

MANUAL FOR THE IMPLEMENTATION OF VARIOUS FORMATS OF WORK-BASED LEARNING



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PrilikaPlus
Ulaganjem u ljude do veće konkurentnosti

Manual for the Implementation of Various Formats of Work-Based Learning

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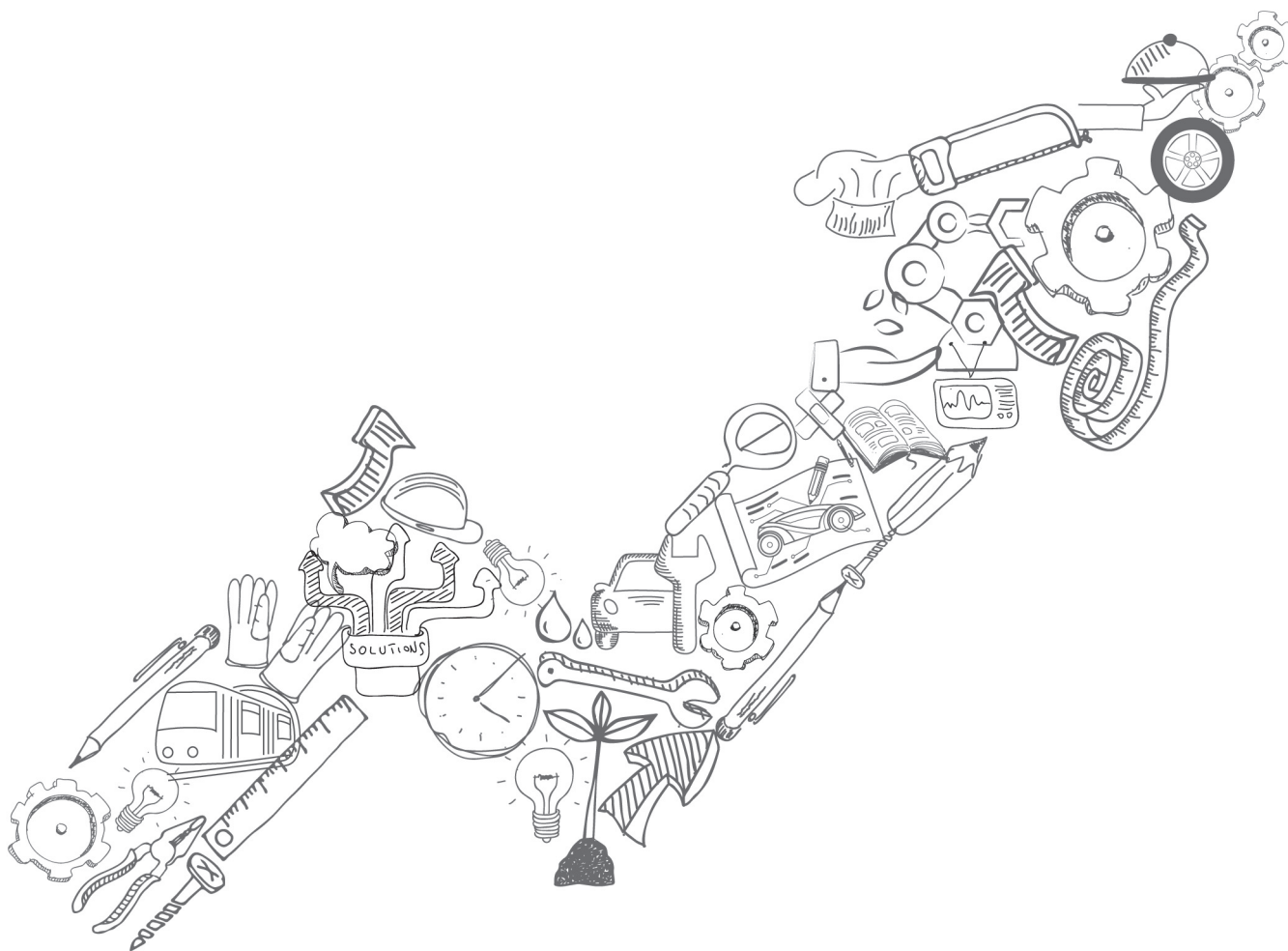
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1. Purpose of the Manual

Modern systems of initial vocational education and training (IVET) are characterised by a great share of cooperation between schools and the economy, and business companies become places of learning. Schools provide general educational and vocational education content through theory and practical training. Practical training at schools, even when it is organised in the best possible manner, constitutes a simulation of the real world of work. In order to ensure work-based learning, vocational schools cooperate with business companies, physical persons that engage in crafts and entrepreneurship, and public companies and institutions. The most important form of cooperation is the one with business companies. A general goal is to include the economy in work-based learning, so that business companies referred to in the text below imply also other actors involved in cooperation.

Business companies provide vocational education with an insight into the world of work, opportunities for learning and work-based learning and acquisition of work experience. In addition to this, by expressing their needs and by accepting students for training, business companies clearly point to labour market needs and help adapt vocational education to such needs. The cooperation between vocational schools and business companies is primarily important for students, because it ensures work-based learning and better education and training. Such cooperation, in addition to various formats of work-based learning in the economy, also includes other forms of cooperation, such as professional orientation, joint projects, support to the development of school resources, etc. In order for the cooperation between a school and a business company to be successful, it is crucial that it meets the interests of both sides and be based on continuous building of mutual trust.

The purpose of the Manual is to improve and promote work-based learning. It therefore contains the basic formats of work-based learning applied in Bosnia and Herzegovina and the advantages of every format for schools and business companies are also mentioned.

The Manual aims to provide assistance to schools and business companies in establishing and developing cooperation. It therefore contains important issues for the course of planning and implementation of various formats of work-based learning, important legal issues and examples of best practices.

2. Structure and use of the Manual

The Manual consists of three main chapters that relate to three formats of work-based learning:

- 1. Learning about work** – becoming acquainted with the real world of work through visits to business companies or visits of representatives of business companies to schools;
- 2. Acquisition of experience** – application of knowledge and skills acquired at school in the real working environment: summer internship/traineeships;
- 3. Learning at work** - Work-based acquisition of knowledge and skills, alternating learning at school and at a company: Alternance, Apprenticeship

Three main chapters of the Manual have the same structure and include the following parts:

- ▲ **Goals of work-based learning;**
- ▲ **Advantages for business companies and schools;**
- ▲ **What should be considered; legal issues**
- ▲ **Examples of best practices.**

The goals are defined in a uniform manner, since both partners should have a shared view of the goals to be achieved through this form of cooperation.

The advantages for business companies and schools, important questions that need to be considered and legal issues are given separately in two columns in a table, since in addition to common advantages, there are also specific advantages relating only to schools or only to business companies.

FORMATS OF WORK-BASED LEARNING

1. Learning about work –

Becoming acquainted with the real world of work through visits to business companies or visits of representatives of business companies to schools

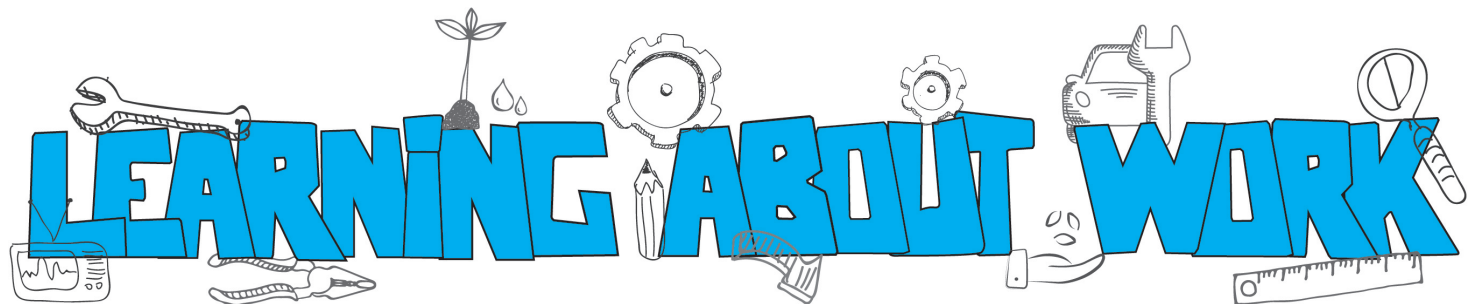
Students of vocational schools frequently lack a clear notion of the real world of work. It happens that they choose the desired professions, but they have unrealistic expectations. They do not know what are the key tasks that are performed within the scope of their professions, they are unable to grasp what opportunities such professions offer, or what are the chances to find employment or start their own business. Students are frequently unable to understand how business companies function, in which way work is organised and what employers will expect from them as future employees.

Students should be enabled to become acquainted with the real world of work. This can be achieved by learning about work, which can take place in two ways:

- ▲ Students visit business companies (visits of classes/groups/individuals, students observe and follow the course of work processes and workers while they perform their work tasks).
- ▲ Representatives of business companies visit schools (managers, owners, experts who hold presentations and talk to students, etc.).

Goals of learning about work:

- ▲ Making students acquainted with the world of work;
- ▲ Getting an insight into real work processes, professions, sectors, work culture; expanding students' understanding of a profession and work tasks that are performed;
- ▲ Information about potential future employers and possibilities for practical training and summer internships.



Advantages

For business companies	For schools
Presentation of occupations, tasks and required competences in a brief and targeted manner	Making students acquainted with the real work organisation and requirements regarding competences for chosen professions
Attracting students interested in other work-based learning formats	Better understanding of students regarding theoretical and practical contents they learn about at school
Attracting students interested in finding employment at a business company upon graduation	Viewing curricula in the wider context of work
Corporate social responsibility of a business company and its reputation in the community	Teachers receive information about current requirements related to certain professions and are able to transfer such information to students
	More information for students supporting their future labour market entry
	Direct contact with the local economy opens up opportunities for other forms of cooperation

What needs to be considered?

In case of business companies	In case of schools
Agreement with the school regarding goals and content of a visit	Agreement with the business company regarding goals and content of a visit
Explanations regarding responsibilities related to health and safety issues during the visit to the business company	Organisation of transportation, supervision and safety of students
Best class/group size	Best class/group size
Time and duration of the visit	Time and duration of the visit
What needs to be presented (the business company itself, its organisation, professions, technological processes, teamwork, etc.)	Information about the business company and preparation of questions to be asked during the visit
Persons in charge of receiving students, tour, presentations, work with the students, etc.	Summary of lessons learned during the visit
Selection of the method to present the business company (tour, lectures, videos, active involvement of students, work in groups, work shadowing, etc.)	Establishment of a network of relevant partner business companies that are visited or whose representatives visit the school in order to ensure a well-balanced distribution of visits for all students

Legal issues

In case of business companies	In case of schools
Responsibilities regarding health and safety-related issues during the visit to the business company	Responsibilities regarding health and safety-related issues during the visit to the business company
	Maximum number of hours/days per academic year during which student visits can be organised

All work-based learning formats have to be organised and implemented in compliance with regulations applicable to this field. It is necessary to know and apply laws and rulebooks at the entity and cantonal level. The cooperation between schools and the business sector is not sufficiently regulated, which constitutes a gap, but also opens up new opportunities for acting. Due to insufficient and differing legislation, it is very important to sign cooperation agreements between schools and business companies that define roles and responsibilities. This is of particular importance when it comes to responsibilities regarding the health and safety of students. As a form of assistance in this field, the Manual refers to links that contain useful information, and appendices include draft contract templates and other useful instruments. The Manual also includes electronic appendices.

Examples of best practices

Students and teachers give feedback on the visit to the business company

"Experience day" is a vocational education visit during which students have an opportunity to get acquainted with the organisational structure and work processes. At the beginning of the visit, students are given an overview of the development of the company. Students have the opportunity to see a series of practical examples of work and become acquainted with state-of-art equipment and technology. After the visit, students and teachers provide feedback and it is used to assess to what extent the visit was stimulating and interesting.

Target group: students attending the programme for mechatronics and car mechanics

Business company: *Porsche BH doo*, Sarajevo; Sales and service organisation for passenger and commercial vehicles

School: *Public institution Secondary Vocational School "Džemal Bijedić"* from Goražde, Bosnia-Podrinje Canton

Organisation of visits to business companies for groups of students, which enables students to actively participate and ask questions

Visits to business companies are organised for groups of up to 8 students. Experience has shown that visits organised for a smaller group of students are more effective, because they give the students more opportunities to ask individual questions and make comments. Small groups also ensure space for observing technological processes. This is a much more individualised manner of enabling students to learn about the real production process, such as seeing tasks and competences needed for various positions and professions in the whole production process.

Target group: students attending the second, third and fourth grade of programme for forestry technicians

Company: *Public utility company Sarajevo šume*; Sarajevo – cantonal public company for management of state-owned forests

School: *Secondary School for Wood Design and Environment* from Sarajevo, Sarajevo Canton

Ensuring an insight into the whole production process during the visit in a pleasant atmosphere

During the visit, students become acquainted with the whole production process, from preparation to final products and examination laboratory. A production engineer waits for them at every plant and provides them with explanations regarding the organisation of production and technological processes and answers students' questions. In addition to their high-quality technical content, these visits are characterised by a warm welcome and friendliness of the hosts and they end with a nice get-together over food and refreshments.

Target group: students of the second and third grade attending the programme for food and agriculture technicians

Business company: *Hemijska prerada kukuruza Draksenić*, Kozarska Dubica, a company producing starch and sugar syrups; they also engage in vegetable production based on warm water, which is a by-product of chemical processing

School: *Agricultural School* from Banja Luka, Republika Srpska

A detailed procedure for the organisation of the visit, especially regarding the definition of goals and target groups/focus of the visit to the company

A request is sent to the company in relation to the organisation of the visit, which contains the goal of the study visit, what profiles will participate in the study visit, the number of students/groups, which teachers will accompany the students, and room is left for agreeing the date and time of the visit. The date and time of the visit is agreed upon once the company replies to the request. A written report is submitted to the headmaster of the school following the study visit.

Target group of students: second and third-grade students

Professions: operators of construction and conversion machines and electrical engineering technicians – mechanics

Company: *ETF Rudnik and Termoelektrana Stanari*, the mining and thermal power plant company

School: *Public institution Secondary School for Traffic and Electrical Engineering Doboj*, Republika Srpska

Donation from the factory as support to capacity building of the school

A one-day optional technical visit was organised for the purpose of becoming acquainted with the latest achievements in the field of mechanical engineering and electrical engineering. Students had an opportunity to visit all production departments accompanied by a team of engineers in charge of individual departments. The school received a valuable donation from the company, which included electrical engineering equipment and batteries and will improve the technical education of students. The lessons covered topics such advanced technologies, which made it easier for students to follow the development and production of electrical vehicles and batteries with a large quantity of energy. Students use the donated equipment to make various devices, such as mobile phone chargers.

Target group: students and teachers of the programme for electrical engineering technicians, machine technicians and technicians for vehicles and means of transport

Factory: *Rimac Automobili*, Republic of Croatia; it engages in the design, development and production of electrical vehicles, plant systems and battery systems

School: *Secondary School Silvije Strahimir Kranjčević* from Livno, Canton 10

2. Acquisition of experience –

Application of knowledge and skills acquired at school in real work environment: summer internship/traineeships

During their initial vocational education, students frequently have no opportunities to acquire practical work experience. Practical training is organised at vocational schools and takes place in a simulated working environment (school workshops, school kitchens, greenhouses, laboratories, etc.). School-based practical training enables students to acquire some knowledge and skills, however, they lack skills that can be acquired only in real working environment by working with older and experienced colleagues, in teams, with state-of-art technology, under pressure, with real clients, and other opportunities.

Internship/traineeships is a work-based learning format in case of which students spend a continuous period of time working at a business company (10, 15 or more days). Such a practice is a way to enable students to acquire experiences and apply the knowledge and skills they acquired at school in real working environment. To what extent students will improve their knowledge and skills acquired at school will depend on the extent to which the tasks they perform during their practical training at the company are related to the content of the curriculum. In addition to experience, internships / traineeships ensure an opportunity for students to receive a certain remuneration for their work. Remunerations paid to students should be regulated by contract provisions and be in compliance with the legislation, real circumstances and possibilities of business companies.

Goals of gaining experience:

- ▲ Application of knowledge and skills acquired at school in real working environment
- ▲ Gaining the first work experience and integration in the working environment
- ▲ Acquiring social competences.



Advantages

For business companies	For schools
Ensuring additional labour force during increased workload periods	Support for the task of the school to prepare its students for working life
Selection of potential future employees	Opportunity for students to apply knowledge and skills acquired at school in a flexible way
Possibility to influence and improve the quality of initial vocational education and training	Development of professional competences of students
Better understanding of current challenges and possibilities of the school	Making students accustomed to professional life (promptness, accuracy, respecting hierarchy, teamwork, business practices, etc.)
Corporate social responsibility and reputation of the company in the community	More motivated students
	More comprehensive educational/vocational education school portfolio, which supports profiling of the school and increases its attractiveness and reputation
	Better inclusion of the school in the local economy

What needs to be considered?

In case of business companies	In case of schools
Voluntary or obligatory internship/traineeships	Voluntary or obligatory internship/traineeships
Worker status or student status (contractual issues)	Worker status or student status (contractual issues)
Purpose of offering an internship/traineeships	Support to students in finding a placement for internship/traineeships
Time period that is best to offer internship/traineeships (summer or winter holidays, peak season for the activity of the business company, duration)	Supervision of students during the internship
How to find and select adequate and interested students?	Documenting work done during the internship
How to integrate students in the work process?	Preparation for the internship
Employees of the business company in charge of designing and holding introductory training for the students	Summary of work experience acquired during the internship
Employees responsible for supporting, supervising and monitoring students during their work	Assessment of work performed during the internship
Paying students for their work	

Legal issues

In case of business companies	In case of schools
Potential timeframe for the internship	Potential timeframe for the internship
Basic responsibilities (worker or student status)	Basic responsibilities (worker or student status)
Responsibilities regarding health and safety during the internship/traineeships	Responsibilities regarding health and safety during the internship/traineeships
Responsibilities regarding supervision	Responsibilities regarding supervision
Internship/traineeships contract	Internship/traineeships contract
Legal provisions for documenting events occurred during the training	Legal provisions for documenting and assessing events occurred during the training
There are no legal provisions about minimum remunerations for the work of students	Maximum number of days during an academic year that students can spend doing an internship/traineeships

The presence of internships/traineeships varies across educational systems in Bosnia and Herzegovina. In some cases, such a training format is obligatory, in others it is only a voluntary choice of students and their parents. Such differences result from different legislation, application of different curricula and different circumstances and possibilities. If analysed at the level of entities and cantons, it varies from full absence of this work-based format to partial presence in some cantons. According to a survey conducted in the framework of the project Cooperation between Schools and the Economic Sector, KulturKontakt, around 60% of vocational schools in Bosnia and Herzegovina do not have this format of practical training for their students. As regards internships/traineeships, it is important to know and apply provisions of the Labour Law, which regulates temporary and occasional jobs, temporary labour relations and work of minors.

Examples of best practices

Rotation of students between various departments and locations of companies for the purpose of acquiring a vast experience

Students doing internships are distributed in such a way that they rotate between hotels and work departments. Students therefore gather more experience regarding the real work environment and enables them to observe similarities and differences related to work teams, work methods, work discipline, etc.

Target group: students attending programmes for waiters, cooks and hotel and tourism technicians

Business company: *Bluesun Hotels*, Makarska, Republic of Croatia; a group of hotels in several locations in the Makarska riviera

School: *Secondary Vocational School Silvije Strahimir Kranjčević* from Livno, Canton 10

Students sign work contracts with all relevant rights resulting from the labour relation

Hotels and students attending summer internships sign a work contract, which guarantees them all rights resulting from the labour relation, such as remuneration for their work, insurance, seniority, etc. In addition to this, students are also provided accommodation.

Target group: Students attending programmes to become waiters, cooks and hospitality and tourism technicians

Business company: *Bluesun Hotels*, Makarska, Republic of Croatia; a group of hotels in several locations in the Makarska riviera

School: *Secondary Vocational School Silvije Strahimir Kranjčević* from Livno, Canton 10

***Selection of students for an internship among students that attend regular training
at the business company throughout the school year***

Students do part of their training at the business company, where mentors work with them. Mentors use the obligatory practical training to obtain the best possible information about the profile of students. Based on this, they select students who are given the opportunity to spend time at the service workshop during the summer/holidays. During the summer internship they have an opportunity to see all process cycles and feel the culture of the company, given the fact that they are part of the organisational structure on a daily basis.

Target group: students of technical schools

Business company: *Porsche BH doo*, Sarajevo; Sales and service department for passenger and commercial vehicles

School: *Public institution Secondary School for Transport and Communications Sarajevo*; *Public institution Secondary School Centre Vogošća*, Sarajevo Canton

Students regularly keep a work diary

Students have a two-week internship during their summer holiday. A teacher from the school and a mentor from Putovi are in charge of organising and monitoring students' work. Students regularly keep a work diary. At the company, they receive work and protective equipment prescribed for work at a construction site, just as company employees do. They are also provided a meal.

Target group: students attending the programme to become civil engineering technicians

Business company: *Putovi d.o.o. Grude*, a construction and road maintenance company

School: *Secondary School Antun Branko Šimić* from Grude, Western Herzegovina Canton

Students and parents find an internship placement and enter into a contract with the employer

Students and parents independently get in touch with and find an employer where the student will do a summer internship. The summer internship is organised at the request and based on the wishes of the student. Specific conditions under which summer internships of students take place are specified in contracts entered into with employers. The school appoints teachers who are in charge of the supervision of students, cooperation with mentors at companies and work conditions.

Adapted part of the curriculum for internships at business companies

The curriculum specifies the programme, the time and duration of an internship. Adapted curricula are adopted by the Teacher's Council based on a proposal made by the teaching staff of the school and in consultations with employers.

Target group: students of the second grade of the two-year programme and third grade of the four-year programme

Business company: *Medena commerce* (machine processing of metal), *FAD Jelah* (production of car parts), *Pobjeda Tešanj* (pump and cleaner factory), *MANN+HUMMEL BA* (production of oil, air, fuel filters and hydraulic systems for the car industry), restaurants *Ukus* and *Intermeco* (hospitality industry), etc.

School: *Public institution Combined Secondary School Tešanj*, Zenica-Doboj Canton

3. Learning at work -

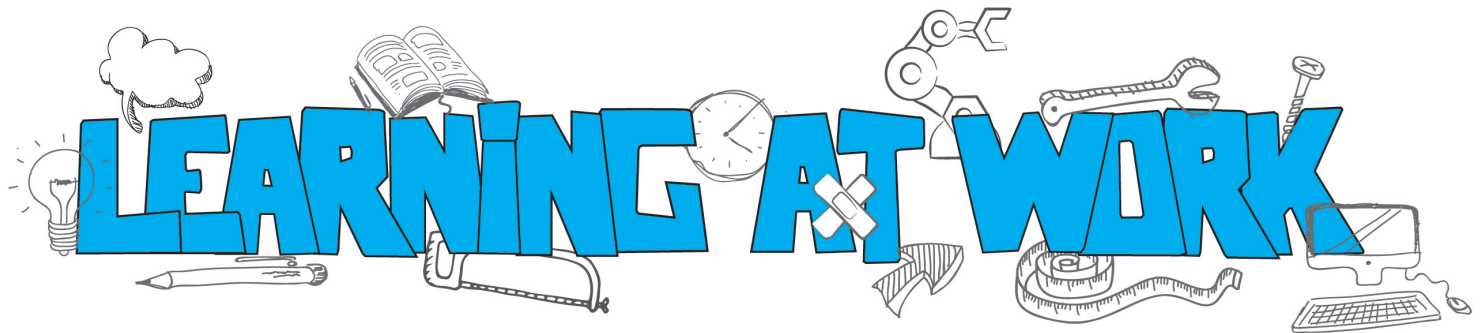
Work-based acquisition of knowledge and skills, alternating learning at school and at a company: Alternance, Apprenticeship

Learning at work is a very good way to train young people in compliance with current needs of the labour market. If the acquisition of skills at work within business company is balanced and if it complements the know-how acquired at the school, it ensures additional value in terms of students' training quality. Learning and training takes place in those environments that are the best for acquiring competences – it alternates between the school and business company.

Practical training is organised in such a manner that students spend one to three days per week during the academic year working at a business company. This enables them to acquire work experience and the business company provides a learning environment in which students acquire part of the skills they need for their future profession. This work-based learning format is the most important and frequent format in vocational education in Bosnia and Herzegovina. Schools and business companies are partners and they have their roles and responsibilities in providing comprehensive initial secondary vocational education.

Goals of learning at work:

- ▲ Complementary acquisition of professional competences;
- ▲ Ensuring the best learning/training environment by identifying parts of the curriculum that fit the school or business best;
- ▲ Training in compliance with labour market needs.



Advantages

For business companies	For schools
Direct impact on vocational education and skills that are acquired – business companies are partners in providing vocational education	Key parts of the learning process take place within the real work process as support to the task of the school to prepare its students for their working life
Training of future qualified employees	Companies ensure training elements in case of which the school cannot ensure adequate conditions
Ensuring additional labour force	Better linkage of practical experiences with learning in a school-based setting
Selection of potential future employees	Better motivated students
Competitive advantage when employing qualified persons that completed IVET	Teaching staff is informed about the current qualifications demand
Corporate social responsibility and reputation of the company in the community	A more comprehensive educational/vocational education school portfolio, which supports profiling of the school and increases its attractiveness and reputation
	Better inclusion of the school in the local economy
	Potential donations of equipment by business companies for the school workshop

What needs to be considered?

For business companies	For schools
Linking school- and company-based practical training components (content, time period) – identification of training programme parts that should be implemented at the business company – coordination	Linking school- and company-based practical training components (content, time period) – identification of training programme parts that should be implemented at the business company – coordination
Adaptation to the company's own planned needs for qualified labour force (how much, which occupations, which departments)	Preparation of a summary of the curriculum for business companies or defining which competences students should acquire and in which way this can be measured
Legal obligations of business companies providing training	Criteria for the selection of business companies
Persons responsible (mentors at the business company) and their qualifications	Persons responsible for the coordination of practical training
Ensuring an exchange of information between the school and business company	Ensuring an exchange of information between the school and business company
How to find and select adequate and interested students?	Distribution of students for training at business companies
Supervision of students during their training at the business company	Supervision of students during their training at the business company
Assessment of students and assessment of the training quality	Assessment of students and assessment of the training quality

For business companies	For schools
Involving students in work processes	Compilation of a list of relevant business companies – establishment of a cooperation network
Requirements and necessary competences for mentors/trainers	
Remuneration of students for their work	

Legal issues:

In case of business companies	In case of schools
Basic responsibilities of the business company providing the training	Basic responsibilities of the school
Responsibilities regarding health and safety during the practical training at the business company	Responsibilities regarding health and safety during the practical training at the business company
Supervision-related responsibilities during this format of work-based learning	Supervision-related responsibilities during this format of work-based learning
Apprenticeship contract (with the school and the student)	Apprenticeship contract (with the business company)
Legal provisions on documenting what happens during this format of work-based learning	Legal provisions on documenting what happens during this format of work-based learning
Role of the business company in assessing the students	Legal provisions on assessing students during this format of work-based learning
There are no legal provisions about minimum remunerations for the work of students	

Examples of best practices

Selection of students based on the compatibility of the curriculum with work processes at production plants

A business company selects students for practical training and students of those professions and classes are selected, whose curriculum is sufficiently compatible with the work processes at production plants. This ensures the quality of training. During practical training, students are monitored and their regular attendance, interest in learning and extent to which they successfully perform tasks are assessed. The monitoring is a basis for reporting to the school and selection of students that will be offered employment by the company.

Target group: students attending mechanical engineering programme, including metal processing, and electrical engineering programme

Business company: *Elas Metalexpert* from Banja Luka; it produces casino equipment, self-service machines, betting terminals, metal products for medicine, etc.; it has 160 employees

School: *Technical School and Škola učenika u privredi* from Banja Luka, Republika Srpska

A mentor at a company guides students, monitors their work and reports on this to the school

The hospital where students attend practical training, appoints a mentor, who guides students in their practical work. Practice takes place in all departments, where they become acquainted with real working conditions and acquire competences needed for independent work once they graduate. A mentor is obliged to inform the school about the attendance and professional progress of students and is also tasked with the assessment of students. The assessment is conducted based on the work diary and work tasks that students perform.

Target group: students attending medical programmes

Institution: *Cantonal Hospital "Dr. Fra Mihovil Sučić" Livno*

School: *Secondary Vocational School Silvije Strahimir Kranjević from Livno, Canton 10*

Practical training diary kept by the mentor at the business company

Those students that sign a contract with the company and obtain the consent of their parents are assigned a chief master craftsman/mentor. The mentor is obliged to monitor the presence of students at work and keep a practical training diary, where detailed entries on activities in which students took place are regularly made. The success of students during practical training is assessed by the head of the service together with the chief master craftsman/mentor. During practical training itself, the teacher in charge of practical training regularly visits students and regularly communicates with the head of the service.

Target group: students attending the car mechanic programme

Business company: *Porsche BH doo, Sarajevo*; Sales and service organisation for passenger and commercial vehicles

School: *Public institution Secondary School Centre Vogošća, Sarajevo Canton*

Cooperation between business companies for the purpose of providing comprehensive practical training

Students attend their whole practical training at the business company (three six-hour days per week). The company, in coordination with the school, cooperates with other two renowned producers from the same industry and students therefore can spend a month of practical training at other business companies. In such a way, students are given a more comprehensive practical training, because they have the opportunity to become acquainted with various technologies, organisation of processes and product ranges.

Target group: third-grade students, programme for carpenters

Business companies: *Fructas, Hestens and Iveral – Art* from Sarajevo; Wood-processing industry – production and processing of boards, design, planning and production of particleboard furniture

School: *Secondary School for Wood Design and Environment from Sarajevo, Sarajevo Canton*

Monthly scholarships for students and additional financing of their welding certificate tests

The business company enters into a contract with the school and the student, which regulates the remuneration for the work of the student in the form of a monthly scholarship. An additional incentive for students that successfully complete their education is the ensured financing of the welding certificate test.

Target group: Third-grade students attending the programme for welders

Business company: Tehnopetrol from Tuzla; it engages in the design, production, services, and repair and installation works at industrial and energy buildings, and sale of petroleum products; it has around 100 employees.

School: Public institution Secondary School of Mechanical Engineering Kalesija, Tuzla Canton

A structured process of planning and implementation of apprenticeship at the school and company

Such an approach implies that a meeting is held before a student is sent to practical training: representatives of the company, school, students and parents, signing of a consent by the parents, entry into a contract between the school and company, which regulates the rights and obligations, training of the mentor at the company, joint monitoring and assessment of the progress of the student by the mentor and practical training coordinator, adaptation and definition of work tasks in compliance with the curriculum at the beginning of the school year by the mentor and practical training coordinator, regular exchange of information about what happens during practical training at the company and school, motivation of students through rewards, evaluation and reporting to the management of the school and company.

Target group: Second-grade students attending the programme for carpenters

Company: „Mega drvo“, Bijeljina

School: Public institution Technical School “Mihajlo Pupin” Bijeljina, Republika Srpska

Dual education system: apprenticeship - a specific form of alternance between school-based and company-based learning

Apprenticeship implemented within the dual education system, a specific form of alternance between school-based and company-based learning, is not present in its full form in the initial vocational education in Bosnia and Herzegovina. Characteristics of this format of work-based learning were given based on experiences resulting from the application of this format in Austria and experiences of individual projects in Bosnia and Herzegovina. A typical characteristic of apprenticeship as a format of the dual education system is the fact that company-based learning alternates with school-based learning. However, there are three elements that are specific for apprenticeship

- ▲ An apprentice is an employee of the business company providing the training and has a special training contract with the company (in our case of alternance between school-based and company-based learning, persons have the status of students);
- ▲ An apprentice receives a minimum salary for the work he/she performs during the training at the business company;
- ▲ An apprentice first has to find a business company for training, and then he/she is automatically tied to the vocational school in which he/she spends part of the time at (in case of alternance between school-based and company-based learning, the selection of the school is the first step, and then the school searches for opportunities for practical training).

In addition to the advantages that have already been outlined in case of the third work-based format, the learning at work setting, the apprenticeship within the dual education system has additional advantages. Companies are more dedicated to providing high-quality training for the following reasons:

- ▲ An apprentice is their employee, not an “external” student;
- ▲ They can select candidates that suit them best;

- ▲ The company itself provides the overall learning and training (they do not depend on the need or willingness of the school to outsource practical training to them);
- ▲ The integration of an apprentice in the working team and work flow at the company occurs at a higher intensity and scope;
- ▲ Minimum wage increases the motivation of apprentices to learn and work.

There are additional advantages for schools:

- ▲ They can focus on those aspects of general and vocational education in case of which the school is the best environment;
- ▲ They do not have to deal with finding placements for practical training of students at business companies;
- ▲ They are not obliged to assess and supervise practical training at business companies.

It is important to stress that there have to be obligatory legal requirements for business companies providing training. This primarily relates to the process of accreditation, in case of which it is necessary to meet certain requirements in order to provide training services, but also to qualifications and training of mentors, time of company-based and school-based training, final exams, quality assurance systems, etc.

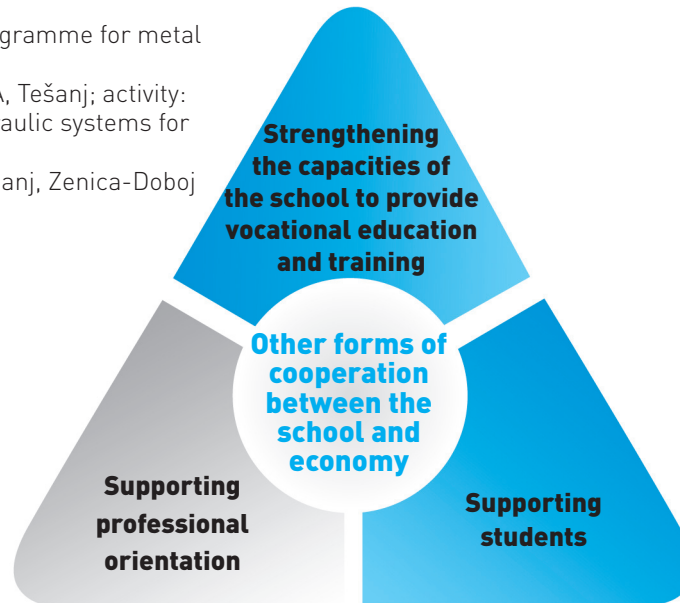
Application of the model of the “German dual system” including the adaptation to local needs and clearly specified tasks and responsibilities of the school and economy

The implementation of the project aims at ensuring training for students based on the German „dual education system” in order to meet future needs for trained labour force. Tasks and responsibilities for the business company have been defined (specification of needs for personnel, training for the mentor, signing of a contract, etc.), for the school (adaptation of the curriculum, implementation of parts of the curriculum, etc.), as well as joint tasks and responsibilities (ensuring all requirements for practical training, etc.). It is of particular importance that a joint system of monitoring and evaluation has been established, which constitutes a basis for defining the next steps in the cooperation.

Target group: students attending the programme for metal cutters (I-III grades)

Business company: MANN+HUMMEL BA, Tešanj; activity: production of oil, air, fuel filters and hydraulic systems for the car industry

School: Combined Secondary School Tešanj, Zenica-Doboj Canton



Other forms of cooperation between the school and economy

The cooperation between vocational schools and representatives of the business sector is primarily focused on joint ensuring of work-based learning. In addition to this, there are some other opportunities for the cooperation between vocational schools and business companies. Cooperation can be long-term or ad-hoc, include various aspects and multiple actors (schools, students, parents, teachers, etc.).

Strengthening the capacities of schools to provide vocational education and training

If there is long-term and mutually beneficial cooperation, business companies can provide significant support to schools by donating financial and material means for the equipment and functioning of school workshops (machines, equipment, raw material, etc.). Resources of schools can be strengthened through joint projects or by involving schools in some production processes in the economy. In addition to material resources, the economy can play an important role in strengthening human resources at vocational schools. Business companies can organise seminars and trainings for teachers, enable them to become acquainted with new technologies and work processes, learn about current demand for competences in the labour market, etc. Experts from business companies contribute to the strengthening of school capacities and participate in the development of vocational education standards and curricula, as well as their adaptation to the requirements of the labour market.

Supporting professional orientation

Schools and business companies can jointly influence professional orientation and direct students towards those professions that are sought after in the labour market. Experts from business companies can provide important information about regional economic development trends, options for vocational education, opportunities for training and career prospects. A good approach is to organise events such as employment fairs, days of entrepreneurship, educational fairs, etc. Events such as open doors day or parents' day can be organised at business companies and schools. Business companies can provide support and participate in various events at school (sports events, exhibitions, competitions, etc.).

Supporting students

There are numerous opportunities in vocational education for providing support to students. Business companies can get involved in school projects (as donors or by providing know-how). They can also participate in school activities focused on ensuring scholarships for students, organisation of various visits, expert study visits or exchange of students. Supporting students in the drafting of their final theses is a particularly important form of support. Such support may involve enabling students to use materials, machines or devices at the business company, but it can also involve professional support from their mentors.

Conclusions and recommendations

Work-based learning is insufficiently and inadequately regulated and its implementation in secondary vocational education in Bosnia and Herzegovina is unsatisfactory. It is therefore possible to draw certain conclusions and give recommendations about key steps for the improvement of cooperation between schools and business companies, especially in case of work-based learning at business companies, in order to improve the quality of secondary vocational education in Bosnia and Herzegovina.

1. Defining work-based learning and cooperation formats between schools and business companies

In order to ensure a common understanding and approach, it is crucial to explain and define work-based learning formats and other formats of cooperation between schools and business companies. Goals to be achieved have to be clearly set and roles and responsibilities of schools and business companies for every work-based learning format have to be precisely defined. In addition to defining this field, it is necessary to raise the awareness of all actors from the business and educational sector participating in work-based learning.

2. Defining minimum criteria for the selection of business companies providing work-based learning

Important factors for ensuring high-quality secondary vocational education in Bosnia and Herzegovina are cooperation with business companies and ensuring high-quality work-based learning that takes place at business companies. Clear criteria for the selection of business companies that meet minimum criteria for ensuring high-quality work-based learning have to be defined (a satisfactory technological level, well-trained mentors/trainers, implementation of relevant parts of the curriculum for practical trainings, setting up procedures for ensuring occupational health and safety, etc.)

3. Benefits of work-based learning for business companies

Company-based trainings should be an important part of vocational education and training in Bosnia and Herzegovina. It is therefore crucial to have a sufficient number of business companies interested in providing practical training for students and ensuring the quality of work-based learning that takes place at business companies. The goal is not for practical trainings to take place at all business companies, but to rather have business companies interested in training and ensuring their future qualified labour force with relevant professional competences providing practical trainings. In order for business companies to be willing to play their role in vocational education, they have to see some advantages for themselves and a possibility to achieve their interests. In addition to a direct benefit that business companies can have from trainings for students, it is also possible to consider systematic incentive measures (tax reliefs or some other form of incentives).

4. Strengthening capacities of business companies for providing work-based learning

Business companies that provide work-based learning should be given systematic assistance. In many countries with well-developed work-based learning systems, there are intermediary and support structures linking vocational education and business companies and providing training for mentors/trainers at business companies, preparing draft contracts, guidelines and other useful instruments, offering advisory services, etc. In Bosnia and Herzegovina, it is necessary to identify opportunities for establishing such support structures and search for the best solutions regarding the place in which such intermediary and support services for work-based learning will be located (sector-specific organisations, chambers of commerce, municipalities, etc.).

5. Strengthening capacities of schools for successful cooperation with business companies

A large number of vocational schools in Bosnia and Herzegovina have already been cooperating with the economic sector, and some of them have very successful cooperation with business companies. Such cooperation is mostly based on personal acquaintances and contacts of individuals, mostly school headmasters. Such good practices of these schools, headmasters and coordinators of practical trainings are something to learn from, but it is necessary to strengthen and ensure resources for establishing more formal cooperation networks with business companies. In addition to this, it is important to strengthen overall capacities and resources of schools for organising work-based learning.



Useful links

In Bosnia and Herzegovina, there are no intermediary and support structures that might connect the economic and educational sector in relation to provision and implementation of work-based learning. For this reason, the Manual includes links that can be useful for business companies and educational institutions in obtaining the necessary information. The links below refer to information about economic companies and their activities (chambers, associations). When it comes to the educational sector, the links refer to ministries of education and pedagogical institutes, which have information about the legislation, schools, professions, curricula and other important information.

Chamber of Commerce of the Federation of Bosnia and Herzegovina	www.kfbih.com
Chamber of Commerce of Republika Srpska	komorars.ba
Chamber of Commerce of Brčko District of Bosnia and Herzegovina	www.brcko-pkomora.com
Association of Employers of the Federation of Bosnia and Herzegovina	www.upfbih.ba
Union of Employers' Associations of Republika Srpska	unijauprs.org
Association of Employers of Brčko District of Bosnia and Herzegovina	www.upbd.org
Registers of Business Companies in Bosnia and Herzegovina	bizreg.pravosudje.ba
Ministry of Labour and War Veterans' and Disabled Persons' Protection of Republika Srpska	www.vladars.net
Ministry of Labour and Social Policy of the Federation of Bosnia and Herzegovina	www.fmrsp.gov.ba
Ministry of Civil Affairs of Bosnia and Herzegovina	www.mcp.gov.ba
Agency for Pre-School, Primary and Secondary School Education	www.aposo.gov.ba
Ministry of Education and Culture of Republika Srpska	www.vladars.net
Ministry of Education, Science, Culture and Sport of Una-Sana Canton	obrazovanje.vladausk.ba
Ministry of Education, Science, Culture, Sport of Posavina Canton	www.zupanijaposavska.ba
Ministry of Education and Science of Tuzla Canton	www.vladatk.kim.ba
Ministry of Education, Science, Culture and Sport of Zenica-Doboj Canton	www.zdk.ba
Ministry of Education, Youth, Science, Culture and Sport of Bosnia-Podrinje Canton	mo.bpkg.gov.ba
Ministry of Education, Science, Culture and Sport of Central Bosnia Canton	sbk-ksb.gov.ba
Ministry of Education, Science, Culture and Sport of Herzegovina-Neretva Canton	www.vlada-hnz-k.ba
Ministry of Education, Science, Culture and Sport of Western Herzegovina Canton	www.mozks-zzh.com

Ministry of Education, Science and Youth of Sarajevo Canton	mon.ks.gov.ba
Ministry of Science, Education, Culture and Sport of Canton 10	www.vladahbz.com
Department of Education of the Government of Brčko District of Bosnia and Herzegovina	www.bdcentral.net
Pedagogical Institute of Republika Srpska	www.rpz-rs.org
Pedagogical Institute of Una-Sana Canton	www.pzusk.ba
Pedagogical Institute of Tuzla Canton	pztz.ba
Pedagogical Institute of Zenica	www.pzzdk.gov.ba
Pedagogical Institute of Bosnia-Podrinje Canton	mo.bpkg.gov.ba
Pedagogical Institute of Mostar	www.pzm.ba
Institute of School Education of Mostar	www.zavod-skolstvo.ba
Educational and Pedagogical Institute of Sarajevo Canton	mon.ks.gov.ba/sektori/ppz

Appendix No. 1¹

In compliance with Article _____ of the Law on _____
(_____ No. _____) the contractual parties :

1. _____
Name and address of the school

represented by _____, on the one hand, and

2. _____
Name and address of the business company

represented by _____, on the other hand,
have entered into the following:

CONTRACT

on the implementation of practical training in the academic year _____.

Article 1

Parties entering into the present contract regulate their mutual rights and obligations related to the implementation of practical training for students, which is prescribed by the curriculum. Practical training aims to complete and improve the knowledge and skills acquired during practical training and form the personality of students, primarily their work attitude, and all of this by making them acquainted with the real world of work.

Article 2

The content and number of practical training hours will be determined in compliance with the applicable curriculum at the business premises of _____,
Name of the business company
and based on the time schedule specified by the school.

Article 3

Name of the business company
accepts to conduct practical training for all students from grade _____, with the education profile/profession _____.

¹ **Smjernice za praktičnu nastavu** [Practical Training Guidelines], a group of authors: Svjetlana Bogdanović-Kuret, Šuhreta Brkić, Elizabeta Dervišević, Adila Ferizović, Sedija Midžić, Fariz Mujkanović, Slavica Pavičević, Fatima Salihović, Poligraf d.o.o., Sarajevo, 2011

Article 4

_____ agrees to provide students with an opportunity to first of all become acquainted with the work space, which has to include an insight into organisational issues and tasks related to the workplace.

_____ also agrees to assign students (in compliance with the applicable labour protection provisions) only those tasks that serve the purpose of learning about their profession and that he/she will gradually introduce them to corporate processes through gradual teaching and warn them about special risks of accidents. Representatives of the school/practical training organiser will be granted access to the premises where students work or spend time, and he/she also agrees to cooperate with these persons.

Article 5

The school agrees to monitor the regular practical training attendance of students through the representative of the school/organiser and work on their active and responsible attitude and meeting of their assigned obligations. After receiving adequate instructions, students have to comply with regulations of the company and all regulations related to the protection of life and health and are obliged to observe professional secrecy. During the practical training, the school shall ensure orderly sanitary booklets. Students shall ensure orderly work uniforms.

Article 6

Damage caused by students shall be handled in compliance with legal regulations, and any other disputes resulting from the Contract shall be solved amicably by the parties.

Article 7

The Contract shall expire:

1. At the end of the academic year _____
2. on the date agreed between the school and business company.

Article 8

The present contract shall be made in three (3) identical copies and every party shall keep one. One copy shall be submitted to the authorised educational institution.

Name of the school

Name of the business company

No. _____ No. _____

Date: _____ Date: _____

Appendix No. 2²

In compliance with Article _____ of the Law on

(_____ No. _____) contractual parties:

1. _____
Name and address of the school

represented by _____, on the one
hand, and

2. _____
Name and address of the business company

Represented by _____; on the other
hand, and

3. _____ have entered into the following:
Name and last name of the parent

CONTRACT

on internship implementation for the academic year _____.

Article 1

Parties to the present Contract regulate their mutual rights and obligations related to the implementation of student internship provided for by the curriculum. The internship aims to complete and improve the knowledge and skills acquired during practical training and form the personality of students, primarily their work attitude, and all of this by making them acquainted with the real world of work.

Article 2

The content and number of hours of practical training shall be in compliance with the curriculum and it shall take place at work premises of _____,

Name of the business company

Practical training may not disrupt the production process of the business company.

² Contact data of the ORGANISER OF PRACTICAL TRAINING, company mentor and parents as well as the CURRICULUM are enclosed with the Contract.

Article 3

_____ accepts to offer an internship placement for
Name of the business company
the student _____, of the _____ class,
with the educational profile/profession
Name and last name of the student

Article 4

The employer _____ agrees to inform the student about occupational safety measures and apply them when implementing practical training.

Article 5

_____ agrees to provide the student
(Name and last name of the organiser of practical training)
with the possibility to become acquainted primarily with the work space, which must include an insight into organisational issues and tasks of the workplace.
_____ agrees to assign students
(Name and last name of the mentor at the business company)
(in compliance with the applicable occupational safety provisions) those tasks that serve the purpose of learning about their profession and that he/she will gradually introduce them to corporate processes through gradual teaching and warn them about special risks of accidents. Representatives of the school/practical training organiser will be granted access to the premises where students work or spend time, and he/she also agrees to cooperate with these persons.

Article 6

The school agrees to monitor regular internship attendance of students through the representative of the school/organiser and work on his/her active and responsible attitude and meeting of his/her assigned obligations. After receiving adequate instructions, the student has to comply with regulations of the company and all regulations related to the protection of life and health and shall observe professional secrecy. During the practical training, the school shall inform the parents to ensure a sanitary booklet/medical certificate for their children. The student shall ensure an orderly work uniform.

Article 7

The mentor at the business company agrees to keep records and documents on the assessment of the internship of the student in compliance with the curriculum and in cooperation with the authorised representative of the school.

Article 8

Damage caused by students shall be handled in compliance with legal regulations, and any other disputes resulting from the Contract shall be solved amicably by the parties.

Appendix No. 3

(header of the school)

No. _____

_____ 20_____.

(Place and date)

For

CONFIRMATION

This is to certify that the student _____

attending the grade _____ - _____, educational profile / profession _____
was assigned to _____

(name of the business company)

For the purpose of participating in practical training over the following period:
from _____ to _____ 20_____.

The certificate is issued for the purpose of _____

Organiser of practical training

Headmaster

STAMP

Appendix No. 4

(header of the school)

No. _____

_____ 20____.

(Place and date)

For _____

CERTIFICATE

This is to certify that the student _____ class _____ - _____,
educational profile/profession _____ was assigned to

(name of the business company)

for the performance of the internship in the following period: from _____ to _____ 20____.

Organiser of practical training

Headmaster

STAMP

We kindly ask you to put a stamp on this certificate at the end of the internship and send it to the address of the school or give it to the organiser of practical training.

CERTIFICATE

_____ certifies that the student

(Name of business company)

_____ class _____ has completed

(Name and last name of the student)

An internship at our company in the period from _____ 20____ to _____ 20____.

Other notes and comments

_____, _____ 20____

(Place and time)

Director
of the business company

Stamp

Appendix No. 5

PRACTICAL TRAINING DIARY

Name of the school _____

Last name and name of the student _____

Class and occupation _____

School year _____

Place of work	Name of the work order/module	Sheet no.
---------------	-------------------------------	-----------

No:
The work order was performed from to

Description of the work order

TABLE OVERVIEW
BASED ON THE SEQUENCE OF TASKS AND ACTIVITIES

Ord. No.	Work operation or procedure	Specification of materials	Used work assets	Number of hours

Preparation of the work task/order: _____

Assessment of the level of completion of the work task/order

Signature of the student

Signature of the teacher

Appendix No. 6³

FEEDBACK FORM (economic operator → school) PRACTICAL TRAINING / INTERNSHIP

Student (name and last name)		
Class		
Production plant/ Department/sector		
Mentor at the business company		
Address of the business company	[stamp]	

Assessment criteria	5	4	3	2	1
Timely arrival to the training					
Tidiness					
Friendliness, communicativeness					
Ability to work in a team					
Reliability					
Interest in assigned tasks					
Self-initiative					
Innovation					
Professional competence (please pay attention to the year of education)					
Handling inventory and materials					
Application of labour protection measures					
Identification with company policy					
OVERALL GRADE					

³ The form is to be adapted to the relevant profession and filled out once per year

Personal remarks	
------------------	--

Do you have the intention to accept a student from the school at your business company next year, 20____ ?	<input type="radio"/> YES	<input type="radio"/> NO
---	---------------------------	--------------------------

Mentor at the business company

Date:

Signature:

