THE RELATION BETWEEN THE QUALITY OF VOCATIONAL TRAINING AND THE LABOUR MARKET STATUS OF PARTICIPANTS

MILANA MALEŠEV
CONSULTING AGENCY TRAIN THE BRAIN

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The aim of this study is to support the Ministry of Education, Science and Technological Development in the implementation of reforms to improve the quality of non-formal adult education.

Specifically, the research work focused on identifying the quality of short-term vocational training to determine its possible relation with the labour market status of participants upon completion of vocational training.

As such, this study is one of a set of analyses that will pave the way for improving the conditions and standards for the accreditation of providers of adult education services.

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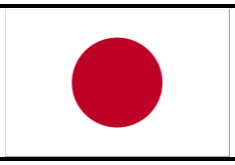

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ACRONYMS

ALMP - Active labour market policy

APAE - Accredited Providers of Adult Education

CGC – Career guidance and counselling

IIE – Institute for the Improvement of Education

MoESTD – Ministry of Education, Science and Technological Development

NES – National Employment Service

NQFS – National Qualifications Framework in Serbia

QA – Qualifications Agency

RPL – Recognition of prior learning

EXECUTIVE SUMMARY

The purpose of this research is to support the Ministry of Education, Science and Technological Development to further improve the conditions and standards for the accreditation of providers of adult education services. The need for improvement stems from the low adult participation rate in formal and non-formal education programmes, the non-functional network of accredited providers of adult education (APAE) with insufficient territorial coverage in Serbia, and the inadequate range of accredited programmes that does not fully meet the needs of the labour market and of the National Employment Service, as one of the most important institutions that annually invests significant financial resources in the implementation of training programmes for the unemployed.

This research aims to identify the quality of short-term vocational training and determine the potential relation between the quality of short-term vocational training and the labour market status of participants upon completion of training. The research covers short-term vocational training organized by the National Employment Service for the unemployed. The sample includes 310 participants from across Serbia who have successfully completed short-term vocational training. The research employed the descriptive (non-experimental) method, as well as survey and scaling techniques.

The structure of this study follows the research topic. In the first part of the study key research findings are presented with accompanying recommendations for improving the quality of vocational training, and standards for APAE accreditation. To facilitate understanding of research findings, the second chapter of the study provides a brief overview of the adult education policy, legislative and institutional framework, with particular emphasis on the concept of vocational training as an active labour market policy (ALMP) measure in Serbia.

The quality of the immediate implementation of vocational training, i.e., the quality of the teachers and instructors, the quality of spatial conditions and health protection, equipment and tools used, organization of training, training locations, training results, and the quality of the training process itself, are presented in Chapter Three .The same chapter describes and analyses the quality of professional support provided to participants before and after completion of vocational training and presents the characteristics of participants and of the analysed vocational training programmes.

The conclusions about the participants' labour market status after vocational training completion are presented in Chapter Four, while the analysis of the possible relation between the

quality of vocational training and the labour market status of participants is presented in the Chapter Five of the study.

To gain better understanding of the quality of implementation of short-term vocational training, Chapter Six analyses its relationship with the quality of career guidance and counselling (CGC) services, characteristics of participants and characteristics of vocational training. The last part of the study presents the research tools we used, as well as relevant statistical data and references used in the preparation of this study.

KEY RESEARCH FINDINGS AND RECOMMENDATIONS FOR IMPROVEMENT

Research results indicate that, in general, **participants perceive the quality of implementation of vocational training as good**, although their assessments of the analysed quality dimensions noticeably vary. When it comes to all analysed vocational training programmes, participants awarded **the lowest assessment** to **the quality of the training process itself and training results**. This indicates systemic challenges to improving the process of acquiring knowledge, skills and competencies to work in a certain job (especially in the case of training in a real work environment with an employer).

In regard to the training process, it is important to point out that **the largest percentage of respondents in the sample attended vocational training (practical training) with an employer in a real work environment** (95.2%), while only 4.8% of them attended the training in a school-based workshop/training facility. The practice of involving employers in the training process is in line with modern trends of matching the education system with labour market needs and introducing dual education at all education levels. Accordingly, the standards and conditions for the selection of vocational training providers for the needs of the unemployed promote these trends.

However, research results indicate that the involvement of employers in the training process failed to ensure its quality, as **participants rated the quality of the training in a real work environment with a lower score**. Participants' assessments indicate that (1) the training failed to provide them with sufficient opportunities to learn and practice; (2) they acquired job competencies only partially by practicing them, i.e. by performing the job in a real work environment with an employer; (3) the training participants were to a certain extent treated as "employees" and were to a significant degree trained in the job tasks that the employer's business

process required at the time; (4) teaching staff was focused on revealing the tricks of the trade to participants only to a limited extent.

The relatively low assessments of the quality of implementation of vocational training implemented by employers indicate **the need to define particular standards and conditions for the selection of employers as training providers, i.e., providers of practical training, which relate to the capacity of employers to assure the quality of the training process in a real work environment**.

It is important to point out that the tender documentation of the NES for the selection of vocational training providers defines as a standard the obligation of training providers to assure appropriate conditions so that the ongoing business workflow of an employer does not jeopardize the training process, and vice versa - so that the training implementation does not jeopardize the ongoing business workflow of the employer. However, participants' assessments show that this standard is not fully met, which implies that **merely defining standards for the selection of training providers is not a sufficient mechanism for quality assurance of the implementation of vocational training**, and that **standards and procedures should be defined for monitoring the quality of implementation of vocational training**, both when it comes to the monitoring performed by a training service provider, and by competent institutions.

In line with the average quality assessment of the training process implementation, participants also assessed vocational training results as average, in terms of acquired knowledge, skills and competencies, their recognition and demand for them in the labour market. Observed in this context, **participants gave a relatively lower assessment to the transferability of the acquired knowledge across employers**, as well as **to their ability to independently perform the jobs they were trained for, upon training completion**. The participants' assessments indicate that vocational training did not fully fulfil its mission, and that it did not equip the labour force with the sufficient level of knowledge, skills and competencies that would ensure their independence, and, thus, confidence in their work and job search process.

The participants' assessment that the acquired knowledge is not sufficiently transferable across employers may raise **the question of the relevance and alignment of training plans and programmes with (local) labour market needs, and the need to harmonize the internal training standards of the NES with national qualification standards on which they are based**. This is particularly important when taking into account that plans and programmes of the analysed vocational training programmes were not accredited in line with the national accreditation procedure and were not implemented by accredited providers of adult education (APAE).

The potential reasons for the participants' assessments, based on their scores, may be sought in the **insufficient capacity of employers to provide vocational training participants with the relevant work experience they need to acquire all vocational competencies planned by the vocational training programme, as well as in the practice to treat vocational training participants as "employees"** and **predominantly train them for the job tasks that the employer requires at a given moment**. According to these findings, the training conducted by an employer was predominantly related to a specific position, i.e., to the job tasks that the employer required at the time, due to which participants were trained only for a limited number of specific activities and tasks compared to those foreseen by the training plan and programme, which reduces their possibility of finding employment in similar jobs with other employers**.**

At the same time, insufficient independence of participants in performing the jobs for which they were trained upon completion of training can be observed in the context of vocational training duration. In other words, according to the participants' assessments, the **number of vocational training hours is insufficient for the development of the competencies defined by the plan and programme, which are necessary for them to achieve the required level of competence and the ability to work in the job independently**.

When it comes to training duration, in line with the internal training standards of the NES, the **number of hours** of analysed vocational training programmes **ranged from 120 to 540 hours**. As training providers did not have the APAE status, none of the vocational trainings in the sample were in line with the national procedure for APAE accreditation in terms of the total number of hours of training.

However, it is important to point out that the answer to the question of **whether or not the number of vocational training hours is optimal cannot be considered independently of the analysis of the quality of the training process itself, primarily practical training**, considering that the largest share of participants attended practical training in a real work environment with employers. Since the quality of the training in a real work environment was rated with average grades, and since not all vocational training opportunities were used within this range of hours, the optimal duration of vocational trainings remains an open issue.

The research findings also **indicate the need to define special standards and criteria for the selection of employers as training service providers**, i.e., providers of practical training, primarily related to the **capacity of employers to provide relevant work experience for the acquisition of all vocational competencies foreseen by the vocational training programme**.

When it comes to the recognition of vocational training, it is interesting that **the certificates received upon completion of vocational training were well assessed by participants**, even though they were internal rather than public documents, since the vocational training was

not implemented by APAE. These findings may lead to the conclusion that both the trainees and employers in the local labour market equally value the internal confirmation of professional competence and the (public) document issued by an APAE. This finding indicates the need to **sensitize individuals and social partners to better understand the comparative advantage of a public document (compared to an internal one)** as a guarantor of quality assurance of the training process outcomes and as an instrument that facilitates the horizontal and vertical mobility of an individual in the labour market and mobility in the education system.

The quality of teachers and instructors was highly rated and considering the importance teaching staff has for the quality of training implementation, we can say that the teaching staff had a compensatory role in relation to other analysed quality dimensions, so that the overall quality of vocational training is largely determined by the quality provided by teachers and instructors. Despite the prevalently high assessment of the quality of teachers and instructors, a share of the participants' assessments suggest that during practical training in a real work environment **the instructors were not completely dedicated to participants, and that they were predominantly occupied with performing tasks and duties they had as company employees.**

This indicates the need to **define a standard that will ensure the full availability of teaching staff to participants during training**, as well as ways to monitor compliance with this standard.

Research findings indicate that modern equipment and tools needed for training were provided in vocational training, that the size of the space was appropriate, but **that no particular places were provided for participants in the workshops where they could learn and practice their new job-related skills, and that various tools and production materials were not available during training**.

Participants' assessments suggest that vocational training programmes were implemented in a real work environment that was not adjusted to vocational training, i.e., that it was more of a work environment with equipment and tools used by the employees, without any designated space for vocational training participants. In general, we can say that participants' quality assessments suggest that employers have modern equipment and tools, but that they have not yet profiled themselves as education providers in the sense that they plan to permanently take part in staff training in addition to their core business. In that sense, there are no designated spaces or production materials intended only for the trainees.

Research results indicate the need to precisely **define standards related to the equipment and tools to be used for instructional purposes to develop competencies defined by the vocational training plan and programme, but also ways and procedures of monitoring**

compliance with this standard, considering that standards for equipment and resources are defined by the NES, but are not fully met.

The research findings indicate the need to improve the quality of vocational training implementation, considering the importance of the training process for improving competences, and consequently the comparative advantages of an individual in the labour market after vocational training completion. This is especially true if we consider that **the findings confirm the relevance of most quality dimensions for the *employment* and *unemployment* status of trainees after completion of vocational training**. The statistically significant relation between the analysed variables suggests that the **quality of implementation of vocational training is a factor that could potentially determine whether a participant will be employed or unemployed upon completion of vocational training**.

When it comes to the trainees' labour market status after completion of vocational training, **the largest percentage** of the total number of respondents in the sample **(46.1%) is unemployed**. They are followed by the **employed, regardless of the type of employment and jobs they perform with 44.2%**, while **30.6% of respondents are employed in the jobs they were trained for**. The smallest percentage of respondents is **inactive, i.e., they are not employed and are not looking for a job (9.7%)**. The relatively high percentage of the employed participants is surprising considering that a certain number of vocational training programmes were completed immediately before or during the state of emergency declared due to the COVID-19 pandemic, which threatened to cause serious disturbances in the labour market. However, when considering the percentage of the employed participants, we should take into account that the last tranche of funds to vocational training providers was conditional on submitting proof of employment of at least 15% of the total number of trainees within 60 days after the end of training and for them to retain the employment for a period of at least 6 months, **so the recommendation is, in future research, to also analyse their labour market status after the end of the six-month period**. Also, considering that training is seen as one of the key instruments for improving the quality of human capital as a driver of future change, **it would be valuable in the coming period to explore the effect vocational training has on the labour market status of participants**, to get an unambiguous answer to the question of whether training is a key factor in changing the labour market status of an individual.

The participants with work experience related to the jobs for which they were trained, gained a better labour market status after completing vocational training. On the one hand, their involvement in a vocational training programme can be understood as part of their career development, i.e., as an instrument for systematizing their existing partial knowledge and skills acquired through work and life experience in different time periods and of different duration, or

for the improvement of previously acquired obsolete knowledge and skills. At the same time, their participation in vocational training programmes could be seen as an unnecessary spending of budget funds for ALMP measures, since participants had years of work experience related to the jobs for which they were trained. The final conclusion requires more detailed research, using an appropriate methodological framework, to determine the effect of vocational training on changing the labour market status of an individual, both for individuals without relevant work experience and those with experience. Observed from the education system point of view, these findings may be understood as the need for **individualized training services**, which implies developing individual training programmes tailored to all forms of knowledge and skills previously acquired by participants, (formal, informal and other). Such an approach would contribute not only to the rationalization of the resources needed for implementing vocational training, but also to improving the quality of education offered in Serbia.

Also, the findings indicate the need to provide **high quality individualized career guidance and counselling service** that will ensure targeted quality selection of vocational training participants and thus contribute to a more rational spending of budget funds allocated to ALMP measures. This is especially relevant when considering that **career guidance and counselling services, as a form of support to the implementation of vocational training programmes for the labour market, participants perceive as of an average quality**. The process of involving trainees in the labour market after the end of the training was the lowest-rated segment, while the process of providing information to trainees before the beginning of a vocational training was slightly better rated. According to participants' assessments, after completing vocational training **participants were mostly not sufficiently informed about vacancies, i.e., they were not provided with sufficient professional assistance in job search in accordance with their new knowledge, skills and competencies**.

The importance of the quality of career guidance and counselling services can also be observed in the context of the findings of this research, which indicate a **statistically significant relation between the quality of career guidance and counselling services and the *unemployment* status upon vocational training completion**. The existence of a statistically significant relation indicates that the lack of professional support before and after vocational training potentially contributes to the unemployment of participants after training completion, i.e. short-term vocational training alone is not sufficient to improve the labour market status of an unemployed individual, and that support should be provided in the selection of a labour market-relevant training that meets the needs of an individual, as well as follow-up support to individuals leaving the ALMP measure by informing and counselling them on new career opportunities and challenges.

Research findings suggest that better assessment of the quality of career guidance and counselling services is associated with better assessment of the quality of vocational training implementation when it comes to all analysed quality dimensions. The complex relation between the quality of career guidance and counselling services and the quality of training services points to **the need to define conditions and standards for training service providers, related to the standards for the implementation of career guidance and counselling services that are in the function of the implementation of the training service**.

When it comes to socio-demographic characteristics of participants in the training, research results indicate that the **analysed socio-demographic characteristics largely did not confirm their statistical significance in relation to the labour market status of an individual** upon completion of vocational training. However, it is interesting that the labour market status of individuals with tertiary education, analysed upon completion of vocational training, was worse compared to other analysed categories. Upon completion of vocational training, 50.8% of the total number of participants without qualifications in the sample were employed, followed by participants with secondary education (43.9%), while only 35.7% of the total number of participants with tertiary education in the sample found a job upon completing training. Interestingly, 52.4% of participants with tertiary education were unemployed, while 11.9% of them were inactive. These findings do not correspond to the results of substantial research which proves that higher levels of education are associated with a better labour market status compared to lower levels of education. However, we should bear in mind that last year was very specific due to the crisis caused by the COVID-19 pandemic, so that caution should be exercised when interpreting these findings. It is understandable that a share of participants (11.1% without qualifications, 8.8% with secondary education, 11.9% with tertiary education) retired to inactivity upon completing vocational training, since the lockdown in force across the country in certain periods of the year made it impossible to look for a job. The temporary withdrawal from the labour market, waiting for the emergency situation to pass, may partly explain the higher unemployment of participants with tertiary education compared to those without qualifications and participants with secondary education who were forced to actively participate in the labour market during the pandemic, to improve their unfavourable status at least partially in the labour market. Part of the explanation for greater employment of those without qualifications and participants with secondary education compared to those with tertiary education may also be sought in having attended a vocational training that provides competencies necessary for assisting the elderly (e.g., training for senior home helpers and caregivers), which were in demand during the crisis as the vulnerability of the elderly population was exacerbated during the crisis.

INTRODUCTORY REMARKS

1. Theoretical framework of the research

1.1. Policy framework for adult education

According to the Strategy for Education Development 2020 the mission of adult education is to guarantee adult citizens the right to education and lifelong learning and thus contribute to their personal and professional development, better employment and social participation (Strategy for Education Development in Serbia 2020). According to this document, the key strategic features of adult education in the context of lifelong learning are coverage, quality, relevance, efficiency, recognition of prior learning (RPL) and career guidance and counselling (CGC) of adults (*ibid*.).

In addition to the Strategy, the Annual Adult Education Plan of the Republic of Serbia (AAEP) defines the determination of public interest in adult education and lifelong learning on an annual basis, in line with the regulations governing adult education. In accordance with the AAEP for 2021, the main purpose of the adult education system development is to enable adults to acquire competencies and qualifications necessary for personal and professional development, work and employment (Annual Adult Education Plan of the Republic of Serbia 2021). In the AAEP 2021 the following are defined as priority education areas and activities: (1) development of human capital based on knowledge and innovation by increasing the offer of programmes and adult education and training providers in Serbia within the formal and non-formal education system, which are in line with labour market needs; (2) improving the quality assurance system; (3) development of a system for the recognition of prior learning and promotion of lifelong learning; and (4) the establishment of the APAE Sub-Register (*ibid.*).

In the Draft Strategy for Education Development of the Republic of Serbia 2030 (hereinafter: the Draft Strategy) the vision for education development in the 21st century is to secure quality education so that the population, especially every child and young person in Serbia, can reach their full potential. The mission of education is to provide high quality education to boost the development of the society as a whole (Draft Strategy for Education Development of the Republic of Serbia 2030). This development vision implies further efforts in building a knowledge-based society and economy, a society that nurtures values such as solidarity, respect, appreciation and strengthening an inclusive approach to education that provides quality education for all and an economy that will be competitive in the European and global economic market. The aspiration is to build a modern and recognizable education system that will be among the highest ranked systems in terms of quality of educational programmes, teaching activities, research and professional work. The vision for education development in the 21st century puts the main focus

not only on children and young people, but also on activities that contribute to the development of the potential of adults (*ibid.*).

The Draft Strategy has two overall objectives: increased quality of teaching and learning, equity and accessibility to pre-university education, strengthened educational function of educational institutions as well as increased quality and improved relevance and equity of higher education. Measures and activities related to the adult education subsystem are predominantly aimed at achieving the objectives related to pre-university education, specifically: • improving the normative framework for non-formal adult education development; • improving the quality assurance framework in adult education; • monitoring the effects of the application of qualifications on employment and lifelong learning; • creating pools of experts for the application of the National Qualifications Framework of Serbia (NQFS); • improving the standards and system for the accreditation of Accredited Providers of Adult Education (APAE), developing standards and procedures for self-evaluation and external evaluation of APAE; • improving the methodological framework for the development of non-formal education programmes based on the qualification standard and the methodology for their assessment (evaluation); • improving the capacity of APAE to develop new training programmes in line with a qualification standard and their networking; • development of procedures, methods and instruments used in the process of recognition of prior learning (RPL); • training of institutions/bodies and staff involved in the implementation of adult education activities; • monitoring and continuously improving the quality assurance system; • data entry in the APAE sub-register; • promotion of lifelong learning; • improving the capacity of social partners to actively take part in the qualifications system development; • improving the cooperation of employers in the dual education system with APAE; • establishment of regional training centres; • training, vocational preparation, reskilling and upskilling in regional training centres, etc.

The importance of adult education is also emphasized in the strategic documents in the field of labour, employment and social policy, as well as in the Economic Reform Program 2021-2023 where adult education is seen as one of the important instruments for the development of a knowledge-based economy able to ensure the development of human capital and employment of the population (Economic Reform Program 2021-2023). The Employment Strategy of the Republic of Serbia from 2021 to 2026 recognizes further development of the National Standard Classification of Occupations as one of the measures for improving the quality of the workforce, which will enable the monitoring of changes in the labour market, i.e., contribute to the harmonization of formal and non-formal education systems with labour market needs. Additionally, the importance of the further development of recognition of prior learning (RPL) has been acknowledged, as well as the importance of developing a training system in non-formal

education through the development of an APAE network by streamlining the APAE accreditation process, which would lead to an increase in their number, with a view to increasing the availability of accredited educational services for anyone who wishes to engage in non-formal education. Special emphasis is placed on improving career guidance and counselling (CGC) and similar services. (National Employment Strategy of the Republic of Serbia from 2021 to 2026).

Therefore, in Serbia's policy documents place adult education is mostly employed in response to the needs of the labour market and individuals for new knowledge and skills, which has a direct impact on the increase in the value of human capital, improvement of employment opportunities as well as on the increase in professional mobility and flexibility of the working-age population. In line with this orientation, *improving the quality assurance system of non-formal education and training* is one of the strategic priorities in numerous policy documents (education policy, employment policy, etc.). Training is seen as an instrument for adapting the workforce to the new demands of the modern labour market, enabling an individual to acquire knowledge, skills and competencies relevant to the labour market, thus contributing to improving their labour market status.

1.2. Legislative and institutional framework for adult education

Adult education is a part of Serbia's unique education system and is regulated by the Law on the Foundations of the Education System (RS Official Gazette, No 88/2017, 27/2018 - as amended, 10/2019, 27/2018 - as amended and 6/2020), the Law on Adult Education (RS Official Gazette, No 55/2013, 88/2017 - as amended, 27/2018 - as amended and 6/2020 - as amended), and the Law on the National Qualifications Framework of the Republic of Serbia (RS Official Gazette, No 27/2018 and 6/2020). Since a framework has been established at the system level for qualifications acquired through formal education, non-formal education and recognition of prior learning are equated, and various programmes of formal and non-formal education and informal learning are being implemented in the adult education subsystem.

Table 1 Formal, non-formal and informal education/learning in Serbia

Formal education of adults includes functional primary adult education, secondary adult education (part-time secondary adult education students over the age of 17) and specialist education. These programmes are implemented by (primary and secondary) schools accredited for the implementation of adult education programmes.
Non-formal education is an organized process of adult learning implemented based on special programmes, with a view to acquire knowledge, skills, abilities and attitudes aimed at work, personal

and social development. Through non-formal education qualifications can be obtained in line with a qualification standard, with the APAE. In line with the Law on NQFS, by attending a training of a duration from 120-360 hours adults can acquire the second qualification level, by attending training lasting at least 960 hours adults can acquire the third NQFS level, while the fifth level adults can acquire by attending a training lasting at least six months. Preconditions for obtaining a qualification at the NQFS levels 2 and 3 is completed primary education, while for the NQFS level 5 the precondition is previously acquired NQFS level 4. Non-formal education programmes are implemented by schools and other organizations with APAE status. In order to ensure the quality of the training process, the Ministry of Education, Science and Technological Development (hereinafter: the MoESTD) in 2015 prescribed standards and conditions for APAE accreditation, i.e. a procedure in which non-formal education providers prove they fulfil conditions and standards in terms of programmes, personnel, space, equipment and teaching aids for APAE accreditation (The Rulebook on Closer Requirements Regarding Programmes, Personnel, Space, Equipment and Teaching Aids for Acquiring the Status of Publicly Recognized Organizer of Adult Education Activities (RS Official Gazette, No 89/2015). APAE accreditation for schools is issued by the MoESTD, while for other organizations it is issued by the Qualifications Agency. As part of the APAE accreditation process, the Qualifications Agency provides an opinion on the fulfilment of conditions in terms of the plan and programme of adult education, the manner of realization and the staff, for schools and other organizations in line with the Law on NQFS. External quality control of APAE is performed by the Qualifications Agency, at least once during the five-year duration of the approval. Upon completion of the training, for the mastered training programme APAE issues to the participant a public document - a certificate, testimonial or confirmation. A certificate is issued for the achieved standard of vocational competencies, or the standard of key competencies, or the qualification as a whole. A testimonial is issued for a partially achieved standard of vocational competencies. A confirmation enables the verification of units of competencies, i.e., individual learning outcomes that do not lead to the acquisition of complete vocational competencies, that is, qualification as a whole (The Rulebook on the Type, Name and Content of Forms and the Manner of Keeping Records and the Name, Content and Layout of Public Documents and Testimonials in Adult Education (RS Official Gazette, No 89/15, 102/15). However, in addition to the documents that are relevant to the labour market, it is important to point out that with amendments to the Law on the Foundations of the Education System from 2019 (RS Official Gazette, No 10/19) the possibility of entry from non-formal education has been provided so that a candidate who has, after completing the training programme, acquired a public document on the achieved qualification standard as a whole and a public document on the achieved standard of key competencies for the general education part of secondary vocational adult education, is allowed to take the Final Exam, and from the year 2020/2021 the Vocational Matura too, through which, by passing it, he acquires a qualification at the NQFS level 3 and 4 (Annual Adult Education Plan of the Republic of Serbia 2020).

Informal learning is a process of independent acquisition of knowledge, skills, values, attitudes and abilities by adults, in everyday life, work and social environment. The Law on NQFS defines the RPL procedure as an adult education activity realized by assessing knowledge, skills and abilities acquired

through education, life or work experience, and which enables further learning and increased competitiveness in the labour market. RPL activities are carried out by schools verified for a training programme and for the RPL procedure (they have the APAE status for non-formal education and for the RPL for qualifications/competencies that are the subject of the RPL procedure).

According to: https://zuov.gov.rs/wp-content/uploads/2021/02/Izvestaj-o-povezivanju-NOKS-a-sa-EOK-om.pdf

Establishing the possibility of individual's horizontal and vertical mobility, after completing training programmes with APAE, both in the education system and in the labour market, indicates the need for as many individuals as possible to attend training programmes with the APAE to improve, upon completing training, their career opportunities and their labour market status, especially persons whose training is financed from the budget of the RS.

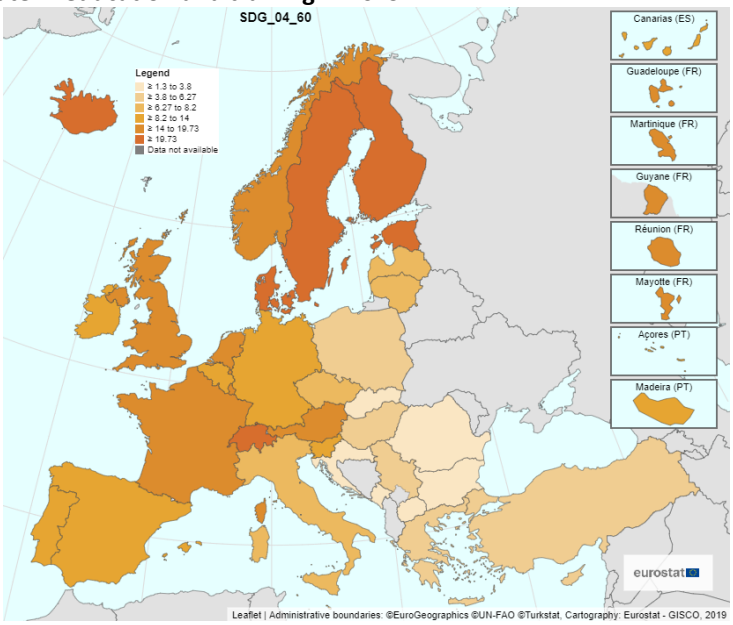
According to the Annual Adult Education Plan of the Republic of Serbia for 2021, from 2015 when the system of APAE accreditation was established, until 1 October 2020, 72 institutions received the APAE accreditation for a total of 262 training programmes for adults (17 secondary vocational schools, 9 institutions for adult education, such as workers', people's and open universities and 46 other organizations). The accreditation of training programmes was given to non-formal education institutions – companies, other organizations (135 programmes), people's, workers' and open universities (76 programmes) and secondary vocational schools (51 programmes) (Annual Adult Education Plan of the Republic of Serbia 2021). Even though the number of accredited programmes is not small, the findings of the *Ex-post analysis of the National Employment Strategy for 2011-2020* indicate that the number of APAE and the number of accredited programmes is still not satisfactory, considering the labour market needs and the educational needs of the unemployed, which may be an obstacle in the implementation of training as an ALMP measure (Ex post analysis of the National Employment Strategy for 2011-2020). Due to the small number of accredited programmes and APAE, the NES is forced to hire those education providers who can only issue an internal confirmation, but not a public document (certificate)/document (testimonial) of the acquired qualification or competencies. In order to improve the labour market status of participants after training and to improve their mobility, researchers point out the need to increase the number of education providers and the number of accredited training programmes (*ibid.*).

1.3. Adult participation in education and training in Serbia

The rate of adult participation in education and training is measured through two types of surveys, which use two different methodologies. One is the *Labour Force Survey,* which measures the participation of adults (from 25 to 64 years of age) in education and training in the last four weeks prior to the survey; the second one is the *Adult Education Survey,* which uses a reference period of *12 months*.

Labour Force Survey data (presented in the EUROSTAT database) show that the adult participation rate in education and training in 2019 in Serbia at the national level was 4.3%, which is below the average of EU member states for 2019 (11.3%), Differences between European countries in this regard are shown in Figure 1.

Figure 1 Adult participation rate in education and training in 2019



Source: https://ec.europa.eu/eurostat/databrowser/view/sdg_04_60/default/map?lang=en

On the other hand, the data from the Adult Education Survey[1] conducted in 2016 (SO, 2018) demonstrate the following:

- Approximately 80% of respondents did not participate in any form of formal or non-formal education.

[1] https://publikacije.stat.gov.rs/G2018/Pdf/G20181131.pdf

- Almost half of the respondents (47%) wanted to participate in some type of education but were prevented primarily due to education/training costs, family reasons, training schedule, i.e., overlaps with working hours, and inadequate type of training on offer.
- The adult participation rate in some form of formal or non-formal education of 19.8%, despite the increase compared to the previous research cycle – 2011, is significantly below the average of EU member states (45.1%). Among EU members, only Greece and Romania have a lower participation rate in lifelong learning than Serbia. However, compared to the surrounding countries that conducted the research (Bosnia and Herzegovina, Albania, North Macedonia), Serbia has a higher adult participation rate in education and training;
- Women are more represented in some of the education and training forms than men (21.4% and 18%, respectively). Women aged 25-34, with tertiary education, who are employed and who live in the city most often participate in lifelong education. In general, the participation rate is the highest in the population aged 25–34 (29.2%);
- Employed persons account for the highest share of participants in education and training (32.5% of all employed persons). Most non-formal education programmes in which adults take part are job-related (employment opportunities, job advancement, to keep their current job or take up a new one, etc.). On average, adults who received non-formal education participated in 1.8 non-formal education activities, most often on-the-job instruction during working hours, whose costs were covered by the employer. Persons who attended a course, workshop or private lessons generally have tertiary education and are classified in the occupational category “Managers, professionals, technicians and associates”.

Despite being compatible with international standards, the established schedule and instruments for data collection on adult participation in adult education clearly lack quantitative and qualitative data relevant to the formulation of adult education and employment policies. There is ample space for improving the methodology and instruments for data collection from various sources. As a step in this direction, the Statistical Office of the Republic of Serbia (SORS) plans to conduct a survey of on-the-job training of employees on a sample of over 6,000 companies (ETF, 2020). At the same time, the Ministry of Education, Science and Technological Development (MoESTD) is engaged in the establishment of the Integrated Education Information System (IEIS) and within it the Register of children, pupils, adults and students. This Register will

contain data on adult participation in non-formal education, career guidance and counselling activities, as well as data on the candidates in the RPL process with APAE, thus providing additional information on the participation of adults in the adult education system.

1.4. Training as an active labour market policy measure

Active Labour Market Policies (ALMPs) are a set of programmes and actions designed to improve employment opportunities for jobseekers by increasing efficiency and equality in the labour market (Jandrić, Aleksić, 2018). These measures affect the labour market through several basic channels: 1) by improving the quality of the labour supply in the market (e.g., through training), 2) by increasing labour force demand (e.g., through subsidies) and 3) by improving the functioning of the labour market (e.g., through job matching services) (Jandrić, 2014). Generally speaking, active labour market policies can be divided into four basic groups: 1) employment counselling (support for active job search), 2) training programmes, 3) job creation (subsidized employment/salaries public works) and 4) self-employment assistance.

In their original form, active labour market policies (ALMPs) emerged at the beginning of the last century as an attempt by public authorities to provide employment when it was not available in the regular labour market (Zubović, J, in: Zubović, J (ed.) 2011). The forerunner of ALMP measures were public works organized in the USA between the two world wars (Ognjenović, K, in: Zubović, J (ed.) 2011). In the ’80s of the 20th century, a sharp rise in unemployment in Western Europe stimulated interest in this group of measures. In Serbia, ALMP measures gained increasing importance in 2005 with the adoption of the National Employment Strategy for 2005-2010 (*ibid.*).

When it comes to the objectives of ALMPs, professional literature lists two main objectives: the first one is economic, which usually implies increasing the likelihood for the unemployed to find a job, and a positive impact on productivity and wages, and the second one is social, which implies improving inclusion and participation associated with productive employment (Kuddo, 2009).

Betcherman et al. (2004), in their influential work, emphasize the relation between different ALMP objectives, their programme orientation and key groups which these measures target. Key measures differ depending on the objective (mitigation of cyclical declines, reduction of structural imbalances, improvement of the functioning of the labour market or improvement of skills and productivity of workers), (Table 2). It is interesting that training is the only group of ALMP measures which, according to the authors, can achieve all the aforementioned objectives.

Table 2 Alignment of ALMP measures and objectives

Objective	Programme orientation	Targeting
Mitigate cyclical declines	Direct job creation-public works Wage subsidies Training Self-employment assistance	Vulnerable groups Vulnerable regions or activities
Reduce structural imbalances	Employment counselling services Training Wage subsidies	Regions, activities or occupations related to structural imbalances
Improve the functioning of the labour market	Employment counselling services Training	Comprehensive
Improvement of skills and productivity of workers	Training	Vulnerable worker groups
Assistance to vulnerable worker groups	Employment counselling services Training Wage subsidies	Vulnerable worker groups

Source: Jandrić (2014), according to: Betcherman, G., Olivas, K., Dar, A., *Impacts of Active Labour Market Programs: New Evidence from Evaluations with Particular Attention to Developing and Transition Countries*, Employment Policy Primer, 2004., p. 12.

Within the modern labour market framework, in conditions of intense technological and social changes, ALMP measures are viewed as an instrument for adapting the labour force to the new requirements imposed by the increasingly dynamic environment (European Commission, 2007).

In addition to designing and monitoring the process, implementation and performance of active labour market measures, it is extremely important, especially given the amount of funds allocated for these measures, to assess the impact of implemented measures. This refers to the programme's effects on and net benefits for labour market participants, public finance and society as a whole. Reliable assessments of the effects of implemented measures include the use of sophisticated econometric techniques and reliable data, as well as a careful methodological design. An impact assessment should answer two basic questions: 1) What the impact of the measures on the future labour market status of participants is, and 2) What the cost-benefit ratio is (Jandrić, 2014). Two problems that are most often discussed in literature, related to the evaluation of ALMP measures, refer to the programme efficiency, that is, its impact on employment of programme participants, and the amount of funding, i.e., cost-effectiveness of the programme (Fabian, 2018).

The results of several large meta-studies based on the experiences of OECD countries show that training is one of the most expensive ALMP measures, while in terms of their effectiveness results differ (Lehmann, 2010). Fabian (2018) presents the results of meta-studies focused on the

impact of ALMP measures on the future labour market status of participants, as well as on wages. The results show that *training for the unemployed* in developed countries has a positive impact on employment, but not on the overall effect on wages, while in countries in transition both aspects are positive. Some of the most important conclusions can be summarized as follows: 1) on-the-job training and employer involvement increases the effectiveness of *training for the unemployed*; 2) training programmes often benefited women more than men; 3) training programmes are most successful when the economy is in the expansion phase. Also, it has resulted that youth unemployment can be addressed much more efficiently through early educational interventions (drop-out reduction, etc.), which indicates the great importance of the education system. A key finding is that training has proven most effective when combined with other services such as employment, primary education and social services. When it comes to the *Reskilling Programme for redundant workers*, which is especially important for countries facing the problem of mass layoffs, results show that it often has no positive impact on employment and wages, although there are exceptions, and that better results can be achieved through integrated training and employment services (Betcherman, Olivas and Dar, 2004).

Martin & Grubb (2001) define key recommendations for designing a programme: (a) clearly targeted selection of participants; (b) emphasis on programmes smaller in scope; (c) programmes should result in the obtainment of a qualification or certificate, accepted and recognized in the labour market; (d) it is desirable for a part of the programme to encompass on-the-job training with a strong link with local employers.

In Serbia, the implementation of programmes, measures and activities for the development of human capital by improving the competencies of the unemployed through short-term training is foreseen in policy documents in the field of employment and in accompanying action plans. In accordance with the Annual Further Education Programme (envisaged in the National Employment Action Plan - NEAP) and internal acts of the NES, *Labour Market Training* is organized with the aim of raising the level of competence, competitiveness and employability of the unemployed, by providing them with an opportunity to acquire additional knowledge and skills to perform a job in the same or new occupation, in accordance with the local labour market and employers' needs, as well as the individual's identified needs, with a view to increasing their employability and assuring a more competitive labour market entry of hard-to-employ persons, primarily persons with no or low qualifications (Rulebook on criteria, manner and other issues of importance for the implementation of active employment policy measures, RS Official Gazette, No 102/15, 5/17, 9/18).

The National Employment Service (NES) keeps records of clients who registered as employed in the period of 180 days after leaving the measure. The data show that the effects of

the labour market training vary significantly. In the period from 2011-2019, the lowest percentage of placements into employment after completion of training was recorded in 2012 (16%), while the highest percentage of employed clients was recorded in 2017, at 40% (Ex-post analysis of the National Employment Strategy for 2011-2020, 2020).

Fabian (2018) states that assessments of the effects of trainings in Serbia give mixed results: from having an extremely small impact on the labour market status of participants (Marjanović, 2015), through having a positive (and statistically significant) impact on the user's likelihood of finding employment (Ognjenović, 2007; Aksentijević, S, in: Zubović, J, (ed.) 2011:489-490), to a 25.06% employment rate among participants six months after the end of the measure (Bjerre, Emmerich & Milošević, 2011). According to the Employment and Social Reform Programme in the EU accession process (2016), the results of assessments show in summary that training programmes have long-term positive effects, with the training programmes for a known employer recording the greatest net effects.

Some of the research points to the importance of the non-economic effects of training. Training participants, compared to non-participants, were happier on average, they expanded their social network, reported better health, considered their perspective in a more positive manner and had more confidence in their knowledge and skills (Bonin & Rinne, 2006; Follow-up survey of the graduated FEEA participants, 2013; Marjanović, 2015; Pejatović, 2007).

Although the assessments referred to measuring economic parameters of the effects of training, the researchers' recommendations for their improvement concerned the improvement of the quality of training. Researchers recommended better targeting of the unemployed who face barriers to employment (avoiding the *creaming* effect), aligning training programmes with local labour market needs, creating a package of measures that includes subsidies for employment of hard-to-employ training participants, as well as shifting the emphasis from classroom-based to work-based training (so-called programmes for a known employer) (Arandarenko & Krstić, 2008; Ognjenović, 2007; Marjanović, 2015, Martin & Grubb, 2001).

However, in the previous period, research focusing on the quality of training implementation, as an ALMP measure, was sporadic, although the results indicate that the quality of short-term vocational training is an important determinant of an individual's labour market status, i.e., that it can be understood as an important factor in improving the status of participants in the labour market (Fabian, 2018). Recent analyses of the effects of labour market training (as an ALMP measure) more explicitly indicate the importance of improving the quality of training, emphasizing the need for the implementation of training programmes in line with standards, through accredited programmes, delivered by accredited providers – APAE, licenced to issue (public) documents upon completion of the programme, as well as the need to improve the APAE

network to cover the entire country. Furthermore, there is a need to examine the link between the quality of short-term training and the labour market status of participants, instead of focusing exclusively on measuring the effects of training programmes on employment and their cost-effectiveness. Also, given that the effects of all ALMP measures largely depend on the quality of targeting, as suggested by numerous researchers in the previous period (Ex-post analysis of the National Employment Strategy for 2011-2020, 2020), special attention should be paid to analysing the impact of the quality of career guidance and counselling services on other ALMP measures (including short-term training).

1.4.1 NES standards for the selection of vocational training providers for the unemployed

To improve the competence and employability of the unemployed, in line with the Training Catalogue, the NES organizes training in response to labour market needs on an annual basis. The Training Catalogue for 2019 was prepared based on the proposals of the NES branches and available financial resources, taking into account the following elements:

1. local labour market analyses and forecasts;
2. structure analysis of the local records of unemployed persons and analysis of individual employment plans taking into account the target groups defined in the National Employment Action Plan for 2019;
3. offer of educational services in local markets;
4. quotas and financial resources allocated for the training programme (NES, 2019).

Providers of labour market-relevant training are selected in line with the regulations governing public procurement. Considering that the training programmes offered by non-formal education service providers with APAE status largely do not correspond to the NES needs in terms of diversity of educational programmes and in terms of the APAE network and its territorial distribution in Serbia, the NES has the opportunity to conduct “internal” verification of training programmes and training service providers through public procurement, at an annual level, and on that basis hire non-formal training service providers who do not have the APAE status. In other words, in the tender documentation the NES has the opportunity to define, on an annual basis, standards (conditions and criteria) in terms of staff, facilities, technical, operational and other capacities a training provider must fulfil to implement training programmes for the unemployed. In the public procurement procedure, a potential service provider submits evidence of compliance with the standards, which the NES evaluates. Before approving a contract award, the NES conducts an official tour of the location and premises where the training provider plans to

implement training and/or traineeships, to verify compliance with the requirements stated in the tender documentation.

For the purposes of implementing labour market-relevant training in 2019, the NES has defined standards (conditions and criteria) for the selection of training providers in its tender documentation that apply to both training providers/institutions and the training programmes. When it comes to the standards for training providers/institutions, they are partially regulated by the Law on Public Procurement, additionally, the NES has also defined standards related to the operational capacity of the provider, the quality management system, the training implementation plan and set out special criteria that will be applied in the contract award procedure together with the weightings/scores of each. It is interesting that only 2 weightings/scores are foreseen for the APAE status, which gives a merely symbolic comparative market advantage to a training provider with a APAE status compared to the one who does not have such status in the selection procedure. When it comes to the standards for training programmes, they refer to: the vocational training programme itself; the structure of the training plan and programme; the number of training hours and the weekly training implementation dynamics; the size of the group of trainees; the use of didactic materials; monitoring and evaluation; the verification of vocational competencies and documents issued after the completion of a vocational training; the training location, training facilities, equipment, materials and teaching aids used in the training; personal protective equipment and means; training programmes provided by an employer; traineeship programmes provided by an employer and staff capacity of the training provider (Tender documentation, 2019). In general, we can say that these standards are largely in line with the standards for APAE accreditation by the education system, however, there are certain inconsistencies of the standards on staff capacities, both related to the qualification structure of the staff engaged in delivering training and their competencies to work with adults.

Table 3 NES standards for the selection of vocational training providers for the unemployed in 2019

STANDARDS FOR THE SELECTION OF TRAINING PROVIDERS			OPERATIONALIZATION OF STANDARDS
Institution	**Mandatory conditions from Articles 75 and 76 of the Law on Public Procurement**		- the bidder must be registered with the competent authority, i.e., entered in the appropriate register; - the bidder and its legal representative must not have any prior conviction in connection with participation in an organized criminal group, economic crimes, environmental crimes, giving or receiving a bribe, and fraud; - the bidder must have paid all taxes, contributions and other public dues in accordance with the regulations of the Republic of Serbia or of the country in which the bidder is domiciled.
	Additional conditions	**Operational capacities of training providers**	- the training provider must have implemented training services (training, courses, professional development, reskilling, upskilling or similar), for at least twice as many persons relative to the number of persons for whom the training is foreseen within the lot/s for which the training provider has submitted a bid, in the previous three years or less, in the areas that are the subject of public procurement for the lot/s for which the training provider has submitted a bid;
		Quality management system	- the training provider must have the ISO 9001 standard certificate – for the Quality Management System, in the area of education.
		Training implementation plan	- the bidder must submit the *Organization and methodology of work, i.e. a plan for the implementation of labour market training programmes for unemployed persons*, which must contain the history, vision and mission, resources available to the training provider that will be engaged for this purpose, locations where the trainings will be organized and conducted, methods and tools to be applied, timetable of activities and planned deadlines, implementation dynamics, monitoring and evaluation mechanisms, i.e. the monitoring and evaluation of the results and effects of the training, risks that may be encountered and planned ways to overcome them, budget allocation for the implementation of the contract.
	Elements of contract award criteria		- total bid price; - having an online learning platform that enables interaction between training participants, as well as between training participants and teachers/instructors; - the use of premises and teaching aids and the availability of teachers/instructors outside the

			training period (the possibility for the participants to use independently or under supervision the premises where the theoretical and practical part of training take place and where teaching aids are, with available teachers/ instructors outside the training period; - the status of accredited provider of adult education services (2 weighting factors) - the number and quality of engaged staff – leader and members of the project team (observed in terms of qualification levels, number, experience in managing/participating in projects of a certain value).
Programme	**Additional conditions**	**Vocational training programme**	- the training plan and programme has to be: (1) adopted by the Ministry of Education, Science and Technological Development based on which the APAE accreditation was acquired, or (2) aligned with the internal training standard of the NES, which is part of the tender documentation, or (3) adopted by the training provider and aligned with the Specification of the subject of public procurement for training for which the internal training standards of the NES are not prescribed.
		Structure of the training plan and programme	- learning contents must be aligned with the areas/modules, planned and programmed in a logical sequence, and must aim to achieve programmed vocational competencies, special knowledge, skills and learning outcomes. The training implementation methodology must be elaborated through the presentation of the training organization and planning of adequate methods and techniques, as well as through other elements listed in the model of the Training Plan and Programme. The training provider is under obligation to explain, plan, organize and conduct the practical training in detail. The content and manner of conducting practical training must aim to provide trainees with the vocational competencies, special knowledge and skills stated in the Training Plan and Programme.
		Number of training hours	- the training provider is under obligation to implement the training with a number of training hours that cannot be less than the number of training hours prescribed by the relevant standard of the National Employment Service, or by the Specification of the subject of public procurement for the lots for which internal NES standards are not prescribed. For the training for which an internal standard has been proposed, the training provider may conduct a training in line with the internal standard or according to a programme approved by the Ministry of Education, Science and Technological Development based on which the training provider acquired the APAE accreditation.

			- the training provider is under obligation to foresee an additional number of hours for periodic knowledge tests, as well as for the final knowledge test, which are not included in the prescribed minimum hours; - the training provider is under obligation to provide a training programme with at least 60% of practical training relative to the total number of training hours.
		Weekly dynamics	- the training provider is obliged to present the training content based on the logical sequence of the training, by implementation weeks. - the training provider is obliged to carry out training at each location in one cycle for all participants, with a weekly schedule of 30 school periods (45 minutes each). Classes can be held on weekdays (Monday to Saturday), in the period from 8 a.m. to 8 p.m., and with adequate breaks, in line with the available public transport schedule (for arrival and departure from the training).
		Educational group	- the maximum allowed size of an educational group is 10 participants, and the minimum is 5 participants. The training provider is obliged to determine the number of participants in an educational group that is adequate to the size of the training venue, the number of learning places and the equipment of the training venue – so that each participant must have his/her own learning place equipped in line with the requirements of the training programme.
		Didactic materials	- the training provider is obliged to provide appropriate written teaching material (manuals, scripts, other professional literature) and other necessary material for all training participants, which will be given to course participants for permanent use. The use of the teaching material is obligatory to be in accordance with the legal regulations governing copyright and intellectual property protection.
		Monitoring and evaluation	- the training provider is obliged to continuously monitor the quality of the training realization, i.e., to regularly monitor, assess and evaluate all activities in all phases of implementation, and to take appropriate corrective measures in a timely manner.
		Verification of vocational competencies	- for each training, the training provider is obliged to provide a verification of vocational competencies of the trainees, i.e., of their ability to perform the job in accordance with vocational competencies (knowledge and skills). - the training provider is obliged to specify clearly, precisely and in detail the verification schedule

			and the criteria for the evaluation and assessment of the participants' performance, as well as the manner in which the evaluation and assessment will be performed.
		Documents upon completion of vocational training	- upon completion of vocational training, the training provider is obliged to issue the following documents to the participants: ▪ an appropriate document, i.e., a certificate, confirmation or testimonial of successful completion of training; ▪ confirmation of attendance for participants who failed to complete the training; ▪ confirmation of attendance for participants who dropped out before the end of the training programme, on the number of hours he/she attended and/or the competencies he/she acquired on that basis. This certificate, confirmation or testimonial of successful completion of training must also have a supplement on the vocational competencies, special knowledge and skills that the trainees have acquired, each with an explanation. The model of the certificate, confirmation or testimonial must contain data on the training participant, the name of the training, the training period, the number of hours, and the name of the training provider. The training confirmation for participants who failed to complete the training or dropped out before completion must contain data on the training participant, name of the training, period of training attendance, number of attended hours, and name of the training provider.
		Location	- the training provider is required to offer a training location that is accessible by public transport; - before approving the contract award, the NES will inspect the location and premises where the training provider plans to conduct training and/or traineeship programmes to verify compliance with the requirements from the tender documentation.
		Facilities	- the training provider is required to provide adequate teaching and training facilities. At each of the locations where the training will be performed, the training provider must provide adequate facilities for theoretical and practical lessons, adapted to the number of training participants (i.e., groups of trainees). The facilities must be adequately equipped, i.e., fitted with all the necessary equipment, resources and accompanying contents, in line with the requirements of the training

			programme. - the training provider is required to carry out the training in facilities that, in terms of area and functionality, are appropriate for the size of the educational group and meet the general hygienic and sanitary standards; - before adopting the Decision on contract award, the NES will inspect the location and premises where the training provider plans to conduct training and/or traineeship to verify compliance with the requirements specified in the tender documentation.
		Equipment, materials and teaching aids	- the training provider is required to provide appropriate equipment, means for work, teaching aids and materials for the implementation of all training contents, i.e., for providing the trainees with the defined knowledge and skills – depending on the needs and type of the training. For training programmes which envisage (complete or partial) learning of content in the field of information technology, the training provider is obliged to provide each participant with a computer, as well as an adequate internet connection. Depending on the training content, computers must have an appropriate configuration. - for vocational training programmes requiring everyday use of appropriate tools, inventory and/or equipment, the training provider is obliged to provide an adequate number of tool sets, inventory and/or equipment for the smooth implementation of the training (minimum 1 tool set, inventory and/or equipment per 2 participants). - prior to approving contract award, the NES will conduct an official tour of the location and premises where the training provider plans to conduct training and/or traineeship programmes to verify compliance with the conditions stated in the tender documentation.
		Personal protective equipment and means	- the training provider is obliged to provide participants with appropriate personal protective equipment and means in line with the regulations governing safety and health at work.
		Training with the employer	- if the training is conducted in an employer's premises (legal entity or entrepreneur in whose premises the training is performed and who performs activities related to the training subject), the training provider should clearly and precisely define the terms and conditions of use of materials and technical aids, as well as the roles, tasks and duties of the employer, so prevent the ongoing business workflow of the employer from jeopardizing the training process, and vice versa – to prevent the training implementation from jeopardizing the ongoing business workflow of the employer.

		Traineeship with the employer	- immediately upon completion of theoretical and practical training, for the training participants who have successfully completed the training, the training provider is obliged to provide traineeship with employers in jobs whose activities are related to the training subject, as an integral part of the training, and issue a confirmation of completed traineeship to them. The date of the beginning of the traineeship should correspond to the date of completion of the training, which will be specified with authorized persons from the competent branch, and the training provider is obliged to perform the traineeship in the specified period. - the training provider is obliged to provide traineeship with employers lasting 20 working days, continuously every working day from Monday to Friday, 4 hours a day (the traineeship is not included in the number of hours of theoretical and practical training defined by standards). - the employer must provide adequate conditions for the traineeship in terms of adequate spatial, material and staffing conditions. The employer must provide at least one of its employees for each group of trainees, in the jobs for which the training participants are being trained, who will be their mentor and who will constantly train and supervise them. - the training provider is obliged to obtain a Confirmation of Traineeship from the employer, for participants with acquired competencies, containing at least the following elements: name and surname of the participant, ID number of the participant, time and period of the traineeship, jobs for which they were trained, and acquired competencies. - the NES reserves the right to conduct an official inspection of the participants who are in the traineeship programme with an employer, during the traineeship.

		Staff capacities	- for each training that is the subject of public procurement, the training provider is obliged to have:
			  - at least 1 competent person with expertise for implementing the theoretical training which is the subject of public procurement (teachers),
			  - at least 1 competent person with expertise for implementing the practical training which is the subject of public procurement (instructors).
			Teachers and instructors with appropriate knowledge, skills and competencies shall be provided for each area/module envisaged in the Training Plan and Programme teacher. It is possible for the same person to work as an instructor and/or as a teacher in the same training programme, provided that this does not jeopardize the implementation schedule or the quality of any of the

			training programmes for which that person is engaged. Instructors and teachers may be persons employed with the training provider or persons hired on another basis with the training provider, in line with the Labour Law. Instructors and teachers for training programmes in the field of *Health, Pharmacy and Social Welfare* teacher must meet the following requirements: - for each learning area in the offered programme, the training provider must provide minimum 1 competent person with expertise for the implementation of training in that area, which includes: o for the theoretical part of training: at least the tertiary four-year education level qualifications in the medical, social and humanities field and/or from other fields that are directly related to the learning contents, o for the practical part of training: at least secondary education qualifications in the field of medicine (note: a teacher can be hired for the practical training too), o teaching experience in conducting at least 1 training with the same or related subject in the field/activity to which the training relates. For training in the field of *Economics*: o at least tertiary four-year education level qualifications in the field of economics or certified accountant or certified public accountant, o at least 5 years of work experience in accounting and bookkeeping, o teaching experience in conducting at least 1 training with the same or related subject in the field/activity to which the training relates. For training in the field of *Mechanical engineering and Forestry, Textile and Leather Industry, Other – Personal Services, Agriculture, Food Processing and Hospitality, Civil Engineering and Transport, Ethnic Crafts:* o at least secondary education qualifications, o vocational competencies in the field that is the subject of public procurement, o at least 3 years of work experience in the field that is the subject of public procurement, o teaching experience in conducting at least 1 training in the same or related subject in the field/activity to which the training relates.

			The teacher/instructor can be in charge of working with one educational group at each location for a maximum of 6 hours a day, which means that if for a certain training at a certain location training is organized for more than one educational group, then a different teacher/instruction must be hired for each educational group. Exceptionally, if the plan and programme envisage the engagement of teachers for fewer hours (on a daily, weekly or total number of hours), one teacher can be hired for the implementation of a training programme with several groups. All teachers must sign an employment contract or a contract of engagement with the training provider for the period in which the teacher will be conducting the training, no later than upon approval of contract award, but before concluding the public procurement contract with the selected training provider.

Source: NES tender documentation

2. Methodological research framework

The purpose of this research is to support MoESTD's efforts to improve conditions and standards for APAE accreditation.

This research seeks to assess the quality of short-term vocational training and determine the possible link between the quality of short-term vocational training and the labour market status of participants upon completion of training. Considering that research results will be the starting point for preparing the proposal for improvement of standards in terms of programmes, staff, space, equipment and teaching aids for the accreditation of providers of adult education services, the quality of short-term vocational training, as an independent variable in the research, was analysed as follows:

- the quality of implementation of short-term vocational training was analysed through several quality dimensions, specifically: teachers and instructors, spatial conditions and health protection, equipment and tools, training process, organization of training, training location and training result;
- the quality of career guidance and counselling services was analysed in terms of providing professional support to individuals in choosing vocational training and informing them, upon completion of training, about job vacancies that match their competencies acquired in training;
- the characteristics of short-term vocational training were analysed in terms of the training duration, type of vocational training where vocational trainings are classified according to the field of work/occupational group to which the conducted training belongs, in line with the Unique Occupational Nomenclature (SFRY Official Gazette, No 31/90), and in terms of the practical training location, i.e. setting (with an employer in a real work environment, in a workshop/educational facility in a school, or combined, both work-based and school-based);
- the characteristics of the vocational training participants were analysed in terms of whether the participants have any work experience, and qualifications similar to the jobs for which the vocational training is organized.

The labour market status of participants, as an independent variable in the research, was observed through the prism of their employment status in the six-month period after completion of training, as follows:

a. employed – a participant who was in employment (contractual or non-contractual) or self-employed in the six-month period after completion of training; participants in the employed group, who were in jobs for which they had been trained, in the period after completion of training until the time of the survey, were analysed separately;

b. unemployed – a participant who was not in any form of employment (either contractual or non-contractual) in the six-month period after completion of training, was not self-employed, and was actively looking for a job;
c. inactive – participants who were neither unemployed nor employed in the six-month period after completion of training.

The research also encompasses control variables that make up the socio-demographic characteristics of participants, specifically: gender, age, education level, total work experience and length of unemployment.

Population, sample and organization of the research

The population in this research consists of 595 unemployed persons who attended and successfully completed short-term vocational training programmes organized by the National Employment Service (NES).

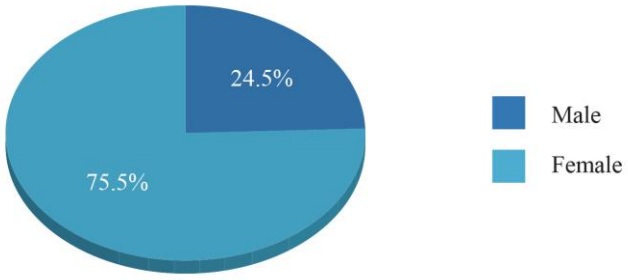
The research sample was appropriate and included 310 participants from across Serbia who successfully completed short-term vocational training. Considering the objectives of the study, the sample size was calculated with a confidence interval of 95%, with a maximum error of 5% and a critical incidence value of 50%, and thus the minimum sample size was 233 respondents. The calculation refers to the minimum number of respondents that needs to be included in the study, though it is allowed to include more respondents. The research was conducted via phone.

Sample structure

Sample structure by gender

Out of the total number of respondents 24.5% were male, while 75.5% were female.

Chart 1 Sample structure by gender



When it comes to the men in the sample, young men up to 30 years of age account for the lowest share (21.0%), while the other two analysed age groups are equally represented with 39.5%, respectively. Men from the sample predominantly have secondary education (69.7%), followed by tertiary education (21.1%), while the lowest percentage of men was without qualifications (9.2%). The largest percentage has between four and six years of work experience (51.3%) and spends one month to one year looking for a job (51.3%). Less When it comes to the women in the sample, young women up to 30 years of age account for the lowest share (25.6%), while the other two analysed categories are equally represented with about 35%, respectively. Women in the sample predominantly have secondary education (65.0%). The largest percentage has between one and three years of work experience (48.3%) and spend one to five years looking for a job (34.2%). The largest percentage of men and women in the sample (52.6% and 59.4%, respectively) do not have any work experience related to the training they attended, or related qualifications (61.8% and 85.5%, respectively). When it comes to each individual training:

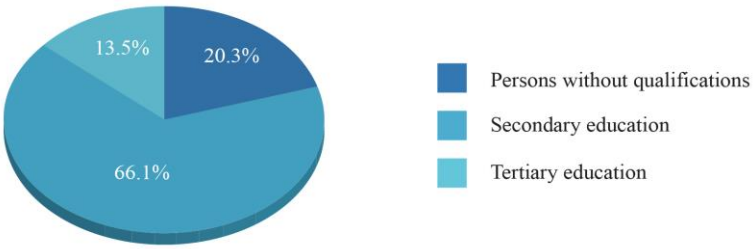
- as many as 63.2% of men in the sample attended the *Training for CNC machines operators*,
- women were represented in all training programmes, and the largest percentage of them attended the *Training in tailoring and sewing ready-made garments – basic level* (23.9%).

The significant participation of men in the *Training for CNC machine operators* could be explained by the structure of vocational training included in the sample. In fact, most of the 17 different vocational training programmes were for jobs traditionally considered as "women's jobs"(senior home helpers and caregivers , tailoring and sewing, embroidery and goldwork, knitting, wool felting etc.). Also, the share of men in the total population of this research and in the sample was low (23.53% and 24.5%, respectively), consequently, training programmes for jobs traditionally perceived as "men's jobs"(locksmith, construction equipment operator, forklift operator) were attended by less than 5% of respondents in the sample, so these training programmes were analysed within the category "*Other"* where male participants accounted for a 30.3% share.

Sample structure by education level

Most respondents in the sample have secondary education (66.1%), 20.3% have no qualifications, while 13.5% have tertiary education.

Chart 2 Sample structure by education level



The largest share of persons without qualifications from the sample are between 31 and 45 years of age. Participants with secondary education aged 31–45 and over 46 years of age are equally represented (35.1% and 37.6%, respectively, while those with tertiary education predominantly belong to the 31–45 cohort (54.8%). In all three categories, there are about 40% of participants with 1–3 years of work experience. As regards length of unemployment, the largest percentage has been looking for a job between one month and one year (about 30%) and between one and five years (between 20% and 40%). Most of the three analysed groups of participants do not have work experience related to the attended vocational training (about 50%), with 45.2% of participants with tertiary education from the sample who have between one and two years of related experience. Similarly, all three groups predominantly do not have qualifications related to the vocational training they attended (between 60% and 90%). I group of participants with tertiary education account for the largest percentage of participants with related qualifications (35.7%). When it comes to each vocational training:

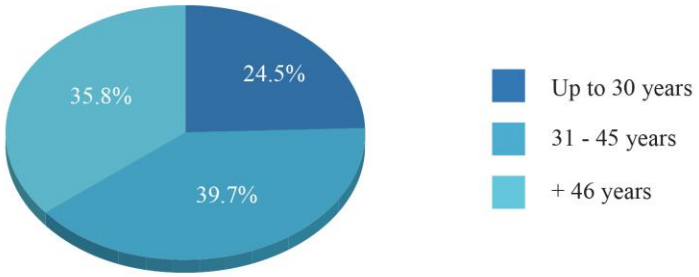
- participants without qualifications predominantly attended the *Training in tailoring and sewing ready-made garments - basic level* (27.0%) and the *Training for senior home helpers* (25.4%),
- participants with secondary education predominantly attended *Training for CNC machine operators* (21.0%) and *Training in tailoring and sewing ready-made garments - basic level* (17.6%),
- the highest percentage of participants with tertiary education attended the *Training for bookkeepers* (26.2%).

Sample structure by age

After categorizing the respondents into age groups, the breakdown is as follows: 24.5% of respondents are up to 30 years of age, 39.7% of respondents belong to the age group between 31 and 45 years of age, while 35.8% of respondents are 46 and older. The average age of the

participants in the sample is 39.57 years of age, with a deviation of 11.55 years (M=39.57±11.55). The youngest respondent is 17 and the oldest is 60 years old.

Chart 3 Sample structure by age



All three analysed categories have the highest percentage of secondary education. In the 31–45 age group there is a slightly higher percentage of participants with tertiary education (18.7%). The largest percentage of young people below the age of 30 has no work experience, the largest share of participants in the category 31–45 age group have between 1 and 3 years of work experience (52.0%), while participants above the age of 46 years predominantly have between four and six years of work experience (55.9%). More than half of the participants in all three analysed age groups do not have any work experience related to the attended vocational training, with youth leading with as much as 76.3%. Similarly, about 80% of participants in all age groups in the sample do not have any qualifications related to the vocational training they attended. At the level of each vocational training, we see that:

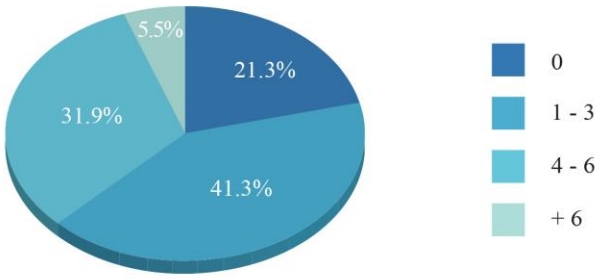
- the largest share of young trainees attended the *Training in tailoring and sewing ready-made garments - basic level* (27.6%),
- participants aged between 31 and 45 predominantly attended the *Training for CNC machine operators* (17.1%), and the *Training for senior home helpers* (18.7%),
- participants over 46 years of age predominantly attended the *Training in tailoring and sewing ready-made garments - basic level* and *Training for CNC machine operators* with 16.2% each and the *Training for senior home helpers* (15.3%).

Sample structure by length of work experience

Within the sample, 41.3% of respondents had 1 to 3 years of work experience, 31.9% of them had 4 to 6 years of work experience, while only 5.5% of respondents had over 6 years of work

experience, and 21.3% no work experience. The average length of work experience was 30.73 months with a deviation of 31.72 months (M=30.73±31.72). Among the respondents there were individuals with no work experience, and at the same time also those with the maximum of 249 months of work experience.

Chart 4 Sample structure by length of work experience



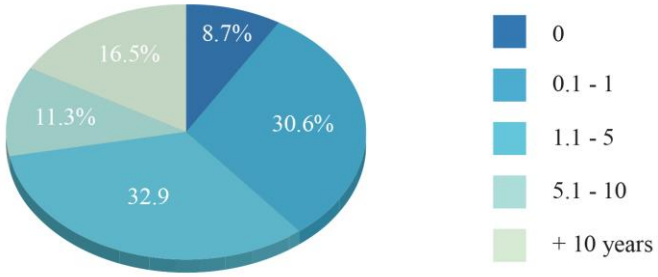
As already shown, women predominate in the sample. Participants without any work experience were predominantly young, up to 30 years of age (57.6%), participants with one to three years of work experience were in most cases between 31 and 45 years old (50.0%), while participants with four to six years of work experience were mostly 46 and older (62.6%). When it comes to the education level, all analysed categories of participants predominantly have secondary education. From the perspective of related work experience, we have observed that in the group of participants with 1 and 3 years as well as those with 4 to 6 years of work experience the percentage of participants without any work experience, or with 1 to 2 years of experience, related to the attended vocational training is almost the same. When it comes to the relatedness of qualifications and the attended vocational training, all analysed categories of participants predominantly do not have qualifications related to the attended vocational training. When it comes to each individual training:

- participants without work experience predominantly attended the *Training in tailoring and sewing ready-made garments - basic level* (33.3%),
- participants with 1 to 3 years of work experience predominantly attended the *Training for senior home helpers* (19.5%),
- participants with 4 to 6 years of work experience and participants with 6 and more years of work experience predominantly attended the *Training for CNC machine operators* (24.2% and 23.5%, respectively).

Sample structure by duration of unemployment

Out of the total number of respondents in the sample, 30.6% were unemployed for up to one year, 32.9% for one to 5 years, and 11.3% for 5 to 10 years before enrolling in the training. A total of 16.5% of respondents were looking for a job for more than 10 years. Only 8.7% of respondents attended vocational training immediately after registering with the employment service. Before enrolment in the training, the average duration of unemployment of the respondents was M=51.52±68.06. The length of unemployment ranges from 0 to 386 months.

Chart 5 - Sample structure by duration of unemployment



In all analysed categories women account for the major share of the total number of respondents. Participants who immediately enrolled in vocational training after registering with the employment service predominantly belong to the 46+ age group (44.4%). A significant percentage of the group of participants who waited for a job for up to one year belongs to the younger age group, up to 30 years of age (41.1%). In the other three analysed categories, the share of the group between 31 and 45 years of age is significant (between 42% and 52%). When it comes to the education level, secondary education dominates in all analysed categories. When we look at the similarity of qualifications and work experience, it is mostly absent in all analysed categories. On the other hand, when it comes to each individual training, we have observed the following:

- participants who have been waiting for a job for less than one month and those who have been looking for a job for 10 years, or more, predominantly attended the *Training in tailoring and sewing ready-made garments - basic level* (33.3% and 25.5%, respectively),

- participants who have been waiting for a job between one month and one year and from 1 to 5 years predominantly attended the *Training for CNC machine operators* (23.2% and 16.7% respectively),
- participants who have been looking for a job for 5 to 10 years predominantly attended the *Training for senior home helpers* (17.1%).

Research method, techniques and instrument

In our research we used a descriptive (non-experimental) method and survey and scaling techniques. Following the example of previous research (Fabian, 2018), for the purpose of this research, an instrument was developed consisting of several questionnaires and subscales, as follows:

- subscale for collecting data on the quality of implementation of short-term vocational training, and the quality of career guidance and counselling services;
- questionnaire for assessment of characteristics of short-term vocational training, characteristics of participants and their work status.

The subscales for collecting data on the quality are made up of statements that are to be answered using the Likert five-point scale (1 = completely disagree - 5 = completely agree) and which refer to the identified quality dimensions of short-term vocational training implementation and the quality of career guidance and counselling services.

To collect data on the quality of short-term vocational training implementation and the quality of career guidance and counselling services, we developed SERVPERF subscales with two groups of dimensions by which training participants assess the quality of vocational training implementation, specifically, the process dimension focused on how the training service is realized and the outcome dimension (Schiffman et al., 2004). Researchers Cronin and Taylor argue that the service quality is "similar to attitude" and accordingly believe that it should be measured on the basis of performance, rather than on the basis of a relation between performance and expectations (*ibid.*).

The subscale for collecting data on the quality of implementation of short-term vocational training is based on a similar subscale used in the literature and it has been improved with items that researchers have assessed as important for a closer look at the quality of vocational training implementation in a real work environment with an employer. Accordingly, a subscale with 42 items was developed, of which three questions were negative and were scored reversibly (1=5, 2=4, 3=3, 4=2, 5=1). Before the final result processing, we

identified the basic metric characteristics of the instrument (reliability, discrimination and validity). All correlations between items are moderately high, which indicates a significant internal consistency of the subscale, and thus its reliability. As for all items the Cronbach's alpha coefficient is greater than 0.7 and amounts to 0.881, we can conclude that the reliability of the subscale is satisfactory. We used factor analysis to check the dimensionality and validity of the questionnaire. We used the Varimax rotation as a rotation method. Factor analysis is an objective way of identifying the main components that can describe data variations as simply as possible and downsize the observed number of variables to a small number of main components that are linear combinations of initial variables.

To verify that the data set is suitable for factor analysis, we performed the KMO and *Bartlett's Test*. As the *Kaiser-Meyer-Olkin Measure of Sampling Adequacy* is above 0.6 and amounts to 0.940, and the value of *Bartlett's Test of Sphericity* is statistically significant (p=0.000), factor analysis is warranted.

Table 4 Kaiser-Meyer-Olkin and Bartlett's Test

KMO and Bartlett's Test		
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		0.940
Bartlett's Test of Sphericity	Approx. Chi-Square	11.151
	Df	990
	P	0.000

In determining the number of factors, we used the Kaiser-Guttman rule, according to which factors with an eigenvalue greater than 1 should be retained. According to the obtained data, it is justified to retain seven factors as they meet the condition that the eigenvalue is greater than 1. At the same time, these seven factors explain a total of 69.35% of the variance. In terms of share, the first main component explains 41.92% of the total variance, the second main component explains 6.42% of the variance, while the third main component explains 5.25% of the variance. The fourth component explains 4.11% of the variance, while the fifth, sixth and seventh main component explain 3.53%, 2.95%, 2.65% of the variance, respectively.

As the Kaiser rule in some cases retains too many factors, we also checked the factor structure with a *scree plot* (*Annex 2*). According to the *scree plot* of the eigenvalues, the main turning point is after the first factor, which is understandable, considering that this component explains by far the largest percentage of variance. However, after the seventh component, the slope of the curve becomes even milder, so according to this criterion too, the seven main

components are retained. Thus, both according to the Kaiser-Guttman rule and according to the *scree plot* representation, we can single out seven factors.

With Varimax rotation, we rotated 42 items that examine the quality of training implementation. Seven main components have already been identified, and by Varimax rotation, the items were distributed in each factor separately as follows (*Annex 4*):

- the first factor: *Teachers and instructors* (12 item–) - items refer to the expertise, andragogic–l - didactic competence of the teaching staff, attitude of teachers and instructors towards participants (openness in communication, respect of participants' experience and expectations, etc.), teachers' availability during classes, availability of textbooks and manuals during classes, etc.;
- the second factor: *Spatial conditions and health protection* (3 item–) - items refer to hygienic, microclimatic and safety and health protection conditions;
- the third factor: *Equipment and tools* (5 item–) - items refer to the training site standards, equipment, machines, tools and production materials used in the training;
- the fourth factor: *Training process* (7 item–) - items refer to the duration as well as the manner of training, i.e., the process of acquiring knowledge, skills and competencies required to perform a job;
- the fifth factor: *Organization of training* (7 item–) - items refer to the organization and implementation of vocational training/teaching;
- the sixth factor: *Training location* (2 item–) - items refer to the place where the facility is located in which the training is realized and the environment around the facility;
- the seventh factor: *Training result* (6 item–) - items refer to participants' perception of acquired knowledge, skills and competencies, their recognizability and demand for them in the labour market and participants' motivation to perform the jobs for which they were trained.

The subscale for collecting data on the quality of career guidance and counselling services is based on a similar subscale used in the literature and contains 3 items. Before the final result processing, we proceeded to identify the basic metric characteristics of the instrument (reliability, discrimination and validity). All correlations between items are moderately high, which indicates a significant internal consistency of the subscale, and thus its reliability. As for all items, the Cronbach's alpha coefficient is greater than 0.7 and amounts to 0.795, and we can conclude that the reliability of the subscale is very high. The discriminant power efficiency of the scale was assessed via the *Point-biserial Correlation*. All obtained coefficients are above the value of 0.3, which indicates good discriminant power efficiency of the scale. We used factor analysis to check the dimensionality and validity of the questionnaire.

We used Varimax rotation as a rotation method. As the *Kaiser-Meyer-Olkin Measure of Sampling Adequacy* is greater than 0.6 and amounts to 0.976, and the value of *Bartlett's Test of Sphericity* is statistically significant (p=0.000), the factor analysis is warranted.

Table 5 Kaiser-Meyer-Olkin and Bartlett's Test

KMO and Bartlett's Test		
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		0.976
Bartlett's Test of Sphericity	Approx. Chi-Square	639.492
	df	3
	Sig.	0.000

When determining the number of factors, we used the Kaiser-Guttman rule, according to which factors with an eigenvalue greater than 1 should be retained. According to the obtained data, one factor should be retained, as it meets the condition that the eigenvalue is greater than 1. This factor explains 72,41% of the variance in total.

According to the *scree plot* (*Annex 3*) of the eigenvalues, the main turning point is after the first factor, which is in accordance with the Kaiser-Guttman rule. Based on the results of both criteria, we will retain one factor.

With Varimax rotation we rotated 3 items that examine the career guidance and counselling services. All three items highly saturate one factor *Career guidance and counselling* (3 items) (*Annex –*) - the items describe the career guidance and counselling services which envisage assistance in choosing a vocational training, providing information on the characteristics of the jobs for which a training is organized, as well as upon completion of the training, informing about job vacancies that match their competencies acquired during training.

Questionnaires for determining the characteristics of short-term vocational training, employment status, the characteristics of the respondents, consist of a total of 12 open-ended and closed-ended questions.

Statistical analysis

For the statistical analysis we used the *Statistical Package for the Social Sciences* (SPSS) version 25.0. After concluding the empirical research, a number of relevant statistical procedures was applied in data processing. To describe the parameters of importance depending on their nature, frequencies, percentages, and the sample mean value with the sample standard deviation were used. The probability level was set at $p<0.05$. To test the differences between

the parameters we used the one-way analysis of variance (ANOVA) in those cases where the differences between the three modalities of the categorical variable were examined, with respect to the numerical variable value. For the differences between two modalities of categorical variable, the *t test* for large independent samples was used. The relation between two categorical variables was tested by the chi-squared test. The *Likelihood Ratio* test was used in cases where the number of respondents in the cells of the cross-tabulation table was less than 5. The correlation of two variables was tested with the Pearson correlation coefficient.

Factor analysis with Varimax rotation was used to determine the factors, i.e., to determine the dimensionality of the questionnaire, and the Cronbach's alpha coefficient to test the reliability of the Questionnaire.

RESEARCH RESULTS

THE QUALITY OF SHORT-TERM VOCATIONAL TRAINING

In this research, we analyse the quality of short-term vocational training by looking at the quality of implementation of short-term vocational training, the quality of career guidance and counselling services, the characteristics of short-term vocational training and the characteristics of vocational training participants.

1. Quality of implementation of short-term vocational training

Following the example of the SERVPERF scale and for the purpose of this research, the quality of short-term vocational trainings implementation is based on the participants' perception of the implementation and outcome quality of vocational training, so the arithmetic mean "M" may range from 1 to 5, with a higher score indicating better quality of vocational training implementation. Three questions were negative and were scored reversibly (1=5, 2=4, 3=3, 4=2, 5=1).

Research results show a high score on the composite score *Quality of implementation of short-term vocational training* (M=4.17±0.52), so we can say that the participants perceive implementation of vocational training as being of high quality. However, it is noticeable that quality assessments vary with the analysed quality dimensions of vocational training implementation. The lowest perceived quality of implementation of vocational training was recorded in the dimension *Training process* (M=3.51±0.83) and the dimension *Training result* (M=3.62±0.63). The highest perceived quality of implementation of vocational training was recorded in the dimension *Training location* (M=4.68±0.50). The dimensions *Teachers and instructors* (M=4.45±0.57), *Spatial conditions and health protection* (M=4.65±0.58), *Equipment and tools* (M=4.02±0.75) and *Organization of training* (M=4.21±0.66) according to the average score on the subscales are between these values. The scores obtained from the participants indicate that improving the quality of implementation of vocational training, especially the training process itself (predominantly in the real work environment with an employer), is necessary, having in mind the importance of this dimension on the outcomes of vocational training, i.e., on achieving the purpose of vocational training as an ALMP aimed at improving the labour market status of an individual through training.

Chart 5 Quality of implementation of short-term vocational training – by quality dimension

A more precise picture of the assessment of the quality of implementation of vocational training was obtained by analysing the participants' assessments at the level of individual items of a subscale. Observed at the level of individual items, the two items for which the participants showed the lowest level of agreement on the entire subscale refer to the implementation of practical lessons with an employer – "*The practical training was tailored more to the current business needs of the employer providing the training, rather than to the presented training plan* (R) (M=2.93) and the applicability of the acquired knowledge in the local labour market *Knowledge and skills you have acquired during the training are narrowly specific and not very applicable when it comes to working for other employers in the local labour market* (R) (M=2.93) (These two questions were asked negatively and were scored reversibly (1=5, 2=4, 3=3, 4=2, 5=1)). The obtained results indicate that with employers where practical lessons were realized the participants were to some extent treated as "workers", and that they were to a significant extent trained for the activities that the employer's business process required at the time. This resulted in training participants being trained only for a limited number of competencies compared to those planned by the training programme. This practice is not new and, as such, has been recognized in numerous studies of work-based learning (European Training Foundation, 2013, European Commission, 2013), and could partly explain why participants perceive the acquired knowledge and skills as not being very applicable to working for other employers in the local labour market, and their employment opportunities as limited upon completion of training. In addition to the problem related to the capacity of selected employers to realize practical training (perhaps caused by COVID-19), the participants' assessment that the acquired knowledge is not very applicable to other employers may also raise concerns about the compliance of training plans and programmes with local labour market needs and the need

to align internal training standards with National Qualifications Standards from which they derive.

When it comes to the *Training Process* (M=3.51±0.83) as a dimension of quality of implementation of vocational training, it appears that 5 out of 7 analysed variables were evaluated with an average score. The trainees expressed the lowest degree of agreement within this quality dimension with regard to the statement that *The total number of training hours was sufficient for you to receive good quality training for a new job* (M=3.14). This indicates that the number of hours of vocational training ranging from 120 to 540 hours, which is how long the training included in the sample lasted, was inadequate for the participants in the sample to some degree, which is in line with the results of previous research (Fabian, 2018). The foregoing, combined with the participants' average assessment of the statement "*Immediately upon completion of training you had sufficient knowledge and skills to work independently in the job you were trained for"* (M=3.43) leads us to conclude that the number of hours of vocational training was insufficient to reach the required competence level for their independent work. At the same time, the basic role of vocational training as an ALMP measure, which is reflected in improving the labour market status of individuals by increasing their competencies, is called into question. However, it is important to point out that the number of hours of vocational training conducted according to internal employment service training standards is to some extent aligned with regulations on the education system, which again indicates the need to consider the broader framework of the training system, the essence and purpose of vocational training within different policies (education, employment...) and the need for a possible redefinition of regulations which define the approximate training duration.

The issue of whether the number of hours of vocational training is optimal or not cannot be studied independently of the quality of the training process, primarily practical training, as practical training in a real work environment with employers accounts for 60% of the total number of hours of vocational training. Observed in this context, it is important to note that participants assessed the quality of implementation of practical training with employers with an average score. Scores indicate that during the training participants did not have enough opportunities to learn a–d practice - "*During practical training you had enough opportunities to learn and practice working in new jobs in order to become completely independent in your work"* (M=3.21); that they acquired job-related competencies only to a certain extent by practicing, i.e. performing these jobs in a real work environment with an employer – "*You learned the new craft by practical work on the machines, and not by watching someone else do it"* (M=3.52); that to a certain extent during the training the participants were treated as "employees", and that they were to a significant extent trained for the activities that the

employer's business process required at the time – "*Throughout the practical training you were learning the new craft and you were not treated as additional labour force by 'he employer's staff* (M=3.37), and that the teaching staff was only to a certain extent focused on revealing the "tricks of the trade" to participants – "*Teachers and instructors also revealed some tricks of the trade in the job in terms of how to do something better, or with less effort"* (M=3.40). The scores obtained from participants indicate the need to improve the training process quality, and above all the quality of practical training in a real work environment with an employer, considering the importance of practical training on the outcomes of vocational training, i.e., on improving the competencies of the workforce and its labour market status. It is important to point out that the tender documentation for the selection of vocational training providers defines as a standard the obligation of the training provider to, if the training is realized in a real work environment, i.e. in a company or sole proprietorship whose activity is related to the subject of training), clearly and precisely define the terms and conditions of the use of facilities, materials and technical aids, as well as the roles, tasks and duties of the employer, to ensure that the ongoing business workflow of the employer does not jeopardize the training process, and vice versa – so that the training implementation does not jeopardize the ongoing business workflow of the employer. The participants' assessments indicate that the defined standard is not fully met, which indicates that the mere definition of standards for the selection of training providers is not a sufficient mechanism for ensuring the quality of implementation of vocational training and opens the space for defining standards related to monitoring the implementation of vocational training. This is especially true when you consider how important work-based training is for achieving the ultimate goal and purpose of vocational training and developing participants' competencies. Also, one of the quality assurance mechanisms related to the teaching process is to rely on examples of good practice from the dual education model and define standards and conditions for involving employers in the training process and building their capacity for taking an active role in education and employment.

In line with the average quality assessment of the implementation of the training process, the vocational training participants rated the *Vocational training results* with an average score in terms of the acquired knowledge, skills and competencies, their recognizability and demand for them in the labour market. Observed at the level of individual items, the participants gave the lowest score to the possibility of applying the acquired knowledge with other employers - "*Knowledge and skills acquired during the training are narrowly specific and not very applicable when it comes to working for other employers in the local labour market"* (R) (M=2.93). Participants' assessments suggest that practical training with employers largely failed to provide the diversity of experience required, i.e., that on-the-job learning was narrowly

specified and linked to a specific workplace with an employer, which reduced the possibility of transfer and thus the possibility of employment when it comes to related jobs with other employers. On the other hand, the participants' assessment that the acquired knowledge is not very applicable to other employers may indicate the need for harmonizing training plans and programmes with the local labour market requirements, and for aligning internal training standards with the National Qualifications Standards from which they are derived. At the same time, participants rated their independence to perform a new job immediately after completion of training as average – "*Immediately upon completion of training you had sufficient knowledge and skills to work independently in the job you were trained for"* (M=3.43). The participants' assessments indicate that vocational training did not fulfil its mission completely and did not equip them with the required level of knowledge, skills and competencies to ensure their independence, and thus confidence in their work performance and job search. As already mentioned, potential reasons for such an assessment can be found in the insufficient capacity of employers who conducted practical training to provide participants with a diverse work experience necessary to acquire all vocational competencies envisaged in the training programme, and within the planned number of hours of vocational training, which participants assessed as unsuitable for independent work. The vocational training participants expressed only a slightly greater degree of agreement with the statements "*Knowledge and skills acquired through training are in demand in the market and lead to work"* (M=3.58) and *"All the effort you put into attending the training and learning paid off in the end because now you "have trade skills"* (M=3.58), which indicates that participants perceive that the vocational training was not fully "cost-effective", both in terms of acquired knowledge, skills and competencies, i.e. "having trade skills", and in terms of local labour market needs, which is understandable if we consider that the participants were unemployed and expected to improve their competencies and consequently their labour market status through vocational training.

It is interesting that participants assessed the recognition of the certificates they received upon completion of vocational training relatively well - "*At the end of the training, you received a certificate recognized by employers"* (M=3.84) even though the certificates were internal and not (public) documents since the training was not conducted by APAE. These findings may lead to the conclusion that individuals and employers in the local labour market evaluate the internal certificate of professional competence and a (public) document issued by an APAE. This, coupled with the fact that the conditions and selection criteria give training providers with APAE status only a symbolic comparative advantage over other training providers (2 weights), from the perspective of the education system, there is clearly a need for sensitizing individuals and social partners to better understanding the comparative advantage

of public documents (compared to an internal confirmation) as a quality assurance guarantee of the education process outcomes and as an instrument facilitating individual horizontal and vertical mobility in the labour market, as well as mobility in the education system. It is noteworthy that, despite the average scores o of the quality dimension *Training result*, participants are highly motivated to perform the jobs for which they were trained - "*After the training you want to find work in a job for which you were trained"* (M=4.38), which implies that the employment service selected individuals motivated to work in the jobs for which they were trained.

In contrast to the previously described quality dimensions of implementation of vocational training, participants gave a high score to the quality of vocational training *Location* (M=4.68 ±0.50) and the quality of *Spatial Conditions and Health Protection* (M =4.65±0.58) during vocational training. According to the participants, "*The training was held at a location with good transport connections"* (M=4.67), and "*The training facilities were located in pleasant surroundings"* (M=4.70). Also, "*Hygienic conditions were good"* (M=4.68), "*Lighting and indoor climate were good (ventilation, heating, air conditioning, etc.)"* (M=4.67), and participants "*Were provided with necessary protective equipment and tools (suits, gloves, etc.)"* (M=4.65). The participants' assessments indicate that vocational training was realized in line with all hygiene and health protection standards to ensure the safety of participants during training and work.

When it comes to the dimension *Teachers and instructors* (M=4.45±0.57), the obtained values suggest that the quality of work of teachers and instructors was given a high score, and based on how important teaching staff is for the quality of the teaching process, we can say that the quality of teaching staff had a compensatory role in relation to other analysed quality dimensions, so the overall quality of vocational training is largely determined by the quality provided by teachers and instructors. According to the participants, teachers and instructors nurtured an atmosphere of trust, understanding, openness in communication, respecting the expectations and previous experience of the participants "*In communication with teachers and instructors you felt respected and treated as an equal"* (M=4.88), "*You could always ask a question, make a suggestion, confide a problem etc. with the lecturers and instructor, without thinking about the consequences"* (M=4.81), *"Teachers and instructors had understanding for your life and family situation"* (M=4.80), *"Teachers and instructors were aware of your expectations from the training"* (M=4.61), *"Teachers and instructors encouraged you to talk about your work and life experience during the training"* (M=4.31); teachers and instructors were focused on participants and their needs during the training *"Teachers and instructors gave instructions especially for you if something was not clear to you"* (M=4.65), they were experts in

their field, and had relevant competencies to work with adults "*Instructors were experts in their field and easily gave you explanations and instructions for performing the jobs for which you were trained"* (M=4.68), "*In addition to practical work, you also benefited from the information received in lectures"* (M=4.43), they used textbooks and manuals during the training "*During classes, textbooks/manuals were always available for use"* (M=4.35) and encouraged activity and self-assessment of students "*Instructors gave you an opportunity to self-assess your performance of a work operation, i.e. evaluate your progress in learning on the job"* (M=4.55). It is interesting that participants rated the availability of instructors during the class with a high score "*Instructors were always available when you needed them"* (M=4.11), while at the same time their scores indicate that they were predominantly busy doing their regular job for the employer "*Instructors helped you during practical training sessions, but they were predominantly busy doing their regular work for the employer" (R)* (M=3.19). Participants' assessments suggest that during practical training in a real work environment with an employer the instructors were not fully available to the participants, but that they were predominantly occupied with their job and duties as company employees, i.e., that they dedicated only part of their working hours during vocational training to the participants. This indicates the need to define additional quality standards when it comes to teaching staff, to ensure the full availability of instructors to participants during training.

The quality dimension *Equipment and tools* was given a high score (M=4.02±0.75). Research findings indicate the availability of modern equipment and tools necessary for training "*Classrooms had modern space and equipment (seats, boards, projectors, etc.)"* (M=4.40), "*Workshops had modern machines and tools"* (M=4.08). The findings indicate that local employers put modern resources in the service of workforce training and that this is the availability of modern resources is the comparative advantage of work-based training over most school-based training programmes in the education system. In the following period work-based training should be further strengthened and put in the service of the education system, similar to the model of dual education. When it comes to the size of the space, i.e., the workshops where practical training is conducted, participants' assessments suggest that the space size was appropriate – "*Workshops were large and spacious so that there was enough space for all participants"* (M=4.08), but that workshops largely lacked a separate place for participants to learn and practice their new skills - "*In the workshop there was a "workspace" where only participants were trained (hairdressing chair, etc.)"* (M=3.70). Participants' assessments suggest that the training was implemented in a real work environment that was not adjusted to the training implementation, i.e., that it was more of a work environment with equipment and tools used by employees, without a separate space for vocational training

participants. At the same time, participants gave lower score to the availability of various tools and production materials during training – "*You had all the tools and production materials necessary for the training"* (M=3.81), which confirms that training programmes with employers in a real work environment lacked some of the conditions necessary for trainees to develop new competencies. In general, we can conclude that the participants' quality assessments suggest that employers have modern equipment and tools, but that they have not yet profiled themselves as educational providers in the sense that they plan to permanently participate in staff training, in addition to their core business. In that sense, there are no special spatial conditions nor necessary production materials set aside to cater solely to the trainees' needs. The involvement of employers in the training process is more part of the ongoing contractual relation with the training provider who has concluded a contract with the employment service on the implementation of a vocational training. Considering the importance of a real work environment for the development of competencies, the capacities of employers to actively participate in the training system should be strengthened further in the forthcoming period, by applying good practices from the dual education model. It is important to point out that a special criterion for the selection of vocational training providers stated in the tender documentation was the obligation of the training provider to determine the number of participants in one educational group that is adequate to: the learning space, the number of learning places and learning space equipment - to guarantee that each participant has his/her own learning place, equipped in line with the training programme requirements. At the same time, according to another criteria training providers were required to provide an appropriate number of tool sets, materials and/or equipment for the smooth implementation of the training (minimum 1 set of tools, supplies and/or equipment for 2 participants) for vocational training that require the use of appropriate tools, supplies and/or equipment on a daily basis. The participants' assessments indicate that the defined standards were not fully met, and that merely setting standards for the selection of training providers is insufficient as a mechanism for a quality assurance of vocational training implementation, hence there is a need to define standards for monitoring the implementation of vocational training to assure the quality in all vocational training phases, the quality of outcomes in terms of knowledge, skills and competencies of participants, and consequently the labour market status of the individual.

The quality dimension *Organization of training* was also rated with a high score (M=4.21±0.66). Despite the fact that a certain number of training programmes was realized only partially due to the COVID-19 related state of emergency , the participants gave a high score to the training timetable "*The classes were held at an appropriate time during the day"* (M=4.56), schedule of classes*, "The classes were held according to the schedule, without sudden*

interruptions or delays" (M=4.44), daily workload during the training *"The number of training hours per day was conducive to good quality training"* (M=4.45), the clarity of lectures and instructions *"The lectures were clear and understandable"* (M=4.52), "*The instructions during practical work were clear and understandable"* (M=4.55). Participants gave a slightly lower score to the adequacy of the test of participants' knowledge, skills and competencies "*After each verification of readiness for work, you had an insight into how much you know and what you should improve"* (M=4.02), which indicates the need to improve teachers' and instructors' competencies for working with adults. Within the analysed quality dimension, participants gave the lowest score to the (non) adherence to the training plan agreed at the beginning of the training – "*Practical training was implemented according to the current business needs of the employer providing the training, rather than according to the presented training plan" (R)* (M=2.939). The results indicate that, because of the economic pressure on the business of employers-practical training providers (perhaps due to COVID-19), participants were to some extent treated as "employees" rather than trainees, and that they were predominantly trained for the jobs that the employer needed at the time. This means that participants were trained only for a limited number of specific activities and tasks compared to those envisaged by the training plan and programme. However, the question is whether the selected employers had the capacity to implement the entire training standards, i.e., all vocational competencies according to the training plan, but trained participants for only one part of the jobs/competencies, for economic (or other) reasons, or whether the selected employers did not have the capacity to implement the entire training standard, so they trained participants in accordance with their maximum capacity. Such experiences have also been observed in other countries that promote learning through work with employers in a real work environment (European Training Foundation, 2013; European Commission, 2013). Some of the mechanisms for quality assurance of training with employers, often cited in literature, are the standardization of conditions for the inclusion of employers in the training system, the selection of employers with real capacity for implementing vocational training, and the development of a training system that allows rotation of participants with a larger number of employers in order for them to develop all competencies envisaged in a vocational training programme.

1.1 Quality of implementation of short-term vocational training by type of vocational training programme

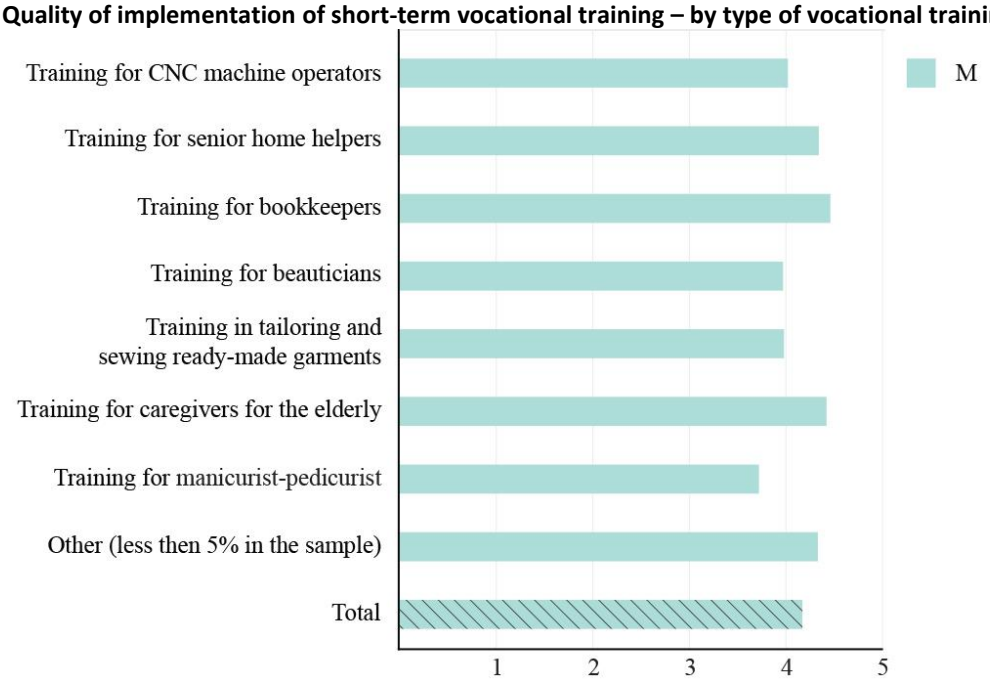
For the purpose of a more detailed quality assessment of vocational training, further analysis refers to the quality assessment of each individual vocational training, since the sample includes vocational training programmes in different areas of work. The analysis included vocational training programmes represented with at least 5% of respondents compared to the total number of respondents in the sample. Vocational training programmes represented with less than 5% of respondents in the sample were analysed within the category *Other*.

The sample included 17 different vocational training programmes implemented by different service providers in a large number of different locations in Serbia, each with different capacities in terms of staff, space, equipment, teaching aids, and different capacities of employers providing practical training with the same or similar training plans and programmes. Because of this, it was not possible to analyse the quality of each individual vocational training by taking into account all these indicators (due to the large number of relevant indicators and the insufficient number of respondents for each of the indicators). Since the NES internal vocational training standards define the number of training hours (vocational training has the same duration regardless of the aforementioned indicators), the list of vocational competencies acquired in a specific vocational training programme and mandatory modules of a learning unit (vocational training has the same outcomes regardless of the aforementioned indicators), and since the implementation of certain types of vocational training programmes requires teaching staff with specific profiles, as well as specific tools, equipment and teaching aids, in our research we opted to analyse the quality of implementation of each individual vocational training programme through the prism of the type of individual vocational training. Nevertheless, the NES recommendation for improving the system of monitoring and evaluation of vocational training in the forthcoming period, is to include the total population participating in vocational training programmes in this process and evaluate the quality of vocational training considering all of the aforementioned indicators, including training service providers.

At the level of each individual vocational training, we have observed that the *Quality of implementation of short-term vocational training - composite score* varies, i.e., that it differs depending on the type of vocational training. The best assessment of the overall quality of vocational training was given by the participants in the vocational training for bookkeepers (M=-4.46±0.34), while the worst assessment of the overall quality was given by those who attended the vocational training for manicurist and pedicurist (M=-3.72±0.63). The rest of the analysed vocational training programme quality assessments are in between these values, as follows: Training for caregivers for the elderly (M=-4.42±0.38), Training for senior home helpers (M=-4.34±0.34), Other (less than 5% in the sample) (M=4.33±0.53), Training for CNC machine

operators (M=-4.02±0.50), Training in tailoring and sewing ready-made garments - basic level (M=3.98±0.45), Training for beauticians (M=-3.97±0.67).

Chart 6 Quality of implementation of short-term vocational training – by type of vocational training

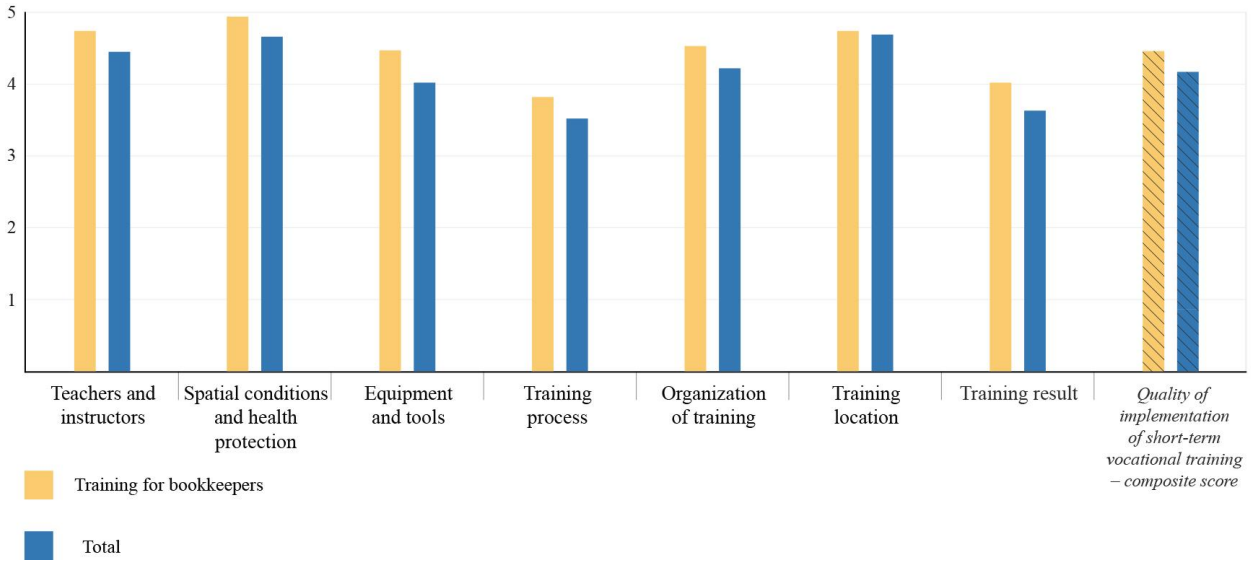


It is interesting that the *Training Process* and *Training Result quality dimension* received the lowest rating by participants of all vocational training programmes. This indicates systemic challenges in improving the process of acquiring knowledge, skills and competencies required to work in a specific job (especially in a real work environment with an employer), and the necessity to optimize the vocational training duration to ensure that participants acquire the competencies that will allow them to work independently in the new job they were trained for, immediately upon completion of vocational training, and thus improve their labour market status.

Training for bookkeepers

According to the trainees' assessments, the *Training for bookkeepers* (M=4.46±0.34) was the most highly rated training programme.

Chart 7 Quality of the training for bookkeepers – by quality dimension



The training was conducted in a good location (M=4.74), spatial conditions and health protection were characterized by good hygiene, ventilation, heating, air conditioning and the use of protective equipment during the training (M=4.94), teachers and instructors nurtured an atmosphere of trust, understanding, openness in communication, respected participants' experience and expectations, were accessible, focused on participants and their needs, used textbooks during classes (M=4.74), the organization of training was characterized by clear and understandable instructions, there was no loss or delay of classes, with optimal daily classload and timetable (M=4.53), equipment and tools were modern and the necessary training materials were provided for all participants (M=4.47). Also, the participants assessed training results highly, in terms of the labour market demand for their skills and the motivation of trainees to work in jobs for which they had been trained (M=4.02).

A slightly lower quality assessment was given to the training process (M=3.82)

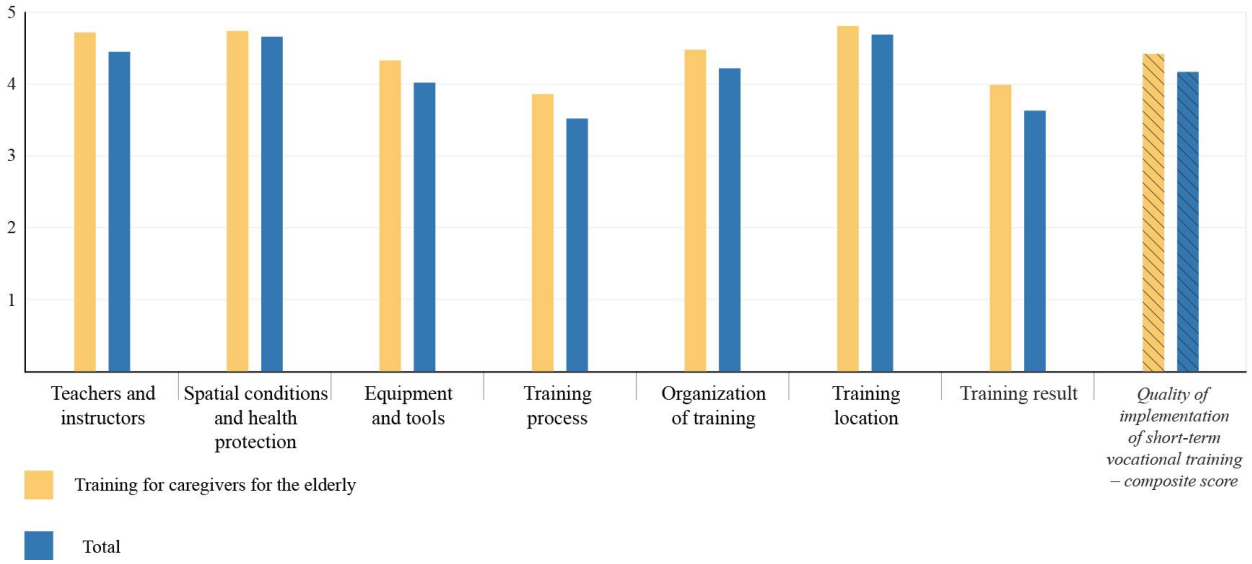
However, although well-rated, a somewhat more precise picture of the implementation quality of the *Training for bookkeepers* can be obtained by analysing the participants' assessments at the level of the individual items. Thus, the participants' assessments indicate that the total number of training hours was not sufficient for the participants to be well trained to perform the new jobs (M=3.18), that the knowledge and skills acquired during the training were narrowly specific and not very applicable when it comes to working for other employers in the local labour market (R) (M=3.18), that during practical training they did not have enough opportunities to learn and practice working in new jobs in order to become fully independent in

their work (M=3.53), and that immediately upon completion of training they did not have enough knowledge and skills to work independently in the job they were trained for (M=3.59).

Training for caregivers for the elderly

The overall quality of the *Training for caregivers for the elderly* was given a high score (M=4.42).

Chart 8 Quality of the Training for caregivers for the elderly – by quality dimension



Almost all analysed quality dimensions were given a high score. The training was conducted in a good location (M=4.81), spatial conditions and health protection were characterized by good hygiene, ventilation, heating, air conditioning and the use of protective equipment during the training (M=4.74), teachers and instructors nurtured an atmosphere of trust, understanding, openness in communication, respected participants' experience and expectations, were accessible, focused on participants and their needs, used textbooks during classes (M=4.72), the organization of training was characterized by clear and understandable instructions, there was no loss or delay of classes, with optimal daily classload and timetable (M=4.48), equipment and tools were modern and the necessary training materials were provided for all participants (M=4.33).

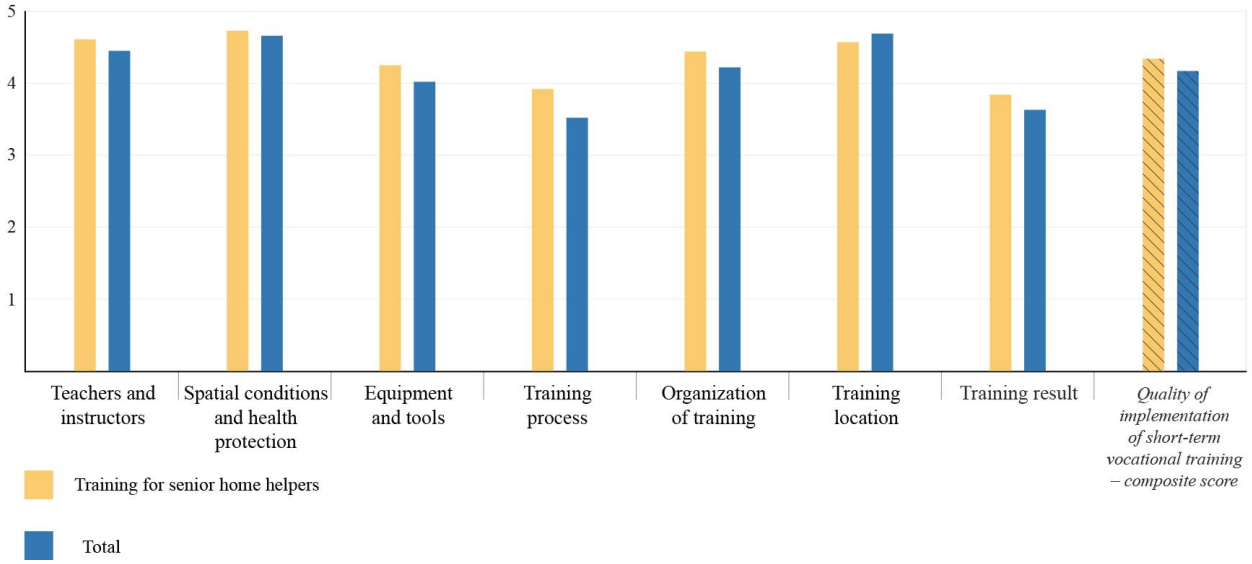
Slightly lower quality assessments were given to the training process itself (M=3.86) and the training results (M=3.99).

However, although well-assessed, as in the previous case, a more precise picture of the implementation quality of the *Training for caregivers for the elderly* can be obtained if we analyse the participants' assessments at the level of the individual items. Thus, the participants' assessments indicate that the knowledge and skills acquired in the training were narrowly specific and not very applicable when it comes to working for other employers in the local labour market (R) (M=3.33), that during practical training they did not have enough opportunities to learn and practice their new job skills in order to become fully independent in their work (M=3.22), and that immediately upon completion of training they did not have enough knowledge and skills to work independently in the job they were trained for (M=3.56). Compared to the rest of the analysed vocational training programmes, the total number of vocational training hours was the best rated segment in the case of the *Training for caregivers for the elderly,* with an average score of M=3.83, However, having in mind the importance the length of vocational training has on the training process outcomes, and consequently on the labour market status of a participant upon completing training, we can say that there is significant space for increasing the number of training hours and improving this training in order for participants to get high quality training for a new job.

Training for senior home helpers

The overall quality of the *Training for senior home helpers* was given a high score (M=4.34).

Chart 9 Quality of the training for senior home helpers – by quality dimensions



Here, too, almost all analysed quality dimensions were given a high score. The training was conducted in a good location (M=4.57), spatial conditions and health protection were characterized by good hygiene, ventilation, heating, air conditioning and the use of protective equipment during the training (M=4.73), teachers and instructors nurtured an atmosphere of trust, understanding, openness in communication, respected participants' experience and expectations, were accessible, focused on participants and their needs, used textbooks in class (M=4.61), the organization of training was characterized by clear and understandable instructions, there was no loss or delay of classes, with an optimal daily classload and timetable (M=4.44), equipment, and tools were modern and the necessary training materials were provided for all participants (M=4.25).

Slightly lower quality assessments were given to the training process itself (M=3.92) and the training results (M=3.84).

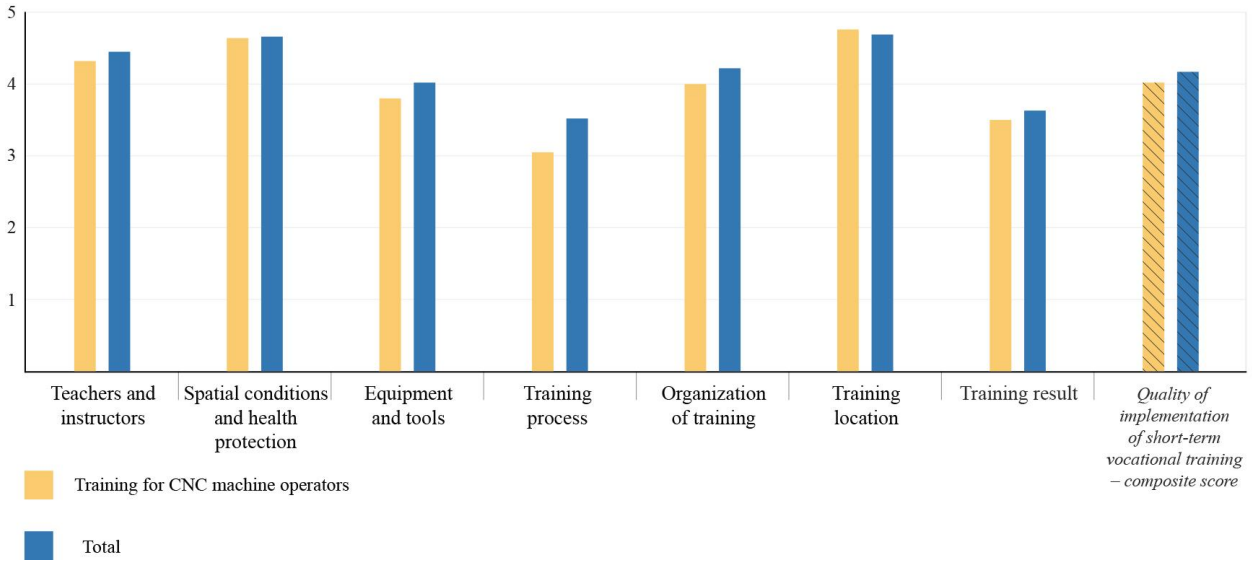
If we analyse the participants' assessments at the level of the individual items, we can see they indicate that the practical training was realized according to the business needs of the employer providing the training, rather than according to the presented training plan (R) (M=3.33), the skills acquired during the training were narrowly specific and not very applicable when it comes to working for other employers in the local labour market (R) (M=3.47), the total number of training hours was not enough to train participants to work in a new job (M=3.51), that at the end of the training they did not receive a certificate recognized by employers

(M=3.63) and that instructors were predominantly busy performing their regular work for the employer (R) (M=3.65).

Training for CNC machine operators

This, too, is a training with a high overall quality score (M=4.02).

Chart 10 - Quality of the training for CNC machine operators – by quality dimensions



Most of the analysed quality dimensions were highly rated. The training was conducted in a good location (M=4.76), spatial conditions and health protection were characterized by good hygiene, ventilation, heating, air conditioning and the use of protective equipment during the training (M=4.64), teachers and instructors nurtured an atmosphere of trust, understanding, openness in communication, respected participants' experience and expectations, were accessible, focused on participants and their needs, used textbooks during classes (M=4.32), the organization of training was characterized by clear and understandable instructions, there was no loss or delay of classes, with optimal daily classload and timetable (M=4.00).

Lower quality assessments were given to the training process itself (M=3.05), training results (M=3.50) and equipment and tools used in the training (M=3.80).

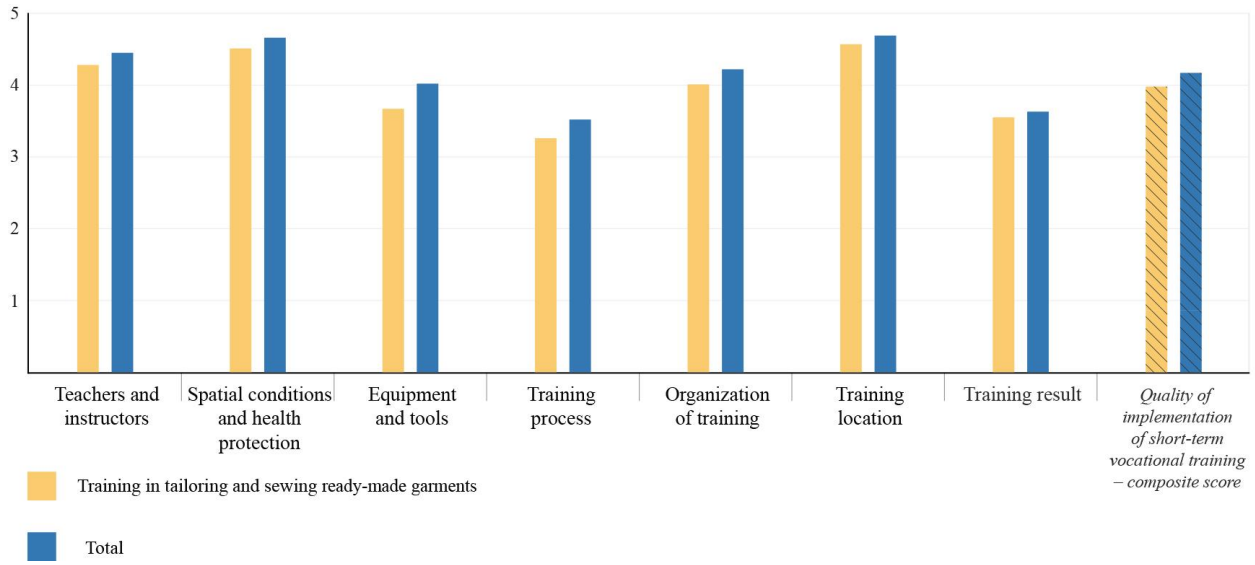
The participants' assessments by individual item show that instructors were predominantly busy performing their regular work for the employer (R) (M=2.88), that there

was no “workspace” in the workshop especially designated for training participants (hairdressing chair, etc.) (M=3.16), that to a large extent they were not learning the new craft through practical work on the machines (M=2.86), that teachers and instructors did not reveal some "tricks" of the trade on how to do something better, or with less effort (M=2.90), that in the course of practical training the employer’s staff did not treat them to a large extent as additional labour force (M=2.75), that the total number of training hours was not sufficient to properly train the participants to work in the new jobs for which they were trained (M=2.88), that practical training was realized according to the current business needs of the employer providing the training, rather than according to the presented training plan(R) (M=2.35), that knowledge and skills acquired during the training were narrowly specific and not very applicable to working for other employers in the local labour market (R) (M=3.18).

Training in tailoring and sewing – basic level

The total quality of the *Training in tailoring and sewing ready-made garments – basic level* was given an average score (M=3.98*)*.

Chart 11 Quality of the Training in tailoring and sewing – basic level – by quality dimensions



The training was conducted in a good location (M=4.57), spatial conditions and health protection were characterized by good hygiene, ventilation, heating, air conditioning and the use of protective equipment during the training (M=4.51), teachers and instructors nurtured an atmosphere of trust, understanding, openness in communication, respected participants’

experience and expectations, were accessible, focused on participants and their needs, used textbooks during classes (M=4.28), the organization of training was characterized by clear and understandable instructions, there was no loss or delay of classes, with the optimal daily classload and the timetable (M=4.01).

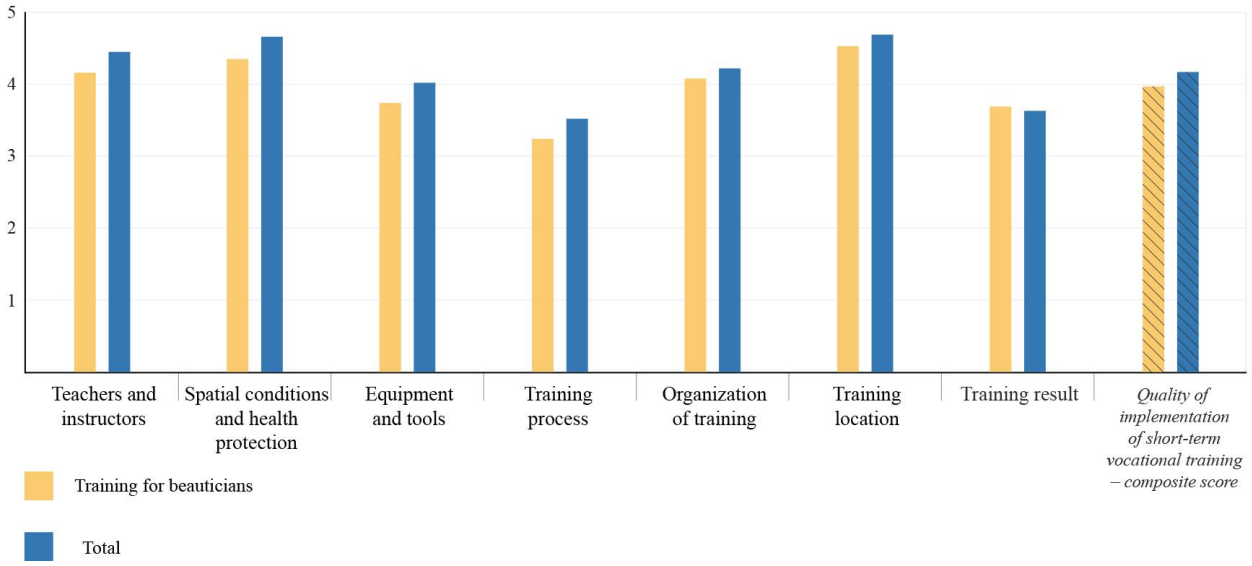
Lower quality assessments were given to the training process itself (M=3.26), training results (M=3.55) and equipment and tools used in training (M=3.67).

When we look at individual items, the participants' assessments show that the instructors were predominantly busy doing their regular work for the employer (R) (M=2.79), that to a large extent they did not learn the new craft through practical work on the machines (M=3.39), that teachers and instructors did not reveal any tricks of the trade to them on how to do something better, or with less effort (M=3.04), that the employer's staff treated them to a large extent as additional labour force (M=2.98), that the total number of training hours was not sufficient to train participants for the new job (M=2.74), that in the course of practical training they did not have sufficient opportunities to learn and practice working in the new job in order to become completely independent in their work (M=2.96) that practical training was realized according to the current business needs of the employer providing the training, rather than according to the presented training plan (R) (M=2.46), that immediately upon completion of training, to a large extent, they did not have sufficient knowledge and skills to be able to work independently in the job they were trained for (M=3.16), that knowledge and skills acquired in the training were narrowly specific and not very applicable to working with other employers in the local labour market (R) (M=2.72).

Training for beauticians

The overall quality of the Training for beauticians was given an average score (M=3.97*)*.

Chart 12 Quality of the training for beauticians – basic level – by quality dimension



The training was conducted in a good location (M=4.53), spatial conditions and health protection were characterized by good hygiene, ventilation, heating, air conditioning and the use of protective equipment during the training (M=4.35), teachers and instructors nurtured an atmosphere of trust, understanding, openness in communication, respected the participants' experience and expectations, were accessible, focused on participants and their needs, used textbooks during classes (M=4.16), the organization of training was characterized by clear and understandable instructions, there was no loss or delay of classes, with the optimal daily classload and timetable (M=4.08).

Lower quality assessments were given to the training process itself (M=3.24), training results (M=3.69) and equipment and tools used in the training (M=3.74).

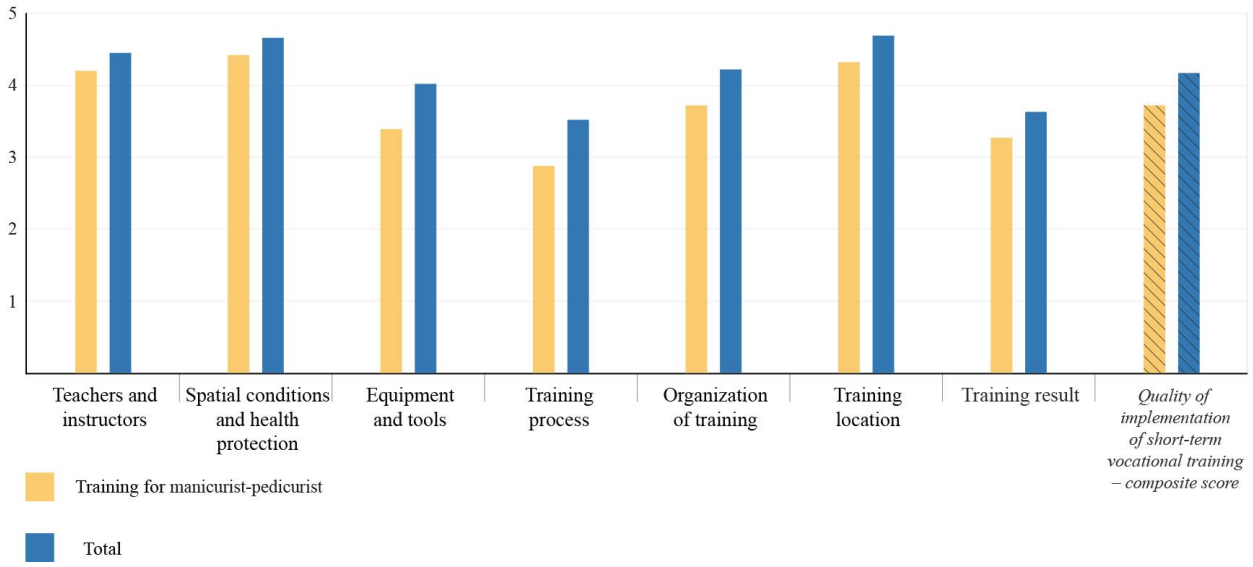
When we analyse the participants' assessments at the level of individual items, we get a clearer picture. The participants' assessments indicate that the instructors were predominantly busy performing their regular work for the employer (R) (M=2.50), that the total number of training hours was not sufficient for the participants to be trained to work in new jobs (M=2.78), that practical training was realized according to the current business needs of the employer providing the training, rather than according to the presented training plan (R) (M=2.61), that knowledge and skills acquired in the training were narrowly specific and not much applicable when it comes to working for other employers in the local labour market (R) (M=3.11), that during practical training they did not have enough opportunities to learn and practice working in new jobs in order to become completely independent in their work (M=3.11), that the employer's staff in the practical training treated them to a large extent as

additional labour force to (M=3.00), that to a large extent they did not learn the new craft through practical work on machines (M=3.06).

Training for manicurist-pedicurist

The overall quality of the *Training for manicurist-pedicurist* was given an average score (M=3.72).

Chart 13 Quality if the Training for manicurist-pedicurist– basic level– by quality dimension



The training was conducted in a good location (M=4.32), spatial conditions and health protection were characterized by good hygiene, ventilation, heating, air conditioning and the use of protective equipment during the training (M=4.42), teachers and instructors nurtured an atmosphere of trust, understanding, openness in communication, respected participants' experiences and expectations, were accessible, focused on participants and their needs, used textbooks during classes (M=4.20).

Lower quality assessments were given to the training process itself (M=2.88), training results (M=3.27), equipment and tools used in the training (M=3.39) and organization of training (M=3,72).

The participants' assessments at the level of the individual items indicate that the instructors were predominantly busy performing their regular work for the employer (R) (M=2.50), that participants largely did not have all the tools and raw materials needed for

training (M=2.4), that the total number of training hours was not sufficient for the participants to be well trained to work in a new job (M=2.60), that during practical training they did not have enough opportunities to learn and practice working in new jobs in order to become fully independent in their work (M=2.35), that practical training was realized according to the current business needs of employer providing the training, rather than according to the presented training plan (R) (M= 2.35), immediately after the training, to a large extent, they did not have enough knowledge and skills to work independently in the jobs they were trained for (M=2.45), that to a large extent they did not learn a new craft through practical work on machines (M=2.55), that in the workshop there was largely no "workspace" where only the training participants were trained (hairdressing chair, etc.) (M=2.60).

2. Quality of career guidance and counselling services

For the purposes of this research, the quality of career guidance and counselling services was assessed using the SERVPERF scale, based on the participant's perception of the quality of career guidance and counselling services, with the arithmetic mean "M" ranging from 1 to 5, with a higher score indicating better quality of this service.

An average score was obtained on the composite score *Quality of career guidance and counselling services* (M=3.29±0.74), therefore we can say that the quality of career guidance and counselling services provided by the employment service as a form of support in labour market training as an ALMP measure, was perceived as average by the participants.

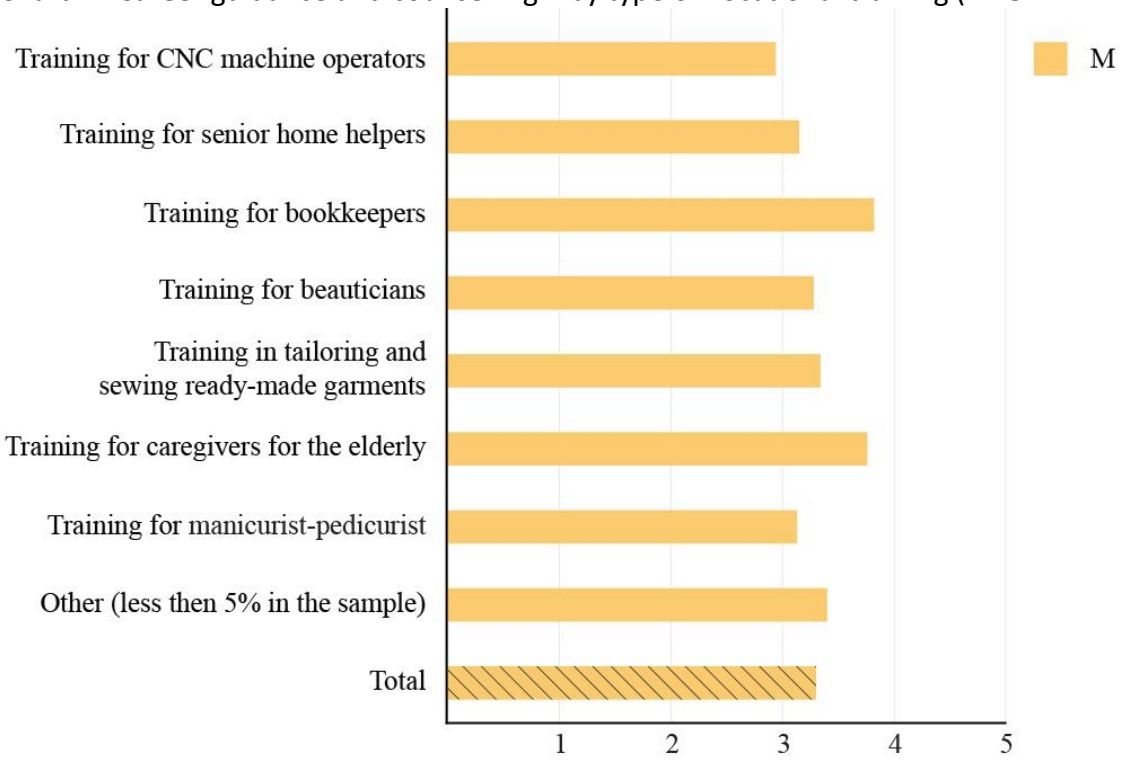
On a five-point Likert scale, participants assessed the degree of agreement with 3 items related to the quality of career guidance and counselling services.

Respondents showed the highest degree of agreement with the statement "*Before starting the training, you were informed in detail about the description of the job for which you would be trained, job risks, working hours, possible earnings, whether it is a seasonal or field job, etc*." (M=3.72), and a slightly lower degree of agreement with the statement "*NES helped you choose the training that suits your needs and the needs of employers"* (M=3.64). The statement with the lowest level of agreement was *"After the training you were informed about job vacancies that match your training"* (M=2.52).

At the level of the individual vocational training programmes, the results of the ANOVA test indicate a statistically significant difference (F=3.12, p=0.000) in the assessment of the quality of career guidance and counselling services between vocational training, so that it was

most highly rated by participants who attended the *Training for bookkeepers* (M=3.82±0.78), and worst rated by those who attended the vocational *Training for CNC machine operators* (M=2.94±0.71). The ratings of the rest of the training programmes are in between these values.

Chart 14 Career guidance and counselling – by type of vocational training (ANOVA test)



Analysing the participants' assessments, regardless of the type of vocational training, it is interesting that the item that refers to the entry of participants into the labour market after completion of training was given the lowest score. According to the participants' assessments, upon completion of vocational training, they were predominantly not informed about job vacancies, i.e., they did not get professional assistance to find a job in accordance with their new knowledge, skills and competencies. On the other hand, perhaps there was no labour market demand for these competencies, which calls into question the annual planning of training. Other possible reasons are employee overload in the employment service, i.e., a large number of unemployed persons per counsellor and, potentially, insufficiently trained staff in the employment service to provide quality career guidance and counselling services. The absence of support after leaving the ALMP measure indicates that vocational training was a one-time support to an individual for entry into the world of work.

At the same time, the items related to informing participants before the start of vocational training received a slightly better score, which in a way confirms that there is some kind of administrative approach in providing career guidance and counselling services, which is often the assessment of career guidance and counselling services provided by employment services, in both scientific and professional literature (Sultana & Watts, 2005).

3. Characteristics of short-term vocational training

The analysis of the characteristics of short-term vocational training focuses on the training duration (number of training hours) and the type of training, classified according to the field of work/occupation group to which the vocational training programmes belong and the location of practical training.

3.1 Number of hours of vocational training

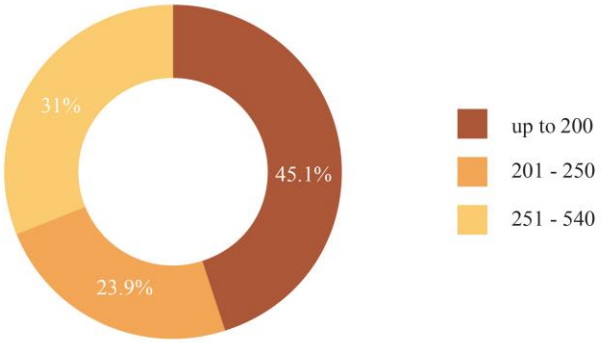
The number of vocational training hours is defined by an internal standard, i.e., by a training programme. Out of 17 different vocational training programmes included in the research sample, 16 were implemented in accordance with the internal training standard defined by the employment service, while one professional training (*Training in knitting*) was implemented in accordance with the programme of the bidder where the number of training hours was defined by the employment service in the tender documentation. Since training service providers did not have APAE status, none of the vocational training programmes in the sample were realized in line with accredited training programmes and with the number of hours defined in line with the national procedure for APAE accreditation. Internal vocational training standards include the title of the training, the total number of training hours, the programme area (field of work), the career opportunities of an individual upon completion of vocational training, the minimum entry qualifications for attending vocational training, the list of vocational competencies acquired by attending vocational training, and compulsory modules - learning units. According to estimation and needs, the training provider has the possibility to adjust the vocational training content to the purpose (objective) of the training. Also, the training provider has the opportunity to add learning areas that are relevant to the training outcomes.

The number of hours of vocational training programmes included in the sample ranges from 120 to 540 hours, while the average number of vocational training hours stood at 256.76 ±

112.70. Out of 17 different vocational training programmes included in the sample, 8 vocational training programmes had a number of hours ranging from 251-540, and 9 of them had up to 250 hours.

Out of a total of 310 respondents, the largest percentage (45.2%) attended a vocational training that lasted up to 200 hours, and 31.0% attended a vocational training that lasted from 251-540 hours of training. The least number of respondents (23.9%) attended a vocational training with a number of hours ranging from 201 to 250 hours.

Chart 15 Number of hours of vocational training



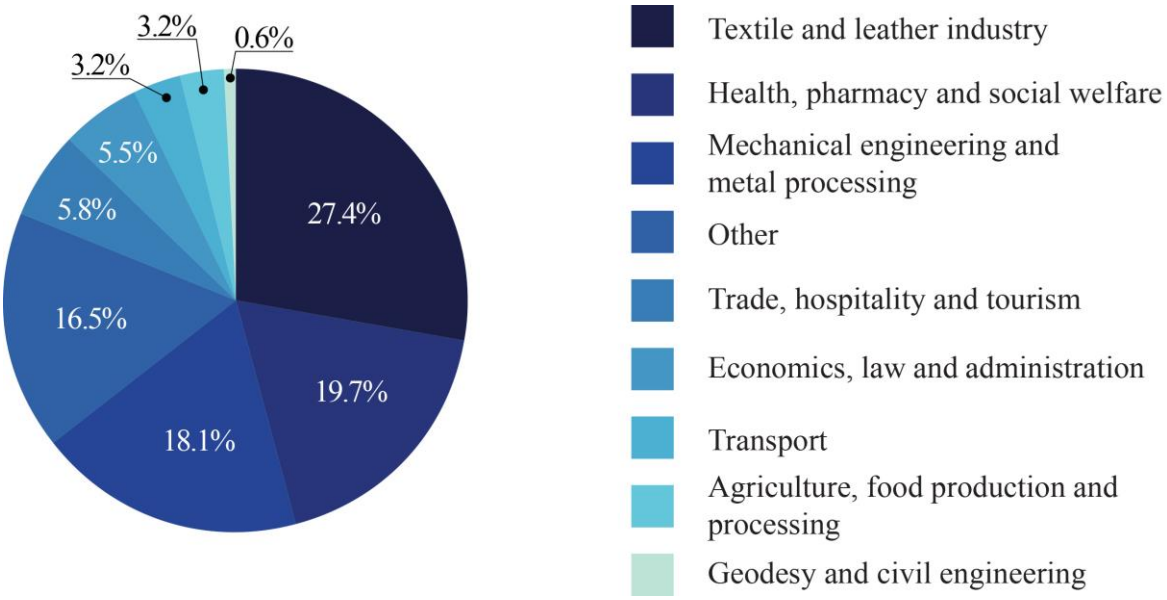
It is important to point out that the number of vocational training hours defined by the internal training standard only partially corresponds to the Law on the National Qualifications Framework, which defines that NQFS level 2 can be acquired through non-formal education lasting from 120-360 training hours, with previously acquired NQFS level 1, that NQFS level 3 can be acquired through non-formal education lasting at least 960 training hours, with previously acquired NQFS level 1, and that NQFS level 5 can be acquired through non-formal education lasting at least six months with previously acquired NQFS level 4. The manner in which outcomes of the analysed vocational trainings are understood, in terms of vocational competencies developed, and the complexity of jobs that participants can perform upon completing a vocational training and exiting the ALMP measure, is a special challenge, given that the vocational training programmes were not approved in line with the national procedure for training programme accreditation, in which competent institutions, (the Qualifications Agency, previously the IIE), estimate, among other, the compliance of the training title and the number of training hours with learning outcomes defined by the training programme and as the vocational training programmes were not implemented by an APAE. Also, the question of harmonizing the competencies defined by the employment system's internal standard of a

vocational training programme (leading to a qualification) and the competencies defined by the education system's National Qualifications Standard remains open, as well as the question of harmonizing all elements from the internal training standard (the issue of compliance of the vocational training title with the defined list of vocational competencies acquired by attending the vocational training). This could be the subject of another research, which could be valuable also in further explaining the results of this research, especially in regard to the participants' assessment that the knowledge and skills acquired in vocational training are narrowly specific and do not fully meet the labour market needs.

3.2 Types of vocational training

The vocational training programmes included in the sample can be divided into 9 fields of work. The biggest share relative to the total number of participants in the sample attended vocational training in the field of Textile and leather industry (27.4%), followed by Health, pharmacy and social welfare (19.7%), Mechanical engineering and metal processing (18.1%), Other (16.5%), Trade, hospitality and tourism (5.8%), Economics, law, administration (5.5%), Transport (3.2%), Agriculture, food production and processing (3.2%) and finally Geodesy and civil engineering with 0.6% of participants.

Chart 16 Distribution of participants by vocational training – by field of work



Observed at the level of each individual training, out of 17 vocational training programmes included in the sample, the largest percentage of participants (18.4%) attended the *Training in tailoring and sewing ready-made garments - basic level*. A slightly smaller percentage (16.5%) of participants attended the *Training for CNC machine operators*. 13.5% of participants attended the *Training for senior home helpers*. 6.5% of participants attended the *Training for manicurist-pedicurist*. The *Training for beauticians* and the *Training for caregivers for the elderly* were attended by 5.8% of the participants, respectively, while the *Training for bookkeepers* was attended by 5.5% of the participants. Less than 5% of the participants attended the following training programmes: *Training for women's and men's hairdressers*, *Training in embroidery and goldwork*, *Forklift operator training*, *Baker training*, *Confectioner training*, *Training in knitting*, *Training in wool felting (manual wool pressing)*, *Pizza chef training*, *Locksmith training* and *Training for construction equipment operators*.

Table 6 Characteristics of vocational training programmes organized by the public employment service

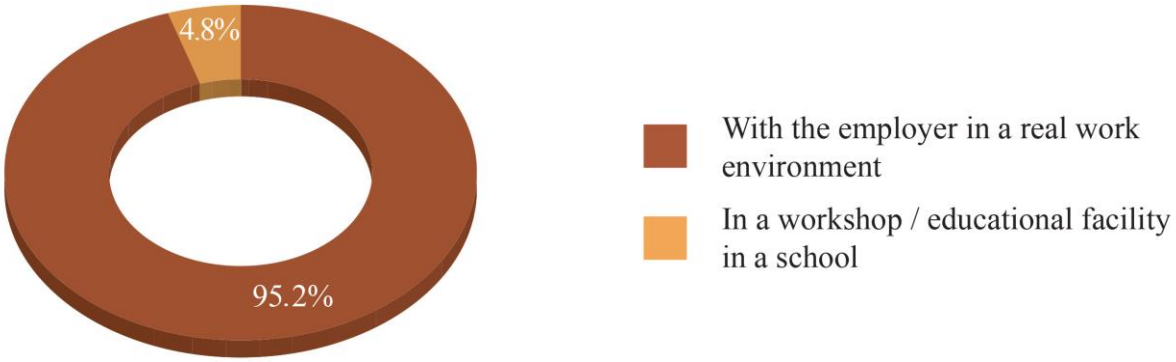
	Field of work	Title of vocational training	Number of participants	Percentage (%)	Number of training hours	Minimum entry qualifications	Special conditions / advantage
1	Textile and leather industry	Training in tailoring and sewing ready-made garments – basic level	57	18.4	240	Primary education	
2	Textile and leather industry	Training in embroidery and goldwork	10	3.2	150	Primary education	
3	Textile and leather industry	Training in knitting	9	2.9	150	Primary education	
4	Textile and leather industry	Training in wool felting (manual wool pressing)	9	2.9	150	Primary education	
5	Mechanical engineering and metal processing	Training for CNC machine operators	51	16.5	180	NQFS level III	
6	Mechanical engineering and metal processing	Locksmith training	5	1.6	450	Primary education	Professional interests and abilities
7	Health, pharmacy and social welfare	Training for senior home helpers	43	13.9	160	Primary education and experience in food preparation	Other relevant experience, professional interests and abilities
8	Health, pharmacy and social welfare	Training for caregivers for the elderly	18	5.8	400	NQFS level II	Field of medicine or social care. Relevant experience, professional interests and abilities
9	Other	Training for manicurist-pedicurist	20	6.5	350	NQFS level III	
10	Other	Training for beauticians	18	5.8	540	NQFS level III	
11	Other	Training for women's and men's hairdressers	13	4.2	360	Primary education	
12	Economics, law and administration	Training for bookkeepers	17	5.5	240	NQFS level IV	
13	Transport	Forklift operator training	10	3.2	120	Primary education	
14	Agriculture, food	Baker training	10	3.2	350	Primary education	Field of hospitality and

	Field of work	Title of vocational training	Number of participants	Percentage (%)	Number of training hours	Minimum entry qualifications	Special conditions / advantage
	production and processing						food production and processing. Relevant experience, professional interests and abilities
15	Trade, hospitality and tourism	Confectioner training	10	3.2	400	NQFS level III	Field of hospitality and food preparation. Relevant experience, professional interests and abilities
16	Trade, hospitality and tourism	Pizza chef training	8	2.6	150	Primary education	
17	Geodesy and civil engineering	Training for construction equipment operators	2	0.6	360	Primary education	
		Total	**310**	**100.0**			

3.3 Location of training

The largest percentage of respondents attended vocational training (practical training) with an employer in a real work environment (95.2%), and only 4.8% in a workshop/educational facility in a school (*Training for bookkeepers and Training for caregivers for the elderly*). None of the training participants attended a combination of work-based and school-based training.

Chart 17 Location of vocational training



Active participation of employers in the implementation of vocational training and the implementation of practical lessons in a real work environment was defined as a condition in the tender documentation for the selection of vocational training providers. According to an additional requirement in the tender documentation, training providers are required to place training participants who successfully completed the theoretical and practical training in traineeships with employers in jobs they were trained for, immediately upon completion of the theoretical and practical training. This is considered as an integral part of the training. and the training providers are required to issue trainees a traineeship completion certificate. The start date of the traineeship is related to the end date of the vocational training. The traineeship with employers lasts 20 working days, continuously every working day from Monday to Friday, 4 hours a day (the traineeship is not included in the number of hours of theoretical and practical training defined by the standards). The employers are obliged to provide adequate conditions for the traineeship in terms of adequate spatial and material conditions and staff. The employer is required to provide at least one employee per educational group, in the jobs for which the participants are trained, who will act as a mentor and who will constantly train and supervise them. The practice of involving employers in the vocational training system is in line with the current trend of strengthening links between the education system and the labour market, and the introduction of a dual model of education, at all education levels. It can also be seen as is the result of the implementation of recommendations of numerous evaluations of ALMP measures (from the previous period) which indicate that the market relevance of training can be ensured through greater involvement of employers in the training process, i.e., through the transition from classrooms-based training to on-the-job training with employers (Betcherman et al., 2004; Arandarenko & Krstić, 2008). However, the offered concept of vocational training in a real work environment with an employer followed by a traineeship with an employer raises the question of trust in vocational training and whether it can be considered as a relevant instrument for improving the labour market status of an individual. Nevertheless,

the key question is basically how long vocational training should last to fulfil its mission in the labour market.

4. Characteristics of participants

The characteristics of participants were analysed through the relation between the participants' prior work experience and the jobs for which they were trained, and the relation between the participants' qualifications, acquired through formal education, and the jobs for which they were trained.

4.1 The relation between work experience and the vocational training attended

Despite the fact that participants in the sample had about six years of work experience on average, the average work experience related to the attended vocational training was much lower and amounted to M=6,94±14.49 months. Among the participants in the sample there were individuals without any work experience related to the vocational training they attended, as well as those with up to 180 months experience in jobs that were the same as or similar to the vocational training they attended.

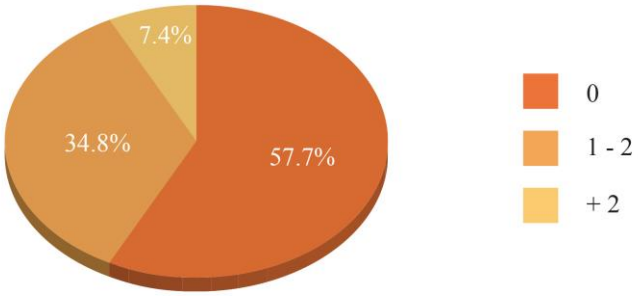
The majority of participants in the sample (57.7%) did not have any work experience related to the jobs for which they were trained, although about 2/3 of the total number of participants in the sample had some work experience. Out of the participants with work experience, 34.8% had 1-2 years and 7.4% over two years of prior work experience in the same or similar jobs as those for which they were trained.

The described sample structure shows that almost half of the training participants had some prior knowledge in the field for which they were trained, which may give rise to the question of whether it is justified to include them in the training process. On one hand, their participation in the vocational training programme may be seen as part of the career development of an individual, i.e., as an instrument for the systematization of the existing partial knowledge and skills, which an individual acquired through work and life experience in different time periods and of different duration, that is, for the improvement of previously acquired obsolete knowledge and skills. On the other hand, their participation in vocational training programmes could be perceived as an unnecessary spending of budget funds for ALMP measures, seeing as the participants had several years of work experience related to the job for which they were trained. Possibly, their participation in the training programmes was a means to obtain a certificate on completed vocational training, with the aim of improving their labour

market status. If this was indeed the case, in the following period this practice should become redundant with the introduction of the recognition of prior learning as an ALMP measure. The research findings indicate the necessity of providing high-quality individualized career guidance and counselling services to ensure efficient targeted selection of vocational training participants and thus contribute to a more rational spending of budget resources allocated to ALMP measures. From the point of view of the education system, these findings may be understood as the need for individualized training services which implies the development of individual training programmes in accordance with all forms of knowledge and skills previously acquired by participants. The described approach would contribute to the rationalization of resources needed for the implementation of vocational training, but also to the improvement of the quality of educational offer in Serbia.

It is important to point out that the question of the impact of vocational training on the labour market status of an individual is a relevant question, especially having in mind that trainings are viewed as one of the key instruments for improving the quality of human capital as the driver of future change. However, as the analysis of the effects of vocational training goes beyond the scope of this research, whose primary purpose is to support the MoESTD improve standards for APAE accreditation, the analysis of the effects of vocational training will be the subject of future research, in line with a methodological framework adapted for this purpose.

Chart 18 The relation between the participants' work experience and the attended vocational training



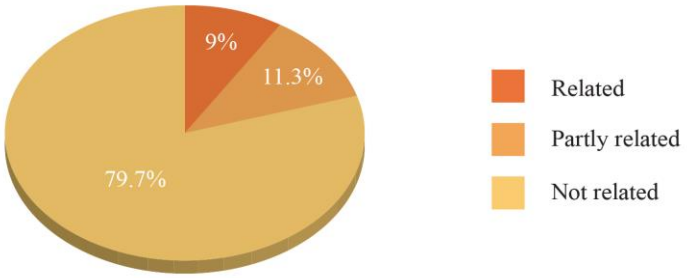
From the point of view of socio-demographic characteristics, we have observed that most women (59.4%) and men (52.6%) from the sample did not have any work experience related to the attended vocational training. When it comes to the age group, the percentage of participants without related work experience noticeably decreases with increased age, so that out of the total number of young people up to 30 years of age in the sample, 76.3% has no related work experience, while 50.5% of participants in the older group (46+) has related work experience. At the same time, the percentage of participants with related work experience in

the sample increases with increased age, i.e., 47.2% of participants in the 31-45 cohort and 49.5% of participants in the 46+ cohort. When it comes to the education level, it is noticeable that more than half of the total number of respondents in the sample with no qualifications and with secondary education have no work experience related to the attended training (58.7% and 59.5%, respectively). When it comes to the participants with tertiary education, 52.4% of the total number of participants in the sample with tertiary education, have work experience related to the attended vocational training. When it comes to the duration of unemployment before entering a vocational training, more than half of participants in all analysed categories have no related work experience.

At the level of the individual vocational training programmes, we have observed noticeable differences. In the Training for manicurist-pedicurist the sample included as many as 90.0% of participants without any work experience related to the attended vocational training, and in the Training in tailoring and sewing ready-made garments - basic level, as many as 71.9% of them, and in the Training for beauticians 55.6% of them. Other vocational training programmes had a larger percentage of participants with work experience related to the attended vocational training. Thus, in the Training for bookkeepers the sample included 76.5% of participants with related work experience, in the *Training for senior home helpers* 58.0% of them, in the *Training for caregivers for the elderly* 55.5% of them, and in the *Training for CNC machine* o*perators* 51.0% of them. 4.2 The relation between formal qualifications and the vocational training attended

Out of the total number of respondents in the sample, 9% attended vocational training related to their formal qualifications at the level of the occupational group, 11.3% attended vocational training programmes related to their formal qualifications at the level of the field of work, while as many as 79.7 % attended vocational training programmed not related to their formal education. This indicates that most vocational training participants did not have any prior knowledge acquired through formal education in the field for which they were trained, in other words, they opted for a different job in a new field of work, which implies the use of different tools and materials as well as different working conditions, etc. The diversity of participants' entry qualifications implies a great heterogeneity of educational groups, which sets very complex requirements for training quality assurance.

Chart 19 The relation between participants' qualifications and attended vocational training



From the point of view of socio-demographic characteristics, the survey revealed that a somewhat greater share of women than men (85.5% and 61.8%, respectively) attended training programmes that were not related to their formal qualifications. Of the total number of men in the sample, 13.2% attended training programmes related to their qualifications at the level of the occupational group, while 25.0% had qualifications related to attended vocational training at the level of the field of work. As regards the age ratio, the share of respondents who attended vocational training programmes not related to their qualifications is similar in all analysed age groups, and we observed that this percentage slightly decreases with increased age. Thus, of the total number of participants from the three age groups in the sample, 81.6% of youth up to 30 years of age, 82.1% in the 31-45 age cohort and 75.7% in the 46+ age cohort have no qualifications related to the vocational training they attended. The situation is somewhat different with regard to the participants' qualification level, , in fact, a higher education level is linked to a higher percentage of participants who attended training programmes related to their qualifications. Specifically, 79.0% of the total number of participants in the sample with secondary education attended training programmes not related to their qualifications, while only 15.1% attended training programmes related to their field of work. When it comes to participants with tertiary education, 33% of the total number of participants with tertiary education in the sample attended training programmes related to their qualifications at the level of the occupational group, while 64.3% attended training programmes not related to their qualifications. Also, the percentage of participants who attended training programmes related to their formal qualifications increases with the increase in the length of work experience. Regardless of the duration of unemployment, almost all analysed categories predominantly attended vocational training programmes not related to their qualifications.

By type of vocational training, participants of almost all vocational training programmes predominantly did not have any qualifications related to the vocational training programme

they attended. The exception is the *Training for bookkeepers*, where as many as 64.7% of participants in the sample had qualifications related to the vocational training they attended, at the level of occupational group. This is not surprising considering that as many as 64.7% of participants in this training had tertiary education and used the training as a means to improve their existing knowledge and skills. Furthermore, the *Training for CNC machine operators* was attended by 51.0% of participants who had qualifications related to the attended vocational training, with 17.6% of them having qualifications related at the level of the occupational group, and 33.3% at the level of the field of work.

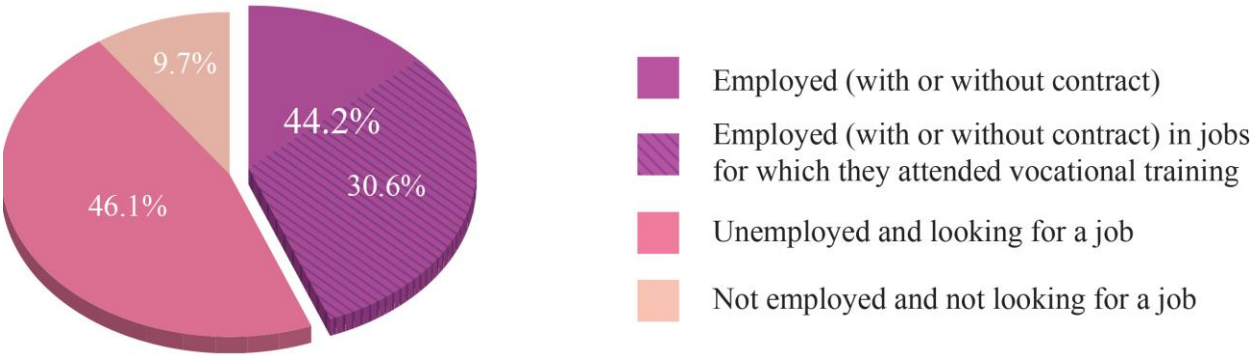
THE LABOUR MARKET STATUS OF AN INDIVIDUAL UPON COMPLETION OF VOCATIONAL TRAINING

1. Employment status of participants upon completion of short-term vocational training

The largest share of participants in the sample (46.1%) was unemployed upon completion of training. They are followed by the employed, regardless of the type of employment and the jobs they perform, with 44.2%, while 30.6% of participants were employed in jobs related to the vocational training they attended. The smallest percentage of respondents were inactive, i.e., not employed and not looking for a job (9.7%). Although the findings are compatible with previous research (Bjerre, Emmerich & Milošević 2011, Follow-up survey of graduated FEEA participants, 2013, Pejatović, 2007, Fabian, 2018), a relatively high percentage of the employed is surprising considering that a certain number of vocational training programmes was completed immediately before the declaration of the state of emergency, or in the period when the state of emergency was in force due to the COVID-19 pandemic, threatening to create serious disturbances in the labour market. The findings of research analysing the impact of the COVID-19 pandemic on employment reveal a decrease in non-formal and formal employment in certain categories. According to the authors this is primarily due to the absence of employment in certain seasonal jobs (rather than to lay-offs) (Udovički & Medić, 2021). The foregoing all indicates that the crisis caused by the COVID-19 pandemic led to a decrease of the labour market's capacity to absorb labour force, and thus it became increasingly more difficult

for participants to find work upon completion of vocational training. However, when we look at the percentage of employed participants, we should consider that the last tranche of funds to vocational training providers, of up to 20% of the total value of vocational training was conditional upon submitting proof of employment of at least 15% of the total number of participants within 60 days of completion of training and for them to retain the employment for a period of at least 6 months. It is therefore recommended that, in future research, the labour market status of participants also be analysed after the end of the six-month period.

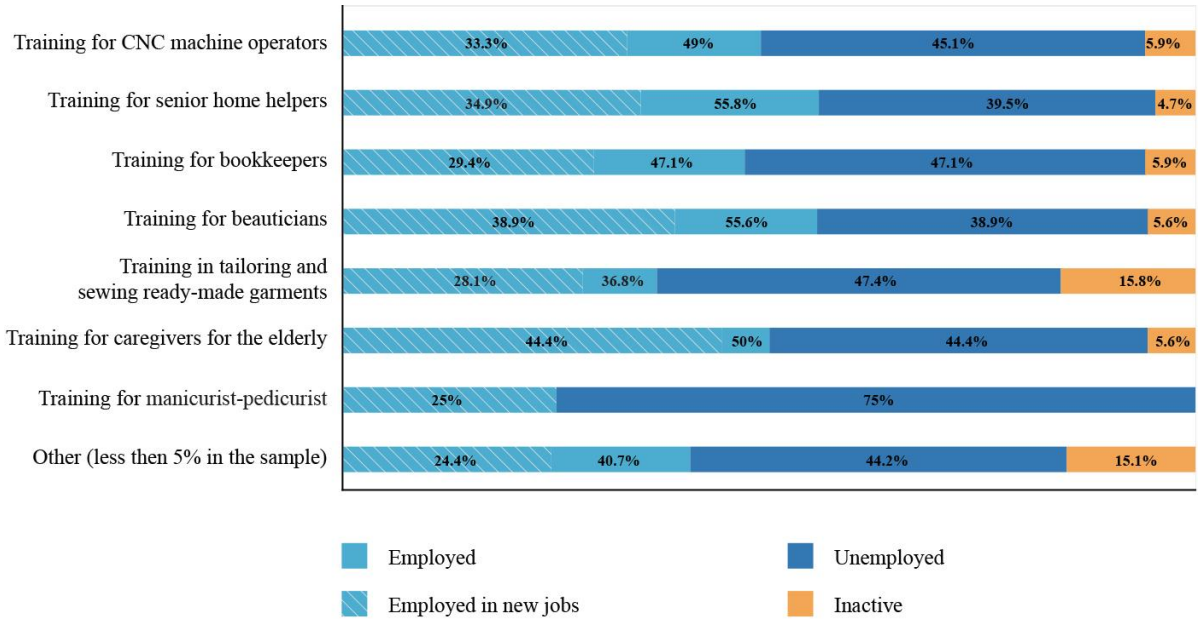
Chart 20 The labour market status of an individual upon completion of vocational training



At the level of the individual vocational training programmes, the highest employment incidence after completion of vocational training was recorded among participants who successfully completed the *Training for senior home helpers* (55.8%), the *Training for beauticians* (55.6%) and the *Training for caregivers for the elderly* (50.0%). More than half of the total number of participants in these training programmes found employment. At the same time, the largest percentage of participants in these training programmes were employed in the jobs for which they were trained, specifically, *Training for senior home helpers* (34.9%), *Training for beauticians* (38.9%) and *Training for caregivers for the elderly* (44.4%). The findings on the high share of employed participants may come as a surprise in view of the COVID-19 crisis, however, the high share of employed home help providers and caregivers for the elderly may in fact be a consequence of this crisis, having in mind that the priority in this crisis was to provide support to senior citizens. In addition to the aforementioned vocational training programmes, a significant percentage of job placements was recorded among participants in the *Training for CNC machine operators* (49.0%), with 34.9% of participants employed in jobs they were trained for and in the *Training for bookkeepers* (47.1%), with 29.4% of participants employed in the jobs

they were trained for. The lowest share of employed participants was recorded in the *Training in tailoring and sewing ready-made garments - basic level* (36.8% in total, 28.1% in the jobs they were trained for) and *Training for manicurist-pedicurist* (25.0% in total and in jobs they were trained for).

Chart 21 The labour market status of participants upon completion of vocational training – by training programme



When it comes to the relation between the participants' work experience and the jobs for which they were trained, research results indicate that as many as 68.7% of participants who were not employed after completing vocational training did not have any related work experience, while as many as 57.4% of participants who were employed after the training had 1-2 years of related work experience, while 82.6% had more than 2 years of related experience. It is important to point out that participants with longer work experience related to the attended vocational training were to a significant extent engaged in the jobs they were trained for. Out of the total number of participants, 43.5% of those with 1-2 years of related experience, and as many as 56.5% of those with more than 2 years of related experience were employed in jobs they were trained for. The situation is similar with participants whose qualifications were related to the attended vocational training. Thus, of the total number of participants with qualifications related to the vocational training, 50.0% (at the level of occupational group), and 54.3% (at the level of the field of work) were employed upon completing training. When it comes to the employment of participants in the jobs for which

they were trained, 39.3% of the total number of participants with related qualifications at the level of occupational group, , and 40.0% with related qualifications at the level of the field of work were employed in jobs they were trained for.

These findings suggest that short-term vocational training predominantly suited participants with some prior knowledge related to jobs for which they were trained. Although the question may arise as to whether including this category of participants in vocational training programmes is justified, and whether spending budget resources for their training is unnecessary, in the analysis it is important that we bear in mind that prior relevant work experience does not necessarily imply that an individual has all the competencies relevant for working in a certain occupation, that is, all the competencies acquired through a vocational training programme, which may lead to a qualification. An individual's work experience is often related to their job(s), which is only a part of the knowledge and skills from one occupation, i.e., qualification. Also, work can be performed mechanical, without understanding its meaning and without an established coherent broader system of knowledge. As experiential learning theories suggest, not every experience is a learning experience. In order for the experience to grow into learning, the learner needs quality support (quality reflection process) so that instead of mechanically performing a work task, the individual understands its meaning which prevents learning from remaining superficial (Kolb, 1984). Goleman et al. also emphasized the importance of a quality context for the permanent development of skills, in particular the importance of exposure to the work environment, cooperation with experts and time, so that the current improvement of skills is not lost upon completion of training (Goleman, Bojacis & Maki, 2008). Viewed in this context, the vocational training and support participants with relevant work experience received on that occasion, can be seen as a tool for labour market participants to improve, better systematize and organize previously acquired knowledge and skills, and to acquire new knowledge, skills, and competencies, and thus increase their competitiveness in the labour market upon completion of vocational training.

When it comes to the socio-demographic characteristics of participants, after completing vocational training, 50.0% of the total number of men included in the sample were employed, which is a slightly higher percentage relative to their female counterparts (42.3%). Observed from the perspective of the age of participants, the participants from the 31-45 age group and those over 46 years of age were mostly employed (45.5% and 47.7%, respectively), while young people up to 30 years of age were mostly unemployed (51.3%). At the same time, 11.8% of youth up to 30 years of age were inactive after completing vocational training, which is a higher percentage compared to other analysed age groups. When it comes to the education level of participants, after completing vocational training, 50.8% of participants without

qualifications were employed, followed by participants with secondary education (43.9%), while only 35.7% of participants with tertiary education found a job after completing the training. It is interesting that 52.4% of respondents with tertiary education were unemployed, while 11.9% of them were inactive. These findings do not correspond to the results of extensive research corroborating that people with higher education level have a better labour market status compared to those with a lower education level (Mincer, 1991, Dinkić et al., 2006, Pejatović & Orlović Lovren, 2014, Marjanović, 2015, Udovički & Medić, 2021), i.e. that the less educated in case of job loss, find it harder to find a new job, have a higher chance of long-term unemployment, which may further result in their exclusion from the labour market, which further reduces the likelihood of new (and quality) employment (Udovički & Medic, 2021). However, we should bear in mind that last year was very specific due to the crisis caused by the COVID-19 pandemic, and that the findings should be interpreted with great caution. It is understandable that a certain percentage of the participants (11.1% without qualifications, 8.8% with secondary education, 11.9% with tertiary education) retired to inactivity upon completing vocational training, since in certain periods of the year, during complete lockdown, it was not even possible to look for a job. The temporary withdrawal from the labour market, waiting for the emergency situation to pass, may partly explain the higher unemployment of participants with tertiary education compared to those without qualifications and participants with secondary education who were forced to actively participate in the labour market during the pandemic to improve their unfavourable labour market status at least to some extent. The higher share of employed participants without qualifications and with secondary education compared to those with tertiary education can partly be explained by the fact that they attended vocational training to assist the elderly (e.g., training for senior home helpers and caregivers), services which were in demand during the crisis, as the older population was extremely vulnerable during the crisis. When it comes to the length of work experience, research findings indicate that participants with work experience had a better labour market status in terms of employment (with a 44.5% to 52.9%, depending on the analysed category), while 51.5% from the category of participants without work experience remained unemployed after completing vocational training. When it comes to the length of unemployment before joining a vocational training programme, participants who were registered as unemployed for less than a month had the best labour market status after completion of vocational training (51.9%). In the other analysed categories, the share of employed participants was slightly lower (ranging from 41.2% to 48.6%, depending on the analysed category). The share of inactive participants is the highest in the category of the long-term unemployed, with length of unemployment of more than 10 years (21.6%), but interestingly also in the category that was

registered as unemployed for the shortest period (11.1%), which can partly be explained by forced inactivity due to the crisis caused by COVID-19.

From the employment policy point of view, one may raise the question of whether including participants who were on the NES unemployment register for less than a month in vocational training is justified, i.e., to what extent attending vocational training contributed to improving their labour market status. It should be emphasized that the participants in the sample of this research who joined vocational training immediately upon registering as unemployed with the NES were predominantly women of 46 years of age and older (44.4%), who fall in the hard-to-employ category in accordance with national employment policy documents. As the biggest problem of the older working age population is obsolete knowledge and skills, and the inability to independently adapt to new labour market needs, their inclusion in vocational training programmes as an ALMP measure is understandable. However, in order to see the real contribution of training to the employment outcomes of participants upon completion of vocational training, it would be of value in future research to include their labour market status before registering as unemployed with the NES, i.e., whether they were in the education system, employed or whether perhaps they have been inactive for many years, which would justify their inclusion in ALMP measures, and the effectiveness of ALMP measures, including vocational training, would be observed in a different way.

QUALITY OF SHORT-TERM VOCATIONAL TRAINING AND THE LABOUR MARKET STATUS OF PARTICIPANTS AFTER COMPLETION OF TRAINING

In this chapter, we analyse the relation between the quality of short-term vocational training and the labour market status of participants upon completion of vocational training. The quality of vocational training was analysed through the quality of the delivery of short-term vocational training, the quality of career guidance and counselling services, the characteristics of vocational training and through the characteristics of vocational training participants. The labour market status was viewed through the prism of employment status, i.e., if a participant was employed, unemployed or inactive in the six-month period after completion of vocational training.

1. Quality of implementation of short-term vocational training and the labour market status of trainees

In this chapter we have analyse the relation between the quality of implementation of short-term vocational training, viewed through the prism of quality dimensions such as: *Teachers and instructors*, *Spatial conditions and health protection*, *Equipment and tools*, *Training process*, *Organization of training*, *Training location*, *Training result* and *Overall quality* of implementation of vocational training (composite score) and the labour market status of participants upon completion of vocational training.

When it comes to the employment status of participants after completing vocational training, using the *T test* for large independent samples we examined whether there is a statistically significant difference in the quality assessment of the analysed quality dimensions of the implementation of vocational training between participants who were employed after the training and those who were not. A statistically significant difference was found in the quality dimensions: *Spatial conditions and health protection* (t=2.350, p=0.019), *Equipment and tools* (t=2.717, p=0.007), *Organization of training* (t=2.041, p=0.042), *Training result* (t=2.703, p=0.007) and *Quality of implementation of short-term vocational training - composite score* (t=2.434, p=0.016). The results indicate that the employed participants rated these training dimensions with a higher score, as well as with a higher composite score, compared to those who were unemployed, specifically: *Spatial conditions and health protection* (4.74±0.48), *Equipment and tools* (4.15±0.68), *Organization of training* (4.30±0.55), *Training result*

(3.74±0.63) and *Quality of implementation of short-term vocational training - composite score* (4.25±0.44).

Table 7 Quality of implementation of short-term vocational training and participants' employment upon completing vocational training (T - test)

		N	M	SD	T	df	p
Teachers and instructors	No	173	4.40	0.62	-1.701	308	0.090
	Yes	137	4.51	0.51			
Spatial conditions and health protection	No	173	4.59	0.64	-2.350	308	***0.019***
	Yes	137	4.74	0.48			
Equipment and tools	No	173	3.92	0.80	-2.717	307	***0.007***
	Yes	136	4.15	0.68			
Training process	No	173	3.48	0.85	-0.776	308	0.438
	Yes	137	3.56	0.81			
Organization of training	No	173	4.15	0.74	-2.041	308	***0.042***
	Yes	137	4.30	0.55			
Training location	No	172	4.66	0.54	-0.977	307	0.329
	Yes	137	4.72	0.45			
Training result	No	173	3.54	0.63	-2.703	308	***0.007***
	Yes	137	3.74	0.63			
Quality of implementation of short-term vocational training - composite score	No	172	4.11	0.58	-2.434	306	***0.016***
	Yes	136	4.25	0.44			

N-number of respondents; M – arithmetic mean; SD-standard deviation; t – t test; df – degrees of freedom; p – statistical significance

We also used the *T test* for large independent samples to examine whether there is a statistically significant difference in the assessment of the quality of the analysed vocational training quality dimensions between participants who, upon completion of training, were employed in jobs for which they had been trained and those who were not. A statistically significant difference was found only in the quality dimension *Training result* (t=3.061, p=0.002), so participants who, after vocational training, were employed in the jobs for which they had been trained rated this quality dimension with higher scores (M=3.79±0.59) than those who were not (M=3.56±0.64). There is no statistically significant difference between the two compared groups in the other quality dimensions, including the composite score.

Table 8 Quality of implementation of short-term vocational training and employment of the participants in jobs for which they were trained (T - test)

		N	M	SD	T	df	p
Teachers and instructors	Yes	95	4.54	0.42	1.784	308	0.075
	No	215	4.41	0.63			
Spatial conditions and health protection	Yes	95	4.71	0.49	1.022	308	0.308
	No	215	4.64	0.62			
Equipment and tools	Yes	95	4.07	0.67	0.770	307	0.442
	No	214	4.00	0.79			
Training process	Yes	95	3.55	0.78	0.495	308	0.621
	No	215	3.50	0.86			
Organization of training	Yes	95	4.31	0.55	1.624	308	0.105
	No	215	4.17	0.71			
Training location	Yes	95	4.74	0.46	1.147	307	0.252
	No	214	4.67	0.52			
Training result	Yes	95	3.79	0.59	3.061	308	***0.002***
	No	215	3.56	0.64			
Quality of implementation of short-term vocational training – composite score	Yes	95	4.13	0.42	1.661	306	0.098
	No	213	4.03	0.55			

N-number of respondents; M – arithmetic mean; SD-standard deviation; t – t test; df – degrees of freedom; p – statistical significance

To assess whether there is a statistically significant difference in the quality assessment of the analysed dimensions of the implementation of vocational training between the participants who were employed upon completion of vocational training and those who were not, we used the *T test* for large independent samples. The results show that a statistically significant difference was confirmed for the following quality dimensions: *Teachers and instructors* (t= 2.562, p=0.011), *Spatial conditions and health protection* (t=2.393, p=0.017), *Equipment and tools* (t=3.506, p=0.001), *Training process* (t=2.606, p=0.010), *Organization of training* (t=3.617, p=0.000), *Training result* (t=2.382, p=0.018) and *Quality of implementation of short-term vocational training - composite score* (t=3.410, p=0.001). Compared to other respondents, unemployed participants gave a lower score to all the quality dimensions listed herein, including the composite score, as follows: *Teachers and instructors* (4.36±0.65), *Spatial conditions and health protection* (4.57±0.67), *Equipment and tools* (3.86±0.80), *Training process* (3.38±0.82), *Organization of training* (4.07±0.76), *Training result* (3.54±0.65) and *Quality of implementation of short-term vocational training - composite score* (4.06±0.59).

Table 9 Quality of implementation of short-term vocational training and unemployment of the participants upon completion of vocational training (T - test)

		N	M	SD	t	df	p
Teachers and instructors	No	167	4.53	0.50	2.562	308	***0.011***
	Yes	143	4.36	0.65			
Spatial conditions and health protection	No	167	4.73	0.48	2.393	308	***0.017***
	Yes	143	4.57	0.67			
Equipment and tools	No	166	4.16	0.69	3.506	307	***0.001***
	Yes	143	3.86	0.80			
Training process	No	167	3.63	0.83	2.606	308	***0.010***
	Yes	143	3.38	0.82			
Organization of training	No	167	4.34	0.55	3.617	308	***0.000***
	Yes	143	4.07	0.76			
Training location	No	167	4.72	0.45	1.173	307	0.242
	Yes	142	4.65	0.56			
Training result	No	167	3.71	0.61	2.382	308	***0.018***
	Yes	143	3.54	0.65			
Quality of implementation of short-term vocational training – composite score	No	166	4.26	0.44	3.410	306	***0.001***
	Yes	142	4.06	0.59			

N-number of respondents; M – arithmetic mean; SD-standard deviation; t – t test; df – degrees of freedom; p – statistical significance

Using the *T test* for large independent samples, we also examined whether there is a statistically significant difference in the quality assessment of the analysed dimensions of vocational training between the participants who were inactive and those who were active after the completion of vocational training. The results confirmed a statistically significant difference in two quality dimensions: *Training process* (t=3.090, p=0.002) and *Organization of training* (t=2.595, p=0.010). Contrary to expectations, the quality dimension *Training process* was rated with a higher score by the inactive respondents (M=3.96±0.85) compared to the others (M=3.47±0.82). Similarly, the quality dimension *Organization of training* received a higher score from the inactive respondents (M=4.51±0.53) compared to the rest of the participants (M=4.18±0.68).

Table 10 Quality of implementation of short-term vocational training and inactivity of the participants upon completion of vocational training (T - test)

		N	M	SD	T	Df	p
Teachers and instructors	No	280	4.44	0.59	-1.435	308	0.152
	Yes	30	4.59	0.47			
Spatial conditions and health protection	No	280	4.66	0.59	-0.085	308	0.932
	Yes	30	4.67	0.47			
Equipment and tools	No	279	4.01	0.76	-1.293	307	0.197
	Yes	30	4.19	0.73			
Training process	No	280	3.47	0.82	-3.090	308	***0.002***
	Yes	30	3.96	0.85			
Organization of training	No	280	4.18	0.68	-2.595	308	***0.010***
	Yes	30	4.51	0.53			
Training location	No	279	4.68	0.51	-0.332	307	0.740
	Yes	30	4.72	0.45			
Training result	No	280	3.63	0.65	0.507	308	0.612
	Yes	30	3.57	0.49			
Quality of implementation of short-term vocational trainings – composite score	No	278	4.16	0.53	-1.596	306	0.112
	Yes	30	4.32	0.45			

N-number of respondents; M – arithmetic mean; SD-standard deviation; t – t test; df – degrees of freedom; p – statistical significance

Based on the determined statistical significances between the analysed variables, we can deduce that all analysed quality dimensions of the implementation of vocational training, including *Overall quality* as a composite score, proved to be relevant for one or more statuses in the labour market. Only for the *Training location* quality dimension, no statistically significant relation was found with any of the analysed labour market statuses. Accordingly, we can say that the quality of implementation of vocational training, observed through the prism of the analysed quality dimension, can be understood as a significant determinant of the labour market status of an individual upon completion of vocational training.

In accordance with expectations, we established that most of the quality dimensions of vocational training implementation were relevant for the *employment* and *unemployment* status of participants after completion of vocational training. The employed participants, compared to those who were not employed, better assessed the hygienic, micro-climatic and safety conditions and health protection in a vocational training, spatial conditions for training, equipment, machines, tools and production materials used in the training, organization and implementation of vocational training/teaching, and they better assessed training results, i.e.,

the acquired knowledge, skills and competencies in training, their recognition and demand in the labour market. Additionally, they were more motivated to work in jobs they were trained for. The statistically significant relation between these variables suggests that the quality of the implementation of vocational training can be understood as a potentially important determinant of an individual's labour market status in terms of his/her *employment*, including jobs the individual was trained for and other jobs. The importance of the described quality dimensions is additionally corroborated by their determined statistically significant relation with the *unemployment* status of an individual upon completion of vocational training, in terms that the unemployed respondents evaluated all the mentioned quality dimensions with worse scores than those who were not unemployed.

A statistically significant relation between the quality of implementation of vocational training (i.e., the listed quality dimensions) and *employment* or *unemployment* of participants after completion of training, suggests that the quality of implementation of vocational training is potentially an important factor that determines the employment status of participants, i.e., a factor which potentially has an influence on whether, upon completing training, a participant will be *employed* or *unemployed*. This further indicates the need to improve the quality of implementation of vocational training, starting from the purpose of vocational training as an ALMP measure, which is to improve the labour market status of an individual through training.

It is interesting that we determined a statistical significance of the dimensions *Teachers and instructors* and *Training process* for the participants' *unemployment status*, but not for their employment status upon completion of vocational training. In accordance with expectations, compared to those who were not unemployed, the unemployed gave poorer scores to the expertise, andragogical-didactic competence of the teaching staff, the attitude of teachers and instructors towards participants (openness in communication, respect of participants' experience and expectations, etc.), availability of teachers during classes, availability of textbooks and manuals during classes, etc., as well as the training process itself, i.e. the duration of training, the manner of training in terms of the process of acquiring knowledge, skills and competencies to work in certain jobs. However, this research did not determine a statistical significance between the mentioned quality dimensions and the *employment* status, and this finding should be analysed carefully, in the context of the established statistical significances of all analysed quality dimensions, especially the *Training result* dimension. One of the reasons for this is that the *Training result* dimension, among other things, refers to the participants' perception of the acquired knowledge, skills and competencies, i.e., their assessment of whether, immediately upon completion of training, they had sufficient knowledge and skills to immediately work independently in the jobs they were

trained for. We can say that the thus operationalized *Training result* quality dimension is largely based on the quality of the work of teachers and instructors as well as on the quality of the training process itself and, as such, incorporates the importance of the quality dimensions *Teachers and instructors* and *Training process*, both for employment and unemployment of participants upon completion of vocational training.

When it comes to the *Training result* quality dimension, it is important to point out that this is the only dimension for which statistical significance was determined for the three labour market statuses of participants analysed in this research, i.e., employment, unemployment, and employment in jobs they were trained for. This indicates that participants who, immediately upon completion of vocational training, believe they have sufficient knowledge and skills to work independently in the jobs they were trained for, who by attending a vocational training acquired market-relevant knowledge and skills which are not narrowly specific and are applicable when it comes to working for other employers in the local labour market, are better positioned upon entering the labour market, they are employed in the jobs they were trained for as well as in other jobs. Considering the importance of this quality dimension for the labour market status of an individual, it would be important to recall the finding that one of the two quality dimensions where the lowest quality of implementation of vocational trainings was determined, is with respect to the *Training result* dimension (M=3.62±0.63), which unequivocally indicates the need to improve the quality of implementation of vocational training, and especially the training process in a real work environment with employers in order for the training outcomes to be reflected in the development of market-relevant knowledge and skills. At the same time, the highest quality of implementation of vocational training was recorded in the *Training location* dimension (M=4.68±0.50), i.e., in the only quality dimension in which no statistically significant relation was found with any of the analysed statuses in the labour market. These findings suggest that future quality research, in addition to assessing certain quality dimensions of vocational training implementation, should also include an (evaluation) assessment of the importance that the measured dimensions have for the overall quality of vocational training implementation. Assessing the importance of a quality dimension will contribute to a realistic perception of the importance it has for the overall quality of vocational training implementation and determining priorities for their improvement.

When it comes to the relation between the quality implementation of vocational training and the inactivity of participants, the results indicate that a statistically significant difference was confirmed in the dimensions *Training process* (t=3.090, p=0.002) and *Organization of training* (t=2.595, p=0.010). Contrary to expectations, inactive respondents rated both quality dimensions with higher scores than respondents who were not inactive

(*Training process* (M=3.96±0.85) vs. (M=3.47±0.82), *Organization of training* (M=4.51±0.53) vs. (M=4.18±0.68)). These findings are not in accordance with previously conducted research where the quality of implementation of training did not achieve a statistically significant link with the status of inactivity at the end of training (Fabian, 2018). However, although in the previous period there was not much research aimed at establishing the relation between the analysed variables, and the knowledge in this area is modest, when interpreting such findings, we should certainly consider that the research was conducted during extraordinary circumstances, caused by the COVID-19 pandemic. The determined inactivity of vocational training participants can to some extent be understood as being forced due to the situation caused by COVID-19. The higher assessment of the training process and the organization of training by the inactive persons is hard to account for but can be explained at least partially by the fact that after completing the training, this category of participants did not enter the labour market due to the crisis caused by the COVID-19 pandemic, and thus did not have the opportunity to evaluate their competencies, that is, their new competitiveness, acquired through vocational training.

2. Quality of career guidance and counselling services and the labour market status of participants

The quality of career guidance and counselling services is observed as the activity of providing professional support to individuals in choosing a vocational training and, upon completion of training, informing them about job vacancies that match the competencies they acquired through the training.

When it comes to the employment of participants after completion of vocational training, using the *T test* for large independent samples we examined whether there is a statistically significant difference in the assessment of the quality of career guidance and counselling services, between participants who were employed after completing training and those who were not. The results indicate that both the employed and those who were not had the same attitude towards career guidance and counselling, so there is no statistically significant difference between the two compared groups (t=1.082, p>0.05). The result on the career guidance and counselling subscale is similar also when comparing the scores of participants employed in the jobs they were trained for and of those who were not (t=1.076, p>0.05). When comparing active and inactive participants (t=1.759, p=0.080), inactive

participants gave a higher score to the quality of career guidance and counselling (M=3.52±0.71) compared to those who do not belong to this group (M=3.27±0.74).

However, when it comes to the unemployed participants, the results reveal a statistically significant difference (t=2,129, p=0,034), i.e., the unemployed participants gave a lower score to the quality of career guidance and counselling services (M=3.20±0.74) compared to the rest of respondents (M=3.38±0.73).

Table 11 Quality of career guidance and counselling services and the unemployment status of participants upon completing a vocational training (T - test)

		N	M	SD	t	df	P
Career guidance and counselling	No	167	3.38	0.73	2.129	308	***0.034***
	Yes	143	3.20	0.74			

N-number of respondents; M – arithmetic mean; SD-standard deviation; t – t test; df – degrees of freedom; p – statistical significance

The statistically significant relation between the analysed variables indicates that the lack of professional support before and after the completion of a vocational training potentially contributes to the *unemployment* status of participants upon completion of the training. The findings confirm that to improve the labour market status of an unemployed individual, short-term vocational training is insufficient in itself. Support in the selection of a market-relevant training that meets individual needs is also required, as well as support after leaving the ALMP measure, in the form of advice and information on new career opportunities and challenges.

Here, it is important that we point out the extremely complex relation between career guidance and counselling services and training services, and that the quality of both services is reflected in the labour market status of participants upon completion of training. Considering the importance and mutual compatibility of these services, the need arises to strengthen training service providers to improve their capacity to also provide career guidance and counselling services that are in the service of the training process. On the one hand, this would compensate for the lack of staff capacity of the public employment service and, at the same time, improve the quality of the training service for all other training participants. Viewed through the prism of standards and conditions for the selection of training providers by the employment service/service for the APAE accreditation, it would imply defining new conditions and standards for training service providers for providing career guidance and counselling services as a complementary service to the training.

However, although the importance of career guidance and counselling services for the status of an individual in the labour market is unquestionable (Fabian, 2018), the research

findings need to be carefully analysed. Specifically, considering the lower score related to the quality of career guidance and counselling services given by all participants in the sample. The lower quality scores given by the unemployed may be related to the quality of career guidance and counselling services, but at the same time may also reflect their dissatisfaction with their employment status after the training (unemployment),that is, unfulfilled expectations, whereby the established relation can, to some extent, be explained differently.

3. Characteristics of vocational training and labour market status of participants

The characteristics of short-term vocational training were analysed through the training duration, the type of vocational training where vocational training programmes are classified according to the field of work/occupational group in which they belong, in line with the Unique Occupational Nomenclature, as well as through the vocational training location (practical training).

Number of hours of vocational training

The relation between the number of hours of vocational training and the employment of participants upon completion of vocational training has been examined using the *T test* for large independent samples. The results indicate that there is no statistically significant difference between participants who were employed after completing vocational training and those who were not ($t=0.702$, $p>0.05$), from the aspect of the number of vocational training hours attended. Those who found employment had attended training programmes of an average duration of $M=261.82\pm119.23$ hours, and those who did not find employment had attended somewhat shorter trainings ($M=252.76\pm107.43$), but still with no statistically significant difference. Similarly, no statistically significant difference was established when comparing respondents employed in jobs they were trained for and those who were not ($t=1.132$, $p>0.05$), as well as when comparing the active and the inactive ($t=1.488$, $p>0.05$), and the unemployed and those who were not ($t=0.180$, $p>0.05$).

These findings are in accordance with the results of previously conducted research (Fabian, 2018). Instead of concluding that the number of hours of a vocational training is not relevant for the status of an individual in the labour market, these findings can be explained by the fact that the sample includes vocational training programmes with the number of hours ranging from 120 to 540, so almost all participants attended vocational training programmes of a similar duration.

Type of vocational training

We have examined the relation between the labour market status of participants and different types of vocational training using the *Chi square* test. The results show that there is no statistically significant difference in the share of participants who were employed upon completion of different types of vocational training, and those who were not (χ^2=8.74, df=7, p>0.05). However, it should be noted that the highest employment incidence was recorded among the participants who attended the *Training for senior home helpers* (55.8%), followed by the *Training for beauticians* (55.6%) and the *Training for caregivers for the elderly* (50.0%). The results of the *Chi square* test show that there is also no statistically significant difference between the analysed categories of participants if we analyse vocational training programmes at the level of occupational group (χ^2=7.94, df=7, p>0.05), or at the level of the field of work to which a vocational training belongs (χ^2=7.93, df=6, p>0.05).

The situation is similar when it comes to *employment in jobs for which the respondents were trained*. No statistically significant difference was found in the distribution of participants into those who were employed in the jobs they were trained for and those who were not, considering the type of training they attended (χ^2=4.48, df=7, p>0.05). The highest employment in jobs for which they were trained was recorded among respondents who attended the *Training for caregivers for the elderly* (44.4%), followed by the *Training for beauticians* (38.9%) and the *Training for senior home helpers* (34.9%). The results of the *Chi square* test show that there is no statistically significant difference between the analysed categories of participants also when analysing vocational training programmes at the level of occupational groups (χ^2=5.84, df=7, p>0.05), or at the level of the field of work to which a vocational training belongs (χ^2=5.45, df=6, p>0.05).

When it comes to the *unemployment* status, research results indicate that there is no statistically significant difference in the distribution of participants into unemployed and those who are not, considering the type of training they attended (χ^2=8.05, df=7, p>0.05). Participants who attended the *Training for manicurist-pedicurist* had the highest unemployment incidence (75.0%), followed by participants in the *Training in tailoring and sewing ready-made garments - basic level* (47.4%) and the *Training for bookkeepers* (47.1%). The results of the Chi square test show that there is no statistically significant difference between the analysed categories of participants in vocational training, either at the level of occupational groups (χ^2 = 7.30, df = 7, p> 0.05), or at the level of the field of work to which a vocational training belongs (χ^2=55.55, df=6, p>0.05)

Similar to the previously described employment statuses of participants, no statistically significant difference was found in the distribution of participants into *inactive* and *active*, considering the type of training they attended (χ^2=10.55, df=7, p>0.05). The largest percentage of inactive people attended the *Training in tailoring and sewing ready-made garments - basic level* (15.8%). The results of the Chi square test show that there is no statistically significant difference between the analysed categories of participants in vocational training, either at the level of occupational groups (χ^2=23.51, df=7, p =0.001), or at the level of the field of work to which the vocational training programme belongs (χ^2=23.51, df=7, p=0.001).

In general, research results show that the analysed types of vocational training programmes are of no significance for the status of an individual in the labour market, although it is important to point out that the sample included only seven different vocational training programmes that were represented in the sample with at least 5% of the total number of respondents in the sample.

Observed through the prism of the quality assessment of a vocational training implementation (composite score), it is interesting that quality assessments are largely in line with the labour market status of participants upon completion of training. Thus, in the highest rated vocational training programmes, more than half of the trainees were employed upon completion of vocational training (*Training for senior home helpers* - 55.8%, *Training for caregivers for the elderly* - 50.0%), while only 25.0% of the participants in the lowest-rated *Training for manicurist-pedicurist* was employed.

In the coming period, it would be valuable to also research the impact of different types of vocational training programmes on the labour market status of participants to obtain the answer whether and under which conditions vocational training is a key factor in the change of an individual's employment status, and how vocational training programmes should be designed to ensure successful transition into employment.

Location of vocational training (practical training)

Is location of vocational training (practical training) a relevant factor for the labour market status of participants upon completion of training? We have tried to find the answer to this question by applying the *Chi square* test. When it comes to the employment status of participants, research findings indicate that there is no difference between the employed and those who were not employed, in accordance with this property, (χ^2=0.754, df=1, p>0.05). There is also no statistically significant difference when comparing the employed in jobs they

were trained for and those who were not (χ^2=0.840, df=1, p>0.05), as well as when comparing the active and the inactive (χ^2=1.68, df=1, p>0.05) and the unemployed and those who were not (χ^2=0.754, df=1, p>0.05).

These findings are not surprising considering that the largest percentage of respondents attended vocational training (practical training) with an employer in a real work environment (95.2%), while only 4.8% of them attended the training in a workshop/educational facility in a school. None of the training participants attended a combination of work-based and school-based training. These findings do not lead to the conclusion that the location of a vocational training (practical training) is irrelevant to the labour market status of an individual, but most participants in the sample attended vocational training with an employer in a real work environment.

4. Characteristics and labour market status of participants

In this chapter, we sought to determine whether there is a statistically significant relation between the characteristics of vocational training participants and their labour market status upon completion of vocational training. The characteristics of vocational training participants were analysed in relation to whether or not the participants have work experience, and qualifications related to the jobs for which they received vocational training.

Work experience related to the attended vocational training and labour market status of participants

To examine whether the work experience of the participants related to the attended vocational training is statistically significant for their labour market status after completion of vocational training, we used the *Chi square* test. In line with expectations, research results indicate a statistically significant relation between the analysed variables for all analysed labour market statuses, i.e., employment (including employment in jobs for which they received training), unemployment and inactivity of participants.

When it comes to *employment*, the results indicate a significant statistical difference between participants who have work experience related to the attended vocational training and those who do not (χ^2=33.50, df=2, p=0.000), where labour market status of participants with related work experience have a better labour market status in terms of employment. In the group of participants who found employment upon completion of vocational training, 40.9% had no related work experience, 45.3% had 1 to 2 years of experience, and 7.4% had over 2 years of experience. At the same time, the majority of participants who did not find

employment upon completion of vocational training did not have any work experience related to the attended vocational training (71.1%), while only 26.6% had 1 to 2 years of relevant work experience and 2.3% had over 2 years of relevant work experience.

Table 12 Work experience related to the attended training and the employment of participants upon completing vocational training (Chi square test)

			Employed		Total
			No	Yes	
Work experience related to the attended vocational training	0	f	123	56	179
		%	71.1%	40.9%	57.7%
	1 - 2	f	46	62	108
		%	26.6%	45.3%	34.8%
	+2	f	4	19	23
		%	2.3%	13.9%	7.4%
Total		f	173	137	310
		%	100.0%	100.0%	100.0%

χ^2=33.50, df=2, p=*0.000*

Likelihood Ratio=34.51, df=2, p=*0.000*

Statistical significance was also determined when we analysed the relation between work experience related to the attended vocational training and the *employment in jobs for which the respondents received training* (χ^2=26.02, df=1, p=0.000). The results of the *Chi square* test show that the largest percentage of participants employed in jobs related to the vocational training they completed had 1 to 2 years of prior work experience relevant to the jobs for which they received training (49.5%). In contrast, the majority of those who, upon completion of vocational training, were not engaged in the jobs for which they received training, do not have any work experience related to the attended vocational training (67%).

Table 13 Prior work experience related to the attended training and employment in jobs for which a vocational training was provided (Chi squared test)

			Employed in jobs for which they received vocational training		
			No	Yes	Total
Work experience related to the attended vocational training	0	f	144	35	179
		%	67.0%	36.8%	57.7%
	1 - 2	f	61	47	108
		%	28.4%	49.5%	34.8%
	+2	f	10	13	23
		%	4.7%	13.7%	7.4%
Total		f	215	95	310
		%	100.0%	100.0%	100.0%

χ^2=26.02, df=2, p=*0.000*

Likelihood Ratio=25.76, df=2, p=*0.000*

When it comes to *unemployment*, using the *Chi square* test we determined a statistically significant difference between participants who had the status of unemployed persons after completing vocational training and those who did not have that status (χ^2=15.89, df=2, p=0.000), taking into account the variable work experience of participants related to the attended vocational training. The results show that the largest percentage of the unemployed did not have any prior work experience related to the attended vocational training (68.5%).

Table 14 Prior work experience related to the attended training and the unemployment status of participants upon completing vocational training (Chi square test)

			Unemployed and looking for a job		Total
			No	Yes	
Work experience related to the attended vocational training	0	f	81	98	179
		%	48.5%	68.5%	57.7%
	1 - 2	f	67	41	108
		%	40.1%	28.7%	34.8%
	+2	f	19	4	23
		%	11.4%	2.8%	7.4%
Total		f	167	143	310
		%	100.0%	100.0%	100.0%

χ^2=15.89, df=2, p=*0.000*

Likelihood Ratio=16.70, df=2, p=*0.000*

Also, a statistically significant relation was found between the analysed variables when it comes to *inactivity,* as an individual's labour market status. In fact, using the *Chi square* test we tested the difference between inactive and active participants after a vocational training, considering whether they have work experience related to the attended vocational training. The results show that there is a statistically significant difference between the analysed categories of participants (χ^2=9.38, df=2, p=0.009), so that the largest percentage of inactive persons did not have any work experience related to the jobs for which they received training (83.3%).

Table 15 Work experience related to the attended training and the inactivity of participants upon completing vocational training (Chi square test)

			Not employed and not looking for a job		Total
			No	Yes	
Work experience related to the attended vocational training	0	f	154	25	179
		%	55.0%	83.3%	57.7%
	1 - 2	f	103	5	108
		%	36.8%	16.7%	34.8%
	+2	f	23	0	23

	%	8.2%	0.0%	7.4%
Total	f	280	30	310
	%	100.0%	100.0%	100.0%

χ^2=9.38, df=2, p=*0.009*

Likelihood Ratio=11.87, df=2, p=*0.003*

Based on the presentation of the established statistical significance between the analysed variables, we can observe that prior work experience related to the attended vocational training is a relevant factor for employment (including employment in jobs for which the participants received training), unemployment and inactivity, that is, it can be understood as an extremely important determinant of the labour market status of a participant upon completion of vocational training.

These findings suggest that short-term vocational training is most suitable for individuals who have already worked in the same or similar jobs, who already have partially developed competencies for the same or similar jobs, who are familiar with the sector/field of work and businesses in the local labour market that employ workers of that profile, etc. For this category of participants, a short-term vocational training is more an instrument for systematizing existing knowledge and reorganizing existing work experience, and often an opportunity to obtain a certificate as a confirmation of competencies, which facilitates their employment.

However, the importance of relevant work experience for the labour market status of participants after completion of vocational training is also reflected in the established statistically significant relation of the analysed variable with the status of unemployment and inactivity of participants. The findings indicate not only that relevant work experience enables employment of participants upon completion of training, both in jobs for which they attended vocational training and in other jobs, but also that the absence of relevant work experience is correlated with unemployment or inactivity of participants. Therefore, knowledge, skills and competencies acquired during short-term vocational training, if not supported by previously acquired relevant experience, or not encouraged through other types of ALMP measures, are not sufficient to change the labour market status of participants in terms of employment. Unemployment of a participant after completion of vocational training or even inactivity is more certain if participants are discouraged in their job search.

These findings should not be understood to mean that vocational training should not include participants without relevant work experience, but that short-term vocational training is more suitable for participants who have some experience in the field for which they are

trained, while longer training programmes are more appropriate for participants who do not have any relevant knowledge and experience before enrolling in training. From the employment policy point of view, the targeted selection of participants before enrolment in a vocational training programme is extremely important. When it comes to education policy, it is extremely important to improve career guidance and counselling services of education service providers, develop the offer of different vocational training programmes adapted to different target groups, and individualize training services taking full account of the previously acquired competencies of participants.

Qualifications related to the attended vocational training and labour market status of participants

To examine whether the qualifications of participants related to the attended vocational training are statistically significant for their labour market status upon completion of vocational training, we used the *Chi square* test. Contrary to expectations, research results indicate no statistically significant relation between the analysed variables for all analysed statuses in the labour market, i.e., for employment, unemployment and inactivity of participants.

When it comes to *employment*, the results of the *Chi square* test show that there is no statistically significant difference between participants who are employed after attending a vocational training and those who are not, taking into account the relation of the participants' qualifications to vocational training, either at the level of occupational groups (χ^2=2.26, df=2, p>0.05), or at the level of the field of work (χ^2=2.14, df=1, p>0.05). The results are similar if we compare the participants who after completing vocational training are *employed in the jobs for which they were trained* and those who are not. The Chi square test results show no statistically significant difference between the analysed categories, either at the level of occupational groups (χ^2=3.04, df=2, p>0.05), or at the level of the field of work. (χ^2=3.03, df=1, p>0.05). A statistical significance was not fund for the status of *unemployment* either (χ^2=1.32, df=2, p>0.05 - relatedness at the level of occupational groups, χ^2=3.03, df=1, p>0.05 - relatedness at the level of areas of work), or in the *inactivity* of participants after completion of vocational training (χ^2=0.71, df=2, p>0.05 - relatedness at the level of occupational groups, χ^2=0.27, df=1, p>0.05 - relatedness at the level of the field of work).

Although in line with the results of previous research (Fabian, 2018), these findings are still surprising, especially considering the repeatedly determined statistical significance of work experience related to the attended vocational training for the labour market status of participants after training. It is realistic to expect that, in vocational training, the competencies

acquired either through (related) work experience or through (related) formal education, will be placed in the service of new learning, leading to the improvement of the quality of a participant's competencies, and consequently of his labour market status.

Instead of concluding that there is no statistically significant relation between the analysed variables, the explanation for the findings should be sought in the very determination of the relatedness of qualifications with attended vocational training. In fact, in the research, the relatedness of qualifications and vocational training was considered in the context of their belonging to the same field of work or the same occupational group in accordance with the Unique Occupational Nomenclature (SFRY Official Gazette, No 31/90). However, since many different qualifications are further classified within the same group, in future research the variable relatedness of formal education and vocational training should be considered at the level of an individual qualification, and not the group or the field of work to which the qualification and vocational training belong.

5. Socio-demographic characteristics and labour market status of participants

The research analysed the sociodemographic characteristics of the participants, specifically, gender, age, education level, total work experience and duration of unemployment of participants before attending vocational training.

To examine whether the *gender* of participants is a statistically significant variable for their labour market status upon completion of vocational training, we used the *Chi square* test. The test results indicate no statistically significant relation between gender and the analysed statuses in the labour market, i.e., employment, unemployment and inactivity of participants.

When it comes to *employment* upon completion of training, the results of the *Chi square* test indicate that there is no statistically significant difference between the genders (χ^2=1.376, df=1, p>0.05). At the end of vocational training, 42.3% of the total number of women in the sample were employed, and 50.0% of men. There is also no statistically significant difference between the genders when we analyse their *employment in the jobs they were trained for* (χ^2=0.007, df=1, p>0.05). Upon completion of vocational training, 30.8% of the total number of women in the sample were employed in the jobs they were trained for relative to 30.3% of men. Similarly, when it comes to the *unemployment* and *inactivity* of participants upon completion of vocational training, we found no statistically significant difference between the analysed categories (χ^2=0.079, df=1, p>0.05 - unemployment, χ^2=2.24, df=1, p>0.05 - inactivity).

Upon completing vocational training, 46.6% of the total number of women in the sample were unemployed, relative to 44.7% of men. When it comes to the inactivity of participants, 11.1% of women were inactive after completing vocational training relative to 5.3% of men.

To examine whether the *education level* of participants is a statistically significant variable for their labour market status upon completion of vocational training, we used the *Chi square* test. Contrary to expectations, the test results indicate no statistically significant relation between the education level and the analysed statuses in the labour market, i.e., employment, unemployment and inactivity of participants.

When it comes to *employment*, the results of the *Chi square* test indicate no statistically significant difference between participants with different education levels related to employment after completion of vocational training (χ^2=2.34, df=2, p>0.05), that is, *employment in jobs they were trained for* (χ^2=2.69, df=2, p>0.05). Upon completion of vocational training, 50.8% of participants without qualifications were employed, followed by 43.9% of participants with secondary education and 35.7% of participants with tertiary education. The situation is similar when it comes to the relation between the education level of participants with the status *unemployment* (χ^2=2.41, df=2, p>0.05) and *inactivity* (χ^2=0.57, df=2, p>0.05) upon completion of a vocational training. Upon completion of a vocational training, 38.1% of participants without qualifications were unemployed, followed by 47.3% of participants with secondary education and 52.4% of students with tertiary education. When it comes to inactivity, upon completion of a vocational training, 11.1% of participants without qualifications were inactive, followed by 8.8% of participants with secondary education and 11.9% of participants with tertiary education.

To determine the connection between a participants' *age* and their labour market status after completion of vocational training, we used the *T test*.

According to the results of the *T test* for large independent samples, there is no statistically significant difference between the two groups, i.e., *the employed* and those who are not, upon completion of vocational training, relative to the age of participants (t=1.386, p>0.05). The average age of the employed is M=40.59±11.20, and of those participants who are not employed M=38.76±11.79. Similar results were obtained when determining the differences between participants who were *employed in the jobs they were trained for* and those who were not. According to the results of the *T test* for large independent samples, there is no statistically significant difference between the two groups of participants (t=0.157, p>0.05). The average age of participants employed in the jobs they were trained for is M=39.73±11.71, and of those who are not M=39.50±11.51.

According to the results of the *T test* for large independent samples, there is no statistically significant difference between *unemployed* participants and those who are not after completing vocational training, in terms of their age (t=1.151, p>0.05). The average age of the unemployed is M=38.76±11.79, while the average age of the rest of respondents is M=40.27±11.33. Also, there are no statistically significant differences when comparing the category of *inactive* participants and those who are not in it (t=10.384, p>0.05), in terms of their age. The average age of the inactive is M=38.80±11.97, while the average age of other respondents is M=39.65±11.52.

To determine the connection between the *duration of unemployment* of participants before enrolling in vocational training and their labour market status after completion of vocational training, we used the *T test*. The results show no statistically significant difference between the compared groups for all analysed labour market statuses. The average duration of unemployment before enrolling in vocational training is similar for the employed and those who are not employed after completing vocational training (t=0.377, p>0.05), and for participants who are employed after completing a vocational training in the jobs they were trained for and those who are not (t=0.698, p>0.05).

The situation is similar when it comes to other statuses on the labour market. The average duration of unemployment before enrolment in a vocational training is similar for the *unemployed* and other participants (t=0.692, p>0.05). The average duration of unemployment before enrolling in vocational training is M=48.64±62.73 for the unemployed participants, and for the rest of the participants M=54.01±72.42. When it comes to the *inactivity* of participants, the average duration of unemployment before enrolment in vocational training is similar for inactive and other participants (t=1.808, p>0.05), with the average duration of unemployment before enrolment in vocational training at M=72.80±77.85 for inactive respondents, and M=49.25±66.69 for the rest of the respondents.

To determine the connection between the *total work experience* of a participant and his labour market status after the completion of vocational training, we used the *T test*. The results show a statistically significant difference between the analysed variables for the employment and inactivity status, but not for unemployment.

When it comes to the *inactivity* of participants, a statistically significant difference was found between respondents who were inactive after completing vocational training compared and those who were not (t=2.039, p=0,042), where the inactive ones had shorter prior work experience (M=19.57±24.46) compared to the others (M=31.93±32.21).

Table 16 Total work experience and the inactivity of participants upon completing vocational training (T - test)

		N	M	SD	t	Df	p
Total work experience (months)	No	280	31.93	32.21	2.039	308	***0.042***
	Yes	30	19.57	24.46			

N-number of respondents; M – arithmetic mean; SD-standard deviation; t – t test; df – degrees of freedom; p – statistical significance

When it comes to the *employment* of participants, it was determined that there is a statistically significant difference between those who were employed and those who were not employed upon completing vocational training, in terms of their total work experience (t=2.374, p=0.018). The employed had longer work experience compared to those who were not employed (M=35.50±33.23 and M=26.95±30.03, respectively).

Table 17 Total work experience and the employment of participants upon completing vocational training (T - test)

		N	M	SD	t	df	p
Total work experience (months)	No	173	26.95	30.03	-2.374	308	***0.018***
	Yes	137	35.50	33.23			

N-number of respondents; M – arithmetic mean; SD-standard deviation; t – t test; df – degrees of freedom; p – statistical significance

It is interesting that the statistical significance of the total work experience was not found when analysing *employment in jobs related to the vocational training programme attended* (t=0.351, p>0.05). The total work experience is similar in the two compared groups, so the group of respondents who were employed in jobs related to the vocational training they attended has an average work experience of M=31.68±31.98, and those who are not in this group M=30.31±31.67.

No statistical significance of the total work experience was determined for the participants who were unemployed after completion of vocational training either. The results show that the total work experience is similar in the two compared groups (t=1.145, p>0.05), the unemployed on average M=28.50±30.93, and the other respondents on average M=32.36±2.36.

In general, the analysed socio-demographic characteristics largely did not confirm their statistical significance in relation to the labour market status of an individual upon completion of vocational training. Although numerous studies suggest that training has a greater impact on individuals with tertiary education (Mincer, 1991; Pejatović & Orlović Lovren, 2014; Marjanović, 2015), that women have a better position in the labour market in terms of employment after a

training (Betcherman et al., 2004), that training yields the weakest results in the case of youth (*ibid.*), and that the probability of finding a job decreases in proportion to the duration of unemployment (Arandarenko, Krstić, Golicin, & Vujić, 2013), the findings of this research suggest that labour market outcomes improved only for participants who had work experience before enrolment in vocational training, regardless of whether it was related or not to the attended vocational training. The findings should certainly be analysed in the context of the emergency situation caused by COVID-19, so that individuals with longer work experience who adapted more easily to the new situation had greater mobility in the labour market than the inexperienced participants just entering the labour market.

QUALITY OF IMPLEMENTATION OF VOCATIONAL TRAINING AND INDEPENDENT VARIABLES

In the following analyses, we have examined whether there is a statistically significant relation between the quality of implementation of vocational training and independent variables, such as: quality of career guidance and counselling services, characteristics of vocational training, characteristics of vocational training participants, including their socio-demographic characteristics.

1. Quality of implementation of vocational training and career guidance and counselling services

The relation between the quality of implementation of vocational training and the quality of career guidance and counselling services has been examined using the correlation coefficient. In line with expectations, the *Pearson correlation coefficient* shows a statistically significant positive correlation between the analysed variables. Having said that, we should emphasize that the coefficient is not high, and that it varies between 0.278 and 0.530, depending on the quality dimension. The findings suggest that a better assessment of the quality of career guidance and counselling services is associated with a better assessment of the quality of implementation of vocational training in all analysed quality dimensions.

Table 18 Quality of implementation of short-term vocational training and quality of career guidance and counselling services (Pearson correlation coefficient)

		Career guidance and counselling
Teachers and instructors	r	***,404****
	p	***,000***
	N	310
Spatial conditions and health protection	r	***,364****
	p	***,000***
	N	310
Equipment and tools	r	***,436****
	p	***,000***
	N	309
Training process	r	***,403****
	p	***,000***
	N	310

Organization of training	r	***,428****
	p	***,000***
	N	310
Training location	r	***,278****
	p	***,000***
	N	309
Training result	r	***,530****
	p	***,000***
	N	310
Quality of implementation of short-term vocational training - composite score	r	***,509****
	p	***,000***
	N	308

r – Pearson correlation coefficient; p – statistical significance

These findings confirm an extremely complex relation between the quality of career guidance and counselling services and the quality of training services. High quality professional support to individuals in the choice of training, and in keeping them informed about vacancies, after completion of training, that match their newly acquired competencies, will result in better assessments of the quality of vocational training implementation in all analysed quality dimensions. The findings in the context of the determined statistically significant relation between the quality of vocational training implementation and of career guidance and counselling services and the labour market status of participants, unequivocally confirm the importance of the quality of career guidance and counselling services, as well as the need for continuously improving and putting it in the service of the training process in all phases, prior to, throughout, as well as after the end of training.

2. Quality of implementation of vocational training and characteristics of vocational training

In the following analyses, we examined whether there is a statistically significant relation between the quality of implementation of vocational training, and the characteristics of vocational training, analysed through the number of vocational training hours, the type of vocational training and the location of vocational training (practical training).

Quality of implementation of vocational training and number of vocational training hours

We examined the relation between the quality of implementation of vocational training and the number of training hours using the correlation coefficient. The *Pearson correlation coefficient* shows a statistically significant correlation between the analysed variables, however, it should be emphasized that the coefficient is not high, as well as that it varies depending on the quality dimension. The results indicate that a larger number of vocational training hours is associated with a poorer assessment of the quality of implementation of vocational training in the following dimensions: *Teachers and instructors*, *Spatial conditions and health protection*, *Equipment and tools, Training process, Organization of training and Quality of implementation of short-term vocational training - composite score,*

Table 19 Quality of implementation of short-term vocational training and number of training hours

		Number of training hours
Teachers and instructors	r	***-,170****
	p	***,003***
	N	310
Spatial conditions and health protection	r	***-,171****
	p	***,003***
	N	310
Equipment and tools	r	***-,175****
	p	***,002***
	N	309
Training process	r	***-,217****
	p	***,000***
	N	310
Organization of training	r	***-,163****
	p	***,004***
	N	310
Training location	r	-,109
	p	,056
	N	309
Training result	r	,003
	p	,952
	N	310
Quality of implementation of short-term vocational training - composite score	r	***-,186****
	p	***,001***
	N	308

r – Pearson correlation coefficient; p – statistical significance

Although this finding is quite difficult to explain, to understand it to some extent, we need to consider the quality assessments of all quality dimensions of the implementation of vocational training analysed in this research. In fact, the results indicate that the number of

vocational training hours, according to the participants in the sample, was to some extent inadequate, i.e., it was not sufficient to reach the required level of competence to work independently. However, participants assessed other quality dimensions with average scores, including the quality of implementation of practical training with employers. Scores indicate that participants did not have enough opportunities to learn in the training, that they acquired competencies to work in new jobs only to a certain extent by practicing them, that during the training they were to a certain extent treated as "employees", and that they were to a significant extent trained for the job tasks that the employer needed at the time for his business process, that the instructors were predominantly occupied with performing tasks and duties they had as company employees, and that they dedicated only part of their working time during vocational training to the participants, as well as the fact that the training provider did not secure the availability of various tools and production materials during training, etc. Observed in this context, the finding that a larger number of vocational training hours is linked with a lower score of the quality of vocational training implementation can also be partly explained by the fact that participants who attended longer vocational training were in the training process with which they were not completely satisfied for a longer time, and thus they gave lower scores to the quality of the vocational training attended.

On the other hand, the reason behind this finding can be that training providers and employers delivering practical training provided vocational training of a lower quality in a situation when it was necessary to train participants for a larger number of competencies, i.e., a larger number of job tasks for which a larger number of vocational training hours was foreseen. Having said that, we should bear in mind that this study covered 17 different vocational training programmes, and that only 7 vocational training programmes in the sample were represented with at least 5% of the total number of respondents in the sample, and that the relation between the quality of implementation of vocational training and the number of training hours needs to be further examined through future research.

Quality of implementation of vocational training and types of vocational training

The relation between different types of vocational training and the quality of implementation of vocational training has been examined using the one-way analysis of variance (ANOVA). The results indicate differences between the analysed variables.

Table 20 Quality of implementation of short-term vocational training by type of training (ANOVA test)

		Teachers and instructors	Spatial conditions and health protection	Equipment and tools	Training process	Organization of training	Training location	Training result	Quality of implementation of short-term vocational training - composite score
Training for CNC machine operators	M	4.32	4.64	3.80	3.05	4.00	4.76	3.50	4.02
	SD	0.59	0.68	0.72	0.83	0.62	0.44	0.59	0.50
Training for senior home helpers	M	4.61	4.73	4.25	3.92	4.44	4.57	3.84	4.34
	SD	0.36	0.44	0.49	0.57	0.44	0.53	0.65	0.34
Training for bookkeepers	M	4.74	4.94	4.47	3.82	4.53	4.74	4.02	4.46
	SD	0.38	0.18	0.53	0.69	0.44	0.62	0.61	0.34
Training for beauticians	M	4.16	4.35	3.74	3.24	4.08	4.53	3.69	3.97
	SD	0.68	0.82	0.91	0.80	0.70	0.50	0.81	0.67
Training for tailoring and sewing ready-made garments - basic level	M	4.28	4.51	3.67	3.26	4.01	4.57	3.55	3.98
	SD	0.57	0.56	0.59	0.54	0.66	0.53	0.56	0.45
Training for caregivers for the elderly	M	4.72	4.74	4.33	3.86	4.48	4.81	3.99	4.42
	SD	0.45	0.55	0.61	0.78	0.52	0.39	0.54	0.38
Training in manicurist-pedicurist	M	4.20	4.42	3.39	2.88	3.72	4.32	3.27	3.72
	SD	0.88	0.76	0.64	0.64	0.86	0.65	0.60	0.63
Other (less than 5% in the sample)	M	4.57	4.78	4.33	3.84	4.39	4.86	3.56	4.33
	SD	0.52	0.49	0.80	0.91	0.67	0.38	0.61	0.53
Total	M	4.45	4.66	4.02	3.52	4.22	4.69	3.63	4.17
	SD	0.58	0.58	0.76	0.83	0.67	0.50	0.63	0.53
F		4.103	2.317	9.471	12.249	5.750	2.416	2.087	6.764
p		***0.000***	***0.003***	***0.000***	***0.000***	***0.000***	***0.002***	***0.009***	***0.000***

M – arithmetic mean; SD-standard deviation; F – ANOVA test; p – statistical significance

Analysed by type of vocational training programme, the results of the one-way ANOVA test indicate a statistically significant difference in all quality dimensions when it comes to the quality assessment of different vocational training programmes, so that:

- the dimension *Teachers and instructors* was given the highest score by respondents who attended vocational *Training for bookkeepers* (M=4.73±0.38), and the lowest by those who attended vocational *Training for beauticians* (M=4.16±0.68);
- the dimension *Spatial conditions and health protection* was given the highest score by the respondents who attended the *Training for bookkeepers* (M=4.94±0.18), and the lowest by those who attended the vocational *Training for beauticians* (M=4.35±0.82);
- the dimension *Equipment and tools* was given the highest score by the respondents who attended vocational *Training for bookkeepers* (M=4.47±0.53), and the lowest by those who attended vocational *Training for manicurist-pedicurist* (M=3.39±0.64);

- the dimension *Training process* was given the highest score by the respondents who attended vocational *Training for senior home helpers* (M=3.92±0.57), and the lowest by those who attended vocational *Training for manicurist-pedicurist* (M=2.88±0.64);
- the dimension *Organization of training* was given the highest score by the respondents who attended vocational *Training for bookkeepers* (M=4.53±0.44), and the lowest by those who attended vocational *Training for manicurist-pedicurist* (M=3.72±0.86);
- the dimension *Training location* was given the highest score by the respondents who attended vocational training classified in the category *Other* (M=4.86±0.38), and the lowest by those who attended vocational *Training for manicurist-pedicurist* (M=4.32±0.65);
- the dimension *Training result* was given the highest score by the respondents who attended vocational *Training for bookkeepers* (M=4.02±0.61), and the lowest by those who attended vocational *Training for manicurist-pedicurist* (M=3.27±0.60);
- the *Quality of implementation of short-term vocational training* was rated with the highest score on the composite score of the scale by the respondents who attended vocational *Training for bookkeepers* (M=4.46±0.34), and the lowest by those who attended vocational *Training for manicurist-pedicurist* (M=3.72±0.63).

These findings are in accordance with the participants' rating of the quality of implementation of vocational training. The overall quality was most highly rated by participants in the vocational *Training for bookkeepers* (M=-4.46±0.34), and worst rated by those who attended the vocational *Training for manicurist-pedicurist* (M=-3.72±0.63). It is interesting that the best rated vocational training has the highest scores in almost all quality dimensions, just as the worst rated vocational training has the lowest scores in almost all quality dimensions. This testifies to the mutual complex relation and interdependence of the analysed quality dimensions and confirms that quality assurance in one dimension conditions and encourages the quality of another dimension and vice versa, the lack of quality in one dimension contributes to a poorer quality assessment in another dimension.

Quality of implementation of vocational training and location of vocational training (practical training)

The relation between the location of practical vocational training and the quality of implementation of vocational training has been examined using the one-way analysis of variance (ANOVA). The results indicate differences between the analysed variables. Contrary to expectations, the participants who attended vocational training in a workshop/educational

facility in a school, better assessed the quality of implementation of vocational training in the following quality dimensions: *Spatial conditions and health protection*, *Equipment and tools, Organization of training and Quality of implementation of short-term vocational training - composite score.*

Table 21 Quality of implementation of short-term vocational training and location of vocational training (ANOVA test)

		N	M	SD	F	p
Teachers and instructors	With an employer in a real work environment	295	4.438	0.578	3.083	0.080
	In a workshop/educational facility in a school	15	4.706	0.535		
	Total	310	4.451	0.578		
Spatial conditions and health protection	With an employer in a real work environment	295	4.643	0.590	4.179	***0.042***
	In a workshop/educational facility in a school	15	4.956	0.172		
	Total	310	4.658	0.581		
Equipment and tools	With an employer in a real work environment	294	3.997	0.757	8.106	***0.005***
	In a workshop/educational facility in a school	15	4.560	0.508		
	Total	309	4.024	0.756		
Training process	With an employer in a real work environment	295	3.506	0.829	0.976	0.324
	In a workshop/educational facility in a school	15	3.724	0.906		
	Total	310	3.517	0.833		
Organization of training	With an employer in a real work environment	295	4.197	0.674	4.753	***0.030***
	In a workshop/educational facility in a school	15	4.581	0.450		
	Total	310	4.216	0.669		
Training location	With an employer in a real work environment	294	4.680	0.504	1.328	0.250
	In a workshop/educational facility in a school	15	4.833	0.450		
	Total	309	4.688	0.502		
Training result	With an employer in a real work environment	295	3.620	0.635	1.020	0.313
	In a workshop/educational facility in a school	15	3.789	0.576		
	Total	310	3.628	0.633		
Quality of implementation of short-term vocational training - composite score	With an employer in a real work environment	293	4.157	0.529	4.469	***0.035***
	In a workshop/educational facility in a school	15	4.450	0.399		
	Total	308	4.171	0.526		

M – arithmetic mean; SD-standard deviation; F – ANOVA test; p – statistical significance

As with the analysis of the relation between the quality of implementation of vocational training and the number of training hours, this finding should also be observed in the context of rating the quality of implementation of vocational training. Participants rated the quality of implementation of practical training with employers with average scores. Research findings suggest that employers have modern equipment and tools, but that they have not yet profiled themselves as educational providers. Scores indicate that the training did not provide participants with enough opportunities to learn, that to a certain extent they were treated as "employees" while attending the training, and that to a significant extent they were trained for the job tasks that the employer needed at the time for his business process, that the availability of various tools and production materials during lessons was not secured, that to a great extent no special places were secured for participants in the workshop to enable them to practice and learn the new skills, i.e., that it was more of a work environment with equipment and tools used by employees, without a separate space for vocational training participants.

Unlike the real work environment with employers, according to the participants' assessments, the workshops/educational facilities in schools provided better spatial conditions and health protection of participants, better equipment and tools, and the organization of training enabled training of a good quality. However, although the quality assessments of the participants indicate that there is significant room for improving the quality of practical training with employers, the findings should be interpreted carefully, taking into account that only 4.8% of participants attended vocational training in a workshop/educational facility in a school, specifically, only 15 participants from the sample, who attended two analysed vocational training programmes (Training for bookkeepers and Training for caregivers for the elderly).

3. Quality of implementation of vocational training and characteristics of participants

In the following analyses we have examined whether there is a statistically significant relation between the quality of implementation of vocational training and the characteristics of vocational training, analysed through the relatedness of work experience and qualifications to the vocational training attended by participants.

Quality of implementation of vocational training and the relatedness of participants' work experience to the attended vocational training programmes

To examine the relation between the quality of implementation of vocational training and the work experience of participants related to the jobs they were being trained for we applied the T test. In line with expectations, the results of the T test show a statistically significant relation, so participants with work experience related to the vocational training they attended gave higher scores to the following quality dimensions of vocational training implementation: *Equipment and tools* (M=4.13), *Training result* (M=3.72) and *Overall quality of implementation of short-term vocational training - composite score* (M=4.24).

Table 22 Quality of implementation of short-term vocational training and work experience related to the training (t test)

		N	M	SD	t	df	p
Teachers and instructors	Has experience	131	4.50	0.53	1.300	308	0.195
	Does not have experience	179	4.41	0.61			
Spatial conditions and health protection	Has experience	131	4.70	0.55	1.081	308	0.280
	Does not have experience	179	4.63	0.60			
Equipment and tools	Has experience	130	4.13	0.72	2.159	307	***0.032***
	Does not have experience	179	3.95	0.78			
Training process	Has experience	131	3.54	0.80	.498	308	0.619
	Does not have experience	179	3.50	0.86			
Organization of training	Has experience	131	4.30	0.62	1.804	308	0.072
	Does not have experience	179	4.16	0.70			
Training location	Has experience	131	4.74	0.47	1.705	307	0.089
	Does not have experience	178	4.65	0.52			
Training result	Has experience	131	3.72	0.63	2.176	308	***0.030***
	Does not have experience	179	3.56	0.63			
Quality of implementation of short-term vocational training - composite score	Has experience	130	4.24	0.48	1.960	306	***0.051***
	Does not have experience	178	4.12	0.56			

N-number of respondents; M – arithmetic mean; SD-standard deviation; t – t test; df – degrees of freedom; p – statistical significance

These findings indicate that participants with relevant work experience gave higher scores both to the *overall quality of implementation of vocational training - composite score*,

and the *Training result* dimension which is related to the participants' perception of the acquired knowledge, skills and competencies, the recognition of and demand for these in the labour market and their motivation to do the jobs they were trained for. We can say that short-term vocational training is mostly adapted to the educational needs of participants who have relevant prior knowledge and skills in the field they were trained for, i.e., that short-term vocational training is an appropriate educational ALMP measure for this category of participants.

Quality of implementation of vocational training and relatedness of participants' qualifications to the attended vocational training programmes

The relation between the quality of implementation of vocational training and the qualifications of participants related to the attended vocational training was examined using the one-way analysis of variance (ANOVA). The results indicate the absence of statistical significance.

Recognizing the importance of the qualifications obtained for further education and training, instead of concluding that there is no statistically significant relation between the analysed variables, in future research the variable relatedness of formal education and vocational training should be considered at the level of the individual qualification, rather than at the level of the group or field of work to which the qualification and vocational training belong, as already recommended in the previous chapters.

4. Quality of implementation of vocational training and socio - demographic characteristics of participants

In the following analyses we have examined whether there is a statistically significant relation between the quality of implementation of vocational training and the socio-demographic characteristics of participants, specifically: gender, age, education level, length of total work experience and duration of unemployment before enrolment in vocational training.

The results show that of all socio-demographic characteristics, statistical significance was determined only in the *gender* of participants. The *T test* for large independent samples showed is a statistically significant difference between men and women when it comes to the *Training process* dimension (t=3.838, p=0.000), so that a higher assessment of the quality of the training process was given by women (M=3.62±0.81) compared to men (M=3.20±0.83).

Table 23 Gender and the quality of implementation of short-term vocational training (T - test)

		N	M	SD	t	df	p
Teachers and instructors	Male	76	4.39	0.57	-1.031	308	0.304
	Female	234	4.47	0.58			
Spatial conditions and health protection	Male	76	4.69	0.66	0.527	308	0.599
	Female	234	4.65	0.56			
Equipment and tools	Male	75	3.93	0.81	-1.229	307	0.220
	Female	234	4.05	0.74			
Training process	Male	76	3.20	0.83	-3.838	308	***0.000***
	Female	234	3.62	0.81			
Organization of training	Male	76	4.10	0.65	-1.774	308	0.077
	Female	234	4.25	0.67			
Training location	Male	76	4.78	0.46	1.778	307	0.076
	Female	233	4.66	0.51			
Training result	Male	76	3.51	0.61	-1.863	308	0.063
	Female	234	3.67	0.64			
Quality of implementation of short-term vocational training - composite score	Male	75	3.97	0.51	-1.838	306	0.067
	Female	233	4.09	0.51			

N-number of respondents; M – arithmetic mean; SD-standard deviation; t – t test; df – degrees of freedom; p – statistical significance

To understand these findings, we should bear in mind the diversity of vocational training programmes in the sample as well as the gender ratio of participants in different vocational training programmes. In fact, only 4 of a total of 17 different vocational training programmes in the sample, were mixed, i.e., both men and women were represented in the sample (with a higher percentage of women). In the remaining 13 vocational training programmes in the sample, participants were either predominantly male (4 vocational training programmes) or predominantly female (9 vocational training programmes). We can say that the quality assessments of the *Training process* dimension made by men and women from the sample refer to different vocational training programmes. Men assessed the training process of the vocational programme they attended with a lower score (*Training for CNC machine operators* M=3.05±0.83), while women assessed the training process of the vocational programme they attended with a slightly higher score (*Training for senior home helpers* M=3.92±0.57). These findings may also be partly explained by the type of training attended by the men in the sample, i.e., by the fact that it involved training the participants to operate complex machines, devices and other tools in very demanding fields such as Mechanical Engineering and Metal Processing, Transport and Geodesy and Civil Engineering, and that training service providers and employers who implemented the practical training did not fully manage to ensure quality of the training process itself in such complex jobs.

ANNEXES

Annex 1 - Questionnaire

Q U E S T I O N N A I R E

In front of you is a questionnaire that aims to examine the quality of training and effects that training attendance had on your labour market status.

Please read each statement carefully and decide to what extent you agree with it. We particularly emphasize that there are no right or wrong answers. You will give your answer by circling one of the offered numbers on a scale from 1 to 5 where the numbers have the following meanings:

1 – Completely disagree
2 – Mostly disagree
3 – Undecided
4 – Mostly agree
5 – Completely agree

We particularly emphasize that you need to provide an answer to all the statements from the questionnaire. If you do not provide answer to one of the offered statements, the questionnaire will be eliminated.
The aim of this research is to improve the quality of implementation of vocational training, so we kindly ask you to answer all questions honestly. The research is completely anonymous.

T H A N K Y O U I N A D V A N C E !

01. Gender: M F

02. Age:

03. Education level:

04. Qualification:

05. Total work experience (all types of work):

06. Work experience in the same or related jobs to those you were trained for (all types of work)

07. Duration of unemployment before training enrolment:

08. What is your current employment status?

a) Employed (with or without contract)
b) Unemployed and looking for a job
c) Not employed and not looking for a job

09. After the training did you find employment (all types of contracts including the "grey zone" of employment) in the jobs you were trained for?

YES NO

10. Title of the training you attended through the NES:

11. The duration of the training you attended /Number of hours

12. Practical lessons during the training were realized:

a) with an employer in a real work environment
b) in a workshop/educational facility in a school
c) combined, with an employer and in a workshop/educational facility in a school

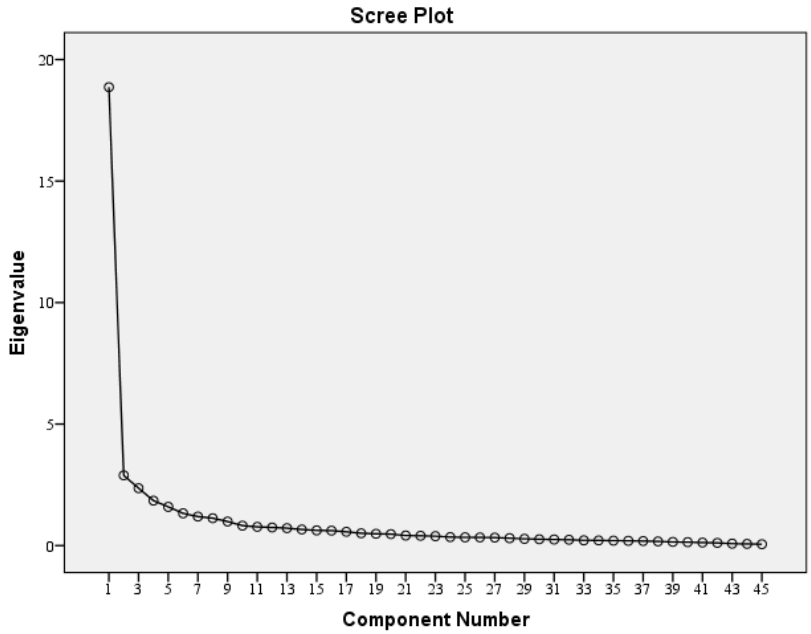
No.	**Items**	Completely disagree	Mostly disagree	Undecided	Mostly agree	Completely agree
13	You could always ask the teacher and instructor a question, or make a suggestion, confide with a problem etc., without thinking about the consequences	1	2	3	4	5
14	Teachers and instructors had understanding for your life and family situation	1	2	3	4	5

No.	Items	Completely disagree	Mostly disagree	Undecided	Mostly agree	Completely agree
15	During classes textbooks/manuals were always available for use	1	2	3	4	5
16	Teachers and instructors were aware of your expectations from the training	1	2	3	4	5
17	In communication with teachers and instructors you felt respected and equal	1	2	3	4	5
18	Teachers and instructors gave instructions specially for you if something was not clear to you	1	2	3	4	5
19	Teachers and instructors encouraged you to talk about your work and life experience during the training	1	2	3	4	5
20	Instructors were always available when you needed them	1	2	3	4	5
21	Instructors gave you an opportunity to self-assess your performance of a work operation, i.e., evaluate your progress in on-the-job learning	1	2	3	4	5
22	Instructors helped you during practical lessons, but were predominantly busy doing their regular job for the employer	1	2	3	4	5
23	Instructors were experts in their field and easily gave you explanations and instructions for performing the job you were trained for	1	2	3	4	5
24	In addition to practical work, you also benefited from the information received in lectures	1	2	3	4	5
25	Lighting and indoor climate were good (ventilation, heating, air conditioning, etc.)	1	2	3	4	5
26	You were provided with the necessary protective equipment and tools (suits, gloves, etc.)	1	2	3	4	5
27	Hygienic conditions were good	1	2	3	4	5
28	Classrooms had modern space and equipment (seats, boards, projectors, etc.)	1	2	3	4	5
29	Workshops had modern machines and tools	1	2	3	4	5
30	In the workshop there was a “workspace“ where only participants were trained (hairdressing chair, etc.)	1	2	3	4	5

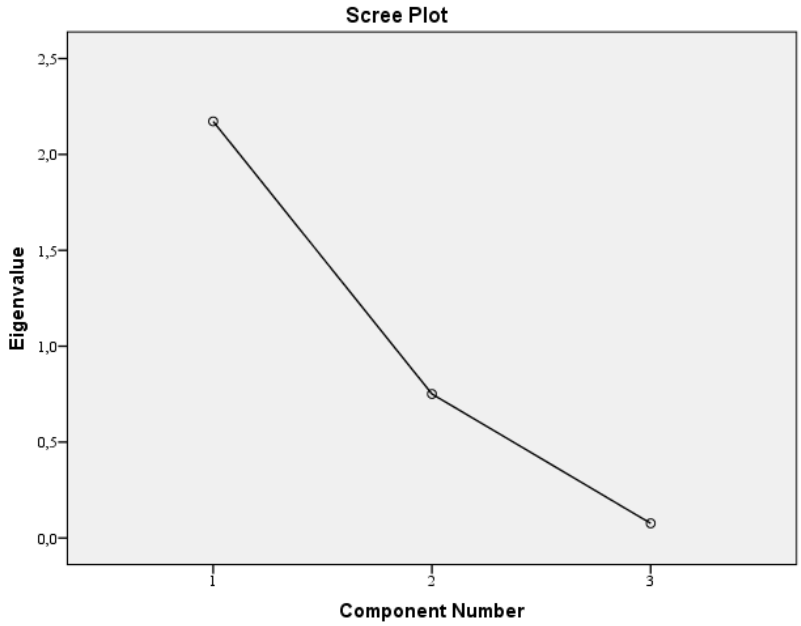
No.	Items	Completely disagree	Mostly disagree	Undecided	Mostly agree	Completely agree
31	Workshops were large and spacious so that there was enough space for all participants	1	2	3	4	5
32	You had all the tools and production materials necessary for the training	1	2	3	4	5
33	You learned the new craft through practical work on the machines, and not by watching someone else do it	1	2	3	4	5
34	Teachers and instructors also revealed some tricks of the trade in terms of how to do something better, or with less effort	1	2	3	4	5
35	Throughout the practical training you were learning the new craft and you were not treated as additional labour force by the employer's staff	1	2	3	4	5
36	You mostly acquired the ability to work in new jobs during classes, without much learning at home	1	2	3	4	5
37	The total number of training hours was sufficient for you to receive a high-quality training to work in a new job	1	2	3	4	5
38	The verification of readiness for work was mostly conducted through practical tasks	1	2	3	4	5
39	During practical training you had enough opportunities to learn and practice working in the new job to become completely independent in your work	1	2	3	4	5
40	The instructions during practical work were clear and understandable	1	2	3	4	5
41	Lectures were clear and understandable	1	2	3	4	5
42	Practical training was implemented according to the current business needs of the employer providing the training, rather than according to the presented training plan	1	2	3	4	5
43	Classes were held according to the schedule, without sudden interruptions or delays	1	2	3	4	5
44	The number of training hours in one day enabled training of a good quality	1	2	3	4	5

No.	Items	Completely disagree	Mostly disagree	Undecided	Mostly agree	Completely agree
45	After each verification of readiness for work, you had an insight into how much you know and what you should improve	1	2	3	4	5
46	Classes were held at appropriate time during the day	1	2	3	4	5
47	The training was held at a location with good traffic connections	1	2	3	4	5
48	The training facilities were in pleasant surroundings	1	2	3	4	5
49	Immediately upon completion of training, you had sufficient knowledge and skills to work independently in the job you were trained for	1	2	3	4	5
50	At the end of the training, you received a certificate recognized by employers	1	2	3	4	5
51	Knowledge and skills acquired through training are in demand in the market and lead to work	1	2	3	4	5
52	All the effort you put into attending the training and learning paid off in the end because now you “have trade skills”	1	2	3	4	5
53	After the training you want to find work in the job you were trained for	1	2	3	4	5
54	The knowledge and skills you have acquired during the training are narrowly specific and not very applicable when it comes to working for other employers in the local labour market	1	2	3	4	5
55	Before starting the training, you were informed in detail about the description of the job for which you would be trained, job risks, working hours, potential earnings, whether it is a seasonal or field job, etc.	1	2	3	4	5
56	The NES helped you choose the training that suits your needs and needs of employers	1	2	3	4	5
57	After the training you were informed about job vacancies that match your training	1	2	3	4	5

Annex 2 Scree Plot – Quality of implementation of vocational training



Annex 3 Scree Plot - Quality of career guidance and counselling services



Annex 4 Factor loads for singled out factors (Quality of vocational training implementation)

Factor title	Items	Factors						
		1	2	3	4	5	6	7
Teachers and instructors	Instructors helped you during practical lessons, but were predominately busy doing their regular job tasks for the employer	0.851						
	Teachers and instructors had understanding for your life and family situation	0.781						
	Teachers and instructors gave instructions specially for you if something was not clear to you	0.703						
	Instructors were always available when you needed them	0.688			-0.365			
	Instructors were experts in their field and easily gave you explanations and instructions for performing the jobs for which you were trained	0.646						
	In addition to practical work, you also benefited from the information received in lectures	0.627						
	Teachers and instructors encouraged you to talk about your work and life experience during the training	0.619						
	In communication with teachers and instructors you felt respected and equal	0.600						
	To teachers and instructors, you could always pose a question, make a suggestion, confide with a problem etc., without thinking about the consequences	0.571						
	Teachers and instructors were aware of your expectations from the training	0.543						
	During classes textbooks/manuals were always available for use	0.520						
	Instructors gave you an opportunity to self-assess your performance of a work operation, i.e., evaluate your progress in on-the-job learning	0.477						
Spatial conditions and health protection	Lighting and indoor climate were good (ventilation, heating, air conditioning, etc.)		0.626					
	Hygienic conditions were good		0.409					
	You were provided with necessary protective equipment and tools (suits, gloves, etc.)		0.321					
Equipment and tools (items)	Workshops had modern machines and tools			0.755				
	You had all the tools and production materials necessary for the training			0.664				

Factor title	Items	Factors						
		1	2	3	4	5	6	7
	Workshops were large and spacious so that there was enough space for all participants			0.616	0.337			-0.382
	In the workshop there was a „workspace“ where only participants were trained (hairdressing chair, etc.)			0.503				
	Classrooms had modern space and equipment (seats, boards, projectors, etc.)			0.428				
Training process	Throughout the practical training you were learning the new craft and you were not treated as additional labour force by the employer’s staff				0.709			
	The verification of readiness for work was mostly conducted through practical tasks				0.650			
	The total number of training hours was sufficient for you to receive the training of a good quality to work in new jobs				0.608			
	During practical training you had enough opportunities to learn and practice working in new jobs in order to become completely independent in your work				0.554			
	Teachers and instructors also revealed some tricks of the trade in the job in terms of how to do something better, or with less effort				0.513			
	The ability to work in new jobs you mostly acquired during classes, without much learning at home				0.497			
	You learned the new craft by practical work on the machines, and not by watching someone else do it				0.471			
Organization of training	Practical training was realized according to the current business needs of the employer providing the training, rather than according to the presented training plan					0.835		
	Lectures were clear and understandable					0.717		
	The instructions during practical work were clear and understandable					0.703		
	After each verification of readiness for work, you had an insight into how much you know and what you should improve	0.302				0.470		
	Classes were held at appropriate time during the day					0.451	-0.307	0.309
	Classes were held according to the schedule, without sudden interruptions or delays					0.428		
	The number of training hours in one day enabled training of a good quality					0.407		

Factor title	Items	Factors						
		1	2	3	4	5	6	7
Training location	Training was held at a location with good traffic connections						0.850	
	The training facilities were located in pleasant surroundings						0.646	
Training result	Knowledge and skills acquired through training are in demand in the market and lead to work							0.912
	Immediately upon completion of training, you had sufficient knowledge and skills to work independently in the job you were trained for							0.912
	After the training you want to find work in the jobs for which you were trained			0.377				0.504
	At the end of the training, you received a certificate recognized by employers							0.410
	All the effort you put into attending the training and learning paid off in the end because now you "have trade skills"							0.378
	Knowledge and skills you have acquired during the training are narrowly specific and not very applicable when it comes to working for other employers in the local labour market							0.330

Annex 5 Factor loads for singled out factors (Quality of career guidance and counselling services)

Factor title	Items	Factor
		1
Career guidance and counselling	NES helped you choose the training that suits your needs and needs of employers	0.948
	Before starting the training, you were informed in detail about the description of the job for which you would be trained, job risks, working hours, possible earnings, whether it is a seasonal or field job, etc.	0.945
	After the training you were informed about job vacancies that match your training	0.617

Annex 6 Average achieved values on the subscale *Quality of implementation of short-term vocational training*

	N	Min	Max	M	SD
The knowledge and skills you acquired during the training are narrowly specific and not very applicable when it comes to working for other employers in the local labour market (R)	310	1.00	5.00	2.932	1.054
Practical training was implemented according to the current business needs of the employer providing the training, rather than according to the presented training plan (R)	310	1.00	5.00	2.939	1.344

	N	Min	Max	M	SD
The total number of training hours was sufficient for you to receive a good quality training to work in a new job	310	1.00	5.00	3.142	0.899
Instructors helped you during practical lessons, but were predominately busy doing their regular job tasks for the employer (R)	310	1.00	5.00	3.190	1.269
During practical training you had enough opportunities to learn and practice working in the new job to become completely independent in your work	310	1.00	5.00	3.219	1.111
Throughout the practical training you were learning new trade skills and you were not treated as additional labour force by the employer's staff	310	1.00	5.00	3.371	1.188
Teachers and instructors also revealed some tricks of the trade in the job in terms of how to do something better, or with less effort	310	1.00	5.00	3.400	1.118
Immediately upon completion of training, you had sufficient knowledge and skills to work independently in the job you were trained for	310	1.00	5.00	3.435	1.052
You learned the new trade skills through practical work on the machines, and not by watching someone else do it	310	1.00	5.00	3.523	1.078
All the effort you put into attending the training and learning paid off in the end because now you "have trade skills"	310	1.00	5.00	3.584	1.042
Knowledge and skills acquired through training are in demand in the market and lead to work	310	1.00	5.00	3.587	0.994
In the workshop there was a "workspace" where only participants were trained (hairdressing chair, etc.)	310	1.00	5.00	3.706	1.018
You had all the tools and production materials necessary for the training	309	1.00	5.00	3.819	1.057
At the end of the training, you received a certificate recognized by employers	310	1.00	5.00	3.845	0.956
The verification of readiness for work was mostly conducted through practical tasks	310	1.00	5.00	3.852	1.026
After each verification of readiness for work, you had an insight into how much you know and what you should improve	310	1.00	5.00	4.023	1.025
Workshops had modern machines and tools	310	1.00	5.00	4.081	0.954
Workshops were large and spacious so that there was enough space for all participants	310	2.00	5.00	4.087	0.845
You acquired the ability to work in a new job mostly in classes, without much learning at home	310	1.00	5.00	4.110	0.956
Instructors were always available when you needed them	310	1.00	5.00	4.110	0.966
Teachers and instructors encouraged you to talk about your work and life experience during the training	310	1.00	5.00	4.319	0.920
During classes textbooks/manuals were always available for use	310	2.00	5.00	4.352	0.908
After the training you want to find work in the jobs you were trained for	310	1.00	5.00	4.384	0.934
Classrooms had modern space and equipment (seats, boards, projectors, etc.)	310	2.00	5.00	4.403	0.814
In addition to practical work, you also benefited from the information received in lectures	310	1.00	5.00	4.439	0.896
Classes were held according to the schedule, without sudden interruptions or delays	310	2.00	5.00	4.445	0.806
The number of training hours in one day enabled a good quality training	310	1.00	5.00	4.458	0.798
Lectures were clear and understandable	310	1.00	5.00	4.523	0.770
Instructors gave you an opportunity to self-assess your performance of a work operation, i.e., evaluate your progress in on-the-job learning	310	1.00	5.00	4.552	0.756
The instructions during practical work were clear and understandable	310	1.00	5.00	4.555	0.698
Classes were held at the appropriate time of the day	310	2.00	5.00	4.568	0.683
You were provided with necessary protective equipment and tools (suits, gloves, etc.)	310	2.00	5.00	4.613	0.696
Teachers and instructors were aware of your expectations from the training	310	2.00	5.00	4.613	0.700
Teachers and instructors gave instructions specially for you if something was not	310	2.00	5.00	4.658	0.715

	N	Min	Max	M	SD
clear to you					
The training was held at a location with good traffic connections	309	2.00	5.00	4.670	0.553
Lighting and indoor climate were good (ventilation, heating, air conditioning, etc.)	310	1.00	5.00	4.677	0.633
Instructors were experts in their field and easily gave you explanations and instructions for performing the jobs for which you were trained	310	3.00	5.00	4.681	0.556
Hygienic conditions were good	310	3.00	5.00	4.684	0.566
The training facilities were located in pleasant surroundings	309	3.00	5.00	4.706	0.491
Teachers and instructors had understanding for your life and family situation	310	2.00	5.00	4.806	0.523
You could always ask the teachers and instructors a question, make a suggestion, confide with a problem etc., without thinking about the consequences	310	1.00	5.00	4.810	0.533
In communication with teachers and instructors you felt respected and equal	310	2.00	5.00	4.881	0.397

N-number of respondents; Min-minimum value of the sample; Max-maximum value of the sample; M – arithmetic mean; SD-standard deviation;

Annex 7 Average achieved values on the subscale *Quality of career guidance and counselling*

	N	Min	Max	M	SD
After the training you were informed about job vacancies that match your training	310	1.00	5.00	2.526	0.876
NES helped you choose the training that suits your needs and needs of employers	310	1.00	5.00	3.642	0.895
Before starting the training, you were informed in detail about the description of the job for which you would be trained, job risks, working hours, possible earnings, whether it is a seasonal or field job, etc.	310	2.00	5.00	3.723	0.870

N-number of respondents; Min-minimal value of the sample; Max-maximum value of the sample; M – arithmetic mean; SD-standard deviation;

Annex 8 Quality of implementation of short-term vocational training – by type of vocational training (ANOVA test)

		Teachers and instructors	Spatial conditions and health protection	Equipment and tools	Training process	Organization of training	Training location	Training result	Quality of implementation of short-term vocational training - composite score
Training for CNC machine operators	M	4.32	4.64	3.80	3.05	4.00	4.76	3.50	4.02
	SD	0.59	0.68	0.72	0.83	0.62	0.44	0.59	0.50
Training for senior home helpers	M	4.61	4.73	4.25	3.92	4.44	4.57	3.84	4.34
	SD	0.36	0.44	0.49	0.57	0.44	0.53	0.65	0.34
Training for bookkeepers	M	4.74	4.94	4.47	3.82	4.53	4.74	4.02	4.46
	SD	0.38	0.18	0.53	0.69	0.44	0.62	0,61	0.34
Training for beauticians	M	4.16	4.35	3.74	3.24	4.08	4.53	3.69	3.97
	SD	0.68	0.82	0.91	0.80	0.70	0.50	0.81	0.67
Training in tailoring and sewing ready-made garments – basic level	M	4.28	4.51	3.67	3.26	4.01	4.57	3.55	3.98
	SD	0.57	0.56	0.59	0.54	0.66	0.53	0.56	0.45

Training for caregivers for the elderly	M	4.72	4.74	4.33	3.86	4.48	4.81	3.99	4.42
	SD	0.45	0.55	0.61	0.78	0.52	0.39	0.54	0.38
Training for manicurist-pedicurist	M	4.20	4.42	3.39	2.88	3.72	4.32	3.27	3.72
	SD	0.88	0.76	0.64	0.64	0.86	0.65	0.60	0.63
Other (less than 5% in the sample)	M	4.57	4.78	4.33	3.84	4.39	4.86	3.56	4.33
	SD	0.52	0.49	0.80	0.91	0.67	0.38	0.61	0.53
Total	M	4.45	4.66	4.02	3.52	4.22	4.69	3.63	4.17
	SD	0.58	0.58	0.76	0.83	0.67	0.50	0.63	0.53
F		4.103	2.317	9.471	12.249	5.750	2.416	2.087	6.764
p		***0.000***	***0.003***	***0.000***	***0.000***	***0.000***	***0.002***	***0.009***	***0.000***

Annex 9 Career guidance and counselling by type of training (ANOVA test)

		Career guidance and counselling
Training for CNC machine operators	M	**2.94**
	SD	0.71
Training for senior home helpers	M	3.15
	SD	0.61
Training for bookkeepers	M	3.82
	SD	0.78
Training for beauticians	M	3.28
	SD	0.81
Training in tailoring and sewing ready-made garments – basic level	M	3.34
	SD	0.72
Training for caregivers for the elderly	M	3.76
	SD	0.78
Training for manicurist-pedicurist	M	3.13
	SD	0.82
Other (less than 5% in the sample)	M	3.40
	SD	0.68
Total	M	3.30
	SD	0.74
F		3.12
p		***0.00***

Annex 10 – Average values on the subscale *Quality of implementation of short-term vocational training* – by type of training

		Vocational training – level of each individual training by items								
		Training for CNC machine operators	Training for senior home helpers	Training for bookkeepers	Training for beauticians	Training in tailoring and sewing ready-made garments – basic level	Training for caregivers for the elderly	Training for manicurist-pedicurist	Other (less than 5% in the sample)	p
To teachers and instructors, you could always pose a question, make a suggestion, confide with a problem etc., without thinking about the consequences	M	4.88	4.93	4.88	4.44	4.77	4.89	4.5	4.85	0.005
	SD	0.43	0.34	0.33	0.78	0.5	0.47	1.05	0.45	
Teachers and instructors had understanding for your life and family situation	M	4.86	4.98	4.88	4.44	4.72	4.94	4.55	4.84	0.002
	SD	0.45	0.15	0.33	0.78	0.56	0.24	0.94	0.48	
During classes textbooks/manuals were always available for use	M	4.04	4.42	4.65	4.22	4.19	4.78	4.65	4.42	0.017
	SD	1.06	0.88	0.7	0.94	0.88	0.55	0.75	0.91	
Teachers and instructors were aware of your expectations from the training	M	4.47	4.72	4.82	4.17	4.46	4.72	4.6	4.78	0.005
	SD	0.73	0.55	0.53	0.99	0.76	0.67	0.88	0.56	
In communication with teachers and instructors you felt respected and equal	M	4.94	4.98	4.82	4.67	4.88	4.89	4.65	4.91	0.020
	SD	0.24	0.15	0.53	0.59	0.33	0.32	0.88	0.33	
Teachers and instructors gave instructions specially for you if something was not clear to you	M	4.57	4.79	4,82	4.44	4.42	4.78	4.4	4.85	0.004
	SD	0.85	0.47	0,39	0.78	0.89	0.55	1.05	0.47	
Teachers and instructors encouraged you to talk about your work and life experience during the training	M	4.14	4.6	4,65	4.17	4	4.61	3.95	4.49	0.001
	SD	1.04	0.62	0,7	0.86	0.96	0.78	1.19	0.85	
Instructors were always available when you needed them	M	3.98	4.21	4,71	3.5	3.79	4.72	3.8	4.3	0.000
	SD	0.97	0.77	0,59	0.62	0.98	0.57	1.24	0.99	
Instructors gave you an opportunity to self-assess your performance of a work operation, i.e., evaluate your progress in on-the-job learning	M	4.43	4.74	4,82	4.22	4.4	4.5	4	4.78	0.000
	SD	0.85	0.54	0,39	0.73	0.75	0.71	1.26	0.58	
Instructors helped you during practical lessons, but were predominately busy doing their regular job for the employer (R)	M	2.88	3.65	3,88	2.5	2.79	4.22	2.5	3.36	0.000
	SD	1.24	0.92	1,11	1.25	1.16	1.06	1.05	1.34	
Instructors were experts in their field and easily gave you explanations and instructions for performing the jobs for which you were trained	M	4.57	4.7	4,94	4.56	4.6	4.83	4.55	4.77	0.079
	SD	0.67	0.51	0,24	0.7	0.56	0.51	0.6	0.48	
In addition to practical work, you also	M	4.08	4.6	4,94	4.56	4.3	4.72	4.3	4.51	0.006

		Vocational training – level of each individual training by items								
		Training for CNC machine operators	Training for senior home helpers	Training for bookkeepers	Training for beauticians	Training in tailoring and sewing ready-made garments – basic level	Training for caregivers for the elderly	Training for manicurist-pedicurist	Other (less than 5% in the sample)	p
benefited from the information received in lectures	SD	1.2	0.69	0,24	0.62	0.87	0.57	0.98	0.89	
Lighting and indoor climate were good (ventilation, heating, air conditioning, etc.)	M	4.65	4.72	5	4.56	4.54	4.72	4.5	4.76	0.140
	SD	0.77	0.5	0	0.7	0.66	0.57	0.95	0.53	
You were provided with necessary protective equipment and tools (suits, gloves, etc.)	M	4.65	4.72	4,94	4.22	4.44	4.72	4.2	4.74	0.001
	SD	0.69	0.45	0,24	1.11	0.66	0.57	1.11	0.6	
Hygienic conditions were good	M	4.63	4.74	4,88	4.28	4.54	4.78	4.55	4.84	0.001
	SD	0.63	0.44	0,33	0.89	0.6	0.55	0.51	0.46	
Classrooms had modern space and equipment (seats, boards, projectors, etc.)	M	4.37	4.58	4,76	3.89	4.12	4.78	4.25	4.51	0.000
	SD	0.82	0.54	0,56	1.18	0.87	0.55	1.02	0.73	
Workshops had modern machines and tools	M	3.94	4.3	4,47	3.83	3.65	4.11	3.95	4.34	0.000
	SD	1.05	0.64	0,72	1.2	0.92	0.96	0.89	0.94	
In the workshop there was a „workspace“ where only participants were trained (hairdressing chair, etc.)	M	3.16	3.95	4,06	3.56	3.49	4.22	2.6	4.16	0.000
	SD	1.07	0.75	1,03	0.7	0.85	0.88	0.94	0.93	
Workshops were large and spacious so that there was enough space for all participants	M	3.82	4.21	4,59	4.06	3.6	4.67	3.75	4.37	0.000
	SD	0.84	0.6	0,71	0.87	0.7	0.59	0.85	0.87	
You had all the tools and production materials necessary for the training	M	3.56	4.21	4,47	3.39	3.51	3.89	2.4	4.26	0.000
	SD	0.95	0.71	0,72	1.24	0.83	1.18	1.05	0.96	
You learned the new craft by practical work on the machines, and not by watching someone else do it	M	2.86	4.07	4,06	3.06	3.39	3.67	2.55	3.92	0.000
	SD	1.15	0.8	0,9	1	0.73	1.14	0.76	1.07	
Teachers and instructors also revealed some tricks of the trade in the job in terms of how to do something better, or with less effort	M	2.9	3.77	3,94	3.33	3.04	4.17	2.85	3.63	0.000
	SD	1.12	0.95	0,97	1.03	0.82	0.79	0.99	1.26	
Throughout the practical training you were learning the new craft and you were not treated as additional labour force by the employer's staff	M	2.75	3.77	3,94	3	2.98	3.78	3.35	3.69	0.000
	SD	1.09	0.9	1,3	1.08	1.08	1.52	0.81	1.21	
The ability to work in new jobs you mostly acquired during classes, without much learning at home	M	3.9	4.4	4,29	3.61	3.98	4.67	3.45	4.28	0.000
	SD	1.14	0.58	0,77	1.24	0.83	0.84	1	0.9	
The total number of training hours was	M	2.88	3.51	3,18	2.78	2.74	3.83	2.6	3.43	0.000

		Vocational training – level of each individual training by items								
		Training for CNC machine operators	Training for senior home helpers	Training for bookkeepers	Training for beauticians	Training in tailoring and sewing ready-made garments – basic level	Training for caregivers for the elderly	Training for manicurist-pedicurist	Other (less than 5% in the sample)	p
sufficient for you to receive the training of a good quality to work in new jobs	SD	0.74	0.77	0,88	0.73	0.67	0.79	0.82	1	
The verification of readiness for work was mostly conducted through practical tasks	M	3.49	4.16	3,76	3.78	3.72	3.67	3	4.27	0.000
	SD	1.07	0.69	0,9	1	0.9	1.28	1.03	0.99	
During practical training you had enough opportunities to learn and practice working in new jobs in order to become completely independent in your work	M	2.59	3.77	3,53	3.11	2.96	3.22	2.35	3.65	0.000
	SD	1	0.87	1,07	0.9	0.76	1.35	0.93	1.18	
The instructions during practical work were clear and understandable	M	4.59	4.74	4,53	4.39	4.39	4.67	4.15	4.66	0.017
	SD	0.64	0.44	0,72	0.7	0.7	0.59	1.09	0.7	
Lectures were clear and understandable	M	4.37	4.74	4,71	4.39	4.39	4.61	4.05	4.67	0.005
	SD	0.94	0.44	0,47	0.7	0.73	0.61	1.1	0.76	
Practical training was realized according to the current business needs of the employer providing the training, rather than according to the presented training plan (R)	M	2.35	3.33	3,88	2.61	2.46	4.22	2.35	3.16	0.000
	SD	1.09	0.99	1,11	1.24	1.12	1.22	1.18	1.51	
Classes were held according to the schedule, without sudden interruptions or delays	M	4.2	4.6	4,71	4.39	4.26	4.72	4.1	4.62	0.003
	SD	1.04	0.66	0,59	0.92	0.81	0.57	0.85	0.67	
The number of training hours in one day enabled training of a good quality	M	4.27	4.67	4,76	4.39	4.28	4.44	4.05	4.63	0.004
	SD	0.92	0.57	0,44	0.85	0.82	0.92	1.1	0.67	
After each verification of readiness for work, you had an insight into how much you know and what you should improve	M	3.84	4.33	4,24	3.89	3.89	4	3.2	4.24	0.001
	SD	1.07	0.81	0,83	1.13	0.9	1.28	1.2	0.98	
Classes were held at an appropriate time during the day	M	4.39	4.67	4,88	4.5	4.39	4.67	4.15	4.77	0.000
	SD	0.75	0.52	0,33	0.79	0.8	0.49	0.88	0.55	
Training was held at a location with good traffic connections	M	4.75	4.58	4,59	4.5	4.56	4.78	4.26	4.86	0.000
	SD	0.48	0.54	1	0.51	0.57	0.43	0.65	0.38	
The training facilities were located in pleasant surroundings	M	4.78	4.56	4,88	4.56	4.58	4.83	4.37	4.86	0.000
	SD	0.42	0.55	0,33	0.51	0.53	0.38	0.68	0.38	
Immediately upon completion of	M	3	3.7	3,59	3.44	3.16	3.56	2.45	3.92	0.000

		Vocational training – level of each individual training by items								
		Training for CNC machine operators	Training for senior home helpers	Training for bookkeepers	Training for beauticians	Training in tailoring and sewing ready-made garments – basic level	Training for caregivers for the elderly	Training for manicurist-pedicurist	Other (less than 5% in the sample)	p
training, you had sufficient knowledge and skills to work independently in the job you were trained for	SD	0.82	0.89	1,12	1.2	0.77	0.92	1.1	1.1	
At the end of the training, you received a certificate recognized by employers	M	3.78	3.63	4,12	3.78	3.77	4.39	3.55	3.95	0.069
	SD	0.99	1.02	0,78	1	0.8	0.7	0.89	1.04	
Knowledge and skills acquired through training are in demand in the market and lead to work	M	3.61	3.74	4,35	3.61	3.7	4.39	3.65	3.08	0.000
	SD	0.9	0.85	0,7	0.98	0.82	0.61	0.75	1.14	
All the effort you put into attending the training and learning paid off in the end because now you "have trade skills"	M	3.06	3.88	4,12	3.72	3.67	4	2.9	3.63	0.000
	SD	0.99	0.96	0,78	1.18	0.79	1.03	1.07	1.11	
After the training you want to find work in the jobs for which you were trained	M	4.37	4.65	4,76	4.44	4.3	4.28	4	4.34	0.149
	SD	1.06	0.69	0,56	0.62	1	1.13	0.92	0.97	
Knowledge and skills you have acquired during the training are narrowly specific and not very applicable when it comes to working for other employers in the local labour market (R)	M	3.18	3.47	3,18	3.11	2.72	3.33	3.05	2.47	0.000
	SD	0.77	1.05	1,19	1.23	0.94	1.14	0.6	1.08	

Annex 11 – Average achieved values on the subscale *Quality of career guidance and counselling services* – level of each individual training

		Vocational training – by type of training, by items								p
		Training for CNC machine operators	Training for senior home helpers	Training for bookkeepers	Training for beauticians	Training in tailoring and sewing ready - made garments – basic level	Training for caregivers for the elderly	Training for manicurist- pedicurist	Other (less than 5% in the sample)	
Before starting the training, you were informed in detail about the description of the job for which you would be trained, job risks, working hours, possible earnings, whether it is a seasonal or field job, etc.	M	3.31	3.6	4,24	3.5	3.74	4.28	3.7	3.85	0.000
	SD	0.91	0.69	0,75	0.92	0.88	0.67	0.98	0.83	
NES helped you choose the training that suits your needs and needs of employers	M	3.25	3.4	4,24	3.5	3.61	4.17	3.65	3.81	0.000
	SD	0.93	0.79	0,75	0.86	0.84	0.79	1.04	0.85	
After the training you were informed about job vacancies that match your training	M	2.25	2.44	3	2.83	2.67	2.83	2.05	2.52	0.002
	SD	0.84	0.7	1,12	0.92	0.76	1.2	1.1	0.76	

Annex 12 Socio-demographic characteristics of participants – by type of vocational training

			Vocational training - by type of training								
			Training for CNC machine operators	Training for senior home helpers	Training for bookkeepers	Training for beauticians	Training in tailoring and sewing ready-made garments – basic level	Training for caregivers for the elderly	Training for manicurist -pedicurist	Other (less than 5% in the sample))	p
Gender	Female	f	3	42	14	18	56	18	20	63	0,000
		%	1.3%	17.9%	6.0%	7.7%	23.9%	7.7%	8.5%	26.9%	
	Male	f	48	1	3	0	1	0	0	23	
		%	63.2%	1.3%	3.9%	0.0%	1.3%	0.0%	0.0%	30.3%	
	Total	f	51	43	17	18	57	18	20	86	
		%	16.5%	13.9%	5.5%	5.8%	18.4%	5.8%	6.5%	27.7%	
Age	Up to 30 years of age	f	12	3	1	10	21	1	2	26	0,000
		%	15.8%	3.9%	1.3%	13.2%	27.6%	1.3%	2.6%	34.2%	
	31 - 45 years of age	f	21	23	11	8	18	4	11	27	
		%	17.1%	18.7%	8.9%	6.5%	14.6%	3.3%	8.9%	22.0%	

			Vocational training - by type of training								
			Training for CNC machine operators	Training for senior home helpers	Training for bookkeepers	Training for beauticians	Training in tailoring and sewing ready-made garments – basic level	Training for caregivers for the elderly	Training for manicurist -pedicurist	Other (less than 5% in the sample))	p
	+ 46 years of age	f	18	17	5	0	18	13	7	33	
		%	16.2%	15.3%	4.5%	0.0%	16.2%	11,7%	6,3%	29.7%	
	Total	f	51	43	17	18	57	18	20	86	
		%	16.5%	13.9%	5.5%	5.8%	18.4%	5,8%	6,5%	27.7%	
Education level	Persons without qualifications	f	0	16	0	1	17	2	0	27	0,000
		%	0.0%	25.4%	0.0%	1.6%	27.0%	3.2%	0.0%	42.9%	
	Secondary education	f	43	25	6	16	36	15	17	47	
		%	21.0%	12.2%	2.9%	7.8%	17.6%	7.3%	8.3%	22.9%	
	Tertiary education	f	8	2	11	1	4	1	3	12	
		%	19.0%	4.8%	26.2%	2.4%	9.5%	2.4%	7.1%	28.6%	
	Total	f	51	43	17	18	57	18	20	86	
		%	16.5%	13.9%	5.5%	5.8%	18.4%	5.8%	6.5%	27.7%	
Total work experience	0	f	11	6	1	5	22	2	2	17	0,001
		%	16.7%	9.1%	1.5%	7.6%	33.3%	3.0%	3.0%	25.8%	
	1 - 3	f	12	25	10	10	21	7	11	32	
		%	9.4%	19.5%	7.8%	7.8%	16.4%	5.5%	8.6%	25.0%	
	4 - 6	f	24	11	3	3	13	6	6	33	
		%	24.2%	11.1%	3.0%	3.0%	13.1%	6.1%	6.1%	33.3%	
	+6	f	4	1	3	0	1	3	1	4	
		%	23.5%	5.9%	17.6%	0.0%	5.9%	17.6%	5.9%	23.5%	
	Total	f	51	43	17	18	57	18	20	86	
		%	16.5%	13.9%	5.5%	5.8%	18.4%	5.8%	6.5%	27.7%	
Duration of unemployment before enrolment in training	0	f	4	3	0	0	9	1	0	10	0,059
		%	14.8%	11.1%	0.0%	0.0%	33.3%	3.7%	0.0%	37.0%	
	0,1 - 1	f	22	11	3	4	16	4	6	29	
		%	23.2%	11.6%	3.2%	4.2%	16.8%	4.2%	6.3%	30.5%	
	1,1 - 5	f	17	14	10	9	17	3	7	25	
		%	16.7%	13.7%	9.8%	8.8%	16.7%	2.9%	6.9%	24.5%	
	5,1 - 10	f	5	6	3	1	2	5	2	11	
		%	14.3%	17.1%	8.6%	2.9%	5.7%	14.3%	5.7%	31.4%	
	+ 10 years	f	3	9	1	4	13	5	5	11	
		%	5.9%	17.6%	2.0%	7.8%	25.5%	9.8%	9.8%	21.6%	

			Vocational training - by type of training								
			Training for CNC machine operators	Training for senior home helpers	Training for bookkeepers	Training for beauticians	Training in tailoring and sewing ready-made garments – basic level	Training for caregivers for the elderly	Training for manicurist -pedicurist	Other (less than 5% in the sample)	p
	Total	f	51	43	17	18	57	18	20	86	
		%	16.5%	13.9%	5.5%	5.8%	18.4%	5.8%	6.5%	27.7%	

Annex 13 Labour market status of participants upon completion of training – by type of vocational training

		Employed			Unemployed and looking for a job			Not employed and not looking for a job		
		No	Yes	Total	No	Yes	Total	No	Yes	Total
Training for CNC machine operators	f	26	25	51	28	23	51	48	3	51
	%	51.0%	49.0%	100.0%	54.9%	45.1%	100.0%	94.1%	5.9%	100.0%
Training for senior home helpers	f	19	24	43	26	17	43	41	2	43
	%	44.2%	55.8%	100.0%	60.5%	39.5%	100.0%	95.3%	4.7%	100.0%
Training for bookkeepers	f	9	8	17	9	8	17	16	1	17
	%	52.9%	47.1%	100.0%	52.9%	47.1%	100.0%	94.1%	5.9%	100.0%
Training for beauticians	f	8	10	18	11	7	18	17	1	18
	%	44.4%	55.6%	100.0%	61.1%	38.9%	100.0%	94.4%	5.6%	100.0%
Training in tailoring and sewing ready - made garments – basic level	f	36	21	57	30	27	57	48	9	57
	%	63.2%	36.8%	100.0%	52.6%	47.4%	100.0%	84.2%	15.8%	100.0%
Training for caregivers for the elderly	f	9	9	18	10	8	18	17	1	18
	%	50.0%	50.0%	100.0%	55.6%	44.4%	100.0%	94.4%	5.6%	100.0%
Training for manicurist-pedicurist	f	15	5	20	5	15	20	20	0	20
	%	75.0%	25.0%	100.0%	25.0%	75.0%	100.0%	100.0%	0.0%	100.0%
Other (less than 5% in the sample)	f	51	35	86	48	38	86	73	13	86
	%	59.3%	40.7%	100.0%	55.8%	44.2%	100.0%	84.9%	15.1%	100.0%
Total	f	173	137	310	167	143	310	280	30	310
	%	55.8%	44.2%	100.0%	53.9%	46.1%	100.0%	90.3%	9.7%	100.0%

Annex 14 Socio-demographic characteristics and the labour market status of participants upon completion of vocational training

			Labour market status			p
			Employed	Unemployed and looking for a job	Not employed and not looking for a job	
Gender	Female	f	99	109	26	0.242
		%	42.3%	46.6%	11.1%	
	Male	f	38	34	4	
		%	50.0%	44.7%	5.3%	
	Total	f	137	143	30	
		%	44.2%	46.1%	9.7%	
Age	Up to 30 years of age	f	28	39	9	0.656
		%	36.8%	51.3%	11.8%	
	31 - 45 years of age	f	56	56	11	
		%	45.5%	45.5%	8.9%	
	+ 46 years of age	f	53	48	10	
		%	47.7%	43.2%	9.0%	
	Total	f	137	143	30	
		%	44.2%	46.1%	9.7%	
Education level	Persons without qualifications	f	32	24	7	0.537
		%	50.8%	38.1%	11.1%	
	Secondary education	f	90	97	18	
		%	43.9%	47.3%	8.8%	
	Tertiary education	f	15	22	5	
		%	35.7%	52.4%	11.9%	
	Total	f	137	143	30	
		%	44.2%	46.1%	9.7%	
Total work experience	0	f	20	34	12	0.065
		%	30.3%	51.5%	18.2%	
	1 - 3	f	57	60	11	
		%	44.5%	46.9%	8.6%	
	4 - 6	f	51	42	6	
		%	51.5%	42.4%	6.1%	
	+6	f	9	7	1	
		%	52.9%	41.2%	5.9%	
	Total	f	137	143	30	
		%	44.2%	46.1%	9.7%	
Duration of unemployment before enrolment in training	0	f	14	10	3	0.072
		%	51.9%	37.0%	11.1%	
	0,1 - 1	f	45	42	8	
		%	47.4%	44.2%	8.4%	
	1,1 - 5	f	40	55	7	
		%	39.2%	53.9%	6.9%	
	5,1 - 10	f	17	17	1	
		%	48.6%	48.6%	2.9%	
	+ 10 years	f	21	19	11	
		%	41.2%	37.3%	21.6%	
	Total	f	137	143	30	
		%	44.2%	46.1%	9.7%	

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