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## BRIDGING THE LABOUR SHORTAGE THROUGH VOCATIONAL ORIENTATION AT AN EARLY STAGE OF EDUCATION – THE GERMAN EXPERIENCE

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*The changes in the labour market which have taken place in recent years mean that there is a need to educate young people in deficit occupations and fields of study. The increased interest in general education has resulted in a shortage of skilled workers in the EU labour markets, which small, medium, and large enterprises face. This problem is particularly evident in countries with a low level of links between vocational training and business. Countries with an education system based on cooperation with business are in a better situation, which does not mean a need to increase interest in vocational training. Based on literature research and own experience, the article presents the German model of dual vocational education, which can be used to promote vocational education. The authors presented the system and structure of education in Germany and analysed the dual education model against this structure. They showed the advantages of this system and analysed the threats related to the decreasing number of trainees.*

*Despite the system, many initiatives related to vocational orientation are implemented in Germany. They aim at orienting young people to vocational training by getting to know the specifics of a profession already at an early age in primary school. This article describes*

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*empirical experiences from visits to the BVTU (Bildungsverbund Thüringer Unternehmen e.v.) in Thuringia of an association of training companies involved in the BERUFSSTART plus project on early career choice. An analysis of the rolled-out project, its objectives and effects were made. The described activities can be regarded as good practices, adapted and used in other countries. It was pointed out that activities related to career orientation should be an essential part of all stakeholders' activities to ensure a sufficient number of employees with high professional qualifications for the labour market.*

**Key words:** vocational operation, educational model, German experience, job orientation, labour shortage.

## **ПОДОЛАННЯ НЕДОСТАТКУ РОБОЧОЇ СИЛИ ШЛЯХОМ ПРОФЕСІЙНОЇ ПЕРЕОРІЄНТАЦІЇ НА РАННІЙ СТАДІЇ НАВЧАННЯ – ДОСВІД НІМЕЧЧИНИ**

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Зміни на ринку праці, що відбулися в останні роки, означають, що існує необхідність орієнтувати освіту молоді на галузі та професії, яких бракує. Зростаючий інтерес до загальної освіти призвів до нестачі кваліфікованих працівників на ринках праці Європейського Союзу, що є проблемою, з якою стикаються як малі, так і середні та великі підприємства. Ця проблема особливо помітна в країнах з освітньою системою, заснованою на співпраці з бізнесом, що не потребує необхідності підвищувати інтерес до професійної освіти. У статті представлена німецька модель подвійної професійної освіти, яка може бути використана у просуванні професійної освіти, на основі досліджень у літературі з даної тематики та власного досвіду. Автори представили систему та структуру освіти в Німеччині і проаналізували модель дуальної освіти на тлі цієї структури. Вони продемонстрували переваги цієї системи та проаналізували ризики, пов'язані зі зменшенням кількості слухачів в країнах з низьким рівнем зв'язків між професійною освітою та підприємствами.

Незважаючи на функціонування цієї системи, у Німеччині впроваджується багато ініціатив, пов'язаних із професійною орієнтацією. Вони спрямовані на те, щоб спрямувати молодь на професійне навчання, пізнавши специфіку професії ще в ранньому віці на етапі початкової школи. У статті описується емпіричний досвід відвідування BVTU e.v. (Bildungsverbund Thüringer Unternehmen e.v.) у Тюрінгії Асоціації навчальних компаній, що беруть участь у реалізації проекту BERUFSSTART плюс щодо раннього вибору професії. Був проведений аналіз проекту, його цілей та наслідків. Описану діяльність можна вважати хорошою практикою, яку після адаптації можна використовувати в інших країнах. Було зазначено, що діяльність, пов'язана з професійною орієнтацією, повинна бути важливим елементом діяльності всіх зацікавлених сторін, метою якої є забезпечення відповідної кількості працівників з високою професійною кваліфікацією для ринку праці.

**Ключові слова:** професійна діяльність, модель освіти, німецький досвід, орієнтація на роботу, дефіцит робочої сили.

**Introduction of the issue.** Qualifications of personnel play an essential role in achieving a higher quality of operation and production in the organization, so solving quality assurance problems is closely related to personnel. The current market situation of real competition shows that

the principal capital of the company is not money and material resources but the people who create them [7: 1213].

**Current state of the issue.** The European Union is not creating a single education system. Its actions in this field. They consist only in organising the basis for cooperation and exchange

of experience. Each EU member state has developed and implemented a different educational system enriched with the so-called European education. EU law encourages European cooperation in the field of education (e.g., Treaty Maastricht – Articles 126 and 127 or Directive of the Council of the European Union No 96 of 1993).

It applies in particular to:

- The presence in education systems of the idea of cooperation and the history of the continent's unification.
- Dissemination of the languages of the Member States.
- Organise exchanges of pupils, students, and teachers.
- Mutual recognition of diplomas and periods of study.
- Cooperation between educational institutions.
- Development of lifelong learning.

Despite reforms aiming at similar goals, the differences are enormous. At one extreme is education in the Scandinavian countries. In Denmark, for example, vocational schools are in constant contact with companies, which first hire students for apprenticeships and then for permanent positions. At the other extreme is Greece, where ongoing reforms have been going on for years.

**Results and discussion.** As a rule, in almost all EU countries, the education system can be divided into three stages, in which the third stage most often concerns preparation for entering the labour market. The problem of matching the structure and standards of vocational education to the expectations of employers for years set the directions of the public debate on the functioning and reforming of the vocational education system in each country. One of the main conclusions of this debate is that vocational education is no longer just a task for schools but requires the involvement of employers.

The close cooperation of two partners, a company and a vocational school, creates a dual training system

that combines learning and work according to the "learning by doing" principle and is highly regarded throughout the world.

The experience of countries implementing the dual model of vocational education shows that commitment to vocational education produces excellent results, both in terms of quality of education and employment outcomes [4].

#### *The dual education system in Germany.*

The best known dual vocational training system in the EU is the German system.

The German education system is compulsory and covers children and young people from 6 to 18. Education for pupils in public schools is free of charge and financed by federal and local funds from the 16 Länder. The systems in the individual *Länder* may differ, for example, in the number of years of education at each level. The responsibilities of the federal government in the field of education and the legislative powers of the Länder are laid down in the Basic Law (Grundgesetz). The administration of the education system in the school sector, higher education, adult education, and further education under the law is almost exclusively a matter for the Länder.

In addition to the division of responsibilities, the Basic Law also provides specific forms of cooperation between the Federation and the Länder in the framework of so-called everyday tasks (Gemeinschaftsaufgaben).

Early childhood education and care are not part of Germany's state-organized school system but are almost exclusively assigned to the child and youth care sector. At the federal level, the Federal Ministry for Family, Senior Citizens, Women and Youth (Bundesministerium für Familie, Senioren, Frauen und Jugend – BMFSFJ) is in charge of social responsibility; at the state level, the Ministries of Youth and Social Affairs and

the Ministries of Education and Culture are the competent authorities [1].

The following stages of schooling are:

1 Primary education. Education starts at the age of 6 and lasts four years (6 years in Berlin and Brandenburg). At the end of primary school, teachers recommend further education.

2 Lower secondary education, depending on the Land, usually comprises six years of education in one of 3 types of school:

a. Primary school (*Hauptschule*) – study lasts five years. It ends with the *Hauptschulabschluss* examination, which entitles the student to enter a vocational school (*Fachschule*) and a higher vocational school (*Fachoberschule*). The

*Hauptschulabschluss* examination also entitles the student to conclude a contract of apprenticeship with an employer.

b. Realschule (real school) – study lasts six years and ends with the *Mittlere Reife* (lower secondary school leaving exam).

c. Gymnasium – the education lasts 8 or 9 years and ends with the passing of the *Abitur*. It is the most demanding as far as the level of education is concerned. It includes lower and upper secondary school. If you pass the examination, you will continue your studies at a university or college.

3 Upper secondary education usually lasts three years and ends with an examination.

4 Higher education – there are three different forms of higher education: universities, higher vocational schools, and vocational academies.

5 Adult education and lifelong learning. State action on lifelong learning is mainly limited to defining rules and issuing regulations on organisation and financing.

6 Vocational training in Germany is generally accessible, and even young people without a school-leaving

certificate can begin their vocational training with a vocational preparation stage. The average duration of training at vocational schools is 3-3,5 years. 69 % of students at vocational and technical schools learn a profession in the dual training system, and 13 % learn in the vocational school system. Schools that train children and young people for occupations include vocational schools and secondary vocational schools.

Entry to vocational training at an upper secondary school requires completing a qualification and a lower secondary school leaving certificate. Compulsory education must be met before the commencement of vocational training. Admission requirements for full-time vocational schools depend on the type of school.

The stages of vocational training are:

- preparation for vocational training – intended for young people who have not found a craftsman's apprenticeship where they could study or who are not yet ready for training;

- vocational training – vocational training is divided into basic vocational training and vocational training with specialisation. Training in individual professions is based on general training principles;

- continuing vocational training – serves to maintain and deepen professional qualifications. It ensures job retention and helps to adapt one's capabilities to new expectations, e.g., knowledge of new technologies. It is also a basis for promotion;

- vocational training – entitles to perform a new function at work, promotes improvement of the work situation and position on the labour market [12].

The dual training system in Germany is based on in-company training and vocational school in over 340 recognised vocations. There are no additional formal requirements for the dual system – it is open to all upper

secondary school graduates, regardless of their academic performance.

The rules for on-the-job training in the dual system are set at the national level (on-the-job component), while the school curricula are set by the Länder (on-the-job classes).

The practical part in the company takes place 3-4 times a week, on the other days (1-2) per week, classes are held in the vocational school. Participation in this training system requires finding an entrepreneur with whom the student concludes a contract. The duration of the training depends on the profession and lasts from 2 to 3.5 years. During the training period, the apprentice receives a salary (slightly lower than for employees) and social benefits from the company. The training ends with an examination before an examination board composed of representatives of the chambers of crafts, industry and commerce, chambers of the liberal professions, or other chambers of commerce and trade. In the craft trades, this examination is called the journeyman examination.

The dual system is also applied to higher education, where vocational and academic education is permeated. It can also be used to activate unemployed people and job seekers in the labour market.

Legal basis: Vocational Training Act Since 1969, company training has been regulated by the Vocational Training Act (Berufsbildungsgesetz, BBiG). The law guarantees companies the freedom to train specialists. It was last thoroughly modernised in April 2005. The law also stipulates that the German Chambers of Industry and Commerce (Industrie- und Handelskammer, IHK) are responsible for ensuring the quality of workplace training. Together with the school and the company, the chambers are the third pillar of the German education system.

The role of the Chambers of Industry and Commerce (IHK):

- The IHK is the self-governing bodies of the German regional economy. All companies in the industrial and commercial sector must become members of one of the 80 German Chambers of Industry and Commerce. At the same time, the legislator has defined various statutory tasks for the IHK, in particular in the field of vocational training. The IHK represent both the interests of companies and the state itself.

- The IHK is in constant contact with companies, identifies the need for changes in the qualification requirements of the economy, and makes adjustments to the training regulations.

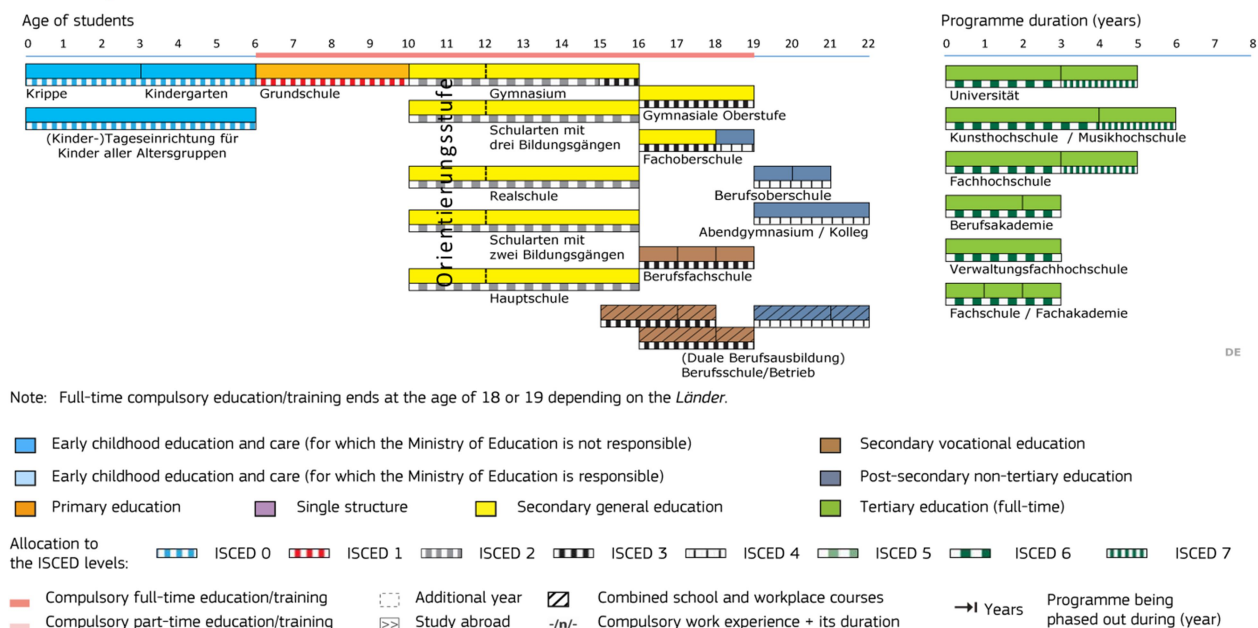
- If a company cannot ensure that all the content (skills) prescribed for a particular profession are imparted, the IHK organises joint training programmes between different companies.

- The chambers register vocational training contracts between the student and the company. The students can count on vocational counselors' assistance, whose services are also provided by the IHK.

- The IHK organise and are responsible for the intermediate and final examinations. For this purpose, they appoint examination committees made up of experienced practitioners: representatives of employers, employee representatives, and vocational school teachers.

- The boards also decide whether a pupil is admitted to the examination and issue certificates. The examination tasks are created centrally, which means that pupils throughout Germany take the same examination. It ensures that the vocational training certificate has the same value throughout the country [14].

Germany – 2020/21



**Fig. 1. Structure of the National Education System**  
**Source: Struktur der europäischen Bildungssysteme 2020/2021**

In the literature, we find evaluations of the system indicating strengths and weaknesses [8; 10].

Strengths of the dual education system:

- including entrepreneurs in the responsibility for labour market processes,
- the opportunity to prepare their future employees,
- the most effective form of recruitment
- reducing the risk of accepting unsuitable staff,
- providing specialists for the future,
- students improve their skills according to the expectations and standards of the labour market,
- students learn and earn money,
- the state budget is relieved through the financial participation of the private sector,
- there is low youth unemployment,
- there is a division of responsibilities between the public and private sectors.

Weaknesses of dual education:

- the dependence of science on economic prosperity and the health of

companies,

- high costs for the company,
- insufficient number of dual system jobs.

The German dual system of vocational training, despite its European and international recognition (German export hit), is still being researched and improved. An integral part of this system is the career guidance provided by the career counsellors of the Employment Agencies, which have a statutory duty to provide vocational orientation and cooperation in this field with schools and other institutions. Cooperation primarily with educational institutions/schools, universities, further education institutions, the National Chamber of Commerce and its branches, employers' organisations, local educational and vocational counselling offices, vocational counselling units in secondary schools implementing counselling tasks. One of the Agentur für Arbeit tasks in the field of counseling is the placement of jobs in the dual system.

### *Vocational orientation in Germany*

Vocational orientation is about early information and orientation:

a. General – Introduction to the choice of profession,

b. Information on requirements, learning content, further professional opportunities in the labour market.

Pupils from the age of 13 to 14 are included in these measures – depending on the federal state/ Länder. The choice of a profession and education starts in Germany with the 8th grade, planning with the 7th grade. The vocational orientation and counselling provided by law by the Bundesagentur are carried out for young people up to the age of 25 by the Vocational Information Centre (BIZ - Berufs Information Zentrum) in every employment agency. The BIZ is also the central place for vocational information for adults.

The minimum FDI advisory offer for schoolchildren per year is two vocational orientation lessons conducted at school by an FDI advisor and one visit to the Vocational Information Centre. During meetings with students, the BIZ specialists advise which education courses to choose and indicate the professions in which graduates will be sought after on the labour market in a few years.

Based on the job seeker's occupational profile, the vocational counsellor searches for apprenticeships (nationwide system). There is the concept of "maladjustment to career choice." It refers to a group of young people who have dropped out of school, often with addiction or legal problems, and measures to prepare them for an apprenticeship with an employer. The vocational counseling service clients can use studies on more than 7500 occupations out of a total of 24000 occupations on the German labour market.

The inclusion of employers in the process of practical vocational training has made it possible to reduce the costs

of education borne by the state, as they bear the costs of remuneration of juvenile workers, preparation of workstations, operation of machinery, used materials, work clothing, and the time spent by more experienced workers instructing. On the other hand, young workers make up for staff shortages, help existing workers, or provide an opportunity for a supply of well-prepared staff. The presence of young workers in the company can also be a source of certain risks: damage to machinery or equipment, loss of customer confidence due to mistakes made by inexperienced employees, or conflicts with the company's permanent staff.

The balance of costs and benefits of implementing practical vocational training in the company largely depends on the national support systems of the participants in this system, both the student and the entrepreneur. Leaving aside the economic aspect, the dual model of vocational training produces outstanding results, both in terms of quality of education and employment outcomes [4]. According to the employers' assessment, The balance of costs and benefits consisted of a bundle of economic and non-economic factors. Sometimes financial considerations are entirely overlooked, overshadowed by higher social goals.

The cost-benefit ratio in a commercial enterprise plays a significant role when deciding to train young people. If the expected costs are higher than the expected total benefit, the company often chooses not to participate in training. About 20 % of companies on the German market currently train young people in the dual system, but this share has decreased in recent years [3].

Both federal and local authorities are aware that without the participation of businesses in training, the provision of skilled workers and thus the maintenance of Germany's economic

strength and the integration of young people into the labour market cannot be guaranteed in its current form. Therefore, it is necessary to regularly examine the costs and benefits of company training to determine the status quo and identify and eliminate possible undesirable developments. To this end, in 1974, the Expert Committee on the Costs and Finances of Vocational Training developed a cost model using which the level of costs and benefits is examined every few years for companies training future employees in the dual system; the reports are made public.

In the 2017/18 training year, the gross costs, i.e., the total costs the company spends on training, amounted to an average of EUR 20,855 per trainee. Trainees' personnel costs (training allowance, statutory, collective agreements, and voluntary social benefits) make up the most significant part, amounting to EUR 12,806 (61 %). Training staff costs amount to EUR 4,935 (24 %), equipment and material costs (e.g., acquisition of trainees' tools and equipment, costs of training workshops or in-house lessons, costs of training materials) EUR 767 (4 %) and other costs (e.g., chamber fees, costs of teaching materials and external courses, costs of on-the-job training management) EUR 2,348 (11 %).

Trainees also contribute to the production of goods and services through their work. If these productive services are subtracted from the gross costs of €14,377 on average, the average net costs for companies in the 2017/18 training year were €6,478 per trainee. However, there are considerable differences between companies. Around 28 % of trainees generate a net income during the training period. In the remaining companies, training is only profitable in the medium or long term.

Based on average cost-benefit values and the number of trainees (1,3 million as of 31 December 2017), the gross

costs for the 2017/18 training year amount to almost €27,2 billion, income €18,7 billion. It results in net costs of €8,4 billion borne annually by businesses. It should be noted that the costs of vocational training are paid by companies and individuals and the state [2].

In the medium to long term, all three parties should benefit: the economy through skilled workers, young people through higher wages and a lower risk of unemployment, and the state through higher tax revenues and lower expenditure through social security systems.

Companies can achieve further benefits from training by hiring graduates for their jobs. It should be added here that the average cost of recruiting a skilled worker at the same time was on average EUR 10,500 [2].

Companies can cover all or part of their need for skilled workers by relying on their graduates, thereby reducing their dependence on changes in the external labour market and avoiding the costs of losses due to staff shortages.

Despite the internationally recognised attractiveness of the dual system for vocational training, the German system encounters a bottleneck [5: 1-10] regarding the decline in applications. It is caused by many factors [6; 9].

1 Demography – decline in the number of young people.

2 Decreasing attractiveness of the system in some professional profiles.

3 Too high barriers to entry – class and community affiliation.

4 Too little innovation in the system.

5 Decreasing profitability for companies.

The proposed and undertaken actions for improvement are:

1 Strengthening the professional orientation process.

a. Involvement of parents.

b. Use of electronic media.



2 Strengthening career choice processes for young people.

a. Involvement of parents and school.

b. Strengthening career guidance.

c. Changing the traditional gender-based approach to competitions.

d. Developing a new strategy to young people with a post-migrant background.

e. Refining the approach towards unemployed, uneducated people.

3 Strengthening the attractiveness of the dual system for young people and young adults.

a. Taking action to increase the attractiveness of training.

b. Develop and implement a strategy to improve system quality.

c. Development of new marketing strategies.

d. Preparation of opportunities and transition paths in competitions.

4 Launch of training in new attractive professional profiles.

a. IT-related professions.

b. Social work professions.

*The Thuringian experience – a case study.*

Career orientation is a process that starts at school and links learning, education and career. It takes place within the framework of individual support over several years as pupils identify their inclinations, expectations, desires, perspectives, and opportunities. Based on interests, competences, and potentials and participating in a long-term process, pupils should be able to decide freely and independently, be free from stereotypes, and actively decide on their further education and career choice. The pupils broaden their ideas and knowledge about professions through information analysis, guidance, experience in the world of work, and reflection in learning and extra-curricular situations. They compare their interests and career possibilities with the requirements and conditions of a profession or the labour market.

The specificity of vocational training in Germany is in close cooperation with employers already at an early stage of education. Students in construction blocks in state and private educational institutions learn about professions that arouse their interest – a responsible choice of education. In the Polish education system, cooperation with employers is limited and occurs at a later stage of education. Therefore, there is a need to collaborate with vocational schools, VET centres, and employers at this early stage through professional excursions, meetings with employers, workshops, competitions, and lectures. The role of parents as representatives of various professions in presenting the aspects (specifics) of work is also essential here.

In Germany, it is noteworthy that employers get to know each other with the potential employee during the training phase, significantly reducing the amount of work and time involved in assessing professional qualifications. In turn, the student becomes more and more convinced of the right choice of career path.

Vocational orientation in Thuringia As a cross-cutting task of school education (guiding principle of the curricula in Thuringia), vocational orientation in Thuringia (*Freistaat Thüringen* – Free State of Thuringia – a federal state in Germany with its capital in Erfurt, founded on 3 October 1990, belonging to the so-called new federal states, as the countries in the former GDR are called) was developed in the school year 2012/13 with proven elements in all general schools, supported by specific and additional measures for practical vocational orientation, which enable students to gain practical experience outside of school. Vocational orientation takes place, on the one hand, through the implementation of specialised curricula (economics and law or economic and legal techniques, social sciences, German, foreign languages) and, on the

other hand, through specific projects in cooperation with schools and external partners such as the Employment Agency, educational institutions, enterprises, and universities, as well as through collaboration with vocational schools. The preparation for the choice of profession is a joint task of the partners with special responsibility. With their vocational experience, parents often take on support and advice to strengthen the child's personality.

Due to the economic structure of Thuringia, which is characterised by the presence of small and medium-sized enterprises, students who have lessons in workplaces gain additional practical experience by participating in various professionally-oriented partnership projects.

One of the best-known associations of regional training companies in Thuringia, which promotes the education and training of its members in the region and the development of qualified employees, is the BVTU (Bildungsverbund Thüringer Unternehmen e.v.).

From 01.08.2009 to 31.07.2015, The BVTU in Erfurt took part in the BERUFSSTART plus project, whose leader since 2003 has been the HWK (Chamber of Crafts) Südthüringen (South Thuringia). Vocational counsellors were involved in implementing the project with the participation of educational institutions and regional companies with extensive experience in implementing EU projects in the assigned schools. Approximately 3,400 pupils per school year were mentored by vocational counsellors on behalf of BVTU e.v. certified by AZAV in TÜV Thuringia.

*The project BERUFSSTART plus aimed at the conscious preparation of pupils to choose a profession related to business and the labour market and was a joint project of several institutions in Thuringia. The main task was to support pupils from the 7th grade*

*onwards in developing their vocational interests, learning about the specifics of different professions and vocational specialities.*

The "BERUFSSTART plus" programme was based on an extension of the quality standards for career choice already tested in its previous version under the name "BERUFSSTART" as outlined below:

- early-career orientation with development recommendation;
- diagnosis of competences
- a wide range of career opportunities;
- use of orientation blocks (components);
- economic proximity to institutions;
- involvement of enterprises in educational activities, including apprenticeship;
- external educational support;
- qualified training staff;
- provision of accompanying offers;
- close cooperation with the career guidance of the employment agency;
- cooperation with the school orientation coordinator.

The specificity of this project was also the inclusion of young foreigners in the context of the German labour market

At the beginning of the 7th grade of primary school, the parents of the pupils taking part in the project were informed at assemblies about the idea and objectives of the project. At the same time, information meetings were held with the pupils in each class. Initial discussions focused on the pupils' interests in their chosen professions. Then, during the lessons:

- each student took a vocational aptitude test, which tested, among other things: knowledge, mathematics, language skills, analytical and logical thinking, concentration, memory, and spatial and visual thinking;
- an assessment of the competences required for his/her chosen profession

has been carried out in an appropriate educational establishment.

The next stage of the project was the participation of students in one-week internships covering the construction blocks of vocational orientation taking place in appropriate public and private educational institutions, where they learned the specifics of various professions. Thanks to such activities, they could learn more closely technologies and techniques typical for different professions and materials and working tools.

The results of the assessment of competences and vocational orientations (building blocks – subject and industry, vocational orientation) were discussed and evaluated individually with each student, as well as with interested parents. The results enabled the teachers to learn about the correlation of the students' chosen professions with the taught subjects and provide them with appropriate support.

For the second time, pupils in Year 8 took part in a one-week placement focused on vocational orientation. As far as possible, they were also able to familiarise themselves with the specifics of other professions and become convinced of the rightness of their choice. One of the project aims was also to give the boys the opportunity to get to know a profession mainly carried out by women and a typically male profession by interested girls. Each pupil completed one or two targeted vocational orientation modules, spending time in the company, observing each employee's daily working day, and learning about the specifics of the profession from scratch. The colleagues assigned to mentor the students also had the opportunity to assess the students' commitment and aptitude for their chosen professions and provide valuable guidance. Those most interested were able to apply for an apprenticeship at the chosen workplace. These activities significantly

increased the chance for the workplace to get to know the potential employees better, their abilities, skills, and professional competences, which is very difficult with standard recruitment. As a result, workplaces incurred fewer costs, and the risk of making a wrong decision related to the choice of a vocational training path was significantly reduced. It encouraged workplaces to participate more and more in the vocational training of students.

In Grades 9 and 10, students who did not choose a vocational pathway were allowed to participate for the third time in vocationally oriented internships and apprenticeships and, if necessary, for a fourth time by the end of Grade 10. During this period, students have a phase of intensive application for training places in as many workplaces as possible.

Employers assigned the participants of the "BERUFSSTART plus" programme to tasks for one or two weeks, on the basis of which they could observe their approach to their duties, the overcoming of difficulties, and their familiarisation and adaptation to the working conditions in the company. In this way, they obtained a picture of the strengths and weaknesses of the pupils who, having had poor results at school, had already missed the opportunity to demonstrate their professional skills and were now able to show their abilities and professional aptitudes.

At this stage of the project, the young people could still search for other professions, but the more flexible their expectations were, the easier it was to find internships and placements at the workplaces. At the same time, the employers cared about the further development and expectations of their future trainees.

Additionally, schools and educational institutions offered, for example, online courses or application workshops. Already from March, intensive recruitment was carried out for the still

undecided beneficiaries to be completed before the start of the following training year. The young people were supported at all times by vocational guidance, in which, in addition to the pupils and their parents, the schools also took an active part. The vocational guidance assumes responsibility in the counselling process by providing training places or other vocational perspectives in close cooperation with the Chamber of Crafts and Trades and the educational institutions.

*Added-value of the "Berufsstart plus" project.*

The "Berufsstart plus" project does not create vocational training places, but it does open up paths to achieving this goal more easily:

1. Thanks to the project through personal involvement in implementing professional activities, young people learn about their strengths and development potential to make the right decision to choose the right career path.

2. Pupils can acquire the first vocational competences necessary for their future profession earlier.

3. Training and employment prospects on the regional labour market are examined, and teachers and careers advisors support students in their search for alternative educational pathways.

4. The "Berufsstart plus" project contributes to the establishment of long-term relationships with subsequent training companies. Employers can follow the development of their future employees for a longer period of time and introduce them to the ins and outs of professional work while still at school.

5. The vocational counsellors of the Chamber of Crafts and Trades and the Chamber of Industry and Commerce, and the educational institutions can reach out to a variety of professional contacts and specific tips for young people to achieve success and choose suitable career paths.

6. Careers advisors support pupils in their career choice process.

In recent years, the state of Thuringia has become an innovative knowledge centre and a central business location. The market for practical vocational training in Thuringia has also undergone significant changes, closely linked to demographic developments in the context of an increasingly complex world of work. According to the chambers, fewer vocational training contracts have been concluded than in previous years, and the number of unfilled apprenticeships is steadily increasing. The number of people interested in dual training will undoubtedly continue to decline in the coming years. The increase in the number of internships offers due to the need to replace departing employees will result in even greater competition for recruiting people in dual education on many levels (between regions, industries, and companies). The chances of small and micro companies competing with large and medium-sized companies for trainees and specialists will be reduced. Small and micro companies are disadvantaged not only in terms of available resources and allegedly worse future prospects. Due to the cost of consultancy, they are often less likely to use it and have less access to support measures and funding. The main challenge is to attract candidates within the framework of dual training, to unlock and use new or hitherto unrecognised skilled labour potential. The Mittelthüringen (Central Thuringia) region's vocational training initiative intends to meet this challenge by focusing on small and micro-enterprises. The aim is to eliminate structural barriers in small and micro enterprises, attract new apprenticeship companies, inform candidates about visible advantages such as regional presence / proximity or greater individuality, and fill new

apprenticeships with suitably matched candidates.

To meet these needs from 01.03.2017 to 29.02.2020. The BVTU in Erfurt, together with its subsidiary FAV Service in Gotha, participated in the project JOBSTARTER plus "Initiative of the Mittelthüringen region (Central Thuringia) for vocational training in small and micro-enterprises."

The project aimed to familiarise young people and parents with the newly developed vocational training perspectives of regional small and micro enterprises and optimize candidates' recruitment. The external apprenticeship and traineeship management, which is oriented towards the individual challenges of the respective enterprises, offer support and consulting services for small and micro enterprises and activates, supports, and trains these enterprises to initiate and ensure successful vocational training long term. Through tailor-made, modular qualification programmes, trainers have been prepared for the changing requirements of the labour market, apprenticeships, and special needs in the approach to trainees. The Mittelthüringen (Central Thuringia) region's initiative for vocational training also aims to increase the proportion of female apprentices.

The Federal Ministry of Education and Research (BMBF) is funding the second round of the programme "JOBSTARTER plus – Vocational training of the future" with federal funds and from the European Union's European Social Fund (ESF). JOBSTARTER plus supports the Alliance for Vocational Education and Training objectives and is part of the Federal Government's Qualifications Initiative to increase educational opportunities and flexibility in the education system. JOBSTARTER plus contributes to the progression from school to practical vocational training

by supporting structural development concepts in the regions. The programme links current vocational training policy issues with current regional conditions and the development potential of the economy and implements the principles of supporting business-oriented vocational training structures. Therefore, the concepts and services of the funded projects are primarily targeted at small and medium-sized enterprises (SMEs as defined by the European Commission).

The decline in the number of early school leavers in Germany, due to the increased interest in academic training, has an impact on the vocational training market in the form of a falling number of new vocational training contracts, a falling rate of apprenticeships, and various problems, depending on the region, related to supply, recruitment or matching. The main objective of these funding guidelines is to ensure the stabilisation of regional apprenticeship markets and strengthen vocational training as an essential pillar for securing skilled workers by improving integration opportunities and making training more attractive and of higher quality in small and medium-sized enterprises.

Small and medium-sized enterprises find it increasingly difficult to find young people willing to learn a trade and often need support to cope with recruitment or lack of fit in their industry. A key challenge is to increase the attractiveness and quality of vocational training. Because of the emerging skills shortage, it is necessary for many sectors to maintain the involvement of small and medium-sized enterprises in vocational training and to attract new enterprises in this area, especially where apprenticeship opportunities are poorly available.

The demand for skilled workers in small and micro enterprises is high and growing. In-company practical vocational training (traineeship) is a

way to get qualified employees. Due to the lack of a recruitment strategy, small and micro companies have difficulties attracting candidates; practical vocational training (traineeship) as a criterion for a company's attractiveness is not yet widely recognised as a resource, especially by small and micro-companies. Offers of practical vocational training in small and micro enterprises are little known in the region, and enterprises are not fully aware of the need to make internships and training courses attractive and communicate individual benefits to the target groups. Apprenticeships in small and micro enterprises are implemented sporadically and in a disorganised way, and the available external support offers are rarely used due to lack of knowledge compared to large and medium-sized enterprises. As a result, this often leads to dropouts and failure in exams. Therefore, it is vital to quickly and sustainably improve the vocational training offer in small and micro-enterprises.

The JOBSTARTER plus project was designed to pave the way for students to find and create apprenticeship opportunities as a practical learning option in small and micro enterprises and to get to know companies in the region that were not previously included. The Mittelthüringen region's (Central Thuringia) vocational training initiative thus supports recruiting candidates at an early stage, attracting workplaces, and successfully helps connect candidates with regional small and micro-businesses. By identifying candidates' interests, preferences, and competences in the previous career orientation process, a good match between apprenticeships and traineeships can be ensured, and an increase in the number of early school leavers can be prevented. The project provided counseling services to small and micro enterprises on developing an attractive image to attract new groups of candidates initiated a change of

mindset, and supported candidates' recruitment (fairs, online platforms, internship, and apprenticeship pools). Open days for candidates were organised in cooperating schools. Parents also play an essential role in the career choice process: it has been proven that young people attach particular importance to parental advice and opinions when choosing an internship. Therefore, it is crucial to involve parents. Presentation processes for small and micro-enterprises, in which parents are involved, can contribute to success. During parents' evenings, the project team presented regional apprenticeship opportunities in small and micro enterprises and convinced them of new perspectives that had not been considered before. In addition to information meetings at schools, pupils, teachers, and parents learned about training companies and the professions on offer, excursions to companies were planned. Pupils could participate in various themed excursions to companies (sorted by vocational fields) and find out about practical training opportunities in small and micro companies on-site and learn about companies offering apprenticeships and traineeships. Getting acquainted with a company in a company is exciting for the students and allows them to find a suitable match for their company, purely through personal contacts and practical experience. The project team represents small and micro companies at all renowned and regional job fairs or information meetings, as small and micro companies are usually unable to attend for personal, time, and financial reasons. Furthermore, small and micro enterprises were supported to publish internship offers on existing platforms. Additionally, the workshops discussed and trained participants on "sourcing candidates," "recruitment processes and procedures," "interviewing," and other topics. The team offered support for recruitment and training processes

and implemented them in the long term to remove personal, technical, and structural barriers. Active promotion of this offer (flyers, online information) should ensure recognition of small and micro enterprises among potential candidates in the region and at the same time encourage students with weak or missing certificates, inhibitions, language deficiencies, as well as young people of foreign origin to apply for an internship in a regional small and micro-enterprise.

Linking general education to vocational school is an opportunity to bring students up to date with the requirements of work and the professional world while supporting a successful transition to dual education. Greater involvement of vocational schools can therefore help to strengthen the practical relevance of vocational orientation at school. It needs to be examined what legal, material, and personnel requirements are to be created in the medium and long term to achieve the desired closer cooperation between the two types of schools.

Further gradual implementation of the country strategy until it is sustainable requires a long-term perspective:

- implementation of practical experience as an apprenticeship-oriented activity under current quality standards (especially with an inclusive educational approach);
- related qualification measures to professionalise vocational orientation actors (first to third stage teacher training, career guidance, educational support, etc.);
- staff development and teaching in the school;
- qualitative development of regional networks (including SCHOOL ECONOMY working groups);
- sustainable and long-term financing.

In preparation for the new ESF Structural Fund support period, it is

planned to anchor the state apprenticeship-oriented strategy with career-oriented measures in the relevant investment priorities.

Further development of vocational orientation in Thuringia will have to take more account of individual students' individual needs and abilities in the future. Not everything should be offered to everyone to the same extent. At this point, career orientation also takes the changes in school regulations in Thuringia seriously and sees itself as a component of improving individual support.

Experience from successful vocational orientation projects suggests that ensuring continuity between school and practical vocational training should enable all students in all schools to make a smooth transition from school to work in a profession.

**Conclusions and research perspectives.** Based on the conducted research of materials and scientific publications and reports, it should be concluded that the German model of dual vocational training is good, proven, and possible to implement in other countries. However, it should be mentioned that in the country of its origin, sure signs of entropy of the model as a socio-economic system have been noticed. These signs include a decline in the interest of youth and young people in this training system; a reduction in the interest of entrepreneurs in participating in this process.

The main reasons for the decline in entrepreneurial interest lie on the economic (business) side, the increasing number of school dropouts, and the insufficient or even minimal financial support system on the part of the federal or local authorities. The costs of employing an intern that the employer bears in few professions are recovered during the traineeship. However, these costs are usually recovered after the trainees have been employed and work longer as

employees. The costs for the employer depending on the number of trainees. The fixed costs (e.g., trainer, supervisor) are spread over the planned number of trainees. The system is organised in such a way that participation pays off for large companies. When young people's interest in learning wanes, it becomes unprofitable for them to participate in the system.

The reasons for the decline in young people's interest in this form of education or study can be traced to several factors, such as demographics, the decline in the attractiveness of certain professions, the low attractiveness of the system for today's young people, or too high entry barriers for specific groups.

The signals mentioned above immediately triggered countermeasures among some stakeholders (Federal Government, Land Administration, IHK), which can also be replicated in other countries. The following actions should be mentioned and emphasised:

- strengthening the career orientation process by involving parents and the electronic media,
- strengthening the career choice process by involving parents, school, IHK advisors and also by influencing the youth environment,
- seeking innovative solutions for young people and young adults from both unemployed and post-migrant backgrounds,
- launching training courses in new attractive occupations and support for the professional self-fulfilment of genders different from the traditional occupational assignment,
- inclusion of micro-entrepreneurs in the system by developing principles and rules for micro-entrepreneurs willing to participate in the dual vocational training system

To avoid "wasting" resources, it is particularly important to prepare young people to be able to make informed decisions and accurate career

decisions, that is, as already emphasised, in line with both the individual needs of the person and the labour market demands [11].

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