

VOCATIONAL EDUCATION - PROFESSIONALISM, COMPLIANCE, CHALLENGES

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Abstract

Vocational education brings together many interests. It is not secondary education only, nor just the first most important step towards professional development of those who choose it. It is the key to development of competencies that underpin industrial progress and are a prerequisite for the innovation and creativity so very necessary for any technological progress. Professional education is the implicit part of any successful business.

Keywords: vocational education, professionalism, compliance, challenges.

1. INTRODUCTION

The discussion about the fate of vocational education is continuous, but in many cases fruitless as far as its adaptation to the modern demands of the economy and the dynamically changing business environment is concerned. If this were not the case, today there would be no shortage of professions, we would not wait for the last drops of state-organized professional education to be drained, to move in leaps and bounds towards the "modern", and much more popular among candidates, professional fields and thus emptying of content important for the economic base areas. Its complexity, caused by the necessity to combine the general and professional parts, often causes a set of inconsistencies, which requires continuous adaptation and transitions that ensure not only its functioning, but the functioning of our entire economy. Professionalism in vocational education requires an arrangement of the mission, goals, factors and tools in an appropriate format that can ensure the even development of each business and each single economic direction.

2. PROFESSIONALISM IN VOCATIONAL EDUCATION

For too long, vocational education was left to itself, or rather to the "free market", which not only did not regulate it, but also created certain disparities that are very difficult to overcome and last for a long period of time. From the point of view of meeting the needs of skilled workers, this single market did not give Bulgarian economy a chance and today this is already a serious problem - there is a lack of specialists in basic professional fields, specialists with secondary education as well as such with higher education. It was not enough to change the laws, to change the names, to organize recognition of diplomas, to decide on dual education (a forgotten old thing that had already existed in Bulgaria). It was necessary to arrange the system according to clear and precise criteria, to produce specialists in the needed-by-the-economy professions and to make it flexible to easily adapt to the rapidly developing technological processes and the changing business environment. Economy needs education, and education needs economy - not only of its orientations, but of its investments, too. In fact, the people in the education sector did not know exactly what specialists the economy needed; there was nobody to tell them. And they produced specialists according to

their internal educational logic, namely – they produced staff in the disciplines and specialities for which they had teachers and/or a material base. In the meantime, there appeared exotic specialties, hardly needed by anyone, but they kept the status quo. Data from evaluations of education quality have long been commented by society. We talk a lot and at length about external assessment, about the content of curricula, about textbooks, we listen to extensive explanations from experts, parents, citizens, but in fact we rarely comment on the fact that it is increasingly difficult to find a handyman to repair our defective kitchen sink, a handyman to replace the tiles in the bathroom, an electrician to fix our outdated electric wiring (Terziev, 2022a; 2022b).

Without undervaluing the role of education for personal development and independent growth, it is important to provide the economy in its most general dimensions with skilled staff in the needed professional directions.

Change is more than necessary, but change that is subject to principles and rules serving both sides in this process –business as well as education. In fact, serving the state. Even the available strategies do not do enough if implemented sporadically or partially. The strategic agenda of professional education requires the creation of an environment in which any supporting and sustaining business system will develop, including the educational one. There have always existed regulations, but what is needed today is a new reviewing of them, precise criteria, assessment of compliances to fulfil the functions and role they are intended for.

3. THE FACTORS OF PROFESSIONALISM

Every element in the system of professional education leaves its mark and to some extent affects the quality of specialists with certain qualification. The factors determining the preparation of skilled workers for the sphere of economy fall under the general framework of factors for the development of education, and for this reason it is impossible to completely separate professional education from other types of education. It is an art to make a combination that allows parallelism, enough possible transitions, input and output to match the dynamics of life and technological development. The organizational factors are determinants of the quality of education, insofar as they determine the overall infrastructure and the professional factors related to capacity, quality and professionalization, and there must be found the most precise elements responsible for vocational education.

– Organizational factors:

- Legislation – legislation with an educational field of applicability and that with an economic field of applicability.

The variety of laws, especially the by-laws, the need to combine the different fields of application of the laws so that they can serve the common goals, the mechanisms for legislation implementation and control are an essential part of the management process in education. The possibility to manage qualitatively and effectively through laws is determined not by the number of laws or their changing but by their skilful codification, not by the number of sub-normative documents, but by their content and quality. The instability of the legislative base, the introduction of foreign practices without the necessary base in our country, as well as the implementation of legislation, is a challenge.

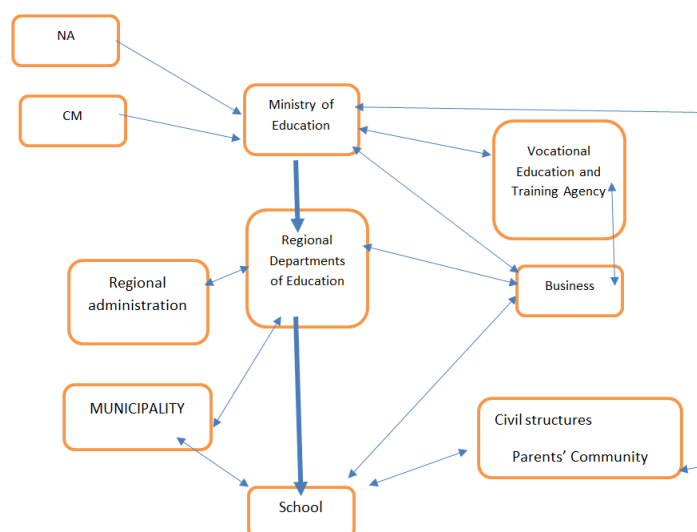


Fig. 1. Organizational infrastructure of vocational education

- **Organizational Infrastructure:**

The organizational infrastructure of vocational education is part of the general framework (Fig. 1). The main institution responsible for the organization of the entire educational process, for the creation and implementation of legislation in the system is the Ministry of Education and Science. The role of all other institutions that are connected with and have responsibility for education is also essential. A well-organized and hierarchical structure through which legislation is implemented and education is managed is also important - especially in the area of vocational education, where the number of interested institutions is greater. An essential issue in this structure is the distribution of responsibilities, which is not always the best and does not always consider different interests in the best way.

The target institutions with responsibilities in vocational education – the National Agency for Vocational Education and Training, Regional Administrations, Municipal Administrations, employer organizations and business structures – have a serious but insufficiently regulated place in the system and this is probably one of the reasons for the existing inconsistencies and deficits.

- **Institutional Interaction**

The entire process of management of education depends on the level of this interaction. Even in the presence of a formally good infrastructure, good legislation, institutional interaction (non-interaction) determines the quality of the educational process from the highest to the lowest level. Even a cursory glance at the structure shows how significant is not only the interaction, but the agreement between the institutions, which is often intertwined with different political commitments or with the claims of certain civil groups not always reflecting public opinion. The necessary degree of freedom of each institution must be conformed to that of all others, and only a well-organized mechanism of interaction can lead to a success of the system. Naturally, the institutional interaction is laid down in the legislation, but sometimes it is impossible to overcome the division or the emerging deficits. For example, the interaction between business and vocational education is difficult and very slow to make its way, a deficit that can be easily overcome by strengthening the role of the National Agency for Vocational Education and Training, rethinking the role of the Regional Departments of Education of the Ministry of Education and Science, the regional and local authorities in determining the professional directions in accordance with the priorities of the regional economy. It is a challenge for a Regional Department of Education, for example, to work with only one professional education expert in a rather heterogeneous environment of professional fields. Except for the purely administrative and formal role in approving the admission plan, nothing highly professional can happen. Professional areas of education are often determined by the internal logic of educational institutions, their "enthusiasm" to look for intersections with some employer or other type of business organization, the competence of the regional councils that approve (most often quite formally) the admission plan in the professional education.

- **Professional Factors**

- **Institutional Capacity**

This factor includes three main elements - managerial, administrative and professional capacity

Institutional capacity gives an answer to the question "to what extent does the professionalism in the management and implementation of the educational process meet the requirements of today - intelligent growth, Industry 4.0, transition to the digital age?" Perhaps this is the question of the questions. Regardless of modernity, to which everyone rushes with great pleasure, leaving out at that those areas that carried and carry the prestige of the normal economic support in the development of any economic entity. Even if we make all schools STEM and innovative, they should have majors supporting core operational activities, and they themselves should be up-to-date, but not red-booked.

- **Teaching Capacity and Quality**

Perhaps the easiest question is the assessment of the capacity of the teaching staff. However, it should be added that it still depends not only on the personal capacity of the teachers, but also on the material base, the textbook fund, the costs of maintaining the systems in vocational education, etc. Even if a professor enters a vocational high school, theory alone will not solve the issue of capacity and quality.

- **Professionalization**

It is determined according to the strategy for economic development, but often the implementation and realization remain far from the strategic guidelines. The list of professions for vocational education and training and the standards for acquiring professional qualifications are essential elements that determine

whether the skilled workers "produced" as a result of the thus organized system are sufficient and how qualified they are. The combination of the National Qualifications Framework with the List of Vocational Education and Training Professions, as well as with the standards, is an important part of forming the overall picture.

The applying of the framework programs (A-E) ensures a balance between general education, common and specific professional knowledge. Several trends have a serious impact on the imbalance of professional education - on the one hand, the trend for increase of the number of higher education graduates makes the number of those starting work immediately after finishing secondary education constantly decreasing; on the other hand, there are the negative demographic trends, and on the third, there is the fact that Bulgaria is one of the countries in which the share of early school leavers and the number of young people who neither study nor work is too high. This could be a reserve for vocational education, but it requires a professional approach to each group, as well as an appropriate model by which these young people can be involved in the educational process. This would mean a transformation that connects the labour-market trends on the one hand, and on the other, updating the professional directions, aligning them with the forecasts for the economic development of the country, as well as expanding the scope of professional guidance and orientation of young people for career development.

4. QUALIFIED STAFF – PROFESSIONALISM AND COMPLIANCE

Undoubtedly, the responsibility for providing qualified staff for each professional direction falls on professional education - secondary professional and higher. Each professional field and each profession needs qualified workers who must meet their requirements and standards, if there are such. It is in determining the correspondence between demand and supply, i.e. between the demands of the economy and the response of vocational education, that professionalism in management of vocational education fits. Part of the solution to the problem are the Framework Programs (Framework Program A - E) and Standards developed by the Ministry of Education and Science - a necessary but not sufficient condition, especially for some professional areas and especially considering the rapid changes occurring in the industry. The variable parameters in professional areas and professions are a fact – today's professions may not exist tomorrow, just as some professions from earlier times already appear as exotic or are completely absent from the labour market. At the same time, we have a red list of deficit professions. The difficulty comes from the fact that each professional direction needs a serious defining of concrete specialities, as they are often the key to the development of the respective direction. Many of the questions raised above can be solved by better implementation of legislation, better interaction between institutions, better quality control. If quality control in general education is a public problem, then the quality of professional education has not become such at all. It is important to evaluate the processes of the labour market and, more precisely, with regard to the level of qualifications. Professional education "produces" specialists of 1 to 3 qualification degrees. The number of skilled workers with 4th qualification degree is very small. The participation of professional colleges in the formation of the country's workforce is a challenge. A non-exhaustive reference shows that 4th degree is planned for some fields in the spheres of tourism, cosmetics, medicine and especially in military science. What would be the motive to create a professional college, which is a serious investment, when with one postgraduate program at any university one can easily get a certificate providing a 4-degree qualification? (Terziev, 2022a; 2022b).

We have to answer many questions in order to overcome the challenges and deficits and to give freedom to professional education, but such a freedom that guarantees servicing the economy and providing jobs for the specialists.

There can be defined several sets of questions, namely:

- Is the List of Professions adequate to the state and prospects for the development of the economy and is the economy provided with the necessary skilled personnel in terms of quality and type?
- Do the protected professional specialties sufficiently protect the development of certain professional areas needed by the state (51 protected professional specialties for academic year 2021/2022)?
- Is the procedure for opening new occupations adequate?
- Do the standards in the education system ensure the achievement of the necessary knowledge, skills and competences with which each individual can realize his full potential and be useful for both themselves and the society. And is there a reliable standard for every profession?
- Is the analysis made to show what skilled workers are needed for the development of the Bulgarian economy reliable enough to have the whole professionalization arranged on the right basis and to ensure the

relevant qualification levels, (The List of specialties in professions in which there is an expected shortage of specialists on the labor market for academic year 2021/2022 – 77)?

– Is there a need for a change in the ratios between first to fourth qualification degrees in the different professional fields?

5. QUALIFIED STAFF IN THE FIELD OF CONSERVATION OF IMMOVABLE CULTURAL HERITAGE

Each professional direction has its specifics and needs a specialized approach. Given the large number of professional areas, professions and specialties included in the List of Professions for Vocational Education and Training, it is impossible to expect listing of details that would satisfy even the smallest needs. However, it is necessary to cover important areas in the respective professional fields, which according to the strategic directions for economy development, the respective businesses interested, employer organizations, etc. are required. The lack of such coverage condemns industries and areas to underdevelopment or the need for additional training, which not only costs financial investment, but also costs time, competitiveness and added value. Sometimes, at the expense of self-directed specialties which lack demand on the labor market. It turns out that Conservation of Immovable Cultural Heritage is an area of professional education that does not enjoy much attention in professional education. The question arises as to what kind of specialists should deal with the preservation of immovable cultural heritage - what are the professional directions, what are the specialties, what standard should their training cover.

Qualified personnel in the field of preservation of immovable cultural heritage are most likely prepared in the vocational high schools of construction and architecture in accordance with the List of Occupations for Vocational Education and Training and its annual update by the Ministry of Education and Science. The available professional directions and specialties that are expected to be useful in the field of immovable cultural heritage protection are related to the following directions: architecture, urbanism and geodesy, construction and applied arts and crafts and are shown in Table 1.

Table 1. List of professional areas and specialties in the field of preservation of immovable cultural heritage related to areas: architecture, urbanism and geodesy, construction and applied arts and crafts

Code	Professional Direction	Code	Specialty	Code	Speciality	Qualification Degree
581	Architecture, Urbanism and Geodesy	581010	Geodesist	5810101	Geodesy	3
		581020	Restorer Executor	5810201	Constructive Restoration	2
				5810202	Decorative Restoration	2
		581030	Restoration Technician	5810301	Architectural Restoration	3
582	Construction	582010	Construction Technician	5820101	Construction and Architecture	3
215	Applied Arts and Crafts	215040	Wood Carver	2150401	Wood Carving	2
		215050	Ceramics Worker	2150501	Ceramics	2
		215060	Stonemason	2150601	Stone-cutting	2
				2150602	Decorative Rock Facings	2
		215070	Artist - Applied Arts	2150701	Artistic Woodcarving	3
				2150702	Artistic Ceramics	3
				2150703	Artistic Fabric	3
				2150704	Artistic Processing of Metals	3
			2150705	Icon Painting	3	

Unfortunately, some of the specialties in the Applied Arts and Crafts professional field fall into the List of Protected Specialities per Professions for academic year 2021/2022. (Table 2).

Table 2. Protected Specialities per professions in “Applied Arts and Crafts” Professional Direction

№	Code	Professional Direction	Code	Profession	Code	Specialiity
1.	215	Applied Arts and Crafts	215060	Stonemason	2150601	Stonework
2.	215	Applied Arts and Crafts	215070	Applied Arts Artist	2150701	Artistic Woodcarving
3.	215	Applied Arts and Crafts	215070	Applied Arts Artist	2150702	Artistic Ceramics
4.	215	Applied Arts and Crafts	215070	Applied Arts Artist	2150703	Artistic Fabric
5.	215	Applied Arts and Crafts	215070	Applied Arts Artist	21507	Applied Arts Artist- 05 Icon painting

In addition to the List of Occupations for Professional Education and Training, extremely important, too, is the content of the curricula and programs for the relevant specialities. A cursory glance at the curricula of the vocational schools of architecture and construction shows the following:

Speciality "Construction and Architecture" - specific vocational training in class XI (second high school stage), with part of these subjects falling into the group of elective disciplines, namely:

- Geodesy;
- Construction Mechanics;
- Technology of Construction Processes;
- Computer Drawing in Construction;
- Construction Organization;
- Urban Planning and Architectural Design;
- Reinforced Concrete Structures;
- Construction Activities and Control;
- Ecological and Energy-Efficient Construction;
- Water Supply and Sewage of Buildings;
- Roads and Facilities.

It would be difficult for a specialist in construction and architecture with the above training to directly work successfully in the field of preservation of immovable cultural heritage.

The available standards for the "construction" profession are as follows: 582010 Construction Technician (published 09/08/2020); 582040 Builder-installer (published 09/19/2019) and 582080 Construction Assistant (published 09/08/2020).

6. CONCLUSION

Probably, the answer to many of the questions raised should be sought in the field of higher education, but it should always be taken into account what the risk of retraining for certain activities and positions may be. This requires a refinement of the entire toolkit of vocational education, especially since modern industrial development got primarily interested in training specialists in the digital field, and subsequently led to continued shortages in many other zones.

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