

ANALYSIS FOR THE DEVELOPMENT OF DUAL STUDY PROGRAMS IN HIGHER EDUCATION

- STATUS QUO BEFORE -

1 EDUCATION SYSTEM IN THE REPUBLIC OF SERBIA

Providing the economy with qualified and skilled labour is not just the key challenge for Serbia but for many countries in the world. The system of education should act as a driving force of economic development and social prosperity and stability. However, education system cannot have merely a role to just promote economic goals, it also should have the potential to improve and facilitate the transition from school to world of work, to be accessible to all and to offer young people a perspective for planning their career and find their role in society.

Serbia has started reform process of the system of education as a part of the country's overall political and economic transition. It has committed itself to address several challenges. The most important one is certainly to address the transformation from a school-based to a dual system on a secondary as well as on a higher level of education. Such a commitment was demanding and promising at the same time. It was demanding because there were no blueprint on how to design the change and it was promising because there was much potential for the advancement of the education system.

After the positive experiences made during the years of introducing the dual education system into the secondary level, and finally the enactment of the Law on Dual Education in secondary education in 2017, there are aspirations to do the similar endeavor in a higher education (HE), i.e. to shift a part of higher education system towards dual model. The policy makers have been aware that only accelerated reform of the education and training system will help improve effectiveness and compliance with societal and economic needs. Entering into the field of dual higher education will certainly increase chances for young people in Serbia to find long-term employment in dynamic economic sectors, build up their skills and applicable knowledge in general, thus contributing to the economic and social development of the country and promoting its competitiveness.

The Ministry of Education, Science and Technological development as the hub of the changes in education has encouraged the activities in secondary and higher education institutions in relation to promoting employability of students, organization of student practices, establishment of virtual companies and all other activities that provided for a firm and continuous cooperation

between the educational and the economic system. During this decade, the Serbian government launched quite a number of legal and organizational actions to induce changes in the education sector. In September 2017 the National Parliament enacted the Amendments to the Law on Foundation of System of Education which ensured the enactment of the Law on the National Qualification Framework, only seven months later, as a foundation for curricula development.

Soon after, a brand new law regulating the concept of dual education in secondary vocational education was adopted which will become effective as of beginning of 2019/2020 school year. This law stipulates the increase in the scope and quality of practical teaching, i.e. work-based learning, as well as involvement of the companies in a variety of activities, starting with the design of the curricula to its implementation in the real working environment. The law creates opportunity for students to explore occupations through work-based learning. Furthermore, the Law on Higher Education, adopted in 2017, foresees the establishment of employers' councils at each higher education institution to give a better insight into the labor market and better align the HE sector with the needs of the business sector. The novelty is that the Chamber of Commerce and Industry of Serbia nominates two members of the Council, while the Council itself is obliged to have meetings with the Chamber at least twice a year. The Chamber of Commerce and Industry of Serbia nominates two members of the National Accreditation Body, the institution established for the purposes of accreditation, HE institutions quality control, study programs evaluation and quality assurance in HE.

All these laws ensured shaping education system according to the labor market demands and the society requirements as a whole, which opened the space to the idea of introducing dual education also into the HE system in Serbia.

2 ANALYSIS BEFORE

The Chamber of Commerce and Industry of Serbia (CCIS) joined the project funded by the European Union which aims to improve professional chances of young people in the Danube region and better link education to employment in a sustainable way and hopefully reduce the emigration of Serbian citizens or even to regain them. The Edu Lab project (“New Danubian Governance in Labor Market Relevance of Higher Education”) investigates the conditions and ways to make this ambition feasible. It aims to provide relevant evidence, concepts, ideas, options, and arguments to support a rational discussion on the feasibility and modalities of a reform of the current system of HE in Serbia towards dual studies.

The basic concept of the activities piloted in Serbia was to identify a study program which could be modernized in a way that it is adapted to the needs of the economy, with incorporated elements of dual education. This piloted study program would eventually show what the most suitable model of dual studies is feasible and viable and accordingly, how to tackle potential challenges and obstacles that may appear. Finally, the follow-up analysis would suggest certain recommendations and proposals for the improvement of the whole process and legal framework.

Two studies (analyses) were performed within this projects. The study Status quo BEFORE and study Status quo AFTER. The Contractor performed the analysis of status quo in Serbia BEFORE the implementation of dual study programs with relevant stakeholders, students, professors, business representatives, state authorities and create expert study in written form.

The study has been based on the interviews with 31 randomly selected students of Belgrade University, and it is based on combination of closed end questionnaire, verbal interviews with relevant stakeholders (professors, business representatives, and state representatives) and research for publicly available information related to the subject.

The interviews took place during the end of September and the beginning of October 2018. The key expert prepared a questionnaire for the first part of analysis – the analysis of status quo before – in order to record current state of the play considering the period without pilot dual programs. Questionnaire was prepared in consultation with the CA, and it covered enrolled students of Belgrade University. Considering the nature of this analysis, which should be used as a snapshot of the current situation rather than a statistically significant study, it covered 31 participants, chosen randomly within the targeted population. In order to gather quality responses, the survey was anonymous, and participating students were chosen randomly, from both state- and privately-owned faculties within the university. Prepared questionnaire was mostly a multiple-choice questionnaire.

Analysis showed:

- although high number of students said they had had practical experience, more than 90% of them were not satisfied with it, with significant percentage with no practical work at all;
- 71% of young people participating in the survey considered they would find employment more probably if they had had practical work during studies;
- 68% of young people participating in the survey considered they were not prepared fully for the future workplace;
- 68% of young people participating in the survey claimed that the introduction of dual programmes in higher education would prepare them better for future employment;
- significant number of surveyed students did not have enough information about such kind of educational possibilities, thus highlighting the need for better promotion.

3 CONCLUSIONS

Mismatch of educational profiles and available work force profiles with the needs of the labor market is a long-term and systemic problem in Serbia. This process results in high unemployment and disturbing growing percentage of youth unemployment. The socio-economic development of Serbia depends to a great extent on the quality and availability of required labor force. The problem of insufficient cooperation between decision-makers in education policy and the employers are clearly recognized and since 2001 they have been solved with variable success and results. The problem of mismatches of skills and knowledge acquired during higher education with the needs of the labor market affects a range of economic and social problems: budget expenditures for education that does not lead to employment, the unpreparedness of young people for transition from education to the world work and market match, lack of required skills and competencies demanded for work.

Higher education institutions are not at the systemic level associated with employers of their students and their engagement in the organization of student practice drastically varies from case to case. On the other hand, employers are not able to reach the required workers according to their business's needs, and in most cases, they do not have the capacity, resources and time for their additional training, and introduction to the work environment. This results in a significant number of long-term job offerings, since labor with needed knowledge and skills is hard to find.

Improving student practices and introduction of dual programs create a sustainable and effective framework for the cooperation of higher education institutions and employers and contributes to further harmonization education and labor market in Serbia.

Identified challenges related to the organization of quality dual vocational programs are:

- ✓ Different terms used in the field of professional practice and dual programs (dual vocational programs, practices, volunteering, internships, fellowship);

- ✓ Providing a high quality mentoring system (meeting the required conditions regarding the mentor's qualities by employers, the need for mentor training, structurally organized training for instructors, cost of organizations of such trainings, etc);
- ✓ Insufficient awareness of the rights and obligations of young people in relation to practice and dual vocational programs, as well as ignorance of the contractual forms used to regulate them;
- ✓ Identifying the form of a contract that can be used to regulate the relationship between a dual vocational student and an employer. A special issue was raised regarding the implementation of the Agreement on Vocational Training. Namely, the amendments to the Article 201 of the Labor Law of 2014 stipulate that a professional development contract can be concluded for the purpose of professional development and acquisition of special knowledge and skills for work in the profession, or for specialization, during the time determined by the training program, specialization, in accordance with a special regulation.

Possible recommendations for creation and improvement of dual vocational programs:

- ✓ Improving youth's knowledge regarding rights and obligations within the dual program of practice
- ✓ Continuous promotion of professional dual programs
- ✓ Identification of minimum standards for implementation of the dual programs
- ✓ Harmonization of the meaning of terms used in the field of professional practice and dual programs
- ✓ Serbia accession to the European Alliance for Professional Practices (encouraging large companies and companies to engage in vocational training support programs);
- ✓ Arrangement of the method of conclusion and the content of the contract on professional practices (during vocational education and after completion of education);
- ✓ Establishment of the obligation of the employer to provide or at least to participate in creation of a dual vocational program, to train the qualified mentor, verification of the achieved goals and a certificate of completed dual programme
- ✓ The tax treatment of the vocational training contract should be similar to the treatment of paid volunteering (the net amount of 30-50% of the fee should be tax exempted)

High unemployment of young people and difficult transition from education towards stable employment has prompted an increase in the number of programs practices aimed at improving the employability of young people through the acquisition of work experience and practical knowledge and skills demanded in the labor market. However, there is no adequate legal protection for young people participating in programs of practice, as well as standards that would ensure their quality. A large number of young people participate in programs that are incompatible with practices.

There is a particular problem with the work-based practices on the market labor force. Under these practices, we mean short-term programs for acquiring work experience that include learning and training, in which all who are interested can be involved, regardless of whether they are or not in the formal education system. These practices are self-initiated - they are usually not a required part of education and training, and are not prescribed by law or regulation as a condition for dealing with certain occupation, or profession, but are important for development skills and further employment.

Existing solutions in the Labor Law regulating contracts on vocational training and improvement do not include all forms of work-based practices and demotivate organizing such programs for the unemployed.

There are no quality assurance mechanisms of work-based practices.

Two options for improving the legal framework were considered, and with that and increasing the number of quality work-based practices that increase employability of young people.

These are:

- changes to the Labor Law/adding new Article 200 of the Labor Law and
- adoption of a special law which refers to work-based practices.

An option that is considered to be the most up-to-date is to add a new Article 200 to the Labor Law, given that the existing Article 201 still has its application in certain cases of training and improvement precisely in the way it is now regulated. It is necessary to provide unique record of practices, regulate quality standards that will apply to all types of practices, increase awareness and motivation of young people, employers and competent institutions for organizing work-based practice as an important instrument in the fight against unemployment.

What can be done in the future?

- Creation and implementation of dual study programs.
- Analysis and redefinition of goals and outcomes of study programs.
- Creation of professional councils of higher education institutions.
- Strengthening the capacities of scientific and professional base in the economy.
- Creation of programs with introduction of non-working teachers in accordance with the Law on Higher Education.
- Creating short educational programs on the basis of real needs of the economy and in cooperation with the economy.
- Strengthening the sense of student entrepreneurship
- Preparation of rules and general acts, with the aim of clearly defining rights and obligations regarding the protection of intellectual property

ANALYSIS FOR THE DEVELOPMENT OF DUAL STUDY PROGRAMS IN HIGHER EDUCATION

- STATUS QUO AFTER

High unemployment rate among youth in Serbia (31.9% in 2017), in particular among graduates of HEIs, has resulted in the fact that Serbia loses about 32,000 citizens per year, leaving the country mainly for work or professional development. That “brain drain”, the loss of highly educated persons, is considered a severe obstacle for Serbia’s economic and social development. In Serbia 10.6% of the population have university and comparable education, which is less than half of the EU average (23.7%). The number of employees in research and development is 2,800 per one million inhabitants in Serbia compared to 5,000 in the EU. Furthermore, Serbia is still suffering from the occupational mismatch. The last available data (from 2016) point out that 7.1% of upper-secondary graduates working in low-skilled jobs (ISCO 9) and that 24.2% of tertiary graduates working in semi-skilled jobs (ISCO 4-9) (ETF, 2018).

The position of young people on the labour market seems still unfavorable, with a three-fold lower employment rate compared to the population aged 25 – 64 while the number of young people who are not in education, employment or training (NEET) is still high - in 2017, the NEET rate in EU28 was 11.5 percent while in Serbia in the same year it was 17.2 percent.

4 ANALYSIS AFTER

The main partners in this analysis Status quo AFTER were company Gorenje d.o.o Beograd, on the one hand and Faculty of Economics, Finance and Administration-FEFA, on the other. The CCIS and Institute of Mihajlo Pupin had a role of coordinators of activities and facilitators in this process.

The first step was to identify a study program which could be better adapted to the needs of the company Gorenje and more professionally oriented. Bearing in mind the period for the realisation of pilot activities within the project, all stakeholders agreed that pilot activity should be done without intention to reaccredit the program since the process itself is a time-consuming and lengthy one. The starting point was to increase and improve the practical part of the studies based on the Memorandum of Understanding signed between FEFA and Gorenje defining goals, forms and activities of cooperation.

The analysis was organized in January 2019. Key expert prepared a questionnaire for the second part of analysis – the analysis of status quo after – in order to record current state of the play considering the period after pilot dual programs. Questionnaire was prepared in consultation with the CA, and it covered enrolled students of FEFA faculty. Considering the nature of this analysis, which should be used as a snapshot of the current situation rather than a statistically significant study, it covered 31 participants, chosen randomly within the targeted group – students who participated in the pilot dual program. Prepared questionnaire was mostly multiple-choice questionnaire.

16 students attending 3rd-year of studying were involved in the realisation of improved student practice (work-based learning) with elements of dual education, 13 in Master studies and 2 in PhD studies. The practice was implemented within the period of three months during which students had a project task closely related to the theoretical knowledge acquired at faculty.

Upon finishing student practice in the Gorenje company, an analysis Status Quo After was implemented.

Analysis showed:

- 71% of interviewed participants expected to have some kind of practical work during studies, while 10% did not expect
- 74% said they had received enough practical experience during studying, 56% of which believed they could have had more practical experience during studying period, and 44% believed it was because of dual program
- 35% of survey participants believed they would find employment more probably due to the existence of dual program
- Higher number of participants (71%) considered they were fully prepared for future workplace. In comparison with the same question in the status quo analysis before, among the participants who were not enrolled into dual programs, where 68% believed they were not prepared fully for future workplace, significant difference could be noted.
- 90% of interviewed students believed that introduction of dual programs in higher education would prepare them better for future employment
- 58% among interviewed students stated they would even increase the amount of work-based learning in pilot dual program in which they participated
- 74% stated they would feel ready to take certain obligation and tasks when they took job opportunity after completion of pilot dual program.

All interviews held highlighted that the existing HE system should be reformed in a way that the content of the study programs reflect contemporary technological development and market needs, but taking our societal and economic situation into account. Company representatives underlined that providing students with well-organized and substantive practice will certainly increase the chances of employment for graduates and enable them to create their own jobs or even to employ others by establishing their own companies.

Furthermore, the curricula of HE institutions have to be adapted as much as possible to current and projected trends in the business sector. It is of the utmost importance that the academic institutions provide students with the opportunity to acquire combination of theoretical and practical knowledge in the course of their studies, which would enable them to find desired employment in a faster manner, thus saving time and costs for employers of initial training for employees in junior positions.

Company representatives found very important the opportunity to organize interviews with students that would be interested in conducting professional practice and employment later on, so that companies can find candidates that best suit the needs of the employer, and become serious candidates for future work.

It is also necessary to establish a formal training for instructors (mentors) in the company or at least to develop appropriate tools/guidelines, so that they could acquire necessary pedagogical competences that would help them deliver requested learning outcomes of students. Namely, the interviewed instructors emphasized that the most significant and at the same time the most demanding part of this process is working with students, and it is necessary that this job is shared and jointly carried out by the university and the company. It would be likely that untrained instructors would slowly adapt to changes.

Moreover, it is crucial that there is a continuous communication between students and both mentors, academic and the industrial, as well as between the two mentors themselves. The academic mentor must be engaged in the sense that the academic part of the training enables the student prerequisites for executing tasks in the company. On the other hand, a mentor from the company should help the student to fit into the working environment as quickly and easily as possible in the company and facilitate the accomplishment of the assigned tasks. Both mentors should assess the progress of the student and identify possible problems. At the same time, these personal contacts enable the representatives of universities and companies to get to know each other, which can provide the preconditions for broader cooperation.

The last but not the least observance was that providing companies with certain financial benefits would certainly give additional impetus to a wider acceptance of the model and its spreading throughout the country.

The overall impression was that providing companies with opportunity to actively participate in the design of study programs of the HEI, nominate mentors to work with students, select students who best suit the companies' needs would increase the interest of the companies to further support dual studies.

HEI recognize that it is important to create new and attractive study programs for students that would allow them to easily find a job. Due to fast changes in societal-economic environment it is obvious that there is a mismatch between skills (especially the so-called soft skills) and knowledge acquired at the HEI and those required by employers.

Faculty representatives pointed out that a model of dual education in the system of higher education of Serbia should be flexible and responsive to fast changes in the technological developments, avoiding adaptation of a study programs to an individual company's needs, but taking into account the broader needs of the companies in certain sectors. That is why one of the prerequisites for the successful implementation of dual study programs should be to form a pool of companies that are interested in hosting and training students.

It is very important to identify priorities in further development of Higher Education (HE) so as to create conditions for graduate students to acquire appropriate skills that are an imperative of the modern labor market. In this regard, it is crucial to facilitate cooperation between the economy and institutions in order to secure in the long run education for professions of the future. It is very important to link students with the economy in order to provide opportunities for performing student practices and future employment. The educational institutions should be recognized as a modern and market-oriented leading educational institutions that provide students with the knowledge of highest quality and skills necessary for working in the economy.

Another important issue from the perspective of faculty is valorization of the students' contribution to the company's performance. Although the benefits for students who receive training and gain experience is beyond doubt, their contribution to the company must also be valorized. It is obvious that students are not experienced full-time workers, but their contribution to the work processes in a company must also be assessed and remunerated.

With regard to the forms of potential dual studies, they considered a dual study of minimum three years as more useful than just short term training, since it would enable both the company and the student to gain relevant feedback, build student's competences, get information on the latest achievements in the economy and thus have the opportunity to modernize their own lectures.

5 CONCLUSIONS AND RECOMMENDATIONS

The aforementioned activities of the Government of the Republic of Serbia and the MoESTD point to the great interest in starting the introduction of dual education into the higher education system of the Republic of Serbia.

The basic goal of dual education is to bridge the gap between theoretical and practically acquired knowledge, and quickly adapt to changes in the globalized economy. In dual studies, practical training, or work based learning with the employer is an integral part of the study program, which involves signing contracts with an employer and studying at two different locations - at the higher education institution and the company.

At times it is suggested that established dual systems in countries such as Germany, Austria or Switzerland should be exported to other countries, such as Serbia. It is evident both in research and in practice that there is no quick and easy way to transfer a dual system to other countries. Transferring a VET system from one country to another is not merely a matter of copying the original system, but much more a process of selection and adaptation by the potential recipient country.

It is definitely not possible to expect a single global concept of dual studies or taking one's model completely without taking into account the national and local context (the expected increase in the number of foreign companies – investors will certainly lead to establishing of dual study programs in HE). Dual study programs will also bring significant benefits to companies, which will only increase their motivation to be massively involved in them.

Key Benefits for companies are:

- establishing close cooperation with universities;
- making better insights into study programs organized by the university;
- possibility of insight into students' potentials and evaluation of future employees
- participation in the process of preparing future industrial experts;
- development of new and innovative ideas;
- providing support for the implementation of appropriate projects;
- development, i.e. creation of new study programs and projects together with universities.

Key benefits for universities:

- new and attractive study programs for students;
- providing students with the knowledge of highest quality and skills necessary for working in the economy;
- university teachers through their students gain feedback from the economy, get information on the latest achievements in the economy and thus have the opportunity to modernize their own lectures.

Key benefits for students:

- Dual studies increase students' competences, employability and their greater competitiveness in the labor market
- Students have the opportunity to be trained in the most contemporary environment and to be up-to-date with the newest technologies
- It provides the possibility of employment with an employer who is a partner in dual education;
- students contribute to the work processes in a company and receive adequate remuneration for their performance.

Regarding the accreditation of DHE courses certain legal amendments are necessary. It will be important to figure out if the current option to change twenty percent of a HE programs will be enough to start a dual study program. Since dual programs require a practical part of about 50 percent of the whole study time, there might be the need to develop and accredit new/updated programs.

The adaptation of contracts to the new form of study might take a longer period of time on both sides, higher education institutes and companies. Questions such as the categorization of students (employee, trainee, and apprentice), their rights and duties, and their remuneration might lead to longer discussions in case the labor law is not flexible.

Also, the academic institutions need to revise rules and regulations and to adapt them for dual study students, since their study process will be different from "normal" students, questions of repetition of courses/examinations, drop out etc. need to be clarified.

Following tasks are to be considered for the establishment of DHE programs and for quality assurance of the programs:

- ✓ Attracting companies, (definition of conditions and assessment of their eligibility as partner companies, their provision of qualified personnel, learning space and equipment),
- ✓ Revision and adaptation of teaching programs/curricula due to the shorter periods for academic studies, their coordination with learning content at companies, definition of ECTS points for both learning places, higher education institute and company,
- ✓ Attracting students (special marketing and promotion, schools, media etc.),
- ✓ Supervision of students' admission to the faculties and their respective placement in companies,
- ✓ Planning and coordinating work-based learning in companies,
- ✓ Additional consultations/trainings for lecturers teaching DHE students,
- ✓ Assessment of students' performance during the practical periods (e.g. visits to companies, assessment of student reports) and of the location of training,
- ✓ Supervision of student graduation projects in cooperation with companies,
- ✓ Frequent meetings/workshops with partner companies, with their supervisors and leadership,
- ✓ Standardization of contracts (company – student, university – company, insurances),
- ✓ Organization of international exchanges,
- ✓ Development of a concept for quality assurance.
- ✓ To amend legislation to provide companies with incentives, i.e. tax exemptions or state subsidy.

The rich experience Serbia has in the establishment of dual education in VET should in any case be transferred into follow up programs/projects that aim at upgrading the dual educational system to the tertiary level. The opening of the HE system in Serbia to dual studies seems to be on its way even though details will be clear only within the coming two years.