

DUAL EDUCATION – A VIABLE SOLUTION IN THE TRANSITION TO THE LABOUR MARKET

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Abstract

The qualification of human resources through the training of practical skills at the secondary level represents a challenge for professional and ethnic education, in the context of economic decentralization and the massification of higher education. Thus, we can ask ourselves if the gap between work and education, respectively that between professional requirements and skills, is the result of the lack of jobs or the lack of skills? Following the same line of ideas, these two overlapping crises may be the result of poor coordination between the actors interested in this problem, namely: education and training providers for the labour market, ministries and representatives of the government administration, employers, and, not lastly, the young people. The purpose of this study is to provide concise data regarding the current situation of vocational and technical education (VET) in Romania, which will serve as fundamental information for ongoing and future discussions regarding the new generation of education and training programs. The results showed that vocational education in a dual system, based on the German model, could represent an alternative for relaunching vocational education in Romania and a solution to facilitate the transition of young people to the labour market. The key factor of dual education is the practical component it emphasizes, developing the professional skills of young people directly at the workplace.

Key words: DUAL, education, practice

INTRODUCTION

Dual education is a tripartite form of professional and technical education organization, which is based on a partnership contract between the economic operator, the educational unit, and the administrative-territorial unit, as well as individual practical training contracts between the economic operator, student/parent - tutors and the educational unit.

The term "dual education" is widely used as an umbrella term, referring to the fact that teaching and learning in Vocational Education and Training (VET) is characterized by "duality" from two points of view: the duality of learning spaces (schools/ VET providers and training companies), who share responsibility for providing theoretical and practical training, respectively the duality of actors involved (public and private actors), who share responsibility for VET policies and practices [6], [11].

The dual nature of learning spaces is the basis of the definitions used in European and international specialized literature:

✓ According to the United Nations Educational, Scientific and Cultural Organization (UNESCO), "the dual education system is called "dual" because it combines in one course both apprenticeship in a company and vocational education in a vocational school." Within the company, the apprentice benefits from practical training, which is supplemented by theoretical training at the vocational school.

✓ According to the European Center for the Development of Vocational Training (CEDEFOP), dual education refers to "periods where learning or training in an educational institution or training center is combined with learning or training at the workplace". CEDEFOP also refers to dual education as work-study, emphasizing that the term "dual education" can be used as a synonym for "work-study", "apprenticeships" or "work-

based learning". There are, however, a series of small but significant differences between these terms, as they differ from the point of view of the two aspects mentioned above [6], [20], [22].

The organization of dual education is done at the request of economic agents. The organization, duration, content of the training programs, and methods of certification of the professional training are established by consulting the economic operators. Therefore, this form of professional education is complementary to those currently operating, and GEO 94/2014 provides the legal framework for its organization, allowing economic agents to be directly involved in all the components of the workforce training they need).

Work experience is highly valued by businesses and therefore the lack of such experience is a major obstacle for people looking for their first job. Many young people are caught in a vicious circle: they can't find a first job, but they also can't get a job because they don't have work experience. In some European countries, apprenticeship programs have been shown to have a significant impact on promoting youth employment and are one of the main reasons for low levels of youth unemployment [9], [10].

The education and professional training of students have as their main purpose the formation of competencies, understood as a multifunctional and transferable set of knowledge, skills, and aptitudes, necessary for:

- ✓ personal fulfilment and development, by achieving one's own goals in life, according to everyone's interests and aspirations and the desire to learn throughout life;
- ✓ social integration and active citizen participation in society;
- ✓ employment and participation in the operation and development of a sustainable economy;
- ✓ the formation of a conception of life, based on humanistic and scientific values, on national and universal culture, and on the stimulation of intercultural dialogue;

- ✓ education in the spirit of dignity, tolerance, and respect for fundamental human rights, and freedoms;

- ✓ cultivating sensitivity to human issues, moral-civic values, respect for nature, and the natural, social, and cultural environment [8], [21].

In this context, the purpose of this paper is to provide accurate information regarding the regulatory and organizational methodology of vocational and technical education (VET) in Romania. This information is intended to serve as fundamental knowledge for ongoing and future discussions concerning the new generation of education and training programs.

More specifically, the study addresses the following aspects:

- ✓ the rationale behind the implementation of dual education systems.
- ✓ establishing connections between excellence in vet, dual education, and economic growth.
- ✓ identifying trends and changes in dual education.
- ✓ innovative approaches to enhancing and increasing the attractiveness of this type of education.

MATERIALS AND METHODS

In the framework of dual education, the following notions are used during practical activities, according to the legislation in force [11], [13], [14], [15]:

- ✓ *the internship* represents the activity that the students carry out according to the education plan and the purpose of which is to check the applicability of the theoretical knowledge that they have acquired during the theory lessons in the school curriculum.

- ✓ *practice organizer* - the higher education institution that carries out instructive, educational, and formative activities, according to the Romanian legislation in force.

- ✓ *practice partner* - the central or local institution or any other private legal entity in Romania, which carries out an activity in correlation with the specializations contained in the nomenclature of the Ministry of

Education and which can participate in the process of practical training of students.

✓ *the trainee (trainee)* represents the student who is enrolled in an internship and carries out the activity within the internship to consolidate theoretical knowledge as well as training and cultivating the skills and abilities to apply them according to the specialty for which he is trained.

✓ *the internship leader* is the person who ensures the planning, organization, and supervision of the internship, as well as compliance with the conditions of training and acquisition by the practitioner of the professional skills planned for the internship period.

✓ *the internship tutor* is the person designated by the internship partner, who will ensure compliance with the training conditions and acquisition by the intern of the professional skills planned for the internship period.

✓ *the internship contract* is an agreement concluded between the internship organizer - the educational institution, the internship partner - the company, and the one who carries out the internship.

✓ *the internship program* is a document developed by the relevant department, following the legislation in force, which includes the training objectives to be achieved and the skills to be obtained through the internship, as well as the modalities for its implementation

The following normative acts are the basis for the realization of this form of education:

- National Education Law no. 1/ 2011, with subsequent amendments and additions;
- Order of the Ministry of National Education no. 5732/ 2022 regarding the approval of the Methodology for the organization and operation of dual education;
- Government Decision no. 918/2013 regarding the approval of the National Qualifications Framework and Government Decision no. 567/ 2015 for the amendment of Decision no. 918/2013 regarding the approval of the National Qualifications Framework;

Government Emergency Ordinance no. 49/ 2014 regarding the establishment of some measures in the field of education, scientific research and for the modification of some normative acts.

Therefore, based on the study of the legal framework and other materials on the topic, a comprehensive and logically structured material was set up emphasizing why education in a dual system is useful and efficient.

RESULTS AND DISCUSSIONS

The procedural preparation for the organization of internships is a necessary precondition for the preparation of activities supporting the practice. The students' practice is carried out following the education plan, as a way to verify the applicability of the theoretical knowledge acquired by them in the practical activity.

At the same time, the running of the internships aims to strengthen the theoretical knowledge and the training of the students' practical skills and abilities, which can be applied to the specialization that they follow. Therefore, the practice activity wants to complement in the most appropriate way the didactic activity through which the students acquired basic theoretical knowledge [4], [5]. Dual education is addressed to 8th-grade graduates of the current year or 8th-grade graduates who have interrupted their studies and whose maximum age is up to 26 years. Length of studies:

- ✓ after the 8th grade, dual education is organized to acquire a job with level 3 qualification;
- ✓ the level 3 qualifications include the 3-year study module (the theoretical parts of compulsory and specialized education, as well as practical internships carried out at the respective economic operators) for the 9th, 10th, and 11th grades;
- ✓ education is completed with a level 3 professional qualification certification exam, recognized both in the country and in the European Union [23].

Characteristics of education in the dual system:

- dual education is organized as part-time education, day courses, within state, private or confessional, authorized or accredited educational units, at the national level.

- educational units in which dual education is organized are established annually by order of the Minister of Education.

- in state education units, the dual study program is free.

During the three years, combined practical training internships are organized, with a total duration of 24 weeks distributed over the 3 years [4].

The structure of practical training for dual education

IX CLASS - 20% practical training - 5 weeks internship

CLASS X - 60% practical training - 9 weeks internship

CLASS XI - 72% practical training - 10 weeks internship

After the 3 years of training in Dual, i.e. the 9th, 10th, and 11th grades, graduation is completed with a certification exam for level 3 trades.

Graduates from dual education (called DUAL) can be employed at the partner economic operators where they have completed their practical training during the 3 years of DUAL and, at the same time, they can continue their studies at high school, to obtain level 4 qualification, the baccalaureate diploma and, respectively, to pursue university education (level 6) or, with/without baccalaureate, to choose post-secondary education (level 5). Thus, the professional educational route can continue depending on one's choice for level 4 (high school), 5 (post-secondary), or level 6 (university studies) qualifications.

The content of pre-university education is provided by the National Curriculum, which represents the coherent set of educational framework plans (Fig. 1), school programs, and textbooks in pre-university education [12]. The curriculum corresponding to qualifications in vocational and technical education (VET) is developed based on the Vocational Training Standards (SPP).

Vocational training standards are the document that describes the learning

outcomes that a participant in a vocational training program, carried out within vocational and technical education, must demonstrate at the end of it (Fig. 2). Also, the SPP is the document that is the basis of the valuation for certification [4].

CURRICULUM PLAN	
11th GRADE	
Vocational Education	
Qualification: HOTEL WORKER	
Professional Training Field: TOURISM AND CATERING	
General Training Field: TOURISM	
Module 1. Hotel Tourism Product	
Total Hours/Year:	210
from which:	
Technological Laboratory:	120
Practical Training	90
Module 2. Hotel Space Maintenance	
Total Hours/Year:	420
from which:	
Technological Laboratory	180
Practical Training	240
Practical Training Period	
Module 3. Local Development Curriculum	
Total Hours/Year:	300
OVERALL TOTAL:	
	930 Hours/Year

Fig. 1. Vocational education level curriculum, technological stream, services profile, tourism field/hotel worker specialization - 11th grade - technology curriculum area

Source: OMEN no. 3500/ 29.03.2018 [17].

The structure of the professional training standard is approved by MECS Order no. 4121/ 13.06.2016 regarding the approval of the Structure of the professional training standard in professional and technical education.

Starting with 2016, an evaluation standard corresponding to each unit of learning outcomes was developed and included in the SPP, in which the conditions under which the acquisition of the respective unit of learning outcomes is tested are specified. These conditions are described by performance criteria and indicators. Thus, the professional training standard is the regulatory document with the most important role in the design of the curriculum for professional and technical education, being elaborated based on the occupational standards in force or, in their absence, the competencies related to the occupation/occupations targeted by the respective qualification, which establish by consulting sectoral committees or economic operators and other interested factors.

#	Subject	Curriculum Framework			Timetable			Total
		TC	CD	CDL	TC	CD	CDL	
TECHNOLOGIES								15.2
12	Information and Communication Technology -- CEBUC M.CRISTINA MIHAELA	2	9	30	2	9	4.2	2
13	Specialized Culture		6					
14	Practical Training			30				
15	Weekly Practical Training		3					
16	Module I. Fundamentals of Accounting -- CIOBĂNICĂ I FLORIN-CRISTIAN(m)					2		2
17	Module II. Quality in Tourism and Catering - Theory --CIOBĂNICĂ I. FLORIN-CRISTIAN(m)					1		1
18	Module II. Quality in Tourism and Catering - Practical Training --CIOBĂNICĂ I. FLORIN-CRISTIAN(m)					1		1
19	Module III. Tourist Accommodation Facilities - Theory -- (m)					1		1
20	Module III. Tourist Accommodation Facilities - Practical Training -- (m)					1		1
21	Module IV. Basic Food Processes - Theory -- CIOBĂNICĂ I. FLORIN-CRISTIAN(m)					2		2
22	Module IV. Basic Food Processes - Practical Training -- CIOBĂNICĂ I. FLORIN-CRISTIAN(m)					1		1
23	Module V. Practical Training Period (CDL)-- CIOBĂNICĂ I. FLORIN-CRISTIAN(m)						4.2000	4.2

Fig. 2. Timetable at the level of professional education, technological stream, services profile, tourism field/ hotel worker specialization - 9th grade - curricular area technologies

Source: own contribution.

The key competencies targeted by a qualification are formulated in terms of specific knowledge, skills, and attitudes and are integrated into the units of general, and specialized technical learning outcomes. This enables the deepening of key competence areas in vocational training contexts. In this context and in correlation with the European efforts to promote key skills (years 2004 - 2008), the National Education Law no. 1/2011 assumed the eight key skills recommended by the European Commission as the objectives of the levels of compulsory and post-compulsory education.

In the case of vocational education and technical high school education, a distinct curriculum design model is used - compared to the one used in general education - based on the concept of learning outcomes. This model is based on the European Qualifications Framework (EQF), defined in 2005. Learning outcomes are expressed in terms of knowledge, skills, and attitudes acquired through learning and are defined by qualification. The learning outcomes are described by the professional training standards which, in turn, are developed based on the occupational standards in force [18].

The categories of learning outcome units from the professional training standard are:

- general technical learning outcome units;
- units of results of specialized technical learning.

Units of general technical learning outcomes are common to all qualifications in a vocational training area at a given

qualification level, and units of specialized technical learning outcomes are specific to each qualification.

In analysing the two types of skills approaches, for use in the development of curriculum documents and skills assessment systems, as well as for ensuring coherence between education and training routes, common relationships and approaches are considered important. The two perspectives have a history and origins that explain the differences in approach, respectively:

→ model of competencies - key in the field of education;

→ the competency model as learning outcomes from the professional field.

Both perspectives are valuable, they are not mutually exclusive, nor can they be ranked under the criterion of legitimacy. These models co-exist, have been assumed at a formal level in regulatory systems, and have been assimilated in subsequent curriculum documents. The main relationship between the 2 perspectives is the notion of the learning result, which is considered either a component of the competence or the competence itself. The difference is the level of generality, as follows: in the general education system, the learning result is considered more general (skills, in different categories, constituting different types of learning results), while in the professional training system, the learning result is a component, a partial result, a level of development of a competence, which is itself specific (professional, related to a professional occupation/qualification) [19].

Curricular components [12]:

✓ *The common core (TC)* which includes the educational subjects/modules, with the corresponding time allocations, common within a professional training profile/field and which is part of the national curriculum;

✓ *Differentiated curriculum (CD)* that includes the modules specific to the respective professional qualification and is part of the national curriculum;

✓ *Curriculum in local development (CDL)*, which constitutes the specific offer of each educational unit, is aimed at adapting the professional training of students to the requirements of the local labour market. The

CDL is proposed and developed by each educational unit, following the consultation of its partner enterprises.

The curriculum design process in local development includes the following stages:

- identification of professional training needs at the local level;
- the development of the Curriculum in local development, in line with the training needs identified at the local level;
- approval of the CDL by the Board of Administration of the educational unit and by the Local Committee for the Development of Social Partnership;
- CDL approval by the county school inspectorate [1], [2], [3].

During professional and technical education, each module in the curriculum of the Technologies Curriculum Area (specialist module) is taught by one or more teaching staff (generally in cases where the specialized module has both theory hours and technological laboratory hours and practical training hours) – another examples in Fig. 3 and Fig. 4.

#	Subject	Curriculum Framework		Timetable			Total
		TC	CD	TC	CD	CDL	
	TECHNOLOGIES	0	21	0	21	9.6429	30.6429
9	Specialized Culture		5				
10	Practical Training		16				
11	CIOBĂNICĂ I. FLORIN-CRISTIAN(m)				2		2
12	Module I. Ethics and Professional Communication - Theory -- CIOBĂNICĂ I. FLORIN-CRISTIAN(m)				1		1
13	Module II. General Accounting - Theory -- CIOBĂNICĂ I. FLORIN-CRISTIAN(m)				1		1
14	Module II. General Accounting - Technological Laboratory -- CIOBĂNICĂ I. FLORIN-CRISTIAN(m)				2		2
15	Module III. Tourist Assets - Theory -- CIOBĂNICĂ I. FLORIN-CRISTIAN(m)				2		2
16	Module III. Tourist Assets - Technological Laboratory -- CIOBĂNICĂ I. FLORIN-CRISTIAN(m)				1		1
17	Module IV. Consolidated Practical Training (CDL) -- CIOBĂNICĂ I. FLORIN-CRISTIAN(m)					9.6429	9.6429
18	Module I. Ethics and Professional Communication - Practical Training -- CIOBĂNICĂ I. FLORIN-CRISTIAN(m)				1		1
19	Module III. Tourist Assets - Practical Training -- CIOBĂNICĂ I. FLORIN-CRISTIAN(m)				11		11

Fig. 3. Timetable at professional education level, technological stream, service profile tourism field/hotel worker specialization - 10th grade - curricular area technologies

Source: own contribution

Teaching-learning activities organized in separate groups (e.g. with a minimum of 10 students) can be organized for practical training activities at economic operators. Regarding didactic methods, the most used are the methods based on oral communication (exposition and conversation), but the methods of learning and exploration through discovery (direct and indirect exploration of

objects and phenomena) are also useful. The education system promotes the use of student-centered interactive methods based on children's voluntary actions (exercises, practical activities, etc.) and stimulated action (didactic games, learning through dramatization, etc.) [7].

Curriculum Area/Subject/Module	Number of hours per week			Total number of hours per week	Number of weeks	Number of hours per school year	
	TC	CD	CDL				
LANGUAGE AND COMMUNICATION	5	-	-	33	30	150	
Romanian Language and Literature	2	-	-				
Modern Language 1	2	-	-				
Modern Language 2	1	-	-				
MATHEMATICS AND NATURAL SCIENCES	3	-	-			90	
Mathematics	1	-	-				
Physics	2	-	-				
HUMAN AND SOCIETY	1	-	-			30	
Social-Human Sciences / Entrepreneurial Education	1	-	-				
PHYSICAL EDUCATION AND SPORTS	2	-	-			60	
Physical Education	2	-	-				
COUNSELING AND GUIDANCE	-	1	-			30	
Counseling and Guidance	-	1	-				
TECHNOLOGIES	-	21	-			630	
Specialized Culture	-	-	-				
Practical Training	-	21	-				
TOTAL HOURS TC/ CD	11	22	-			990	
Internship Training Period	-	-	30			300	
Total hours per school year	330	660	300			1290	

Fig. 4. Technology curriculum area for 11th grade, three-year vocational education level curriculum, technological stream, service profile, tourism field/hotel worker specialization

Source: OMEN no. 3152/ 24.02.2014 [16]

If the practical training takes place at the economic operator, the tutor is responsible for how the training activity is carried out, following the collaboration with the teaching staff of the school.

Practical training is a mandatory activity within professional and technical education and is provided by teacher-engineers and/or foremen in laboratories and workshops, as well as by tutors, and staff appointed by employers for the practical training of students in the enterprise [1], [2], [3].

Benefits for the duration of schooling in the dual system:

- monthly scholarship of 400 lei (200 lei paid by the state + 200 lei paid by the partner economic operators where they did the practical training);
- performance awards;
- transport/accommodation settlement;
- equipment work and protection;
- practical training and mentoring;
- diploma recognized at European level;
- priority in employment;
- the possibility of continuing studies to obtain the baccalaureate diploma.

The benefits of economic operators

From the point of view of the benefits, the economic operators who invest in the dual system have the opportunity to select the best graduates of the dual education, participating both in the selection process for admission to the dual education and the certification exam that will be organized at economic operators and with their direct involvement.

Also, employers have the opportunity to show their direct involvement in the life of the local community, maintaining a much closer contact with the school, with the parents, and, of course, with the students, contributing to a greater extent to the economic development at the local level, having representatives on the school board [23].

Last but not least, through the legislative changes, economic operators benefit from the deduction of all the expenses they make in dual education.

✓ Deductibility of expenses

The expenses related to the organization and conduct of dual education were included in the category of deductible expenses when calculating the fiscal result, according to Law No. 239/ 2020, which amends the Fiscal Code in this regard. Deductible expenses are those expenses incurred for the organization and conduct of dual education, in accordance with the legal regulations in the field of national education, with the exception of depreciation expenses, which are deductible according to the special regulations regarding depreciation.

✓ Deduction of depreciation

Regarding investments and fixed assets owned and used for the organization and development of dual education, according to the legal regulations in the field of national education, they represent depreciable fixed assets, the value of which is recovered from a tax point of view by deducting depreciation.

✓ Non-taxable income

They are non-taxable income: scholarships, awards, and other rights in the form of accommodation, meals, transport, work equipment/protection, and others received by students during dual education, according to the legal regulations in the field of national education

CONCLUSIONS

The values promoted in the Romanian educational system are an integrated part of the response that education offers to the challenges of the contemporary world and reflect, equally, the culture and spirituality of the Romanian people and the values promoted at the European and global level. These values are intended to guide the management of personal life (health, fulfilment, and personal development), and to promote a sustainable lifestyle, oriented towards success, active citizenship, social inclusion, entrepreneurship, and integration into the labour market.

Vocational and technical education in the dual system combines learning at the workplace with that at school. The dual system works for and in agreement with the labour market, providing the economy with a well-qualified workforce. Within this system, educational institutions and their employers or organizations share responsibility for:

✓ the set of general and specific skills that must be developed for acquiring a specific job;

✓ learning contents;

✓ the preparation methods and the material base necessary to achieve the proposed objectives;

✓ training costs, with the government covering the cost of school training and employers financing company training.

The advantages of dual education are the following:

✓ a large number of students benefit from the advantages of professional training in real working conditions;

✓ this type of education facilitates the transition from the school environment to the one specific to work in the enterprise, thus leading to a high level of employability for the graduates;

✓ the strong involvement of employers guarantees the up-to-date nature of the qualifications, and alignment with the needs of the labour market, while also increasing the notoriety and attractiveness of the system;

✓ the system is regulated by solid quality assurance mechanisms;

✓ it is a very popular and widely accepted system in the countries that practice it;

✓ the diploma obtained at the end of the studies has a high value in the labour market and is recognized in the European Union.

In conclusion, dual education is not only a technical issue, but also has an important social component. Thus, it assumes a type of society in which the interested actors - essentially economic agents and government institutions - are willing to share their responsibility for the professional training of young people and to invest in this process, on the one hand at the school level, on the other party to that of the enterprise.

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