning took place in the college, practical training was conducted in the shops of the plant, and the laboratory work and special subject was organized in the educational center. The students spent more than 50% of their training time in a real production setting.

#### *Evaluation of the project*

At the end of 2016, the evaluation of the effectiveness of the project according to the jointly chosen criteria by Russian and German experts was conducted. The survey of the different groups of actors, involved in the realization of the project, indicated which factors they see as crucial for further development of the dual system of VET in Russia:

- Introduction of the normative acts on the federal level
- Introduction of the tax benefits for employers participating in the dual VET
- Financial support of the government in the organization of dual VET
- Increase of the attractiveness of VET (Agency for Strategic Initiatives, 2016, p. 20).

The approbation of the dual approach in VET was broadly successful and did not meet resistance from the national „significant actors“ due to the flexible realization strategy of the project. The participation in it was voluntary and therefore only interested regions, educational organizations and companies were involved. Except for that, actors had a high degree of freedom of realization and used tools and strategies most suitable to their own needs and characteristics. At the same time, an appropriate consultation and government support were provided.

Along with the project *“Training of Workers Qualified for High-Tech Industries on the Basis of Dual Education”*, in November 2014, the project *prof-mayak* was launched in cooperation with FIRO, BIBB and the Goethe-Institute of Moscow. The purpose of this project was to create an online platform for trainers and teachers, companies, young people and other actors interested in the development of the vocational education. *Prof-mayak* informed about the developments in the sphere of VET, highlighted important federal and regional VET projects and initiatives and provided useful scientific and methodological information. Besides for that, it served as a platform for the exchange of experiences, best-practices and success stories among teachers, trainers and companies. The dual VET was a core topic of the *prof-mayak*. The German online platform for vocational teachers and trainers *foraus.de* was used as an orientation model for the creation of the Russian portal. Therefore, with the introduction of the *prof-mayak* a further element of the dual model was transferred to Russia. Currently, the *prof-mayak* is integrated into the basic center for vocational training, retraining and advanced training of workers.

Another project, *Continuing Training of VET Personnel*, which was cooperatively developed by BIBB and FIRO and started in 2013, is oriented on the improvement of the qualification level of the teachers of vocational schools. The project aimed to promote a systemic introduction of a



standardized qualification program for VET teachers with a focus on methodology and didactics. In the context of the *Project 60*, Russian experts were trained in Germany for a role of multipliers (GOVET, 2014).

#### **IV Internalization**

In the fourth stage, the transferred policy becomes part of the education system of the taking country and it is possible to observe and evaluate its effects.

An impact of the collected experience and practices of various projects of the transfer of the dual approach, including most extensive of them, *“Training of Workers Qualified for High-Tech Industries on the Basis of Dual Education”* on the development of the Russian VET is obvious. Regions, which participated in the project are continuing realization of principles and strategies in VET which proved to be effective in the pilot phase. To ensure sustainability of the collected experiences, the dual approach was integrated into the *„Regional standard of workforce preparation for industrial growth”*, developed by the Agency for Strategic Initiatives in 2016 and implemented in 21 pilot regions. It is seen in the context of the standard as an elective mechanism for securing high-tech industries with skilled workers (Agency for Strategic Initiatives, 2015).

During and after implementation of the project a number of changes were introduced to the federal and regional legislation in the field of VET. Some regions issued decrees on the procedure of organization of the dual VET. Besides, to motivate enterprises for participation in the dual form of VET, in July 2017 the President of the Russian Federation signed a law, according to which a company's costs for education will not be subject to income tax from January 1, 2018. Companies participating in the dual form of VET, can save up to 20% of their training costs. The only condition here, however, is that at least one of the VET students will conclude an employment contract with the company for a period of at least one year after completing the educational program (Agency for Strategic Initiatives, n.d.a).

Furthermore, the approbation of the dual approach influences the development of the structure of SPO educational standards of the new, fourth generation. These set a higher practice-orientation of VET. As it was indicated in the previous chapter, according to FGOS SPO 4, students should spend up to 60% of the learning time in practical training.

A synthesis of the foreign and national educational policies happens in the stage of the internalization. In reality, the dual approach becomes a part of the overall VET strategy. According to *“The complex of measures for 2025-2020, aimed at the improvements of vocational education”*, which was approved by the Government of the Russian Federation in 2015, it is planned to gradually incorporate the dual model of education in all regions till 2020 (Decree no. 349-r).

However, the internalization of the dual approach in the Russian education system is not completed yet. Currently, the realization of the dual approach takes place only in the regions, where it was introduced in the form of the pilot projects. Besides, it is still impossible to see a clear effect of the preparation of the workforce according to the dual principle. The majority of the young people, who participated in the pilot projects just finished their training or are still in the process of it.

## 7 Discussion

### 7.1 Influence of the context conditions on the transfer of the dual model

A transfer of a VET system or its elements is always a context-bound process. Researchers emphasize on the evaluation of the context conditions as a crucial aspect to understand the transferability of the foreign educational policies (Barabasch & Wolf, 2011; Phillips & Ochs, 2003). Phillips and Ochs (2003) argue that national contexts can affect motives behind cross-cultural attraction and influence the process of policy transfer on stages of decision, implementation and internalization. Systems of vocational education are embedded in the variety of national contexts. They influence the development of education systems and policies. Therefore, a consideration of the potential impact of the context conditions on the educational transfer is important because it can help to predict the risks and problematic aspects of the transfer. A comparability of the national contexts of both countries is an essential condition for a successful transfer. In the third chapter, various context conditions of modern Russia were described. It should be observed how they could potentially influence the process and the success of the transfer of the dual system to Russia.

The economic development of Germany is stable, while Russian economy was facing a number of economic crises and is slowly recovering. The economic conditions impact the decision-making and behavior patterns of various national actors, which play different roles in the realization of VET. Thus, governments, businesses, young people choosing their educational and professional paths, as well as their parents, can potentially impact the process of transfer of the dual system to the Russian vocational education and contribute to its success or failure. As it was indicated earlier in the context of the thesis, successful functioning of the dual system strongly depends on the support of above-mentioned groups of actors and their roles in the process.

The implementation and the internalization of the dual elements and structures into the Russian VET depends on the willingness of enterprises to participate in the training practice, to qualify their own employees for the role of the trainers and besides of all to invest in the preparation of the trainees. When the economic situation is unstable, businesses are less willing or incapable to invest their resources in new projects and initiatives. They may also not be motivated to invest in the training because of the high fluctuation of the workforce in the Russian labor market. They may perceive it as a risky and unreliable investment of capital in the future.

As it was indicated in the second chapter, in Germany the biggest proportion of the companies are involved in innovative activities, while in Russia this indicator is one of the lowest among the OECD countries. This context condition is closely related to the organization of the practical training and the ability of companies to provide modern material and a technical basis for it. For a successful realization of the dual VET, it is necessary that young people should have access to the modern technologies and equipment.

Another actor which has a direct influence on the transfer of the dual system is the determination of the Russian Government. In the situation of economic instability, the government has to set priorities and decide, in which areas investments should be conducted. The transfer and approbation of the new educational policies are connected to high expenditures. As it was demonstrated earlier, insufficient financing of the educational sphere and particularly the vocational

education is still an unsolved issue in Russia nowadays. A successful transfer of the dual model can be challenging in the context of underfinancing of the sphere of vocational education.

Furthermore, the way how the societies of Germany and Russia perceive VET is different. In Germany, it is seen as a decent career path leading to good job opportunities, and decent working conditions. In Russia, as it was discussed in the previous chapter, VET suffers from poor reputation even today. Higher academic education is still seen by young people as well as their parents as a more secure path for a good employment and safe income in the future. At the same time, in a situation where the majority of the population has higher education, the absence of it sends a negative message to a potential employer. When economic conditions are bad, young people and their parents are more likely to choose a safe career path which is higher education. A historically developed unattractiveness and skepticism toward vocational education can be a serious challenge in the process of VET modernization, including the educational transfer. On one side, the implementation of the dual approach in Russian VET needs talented and motivated young people, willing to be involved in new unknown education processes. On the other side, transfer of the German VET can also increase the curiosity of young people to be involved in it. Young people can probably see it as an appealing opportunity and a way to develop competencies that are highly required on the labor market.

Furthermore, one of the central ideas and objectives of the dual system is a smooth transition from the VET to work. Companies, participating in dual VET, expect that students will stay in the company after graduation. Young people also hope to be employed by the companies when their training will finish. In Germany, there are no significant obstacles in the way of a smooth transition. Currently, a direct taking over of the graduates is more complicated in Russia. In the earlier chapter, it was mentioned that due to the mixed form of recruiting to the Russia army, students of SPO have to go to army directly after completing their vocational education and training.

## **7.2 Assessing the potential of the dual system as a model for the future development of Russian VET**

The biggest nationwide project on transfer of the dual approach finished in 2016 and the results were positively evaluated by the participating actors. Still, the process of transfer of the dual model to Russian VET is far from done. For now, the dual system remains an experiment of the government, which take place in the selected regions on a voluntary basis. However, a review of the results achieved during the approbation of the dual system in some Russian regions as well as of other transfer activities allows to discuss the potential use of the dual system for Russian VET and to conclude some presumptions about its further development and expansion.

Euler (2013) emphasizes that VET is a tool for the achievement of the specific goals of a country. Consequently, the effectiveness of a national VET system should be evaluated by its success in achieving these goals (Euler, 2013, p. 5). Therefore, a transfer of foreign educational practices should help the importing country to develop a system of VET which is capable of the achievement of its intended goals. This raises the question, whether the introduction of the dual approach is an effective strategy for the strengthening of the Russian VET system. To answer it, it is important to observe what results have already been achieved since the introduction of the dual approach and how it was evaluated by the participating actors in the field of VET.

A decision to transfer a German dual approach to the Russian national educational system was primarily motivated by an intention to improve the quality of the workforce preparation and to solve the problem of the deficit of a sufficient and appropriately qualified workforce in the labor market. Besides that, Russia also sought to learn from the successful German experience of close cooperation of the business community and government in the organization and the realization of the VET.

It is still difficult to talk about long-term consequences from the approbation of the dual model in the selected Russian regions. Especially, the consequences of its implementation on the situation on the regional labors cannot be evaluated yet because the participants either just graduated or are still in the process of training. However, several obvious achievements and positive results can already be indicated:

1. Generally, companies of the pilot regions demonstrated the willingness to participate in a dual form of VET. However, not all of them are ready to train. Some of the regional enterprises influence the system of dual VET through the membership in the employer's' associations or sectorial clusters. Therefore, they have an opportunity to co-determine the labor market needs and educational order for VET. Besides that, the companies, which actively took part in the training of young people, cooperated with vocational schools in the development of educational programs, setting criteria for assessing the quality of the training and the final examination. Thereafter, the number of companies participating in dual VET is constantly growing in these regions after the project finished. This indicates the sustainability of the approach.
2. Many regions report about positive consequences of the introduction of the dual model on the interest of the young people to participate in VET. The competition for admission to the dual programs is significantly higher in comparison to traditional school-based VET programs. Furthermore, the average mark of the school certificates of applicants increased, which demonstrates the ability of VET to attract academically strong school graduates. This is a very important indicator because a successful reformation of the system of VET requires a willingness of young people to participate in it.
3. The prestige of the vocational schools has grown and many of them have received a status of innovation platforms.
4. The introduction of the dual model allowed improving the balance between the labor market needs and the market of educational services in the pilot regions in only several years.
5. Regional actors, who were involved in the realization of the project, among them representatives of the local government, of employers, of vocational schools as well as mentors, clearly see the prospects of further development of the dual VET model (Agency for Strategic Initiatives, 2016).

The above-mentioned results of the project demonstrate that the dual model has a potential to become an effective tool for improving a national system of VET and ensuring that it is capable of fulfilling its objectives.

A further development of the Russian VET in accordance with the principle of the dual approach can help to address the problem of youth unemployment in the long perspective. An established distrust of employers toward the educational achievements of the young people complicates the transition between VET and a first employment. For many young people, it is a big challenge to get a job in their field. The reason for that is that employers look at a practical experience first when they hire, which excludes the fresh graduates of both secondary and higher education. Therefore, the dual model provides the best solution for this settled challenge because it offers young people an opportunity to collect practical experience before they finish their vocational education. Furthermore, the young people can be recruited by the training enterprises employers directly after they finish their VET programs.

The transfer of the dual system was so far cooperatively organized with the German side and implemented under the support and consultancy from the German experts and organizations. However, the further adaptation of the dual approach becomes mainly the task of the Russian actors, who have the power to determine how far it will be incorporated in the national VET system. The Government sees the dual model of VET as one of the approaches with the most

perspective for further reformation of the national VET system and intends to actively promote it further.

Now it is important to answer the question, how the dual system should be further adapted to become one of the main forms of workforce preparation in Russia. It is important to evaluate possible obstacles on the way of a further transfer and expansion of the dual approach and find ways to overcome them.

Due to different context condition, the German dual system cannot be transferred to the Russian education system as a whole. It also wasn't the intention of the Russian Government from the very beginning of the transfer. Russia is motivated to adopt the main principle of the German VET model especially the principle of duality and the consensus principle. Therefore, building effective mechanisms of public-private partnership and combination of the practical and theoretical learning are the main objectives of the transfer.

There is a tendency of using the existing structures in the economy for incorporation of the dual model in Russian. Until today the dual system is most effectively realized within the framework of the regional industrial and scientific clusters organized by the sectorial principle. They represent voluntary associations of various groups of actors such as ministries, vocational schools, universities, companies and trade chambers. As long as the attraction of the single enterprises remains difficult, clusters continue to represent the most convenient basis for the realization of the dual approach.

Furthermore, one of the crucial tasks in the nearest future should become the development of the incentive measure for the companies to increase their willingness to participate in the training of the young people. An attraction of the companies is likely to remain the biggest challenge for the further expansion of the dual approach in the Russian VET system. Until now, only big companies, which have sufficient material and technical resources for the organization of the dual VET, see advantages of participating in it. The role of the SME in the realization of the dual VET remains insignificant to date. While various measures for supporting and motivating SMEs for the participation of VET exist in Germany, in Russia these instruments are just being planned. However, the first amendments are already introduced in the tax law to motivate companies to take part in the dual VET. Moreover, unstable economic conditions can complicate further expansion of the dual model since it is too hard for Russian enterprises, particularly for SMEs, to predict the workforce demand for several years in advance.

A further introduction of the dual system in other Russian regions can be harder than the first approbation round in the pilot projects. The realization of the dual approach went smoothly so far in the economically developed regions, which have strong industrial complexes. These regions have already accumulated successful practices in the field of VET before participating in the dual VET projects. Therefore, the government should develop effective mechanisms for sharing best practices to motivate less developed regions for participation in the dual form of VET.

The development of the instruments and the realization of the principle of dual VET should stay in the hands of the regions and be further realized on the voluntary basis. The successful introduction of the dual model in the pilot regions is partly explained by the fact that they had a relatively high freedom of realization of the dual VET and effectively used their local infrastructure. 85 Russian regions are too diverse in their economic development, labor market conditions, needs and actors' constellation. That is why it is important that the further introduction of the dual system is performed under consideration of the individual needs of the regions. Therefore, the creation of the unified standards for incorporation of the dual system till now cannot be seen as a right solution. On one hand, it is important to define standards for introduction of the dual approach to ensure the unity of the educational space and comparability of the results of the dual VET. On the other hand, regions should be provided with a sufficient flexibility and freedom of action to implement dual VET in accordance with their specific needs and existing resources. The

government is already successfully realizing the task of finding a balance, through new educational standards of VET, the professional standards and exemplary educational programs. Therefore, the actors have to follow these standards while developing the educational programs and have a strong basis for orientation, but a relatively high degree of freedom in the realization at the same time.

Along with the German dual system, Russia is actively learning from other successful international experiences in the field of VET. One of these are the aspects of the promotion of the VET prestige and image and Russia has been actively using the WorldSkills competitions. Russia is also actively implementing the experience of the international movement for development of the national professional and educational standards. In combination with the tools of WorldSkills, the dual model has a stronger potential to increase the effectiveness of the Russia VET system since they address the problems in a complex.

Along with the introduction of the dual approach in the system of SPO, there is a high potential for its success in the realization of the programs of the applied bachelor. This form of education is still relatively new and not incorporated legislatively in the educational system. However, it is becoming very popular with the young people. In addition, it is easier to involve companies in a cooperative realization of the dual VET on the university level, as employers prefer workforce with higher education degrees. Still, the expansion of the dual model in the applied bachelor programs can negatively impact the prestige of the SPO programs.

Currently, a curriculum of the dual educational programs is developed by companies and vocational schools cooperatively based on the professional and educational standards. A consensual system of framework curriculum for vocational and training regulations for the companies, as it works in Germany, is not considered in Russia till nowadays. A possible reason for that can be that scale of realization of the dual programs does still not correspond to the amount of the required effort. Besides, a cooperative development of the educational programs proved to work effectively in the pilot companies and vocational schools.

Furthermore, the success of the incorporation of the dual training in the future will strongly depend on the competence of the teaching and training personnel. Teachers of vocational schools and mentors in the companies are the key figures on whose performance the quality of the training will depend. The introduction of the dual VET is very challenging for vocational school teachers. It requires a more individual approach of teaching, which until now is not common in the vocational schools. In the process of realization of the pilot projects for the approbation of the dual system a number of recommendations for the preparation of the teaching and personnel for the dual SPO were developed. These recommendations are being considered in the development of the new educational standards which are expected to be introduced soon. According to them, SPO teachers have to participate in the programs of professional development, including training in specialized organizations at least once every three years. Another instrument is a permanent qualification of the pedagogic personnel in the enterprises of their field of teaching to ensure their competence to provide up-to-date knowledge.

Moreover, the requirements for pedagogic activity in the field of vocational education are currently introduced through the professional standard "Teacher of vocational training, vocational education and further vocational education". The standard was approved in 2015 and must be applied by the employers since January 1, 2017 (Decree no. 608n). According to the standard, individuals without pedagogic education have to obtain the necessary qualification within the programs of further vocational pedagogical education. However, the standard has a recommendation character until today and is only obligatory to be applied when educational organization are executing a targeted state order.

Trainers are the key figures in the realization of the dual approach. In Germany, the professional and personal suitability, as well as pedagogic competencies of the trainers are important to ensure the quality of the practical training in the companies. However, in Russia, there

are still no specific requirements towards trainers in the companies. They are not even seen as trainers, but rather as mentors. The only recommendation, which exists for the companies participating in dual VET, is to choose mentors among their most competent employees. To ensure an effective combination of the practical and theoretical training within a dual VET it is necessary to prepare the companies' employees participating in the training of young people. An organization responsible for preparation and assessment of trainers has to be established on the national or regional level. This way it can be ensured that companies' employees involved in VET acquire or possess at least basic pedagogical and didactical skills.

Therefore, development of the flexible and effective training opportunities of the VET teachers and trainers is a crucial condition for the further expansion of the dual model in Russia. The consultancy and assistance from the Germany experts remain very important in this field in the next years, because Russia does not have much experience in training company employees for the role of trainers. Therefore, the transfer of the German experience in this competence area should continue.

Furthermore, the term "dual vocational education and training" is not legislatively incorporated in the system of education yet. A creation of the strong system of the normative regulation of VET, like the German Vocational Training Act, remains difficult until now. However, it is critical for further development of the dual VET model. In Germany, it is an important instrument of quality insurance of VET. In Russia, the necessity of the legal framework for the organization of VET is recognized. However, it is important not to overcomplicate the organization of dual VET before national actors recognize its value and demonstrate the willingness to participate.

## 8 Conclusion

The main purpose of this master thesis was to observe the current development of the Russian VET system as well as to discuss the potential of the transfer of the German dual model to the Russian education system as a tool for its reformation and modernization.

The research was based on a profound analysis of the scientific literature in the field of vocational education and training as well as in the area of educational transfer. Besides the scientific literature, various legislative documents, websites, statistical information, publications of the Russian and German governments as well as international organization were used to answer the research question. Both primary and secondary sources were utilized. The originality of the approach lies in the use of the sources in the original languages, which are Russian, German and English. Therefore, this thesis may be of a special interest to the non-Russian readers.

The introduction chapter motivated the topic of the research and presented a research question. The second chapter provided a theoretical background for the fields of vocational education and training as an educational sector, educational transfer and a short introduction into the main principles and elements of the German dual system of VET. A special attention in this chapter was paid to the model of educational transfer by Phillips and Ochs (2003), who present the educational transfer as a four-stage process. They emphasize the relevance of the context conditions of the country interested in transferring the foreign educational practices because of their ability to impact the process and the results of the transfer. Subsequently, the third chapter was dedicated to the presentation of the country profile of Russia in order to reflect the context conditions, in which the transfer occurs. It was indicated that central strategic goals of modern Russia are the achievement of a sustainable economic growth and the strengthening of Russia's position in the world community. The Russian Government defines the innovation and the science-intensive diversification of the economy as main priorities for economic development. An access to the skilled human capital is a crucial condition for the businesses to innovate, grow and increase their productivity. Unfortunately, the situation on the national labor market is unsatisfactory. There are serious skill mismatches caused by an overhang of the workforce with a higher education and at the same time a strong shortage of the skilled workers in many industries at all educational levels.

In the fourth chapter, the Russian education system was presented the as a whole, before concentrating on the sphere of vocational education and training in the following chapter. The fifth chapter provided a profound overview of the Russian VET system, its organization, development over time and the accumulated problems since the beginning of the 1990es. Among the most challenging problems were mentioned a poor material and technical base of vocational schools, low prestige, an unsatisfying performance of the teaching and training personnel and a bad connection to the labor market. It was indicated that the problems in the field of VET badly impact the situation on the labor market. The Russian Government is recognizing these problems and has been actively reforming the national VET system for several years. The main directions of the government policies are concentrated on the development of the 50 most demanded professions of SPO through the introduction of new professional and educational standards, the creation of the competence centers, raising the prestige and the quality of preparation using the WorldSkills competition and searching for the instrument of closer cooperation of the government and



business. In the search for optimal solutions, Russia does not only rely on its own resources and competencies but actively looks to the successful international practices as well. The German experience in the field of VET has been raising a big interest of Russian politicians, researchers and educators for many years.

Thereafter, in the sixth chapter Russian-German cooperation in the field of VET and the transfer of the German dual model to the Russian education system was described through the four-stage concept of educational transfer by Phillips and Ochs (2003).

Afterwards, in the seventh chapter the factors which can influence the success of the dual model transfer were discussed. Furthermore, success conditions of the further development of the educational transfer of the dual approach and its incorporation in the national education system of Russia were discussed.

From the results of the analysis and discussion of the educational transfer of dual system to Russia, it can be concluded that the dual model can become one of the most effective tools for the reformation of the national VET system of Russia. It has proven its effectiveness in the regions where it was applied in form of pilot programs. Furthermore, its impact on the national VET system can already be observed. Some of the educational standards are currently being developed taking into consideration the principles of the dual approach, as for instance, the curriculum development and requirements toward teachers' qualifications. The introduction of the dual model, as it functions in Germany, is not realistic because of the different context conditions of Russia. Therefore, the Russian government is searching for the most effective ways to adapt the dual model to the existing conditions. For instance, the dual model is being implemented on the basis of well-functioning structures in the economy and education sectors, such as regional industrial clusters and competence centers. Besides, the transfer proceeds easier on the higher education level, because companies are more willing to be involved in the training of university students. Furthermore, the adaption of the dual approach is influenced by a strong decentralization of the Russian VET system. Consequently, the further introduction of the dual approach will more likely stay in the competence of the regions, which can best adapt it to the local conditions.

However, as long as a form of the dual VET is not legislatively incorporated in the system of education, its expansion and further development is expected to be limited. Until now, the implementation of the dual approach remains possible only in vocational schools and companies of the regions, where it is officially introduced as an experiment. Although the current results of the reformation of the national VET according to the dual principle are promising, some context conditions can impede its further development. The problem of underfinancing remains one of the key barriers.

The Russian system of vocational education is still in the beginning of its reformation. Many reforms, initiatives and pilot projects are currently taking place and their results cannot be evaluated yet. Russia continues searching for the best working approaches. However, it may take years until the reformation goals of VET can be achieved and an own unique system of VET will be formed. Presumably, it will consolidate the best national and transferred solutions, which can be best adapted to the specific national context conditions. According to the opinion of the author of this thesis, the dual system will stay with a high probability one of the most crucial tools of further modernization of the Russian VET System. However, the evaluation of the benefits from the introduction of the dual approach in Russian educational system and its ability to solve existing problems in the sphere of VET will be possible only in the long perspective.

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The quality of the Vocational Education and Training (VET) is directly connected to the skills of the work force. A well-functioning VET system ensures the ability of the human resources to match the needs of a national labor market. The Russian system of VET is currently facing serious challenges. The non-tertiary VET confronts a low recognition in the society and an unwillingness of the young people to participate in it. As well as many other countries, searching for the best solutions for the further development of the national VET system, Russia demonstrates interest in the German experience. In the recent years, several projects between Russia and Germany were launched with a purpose to adopt dual structures into the Russian VET system.

The aim of this paper is to present a profound overview of the current development of the Russian VET system as well as to discuss a potential of the education transfer in the field of VET, more precisely, of the German dual structures into the Russian VET system. More precisely, the paper focuses on the question, in what form and to what extent the dual approach is being integrated in the Russian education system and what the future perspectives of its further development are.

In den „Osnabrücker Schriften zur Berufs- und Wirtschaftspädagogik“ werden wissenschaftliche Untersuchungen aus dem Arbeitsbereich Berufs- und Wirtschaftspädagogik der Universität Osnabrück veröffentlicht. Hierunter fallen herausragende studentische Abschlussarbeiten (Bachelor- und Masterarbeiten), Forschungsberichte, Working Papers oder weitere wissenschaftliche Beiträge. Das Ziel der Schriftenreihe liegt in der zeitnahen und leicht zugänglichen Publikation relevanter Forschungsergebnisse im Feld der Berufs- und Wirtschaftspädagogik.