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Discussion forum on the needs analysis with key stakeholder and policy makers

Strengthening capacities for the implementation of dual
education in Georgia higher education

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Abstract	A discussion forum was held in order to present the results from T2.1 and T2.2 to stakeholders within the framework of the project funded by the European Union – “Strengthening capacities for the implementation of dual education in Georgia higher education”. The opinions expressed by stakeholders regarding these results will be taken into account in the next stage of the project, which relates to the developing of Generic Dual Higher Education Model (DUGEOR model)
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Introduction:

A discussion forum was held in order to present the results from T2.1 and T2.2 to stakeholders within the framework of the project funded by the European Union – “Strengthening capacities for the implementation of dual education in Georgia higher education”. The opinions expressed by stakeholders regarding these results will be taken into account in the next stage of the project, which relates to the developing of Generic Dual Higher Education Model (DUGEOR model)

The agenda of the forum was as follows (details in the appendix):

- Part I
 - General overview of the project
 - Challenges of dual education
- Part II - presentation of research results
 - Research results - foreign experience
 - Research results - Research of Georgian labor market needs
- Part III
 - The vision of Georgian higher education institutions participating in the project in relation to dual education and a discussion with the participation of invited guests

- The vision of the labor market and discussing the research results. Experience and vision of Georgian companies regarding dual education.

An invitation to participate in the forum was sent to all higher education institutions and companies of Georgia. The main goals and agenda of the project were briefly explained in the invitation. The guests were also sent two reports created in the first stage of the project: “Report on depth analysis of good practices and experiences in respect to DHE in EU Member States and third countries associated to the programme” and “report on company needs for DHE in Georgia”.

Participation in the form was possible both face-to-face and online. For those who preferred to attend online, an invitation link was sent.

The forum was held in a hybrid model, 19 guests physically attended the forum, and 55 guests represented online from the higher education system and companies of Georgia.

The forum was opened and welcomed by the head of the Department of Higher Education of the Ministry of Education and Science of Georgia, Mrs. Nino Tsereteli, who emphasized the importance of dual education and the positive role of Erasmus projects in the education system of Georgia.

Mr. Lasha Margishvili, deputy head of the National Center For Educational Quality Enhancement, also welcomed the forum. The Center is involved in the implementation of the project and the position of the Center, as well as the Ministry, is unilateral in terms of support for the dual model of education.

The dean of the Faculty of Agricultural Technologies of the Technical University of Georgia, prof. Edisher Kvesitadze also welcomed the forum.

After the opening of the forum, Dr. Vano Tsertsvadze, a representative of the Georgian Institute of Public Affairs, introduced the goals of the project to the forum participants.

Dr. Vano Tsertsvadze explained to the participants of the forum what is meant by the "dual education" model. He noted that dual education implies the involvement of two parties in the educational process, the participation of the academy and the employer. This is where the name comes from. Sometimes they get confused and think of dual education as a double degree or a joint program of two universities. However, dual education means the relationship between the school and the employer in order to provide the student with the appropriate skills.

A question was asked to the participants of the forum - how does dual higher education differ from the traditional higher education curriculum, where a practice component is also provided, which usually ranges from 10-20 credits.

Dr. Giorgi Kvartskhava (GTU) noted that the main difference is in the purpose of teaching and the final result. The current type of higher education cannot ensure a quick adaptation of the student to work requirements. The graduate needs some time to understand the essence of the job, the employer spends excessive human and material resources to train a new staff, which in itself reflects the gap between university knowledge and labor market requirements. This was to be expected, since labor and production processes, new technologies are changing so rapidly that universities can no longer modify their curricula in time to match market demands.

And there are many examples of this phenomena in the modern world, reflected in the form of the so-called “uneducated millionaires”.

According to the representative of Telavi University, if we are talking about fundamental science and we want to train new Einsteins and Curies, then the dual model may not be useful for us, but when we are talking about the use of theories established by such science, their introduction, their commercialization, the improvement of the production process, the correct use of resources and effective management, then of course we need graduates who can adapt to market demands.

Based on the opinions expressed, the main goals of the project were briefly summarized:

- Improving the competencies of graduates of higher education in Georgia in accordance with the needs of employers;
- Increasing the employment of graduates and their motivation to study;
- Students are allowed to finance their own education.
- Tasks necessary to achieve these goals:
 - The first is the study of the existing practice on the example of foreign countries and the assessment of the needs of the Georgian labor market.
 - A higher education model adapted to Georgia will be developed, which should facilitate the implementation of the interests of employers, higher educational institutions and students in various entrepreneurial directions.

- Developed recommendations will be submitted to the higher educational institutions of Georgia for the successful implementation of the dual education component in teaching;
- A draft of possible changes in legislation/regulations to adapt the dual higher education component will be developed.

Presentation of research results

The results of the research - a report on the European experience and a report on the needs of companies for dual higher education in Georgia were presented by Vano Tsertsvadze (GIPA).

Report on the European experience

Vano Tsertsvadze noted that the report includes an analysis of the experience of dual programs of higher education institutions of 4 European countries - Austria, Germany, Spain and Serbia, and the evaluation of 20 dual study programs.

According to Dr. Vano, there are three main approaches to studying and working:

Work-Related Learning (WRL): An approach that focuses on developing work-related skills after work. It can be formal and informal trainings.

Work-Based Learning (WBL): An educational strategy that provides students with a real-world work environment where they can apply academic and technical skills and improve their employability.

Work Integrated Learning (WIL): Provides students with the opportunity to apply knowledge gained from academic studies to relevant work and transform work

experience into knowledge. Although work-integrated learning shares the same approaches as work-based learning (WBL), it differs in that WIL is part of the curriculum and guided by learning objectives, whereas WBL focuses on the workplace and is not linked to academic research and teaching. The WIL system is effective in that it not only improves the student's career, academic and other personal skills, but also has additional benefits for employers and academic institutions.

According to Dr. Tsertsvadze, on the example of European countries, it can be seen that all three methods are used at the level of higher education and presented a profitable model of cooperation between higher educational institutions and industry. Higher education institutions have the opportunity to take advantage of the current challenges and create flexible curricula based on a theoretical and practical teaching model, adapted to the demands of the labor market. Such an approach is very effective in higher education programs in engineering and applied sciences, although it can be equally beneficial in other areas such as business and management, law and education.

On the other hand, companies and entrepreneurs involved in the higher education process benefit from the involvement of students in their work tasks. Work-based learning helps companies overcome the shortage of skilled workers, improve the quality of the workforce, simplify the recruitment process and save costs. By partnering with higher education institutions, companies can influence the curriculum by adding the knowledge and skills they want.

According to Mr. Giorgia Gabedava, Vice-Rector of the Batumi Navigation Teaching University, there are two models of dual education - the vocational education model

and the higher education model. The first one is already implemented in Georgia, and the second is a hybrid form of higher education, which offers the participant the opportunity to complete a bachelor's/master's program at a higher educational institution and simultaneously receive a certificate of practical professional training or work experience in a company. The main differences are reflected in the level of specialization and length of study and learning outcomes.

Vano Tsertsvadze presented the semester distribution of the traditional and dual programs based on the analysis of different higher dual programs in Europe. From this comparison, the differences between the teaching approaches became clear. In particular, the distribution of theoretical and practical hours at the bachelor's and master's level in dual education is 60/40 and 50/50 according to the study cycles.

The system of dual higher education integrates three parties: student-higher education institution-company. Dual education considers the company as a student's learning environment together with the university. Accordingly, dual higher education has multiple benefits:

Within this system, students receive practical knowledge and skills in the working environment, which improves their employability;

Businesses and companies find it easier to recruit qualified professionals, which avoids the costs associated with human resource risks and improves their production process and service delivery;

Universities are adapting their curricula to the demands of the labor market and increasing their attractiveness as graduate employment rates improve.

Along with this, dual education also has a social impact, within which students with low socio-economic opportunities receive significant benefits as a result of conducting study and work together, which allows them to somewhat solve the problem of financing the costs caused by education.

According to Dr. Giorgi Kvartskhava, both academic staff and partner companies should be involved in the teaching process. It is recommended that HEIs representatives have industry experience, while company tutors have approximately 5 years of industry experience and a relevant academic degree (minimum MA). The leading role in the evaluation is assigned to the higher education institution, however, in the part of practical work, it must request and rely on the partner company's information about the students' work, according to the established reporting and evaluation system.

In the process of working on the final thesis, the student is guided jointly by the representatives of the higher education institution and the company's institute. The mentor appointed by the company evaluates the practical part of the work, and the supervisor appointed by the university evaluates the academic and theoretical side of the work.

The assessment of the needs of the labor market in Georgia

After presenting the European experience, Vano Tsertsvadze presented the assessment of the needs of the labor market in Georgia and the attitude towards the dual education model.

According to him, an assessment of the needs of the Georgian labor market was planned in order to develop a dual higher education model. In total, 96 organizations

operating in Georgia were interviewed during the research process. 30% of them were micro companies, 30% were small businesses, 25% were medium businesses and 15% were large companies (according to the number of employees).

The main topics we focused on during the research: the purpose of the research was to assess the needs of the labor market in Georgia and the requirements of companies for graduates of higher education institutions, as well as their readiness to be included in the model of dual higher education.

The field of interest of the interviewed organizations is diverse and includes many sectoral directions, such as: gambling business, health care and social work, production and supply of electricity, gas, steam and air conditioning, scientific and technical activities, real estate business, financial and insurance activities, water supply, information and communication sector, public administration, construction, wholesale and retail trade, hospitality, agriculture, forestry, manufacturing, transportation and warehousing, other services

Companies participating in the research are mainly active in the following sectors: transportation and warehousing (20% of surveyed companies), manufacturing - 14%, agriculture, forestry and fishing - 12%, hospitality - 10%, wholesale and retail trade - 9%.

All the companies we surveyed employ at least one personnel with higher education. The employment rate of university graduates in micro-companies ranges from 20% to 80%, while in some large companies with more than 250 employees, the share of university graduates is below 20% (construction, road rehabilitation sector)

It is also worth noting that in some companies the share of university graduates is 100% (for example, in service companies and public institutions). On average, the share of university graduates in the organizations participating in the study is 52% (median average 50%, min.: 6%, max.: 100%).

The staff turnover rate in the surveyed companies is within 1%-50% and according to the size of the companies.

The core interest of our research was aimed at finding out what is the need for employment of persons with higher education in companies and how much they meet the requirements set by the company. To the question we asked - do you agree that there is a need for additional employment of personnel with higher education in the company - the vast majority of companies confirmed the existence of such a need.

Companies face difficulties when hiring personnel with higher education, which is mainly related to their adaptation to the real work environment. To the question - do you agree that there are difficulties/barriers in recruiting adequate personnel with higher education for certain positions - almost all of the companies agreed with this statement.

Among the most demanded and critical positions, where companies experience a shortage of qualified personnel, are managerial and engineering positions.

54% of the surveyed companies have the experience of cooperation with Georgian higher educational institutions, which in most cases is supported by special contracts. Mostly, companies and universities cooperate in the direction of student internships, although company representatives are also actively involved in joint projects and research activities, lecturing, etc.

To our question - would you participate in the development of dual training programs in accordance with the profile of your company? Most of the companies (73%) believe that they should be involved in the dual education system. 21% of the respondents do not have a defined position and it seems that this is mainly due to two reasons, either their head offices are located outside Georgia, or it is a government agency and such a decision requires the approval of the head office. Only a few micro-companies denied the potential of their involvement in dual education (2%) and 4% of respondents avoided answering. Overall, it is clear that most companies express their desire to increase their contribution to the dual education system.

We were also interested to which extent the dual form of education can support the work process in the company and how effectively this process will help to eliminate the shortage of qualified personnel in the labor market. As it turned out, the answers to these questions significantly correlate with each other.

48% of companies fully and 33% almost fully believe that a dual form of education can help and support the process of work or service delivery in their organization. 15% of surveyed companies see a positive potential in this process, and only 4% of companies are somewhat skeptical about the potential of dual education. It should be noted that no organization expressed a categorical refusal against the dual education system.

As for the impact of the dual system on eliminating the shortage of qualified personnel, the vast majority of companies - 96% (71% fully agree, and 25% almost completely agree) believe that the dual form of higher education will play an important role in reducing the shortage of qualified personnel. The answers show that the majority of companies are convinced that dual education has the potential to increase the number of adequate personnel in the employment market.

The implementation of the dual higher education model largely depends on the extent to which companies have the opportunity to employ students in their organization during the training period. 85% of companies have the opportunity to offer students practical education in their organization. 13% of the companies are not sure of their capabilities and only 2% of the 81% of the represented companies have the opportunity to employ students on student internships in their organization every year, while 19% do not have the opportunity to do so. As a minimum, micro, small and medium-sized companies can accept 1-2 students annually. As the size of the company increases, the greater is their ability to get students on work placements.

We were also interested in what was the preferred and mutually beneficial form of employment of students on work practice that would be equally acceptable to both the organization and the student's learning goals.

According to the interviewees, one-semester work practice is the most acceptable, since during this time the continuity of the work process will be ensured and it will be possible to start, finish and report on service projects. Also, it was mentioned, it is of great importance for the student to concentrate on work and to understand the sequence of tasks to be performed.

One of the most important question referred to the extent to which companies are ready to provide financial support to students employed on internships.

able to financially support dual students who will actually work with you during the semester? As it turned out, 46% of the surveyed companies will definitely reimburse students for certain expenses. Following such a response, we delved further into the issue and asked respondents to specify what they meant by financial support.

Most of the companies are also eager to engage in the dual training system with their own human resources and assign mentors to guide the students. This is an important result from the point of view that the mentoring is a contribution to the company and therefore an increased motivation of the company to develop students with skills that can potentially be used to increase the productivity of the company.

Discussion

Participating companies have stated that they are somewhat involved in dual education and prepare students for professional activities. However, the link with higher education institutions and curricula is very informal. In particular, there is no standard written plan, job description, which is consistent with learning outcomes. There is also almost no communication between company mentors and higher educational institutions regarding the teaching plan. Nevertheless, there is a practice of paying students and the option of hiring a student full-time if both parties wish to do so.

In this regard, one of the hosts of the forum explained that there is a difference between the teaching levels of dual education. In foreign countries, in particular, in German-speaking countries, from where the concept of dual education comes from, the model of education, initially his model was implemented on the level of vocational education. In Georgia, dual vocational education was introduced a few years ago and it implies taking into account work practices in teaching. In our case, we are dealing not with the vocational model of dual education, but with the model of dual higher education, which, as in the case of vocational education, involves the development of academic knowledge and practical skills with the participation of the

university and the employer. In this case, full involvement of companies in the educational process is of great importance. Curriculums should be developed with the direct participation of companies and should include methodical steps to improve the student's work skills.

Mr. Nikoloz Bakradze (GIPA) admitted, that in spite the fact the dual education is a model which comes from German-speaking countries, historically, the hierarchy of professional ranks in Georgia consisted of three-levels: master, prentice and apprentice. The master, as a teacher, would teach his craft experience to the apprentice, who after some time would start working as prentice, i.e. partially independent work, whereas after apprenticeship, he would be approved by the master and receive a set of workshop tools from him, and after that he would be considered as a fully-fledged master. The oldest data on the master-apprentice relationship dates back to the 6th century. According to Iv. Javakhishvili, ancient Georgian manuscript - "Martviloba of Eustathius Mtskheteli" (VI century) denotes a crafts union in Georgia as "workman's elder", "craftsmen's boss" and "superior", which were responsible for various actions towards "doers", i.e. "workers". Since the 19th century, a union of artisans named "Amkari" took hold, although it preserved the centuries-old tradition of passing knowledge from the master to the apprentice.

At the forum, the opinion was expressed that the existing model of higher education is somewhat outdated. The university tries to raise a student who has an overload of information that does not allow him to concentrate on practical tasks. This situation is somewhat similar to the joke about double-educated taxi drivers, when extra education does not fully mean higher qualifications and skills. On the contrary, an

excessive dose of education makes the graduate less qualified when solving practical and applied tasks.

According to the representative of the Batumi State Maritime Academy, one of the strategies to eliminate the gap between education and qualifications is the implementation of the dual higher education model. Dual model of higher education was first used in the USA at the University of Cincinnati, and the inspiration behind this model was a dean of German origin, whose idea was to integrate higher education and work into a single entrepreneurial environment – 1906. In 1975, the dual higher education model was introduced at the University of Cooperative Education in Baden-Württemberg, in 2002 at the Graz University of Applied Sciences (Austria FH JOANNEUM), in 2006 at a number of Spanish universities, and since 2019 in Serbia. The essence of the introduction of this model was to bridge the gap between university knowledge and practical skills.

Conclusions

In general, the opinions expressed in the discussion forum can be presented in a general form as follows:

- There is a certain inconsistency between the academic plans of teaching and the practical skills of solving tasks, therefore, there is a shortage of qualified graduates with practical skills in the labor market;
- According to the employer, in the model of dual higher education, mutual cooperation between the university and the labor market will contribute to the training of qualified personnel on the one hand, and on the other hand to increase the productivity of companies;

- Many companies represented in the labor market of Georgia are interested in cooperation with universities in terms of student internships, and it is necessary to adjust this relationship with the curricula.

Forum - Round Table

Agenda

Meeting address:

Tbilisi, Guramishvili 17,

**GTU, Faculty of Agricultural Sciences and Biosystems
Engineering**

Online meeting link:

<https://gipa-ge.zoom.us/j/99467031953?pwd=bXNySzlGbGFmQmdFSFlNeEM5VTZWQT09>

Date: December 19, 2023

Name of the project: Strengthening the possibilities of implementing dual education in the higher education of Georgia

The goal of the meeting: to present the results of the study of european experience in dual higher education and the evaluation of the needs of the Georgian labor market

10:30-11.00	Participants registration	
Part 1 – Welcome addresses		
11:00-11:05	Welcome address- Ministry of Education and Science of Georgia	Nino Tsereteli
11.05-11.10	Welcome address - National Center for Education Quality Development of	Lasha Margishvili

	Georgia	
11:10-11:20	General overview of the project	Vano Tsertsvadze (GIPA)
11:20-11:25	Challenges of dual education	Giorgi Kvartskhava (GTU)
Break		
Part 2 – Presentaton of research results		
11.30-11.40	Research results - foreign experience Results of the research - research of Georgian labor market needs	Vano Tsertsvadze
11.40-12.30	The vision of Georgian higher education institutions participating in the project in relation to dual education and a discussion with the participation of invited guests	<ol style="list-style-type: none"> 1. GIPA - Georgian Institute of Public Affairs 2. Georgian Technical University 3. Jakob Gogebashvili Telavi State University 4. Batumi State Maritime Academy 5. Batumi Navigation Training University
Part III - Labor market overview and discussion of research results		
12.30-13.00	Experience and vision of Georgian companies regarding dual training. Discussion with invited guests	<ol style="list-style-type: none"> 1. Vengo Group 2. InterlogGeorgia 3. Shumi wine company 4. Wilhelmsen Ships Service Georgia 5. National Forestry Agency
13.00-13.10	Conclusion	