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Assessment of Satisfaction of Students and Economic Units Regarding the Implementation of Dual Education

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ASSESSMENT OF SATISFACTION OF STUDENTS AND ECONOMIC UNITS REGARDING THE IMPLEMENTATION OF DUAL EDUCATION

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Assessment of Satisfaction of Students and Economic Units Regarding the Implementation of Dual Education

Silviu Gîncu ^α, Elena Movileanu ^σ & Radu Moldovanu ^ρ

Abstract- As part of the research, the authors aimed to present the results of monitoring the implementation of dual education in the Republic of Moldova, based on a survey conducted among students enrolled in dual education, as well as economic units (companies) involved in delivering this form of education. The research also included an analysis of the provisions of the national regulatory framework governing dual education, as well as international experiences in implementing dual education systems. Given that, in recent times, the authorities in the Republic of Moldova have focused on increasing the number of students enrolled in dual education, it is important to assess the satisfaction of the direct beneficiaries of this system (students and economic units) in order to provide insights into the quality of its implementation and to anticipate potential implementation risks. We believe that the findings presented in this paper will be of interest both to those currently involved in dual education and to students who may choose this form of Vocational Education and Training (VET) in the future. Considering the positive feedback received from students and economic units that participated in the research, the material presented in this publication may also serve as an additional argument for encouraging more companies to engage in dual education. Moreover, we consider that the research findings may serve as examples of good practices for the implementation of VET policies at both national and international levels.

Keywords: dual education, education, economic entities, labor market requirements, technical professional education, quality assurance.

1. INTRODUCTION

Over the past decade, dual education as a part of Vocational Education and Training system (VET) has become increasingly popular and more frequently promoted by the authorities responsible for the professional training of young specialists. This has also contributed to the growth in the number of students choosing to pursue training through dual education. In

2024, there was an increase of over 60% in the number of students enrolled in dual education compared to 2023. In this context, it is important to ensure quality in the implementation of dual education. According to national-level research in the field [1–5], it is important to mention that the Republic of Moldova has made significant progress in the process of implementing dual education.

Internationally [6–19], dual education is considered one of the most successful forms of workforce training, as it meets labour market expectations and significantly contributes to the growth of the market economy.

It should be noted that dual education, as a form of organizing VET education, is characterized by the fact that *"theoretical training is conducted at the vocational education and training institution, while practical training takes place at the economic unit"* [20, Art. 3, par. (1)].

The involvement of the economic unit in dual education occurs under the condition that it meets conformity criteria [21] and has signed a cooperation agreement [22] with the VET institution. Following the approval of the cooperation agreement, *"the parties establish full cooperation relations and provide each other with all necessary assistance to ensure the prompt and effective implementation of vocational training programs through dual education"* [22, p. 5].

To a large extent, the success of dual education relies on the modern equipment and infrastructure available at the economic units, but equally important is the role of the Master instructor within the economic unit. Thus, the Master instructor is responsible for integrating students into the economic unit and for developing their practical skills. At the same time, students in dual education are also monitored by a Master instructor from the VET institution.

Considering that, in order to implement dual education, the economic unit provides students with available equipment and ensures student guidance through an instructor from the company, we believe it is necessary to evaluate the cost-effectiveness of implementing dual education as well as the level of satisfaction of those involved.

From the student's perspective, it is evident that they are involved in practical production activities from

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the age of 16–18 and are given the opportunity to train using high-performance infrastructure and equipment. In this sense, it is important to assess students' perception of dual vocational training, their satisfaction levels, and areas for improvement in the dual vocational education process.

To ensure the quality of dual education implementation, economic units must undergo a conformity assessment procedure [20, 21] before entering a dual training partnership. Through this procedure, the stakeholders involved in dual education are assured that the economic unit has the physical capacity to organize vocational training within the unit, and that it has the necessary and qualified human resources, ensuring all the necessary conditions are in place for the proper implementation of dual education in accordance with nationally approved quality standards.

In this research, we aim to address the results of surveys conducted with students and economic units involved in dual education, highlight the strengths of dual vocational training, and present their level of satisfaction with the implementation process of dual education.

II. MATERIALS USED AND APPLIED METHODS

This research is based on the provisions of the regulatory framework in the field of VET system and is developed using the results obtained from two surveys aimed at determining the level of satisfaction among students and economic units involved in dual education.

To assess the overall satisfaction level of students in dual education, the following topics were addressed: the degree of satisfaction with their experience in dual education; the level of communication and collaboration with company Master instructors; the degree of support provided by the company for carrying out practical activities; the appreciation of the work performed within the economic unit; the level of integration into the economic unit; satisfaction with working conditions; the amount of monthly remuneration received by the student within the economic unit; and the strengths that motivate students to pursue training through dual education.

The questionnaire included 10 multiple-choice questions, was conducted online in March 2025 via Google Forms, and was completed by 1,583 respondents. It is worth mentioning that, as of October 1, approximately 2,417 students were enrolled in dual education programs [5].

To evaluate the satisfaction level regarding the impact of dual education on economic units, the following topics were addressed: the preparation level of students participating in the dual education program; the impact of dual education on the skills development of the economic unit's employees; the integration of dual education students into the company's work teams; the impact of dual education on the productivity of the economic unit; and the economic efficiency of dual education within the company.

The survey included 12 multiple-choice questions, was conducted online in March 2025 via Google Forms, and was completed by 125 economic units out of approximately 170 that are implementing dual education during the 2024–2025 academic year [5].

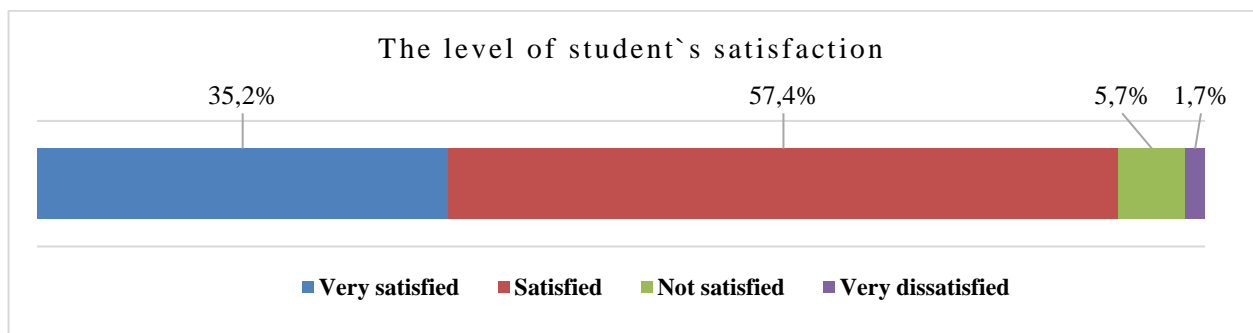
Additionally, the results of the questionnaires were discussed in May 2025 within 10 student groups. These discussions with students aimed to validate the findings from the two surveys.

III. RESULTS

Below, we present the survey results for the two samples: students enrolled in dual education programs (1,538 respondents) and economic units implementing dual education (125 respondents).

a) *Students' Perceptions in Dual Education Identified by the Survey*

As a result of analysing the questionnaire responses, we found that approximately 92,6% of respondents indicated they were satisfied or very satisfied with the experience gained within economic units during their dual education studies. However, it is noted that around 7,4% of students indicated a less positive experience (Figure 1).

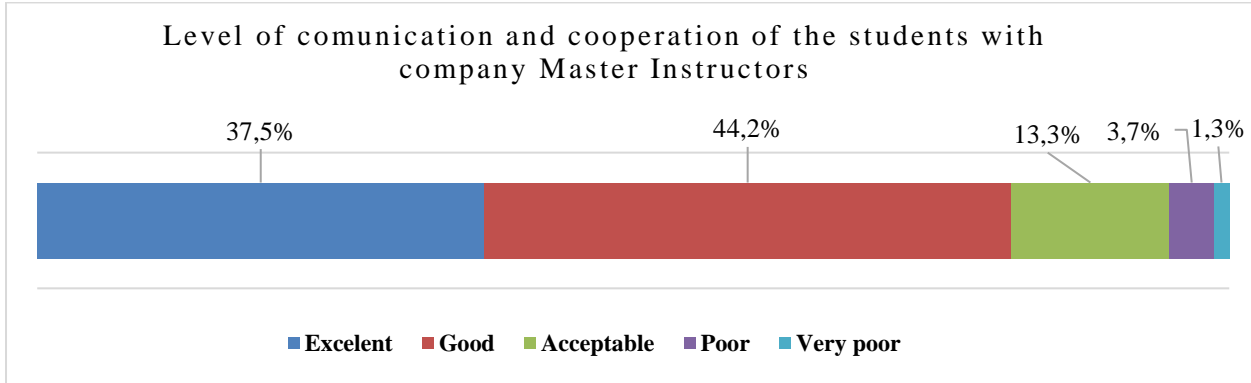


Source: Prepared by the author based on responses from students, 1,583 respondents.

Figure 1: How Satisfied are you with Your Experience in Dual Education?

Concerning the evaluation of the level of communication and collaboration between students and company Master instructors, 44,2% of respondents reported a good level of cooperation and communication, 37,5% rated it as excellent, and 13,3% indicated an acceptable level of collaboration and communication. On the other hand, 3,7% of

respondents mentioned a poor level of communication and collaboration with the company Master instructors, and 1,3% classified this process as very poor. If we generalize the data obtained, approximately 95% of respondents rated cooperation and communication with the company Master instructors positively, while 5% evaluated this process negatively (Figure 2).

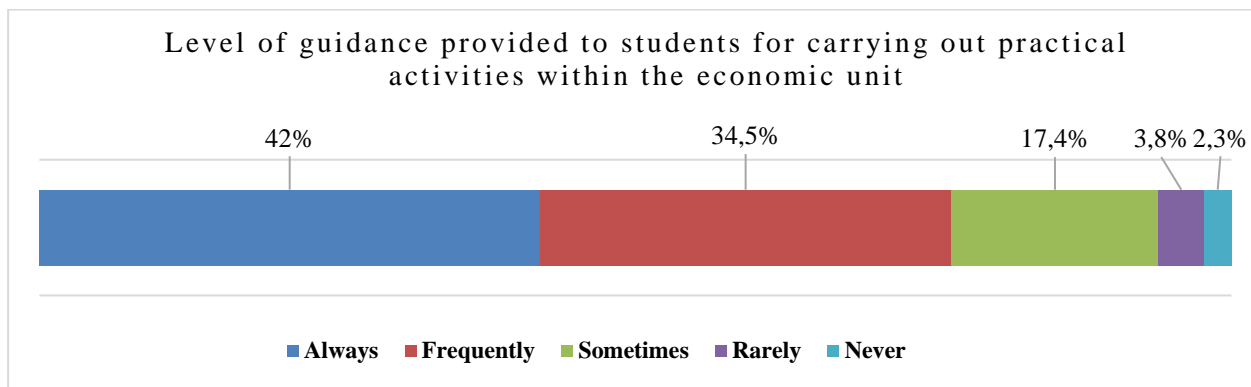


Source: Prepared by the author based on responses from students, 1,583 respondents.

Figure 2: How do you Evaluate the Level of Communication and Collaboration with the Company Master Instructors?

Regarding the evaluation of the level of methodological support provided to students by representatives of the economic units to enable them to carry out practical activities, the following results were noted. About 42% of respondents stated that they always receive this support, while 34,5% mentioned they frequently receive support. At the same time, 17,4%

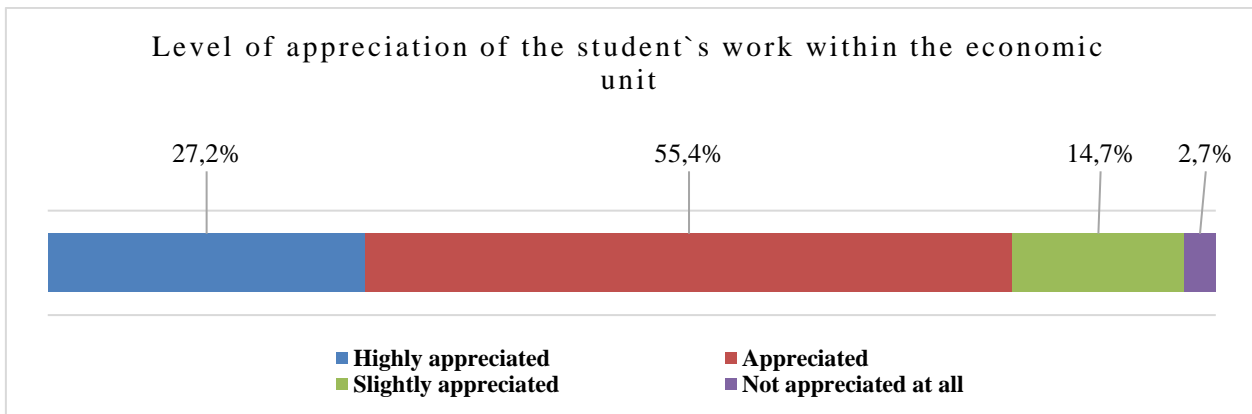
reported that the guidance activities are sporadic. Additionally, 3,8% of respondents indicated that they are rarely guided in carrying out practical activities, and 2,3% mentioned that they are not guided at all during the practical activities within the economic unit (Figure 3).



Source: Prepared by the author based on responses from students, 1,583 respondents.

Figure 3: Do you Consider that you Receive Sufficient Support (Guidance) from the Company to Carry out the Practical Activities?

Related to the students' opinions on how their work is valued within the economic unit, we found that 55,4% of respondents believe their work is appreciated, while 27,2% believe their work is highly appreciated. At the same time, 14,7% of respondents feel their work is only slightly appreciated, and 2,7% believe their work is not appreciated at all (Figure 4).

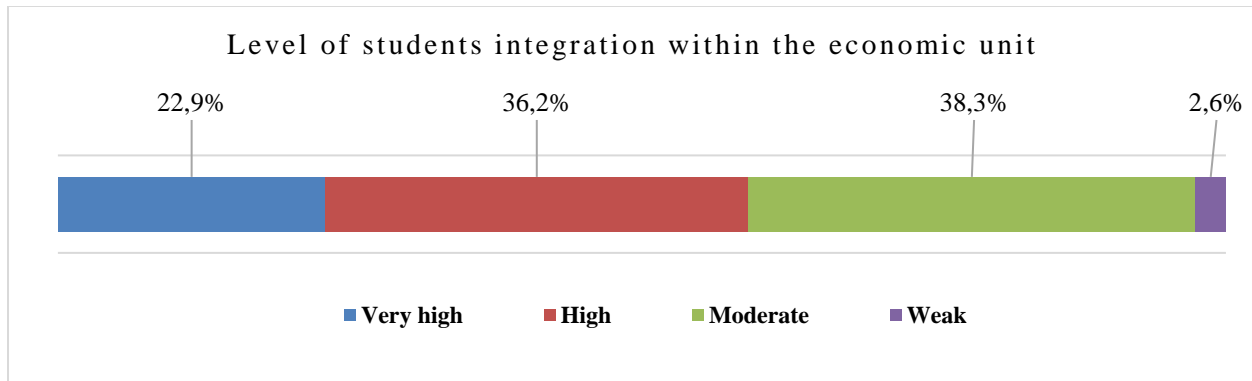


Source: Prepared by the author based on responses from students, 1,583 respondents.

Figure 4: Do you Believe your Work is Appreciated in the Company?

The integration of students into practical activities within the economic unit is an essential factor in the professional training process. In this regard, around 2,6% of respondents stated that their level of integration within the company was low. The remaining

respondents indicated varying degrees of successful integration: 22,9% reported a very high level of integration, 36,2% rated it as high, and 38,5% considered their integration level within the economic unit to be moderate (Figure 5).

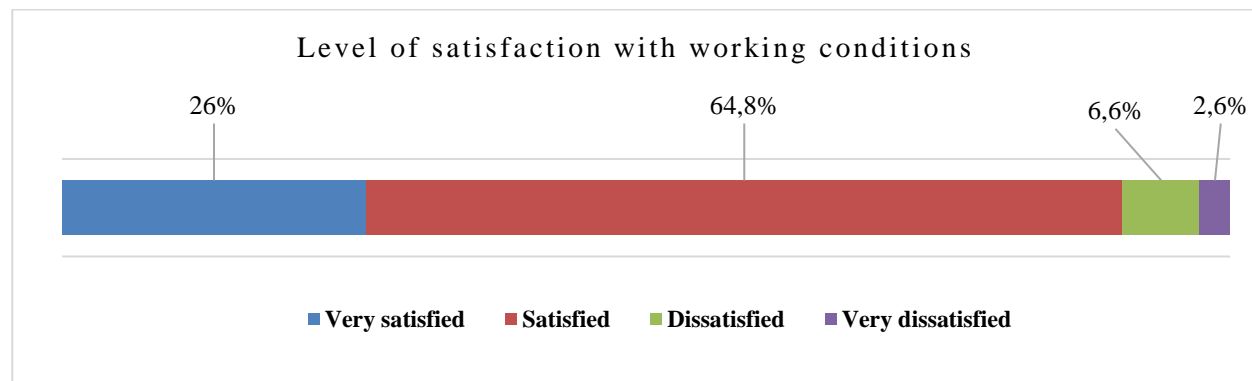


Source: Prepared by the author based on responses from students, 1,583 respondents.

Figure 5: How do you Assess your Level of Integration within the Company?

Given that working conditions are one of the strong points of dual education, the survey results regarding students' satisfaction with working conditions show that 64,8% of respondents rated them as satisfactory, while 26% considered the working

conditions in the economic unit to be very satisfactory. Meanwhile, 6,6% of respondents reported being dissatisfied with the working conditions in the company, and 2,6% stated they were very dissatisfied (Figure 6).

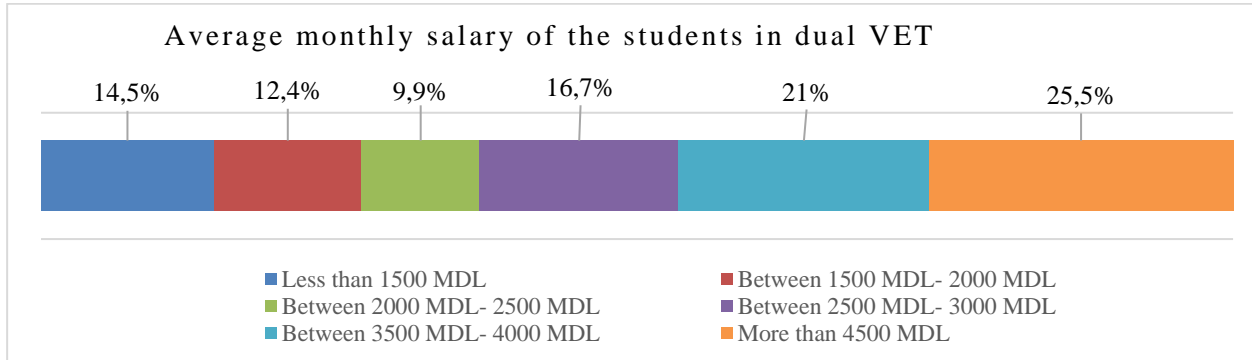


Source: Prepared by the author based on responses from students, 1,583 respondents.

Figure 6: What is your Level of Satisfaction with the Working Conditions?

Another advantage of dual education is that students receive “remuneration, the amount of which is negotiated by the parties and stipulated in the professional training contract under the dual education system, but it must not be lower than the guaranteed minimum wage in the real sector” [20, Art. 12, p. (3), letter d)]. According to [23], the guaranteed minimum

wage in the real sector for the year 2025 was set at 5500 lei. Given that students are remunerated by the company in proportion to the time spent at the economic unit, their responses regarding the average monthly remuneration vary. However, approximately 63,2% of respondents stated that they receive an average monthly wage higher than 2500 lei (Figure 7).

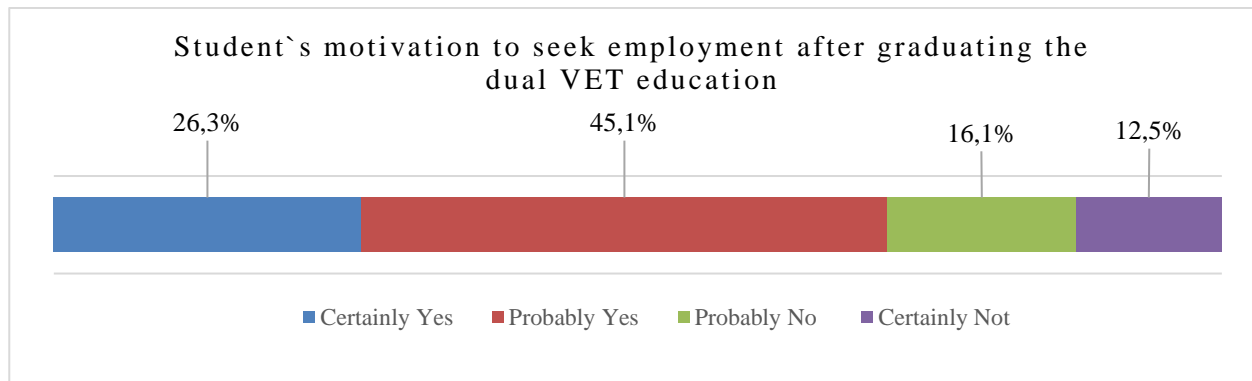


Source: Prepared by the author based on responses from students, 1,583 respondents.

Figure 7: What is the Average Monthly Remuneration you have Received from the Company?

One of the performance indicators established by the Ministry of Education and Research for VET institutions [24] is the employment rate of students after graduation. It is worth mentioning that, according to [5], “around 60–70% of dual education graduates are employed within six months after completing their studies.” In this regard, the students’ responses to the question of whether they intend to seek employment with the company where they completed their dual education program are as follows: 45,1% of

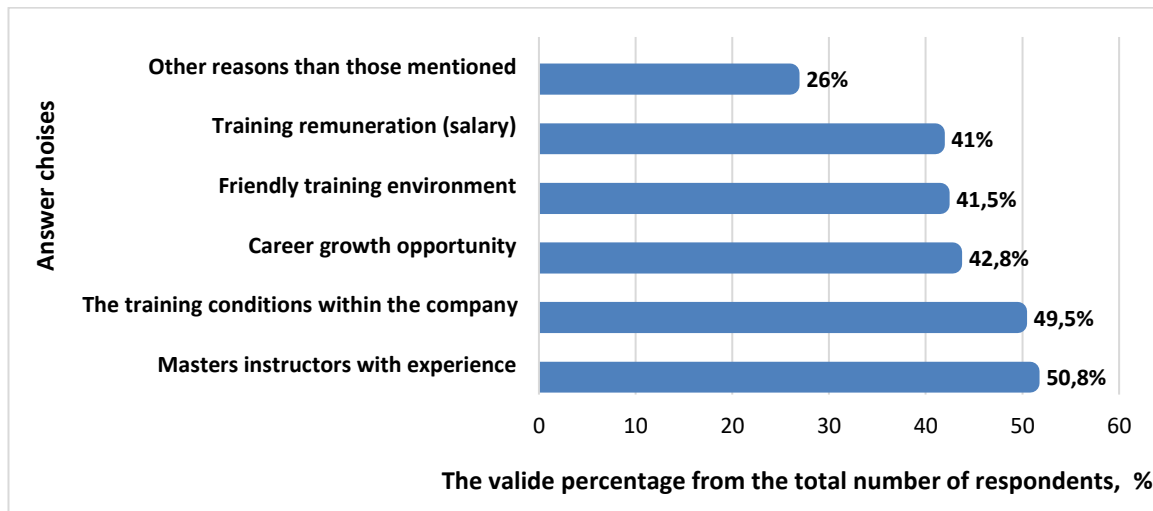
respondents answered probably, 26,3% stated definitely, 16,1% indicated probably not, and 12,5% categorically stated they would not seek employment at the company. Thus, in total, 71,4% of respondents are inclined to seek employment with the companies where they completed their dual education, while 28,6% do not intend to do so. These results confirm the dual education employment rate of approximately 60–70% (Figure 8).



Source: Prepared by the author based on responses from students, 1,583 respondents.

Figure 8: After Completing your Study Program, will you Choose to Work for the Company where you are doing your Dual Education?

To determine the motivating factors for students in dual education, a predefined list was presented to the students, and they were asked to select the top three priorities (Figure 9).



Source: Prepared by the author based on responses from students, 1,583 respondents.

Figure 9: What Motivates you to Pursue your Studies through Dual Education?

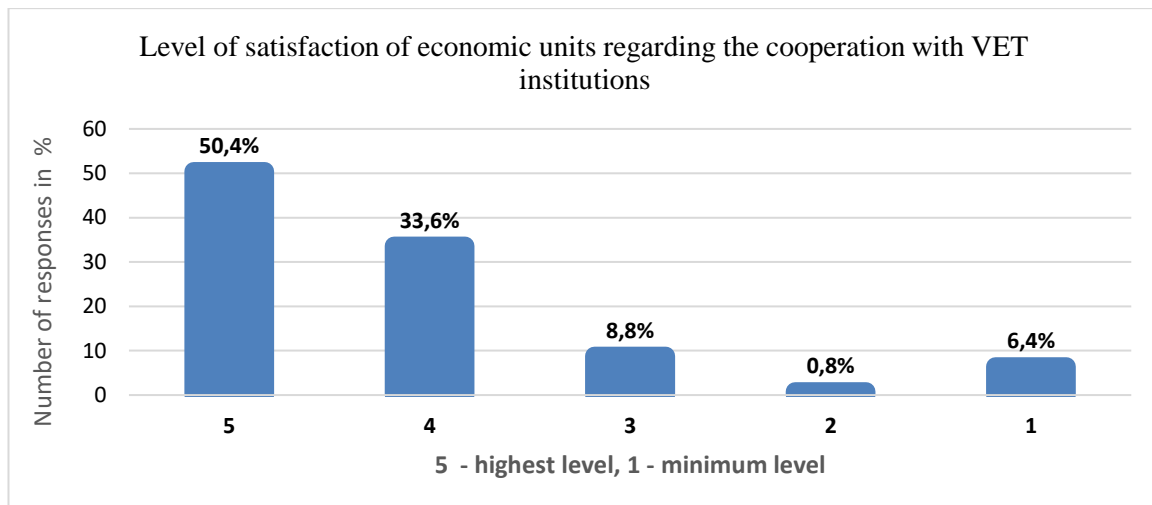
In this regard, it was found that the two most decisive factors motivating students to pursue dual education are (1) experienced Master-instructors and (2) the training conditions within the economic unit. At the same time, it is worth noting that professional training remuneration is not mentioned as one of the determining factors, which suggests that the remuneration amount established for students in dual education is generally sufficient and largely meets their expectations.

b) Assessments of the Economic Units Implementing Dual Education Identified in the Survey

Given that dual education takes place mostly within economic units, it is important to evaluate the

level of satisfaction of the economic units implementing dual education. In this regard, the economic units indicated that cooperation with VET institutions is successful.

Thus, among the total respondents, 50,4% gave the highest rating of 5, 33,6% rated it as level 4, and 8,8% rated it as level 3 (Figure 10).



Source: Prepared by the author based on responses from economic units, 125 respondents.

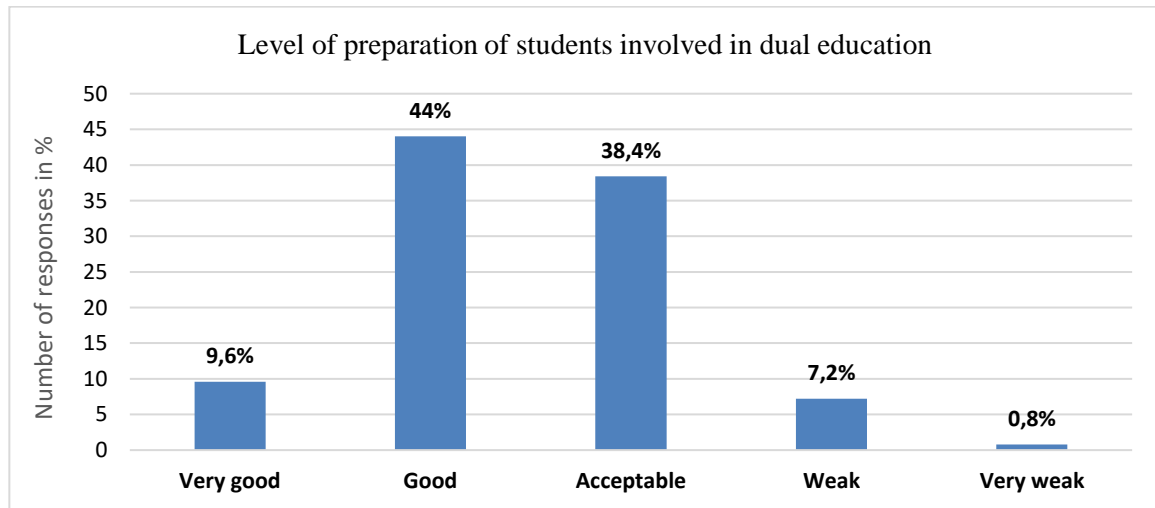
Figure 10: On a Scale from 1 (Minimum) to 5 (Maximum), what is your Company's Level of Satisfaction Regarding Collaboration with VET Institutions?

At the initial pilot stage of dual education, students aged at least 18 were enrolled in the economic

units. This allowed the companies to employ young people with full labour rights. Over time, it was found

that 18-year-olds were not interested in participating in the dual education system. Taking into account the practices of VET systems in European Union countries, the minimum age for students to enrol in the dual system was lowered to 16 years. One of the risks of enrolling 16-year-old students is their level of

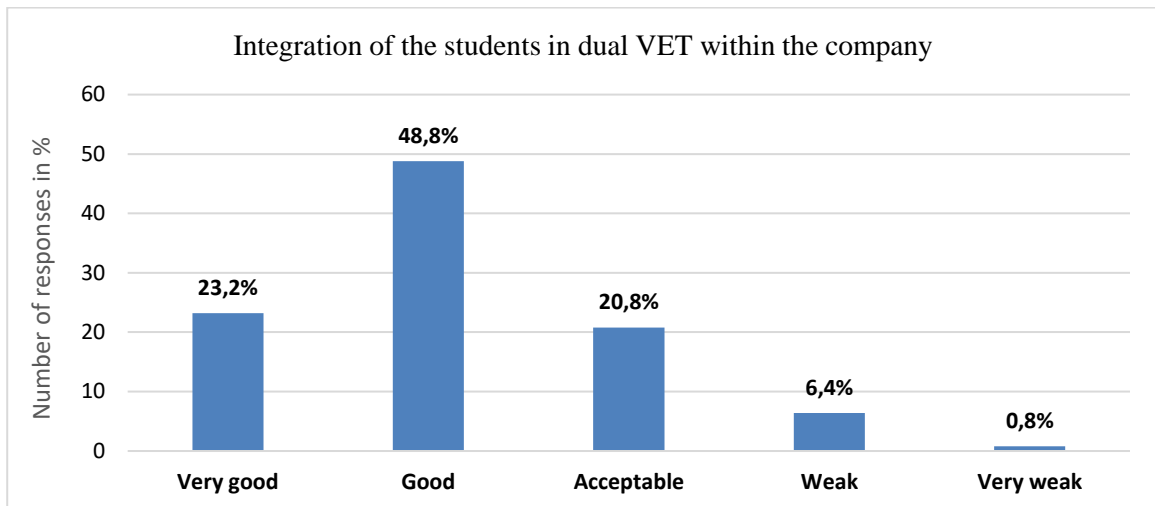
preparation to participate in dual education. From this perspective, we note that approximately 92% of economic units assessed the level of preparation of students participating in the dual education program as at least acceptable (Figure 11).



Source: Prepared by the author based on responses from economic units, 125 respondents.

Figure 11: How do you Assess the Level of Preparation of the Students Participating in the Dual Education Program?

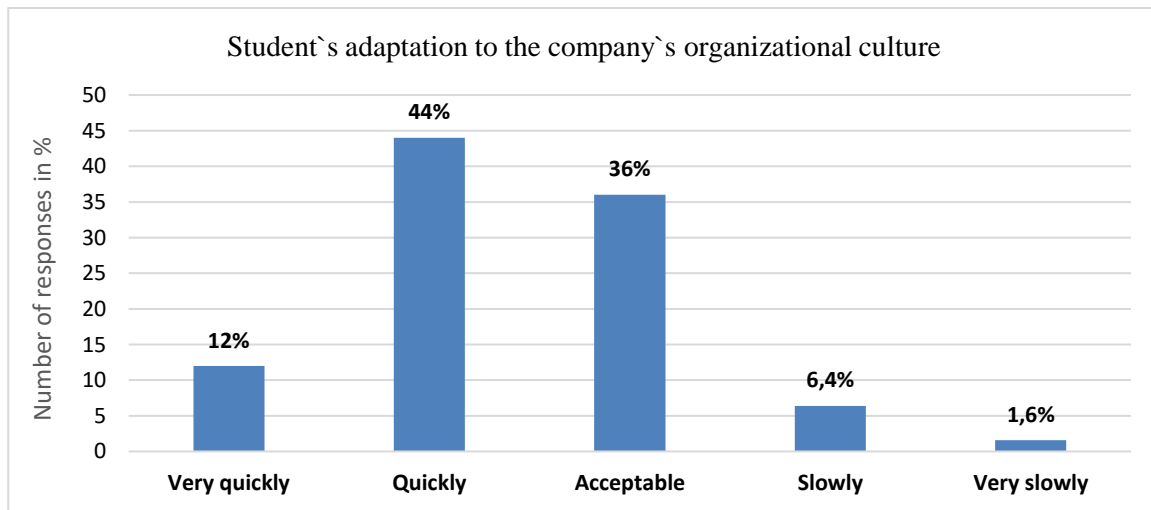
In a similar manner, representatives of the economic units mentioned that approximately 92.8% of students have an acceptable, good, or even very good level of integration within the company (Figure 12).



Source: Prepared by the author based on responses from economic units, 125 respondents.

Figure 12: How do you Assess the Integration of Dual Education Students within the Company?

In line with the previous responses (Figures 11–12), representatives of the economic units mentioned that approximately 92% of students manage to adapt to the company's organizational culture, while only 8% of students show a slow or very slow level of integration (Figure 13).

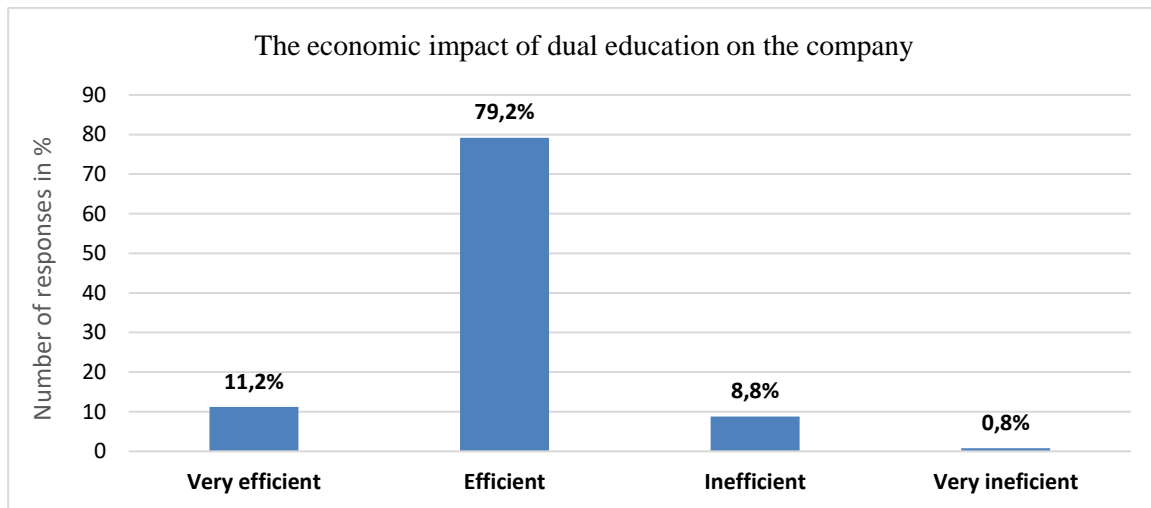


Source: Prepared by the author based on responses from economic units, 125 respondents.

Figure 13: How Quickly do Students Manage to Adapt to your Company's Organizational Culture?

An important element identified during the survey of economic units is the efficiency of dual education within the unit from an economic perspective. In this regard, approximately 79,2% of respondents mentioned that, in their view, the implementation of dual education within the economic unit is efficient, while

11,2% of respondents considered it to be very efficient. At the same time, around 8,8% of respondents stated that the implementation of dual education within the unit is not efficient, and 0,8% of respondents consider the implementation of dual education to be very inefficient (Figure 14).



Source: Prepared by the author based on responses from economic units, 125 respondents.

Figure 14: To what Extent do you Consider the Dual Education Program is Economically Efficient for your Company?

Regarding the extent to which companies would be open to continuing collaboration with VET institutions in the future, approximately 60% of respondents mentioned that they would be open to continuing the collaboration, 24% specified that they would be very open to cooperation, while 12,8% of companies indicated that they are undecided about their future involvement in the implementation of dual education, and 0,8% of companies would not be interested in continuing dual education (Figure 15).

- A significant proportion (90.4%) of economic units expressed their intention to continue collaborating with educational institutions for the implementation of dual education;
- 90.4% of economic units consider the dual education program to be economically efficient for the company.

V. CONCLUSIONS

The results presented in the research reconfirm the relevance of dual education for economic units, as ensuring a qualified workforce for the labor market remains a key factor in increasing the competitiveness of the market economy.

From the students' perspective, dual education is attractive. The survey results showed that students are satisfied with the remuneration they receive from economic units for their practical training activities and highlighted the role of the Master instructor within the unit in the professional training process through dual education.

The Master instructor within the unit is the main person responsible for the implementation of dual education. In this regard, it is important that the Master instructor from the economic unit, in addition to having professional experience and competencies, also possesses psycho-pedagogical skills that facilitate the training process for students in dual education.

Given the economic and social impact of dual education, the competent authorities should monitor and implement motivational policies for economic units in order to encourage the involvement of as many economic actors as possible in the workforce training process, including through dual education.

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