

DEVELOPMENT OF THE CONTENT OF VOCATIONAL EDUCATION IN UKRAINE – SITUATION ANALYSIS AND POTENTIAL SCENARIOS

INTRODUCTION

Reforming the content of vocational education with a view to incorporate a competence-based approach means comprehensive changes in all processes of vocational education - the development and implementation of training programs, the organization of training, methodological support and didactics and assessment of competences. Such reforms require a thorough and critical evaluation of the current situation in the development and implementation of vocational education programs, taking into account the situation in the entire vocational education system (institutions, processes, methodological approaches) and other countries' best practices ON elaboration and development of vocational education content. This research also pursues this goal.

The document begins with a review of the methodological foundations and institutional approaches to the development of vocational education programs, with special emphasis on the relationship between the institutional aspects of vocational education reforms and the methodological approaches to the development and implementation of vocational education programs. The next step is to review the context for the elaboration and development of vocational education programs in Ukraine, which includes a critical impact assessment of the changes in socio-political and socio-economic processes in Ukraine that have resulted in cardinal transformations and the search for new ways of developing vocational education programs. The document ends with the findings of the survey among four vocational education schools in Ukraine assessing the readiness of vocational schools and social partners to shift to modular competence-based training programs and proposes potential scenarios of further development of vocational education programs in Ukraine at the level of institutional development and training processes.

REVIEW OF THE METHODOLOGICAL FOUNDATIONS AND APPROACHES TO ELABORATION OF VOCATIONAL EDUCATION PROGRAMS

Competence-based approaches to the development of vocational education programs more and more often become a key imperative for reforming the content of vocational education in the school-based systems of vocational education. This is due to radical social and economic transformations (as in post-communist countries), economy restructuring (everywhere, but especially this is true for the countries with a relatively high share of agriculture or conventional industry), labour market policies aimed at overcoming hidden structural unemployment and disproportionality between skills and qualifications supplied and demanded (Southern European countries), socio-economic modernization of society (to varying degrees from Vietnam to Turkey). These reforms are initiated not only by national governments, since international institutions and strategies also initiate and encourage them (for example, the Lisbon Strategy in the EU). They propose plans how to replace the supply-oriented vocational education systems with demand-driven and labour-market-oriented models (Mansfield, 2004). The introduction of competence-based approaches is often accompanied by broader education sector reforms aimed at developing lifelong

learning, recognizing the importance of non-formal learning and accreditation of experience (Bjørnåvold, 2000; Collard and Bjørnåvold, 2004). However, the introduction of a competence-based approach in the development of curricula (based on competence and occupational standards), as well as in the organization of training and didactic processes (modulation, development of mentoring and on-the-job training) or in the evaluation of learning outcomes in the school-based vocational education model, is a very complex process characterized by various tensions, contradictions and iterations.

Understanding of competence and its conceptualization in vocational education systems based on vocational schools is shaped in the context of a kind of competition and tension between the new competence- and learning-outcomes-based concepts and the traditional approaches to and practices of elaborating curriculum based on knowledge and school subjects (Cedefop, 2010; OECD, 2011). In the countries where school-based VE systems are in place one may find various models resulting from this competition and a combination of approaches, which depend on the scope, intensity, width and depth of vocational education reform (LeDeist and Tütlys, 2012). That is why, the transition to competence-based curricula in school-based vocational education systems in some cases is iterative and leads to a kind of half-way results where elements of the competence-based approach coexist with elements of subject-based vocational education. At the same time, these transitions and reforms are characterized by multiple methodological and didactic dilemmas, for example, how to ensure an interrelation between the required job skills and the requirements to students' personal and social development, or how to take into account the contradictions between the requirements inherent to the work process and those at a specific workplace as well as various methodological requirements to on-the-job training with the use of information technologies or based on communication (Pavlin and Stanley, 2012; Pavlin and Grigic, 2013). The introduction of the competence-based approach in vocational school systems of vocational education also demands launching significant changes in organizing of the training process, with special emphasis on engagement of social partners and especially employers in the development of the training content, very often in the context of the lack of their readiness and capacity to participate and take on new responsibilities (Cedefop, 2010).

The literature on the diversity of capitalism (LOS) distinguishes and analyses models of skill building in liberal economies characteristic of English-speaking countries, and in coordinated market relations in German-speaking countries (Hall, Sockice, 2009). The study into political economy of skill development focused on the research and analysis of institutional systems and skill building regimes in developed economies, such as the market model of skill building typical of Great Britain and Ireland, the collective model of skill building and development in German-speaking systems of education or the public-private skill building system typical of France, Italy, Spain, Portugal and Greece (Brockmann, Clarke, Winch, 2011).

There is so far no categorization of skill development systems and models characteristic of post-communist countries, although it is widely recognized that there are many skill building systems in this region (Martinaitis, 2013, LeDeist, Tütlys, 2012). In most cases, the studies into skill building systems and models (including those in Central and Eastern Europe) is largely focused on the impact of various macroeconomic factors and processes related to skills and human capital, such as supply and demand in the labour market, investment in education and human capital, patterns of work organization, the availability of social security and government expenditures on social programs, production relations and collective agreements, and so on. This leads to purely economic and oversimplified analysis and understanding of the skill building, while the impact of important

factors and processes related to educational policy and institutional development of education systems and education processes is largely ignored.

Becoming one of the dominant trends in the development of the curricula, standardization of education programs and plans in vocational education gives rise to various disputes between researchers and experts. This leads to the development of various methodological approaches to the development of VE curriculum. One of the dominating and common approaches at the international level in this area is **the Anglo-Saxon competence-based design of curricula**, with the use of behavioural functional analysis of workflow tasks. Although widespread internationally, this approach has also been heavily criticized by many researchers (Young, 2008; Grugulis, 2007; Brockmann et al., 2011). One of the main accusations in this criticism is the traditional "tailored" attitude in this approach to jobs and productivity as a set of individual tasks typical for a workplace where increasing complexity and dynamics of changes in occupational activities is not considered. At present, rapid technological and institutional changes add complexity to work. These challenges require moving beyond the scope of job description and workplace tasks and shifting to a workflow in the development of occupational standards and training programs to cope with today's uncertainty at workplaces.

The model for skills building based on the liberal market (Great Britain and Ireland) is described as the one developing the skills of a relatively low level (Brown et al., 2001) and is characterized by a high influence of free market relations, uneven distribution of access to general and vocational education, and a rather narrow concentration of highly qualified elites in certain economic sectors. Qualification, in the market model of skill development, is strongly demand-driven and performance-oriented, with a focus on current needs at the workplace and flexible ways of acquiring the narrow skills needed to perform specific work tasks. Variations in competition strategies at enterprises pose serious challenges for the use of unified qualification standards: therefore many quality standards of training at lower levels reflect the current situation with the skills demanded at workplaces. Expansion of labour resources and job opportunities in these qualifications require more focus on the development of occupational and general skills. Government support to social dialogue is mostly lacking, although a national social partnership has been established in Ireland. Social dialogue in training at the sectoral and entrepreneurial levels depends on the scale of trade unions - there are cases of extensive interaction between trade unions and employers in the field of training, but this depends very much on the market situation and the short-term interests of stakeholders.

Standards of learning outcomes are increasingly expressed within the system framework, and providers are increasingly describing the training associated with their programs in terms of standards that need to be achieved, rather than in terms of resources and processes associated with training. The learning outcomes or competences related to qualifications are described in sufficient detail, combining theoretical knowledge, practical skills and general abilities. The number of learning outcomes depends on the width and complexity of the qualification units: the more complex and extensive the content of a unit is, the greater are the learning outcomes. Qualification standardization depends on the implementation and use of the national qualification framework (NQF), which serves as a source of common concepts and a reference channel for various concepts. NQF is seen as a tool to establish the overall conceptual framework underlying the national qualification system and references to NQF are the way to resolve conceptual ambiguities in the comparison process. In view of the voluntary and uneven stakeholder participation in the skill development model and the national qualification framework, the main challenge is to ensure that

relevant concepts are sufficiently disseminated, especially at the enterprise and workplace level. Sectors can use quite different definitions and understanding of competences and qualifications. The main focus is on acquisition and provision of the skills needed for entering the labour market, as well as for further career development and future needs of the industries. Flexible vocational qualifications (by their structure) and interchangeability of the training programs content (units and modules) serve for maintaining a balance between the needs of enterprises and the skills needed for an individual career in the labour market. The diversity of training providers contributes to the diversity of structure and content of the proposed qualifications. The distinctive features of institutional development of this skill model are the diversity of training providers and qualifications, their competition in the education and training services market, the flexibility of training and recognition of learning outcomes and the attempts of various public and private institutions (sectoral organizations, competent authorities, industry suppliers) to coordinate these processes. These institutional features favour the diversity of the structure and content of vocational qualifications, creating problems to comparison and comparability, both within the country and abroad, especially as concerns comparison with more holistic European approaches on the mainland.

The state-regulated, school-based model of skill building (France, Italy, Portugal and Spain) is distinguished by the fact that the state plays an active role in regulating the qualification system. Training systems are rather centralized, but not always unified in terms of types and content of qualifications provided and the number of awarding bodies (e.g. France). However, centralized regulatory tools (quality standards, registers) provide a sufficient basis for more or less unified concepts of qualifications, competencies and other elements of the system. Government regulation mechanisms usually offer the possibility to transfer the agreed concepts to practices of qualifications providers and enterprises.

Policies and tools in the field of vocational educational and career development are oriented towards the goals of a national education system, economic and social policy. In general, priority is given to accessibility of skills and qualifications by providing a wide range of institutionalized forms and ways of obtaining qualifications. This approach requires a certain unification of the structure and content of qualifications using the standards and registers of vocational qualifications. Particular focus is on the provision of basic knowledge. This model is characterized by a highly developed governmental institutional infrastructure for regulating, maintaining and developing national qualification frameworks, as well as highly institutionalized and centralized processes of designing, providing and recognizing qualifications that imply strict unification of the structure and content of qualifications.

The model of collective skill building on the basis of social partnership and close relationship between training in vocational schools and on-the-job mentoring (Germany, Austria and the Netherlands) is distinguished by the dominating strategy of corporate competition that is based on the quality and innovations supported by social partnership, and the highly developed dual vocational training that leads to a wide spread of general and specialized skills of the workforce, contributing to high productivity and relative equality of incomes. The Netherlands' social and economic "polder model" is somewhat like a hybrid between the state-regulated "Rhineland model" and the British market voluntarism, but vocational education and qualifications are closer to the dual system. The state plays the role of regulation and coordination of skill development through harmonization and agreements with stakeholders at the national, regional and sectoral levels. Qualifications are regarded as important prerequisites for high quality and productivity, while

competences and learning outcomes are described and understood as integral components of the job resulting from job tasks. This approach leads to a professional-hierarchical structuring of qualifications and promotes a professional career development. The holistic concepts of competence and qualifications emphasize the importance of integrating a wide range of knowledge, skills and behaviour in the context of work and preserving an occupational identity (Beruf). The approach to the structure and content of qualifications is equally holistic where learning "is intended to enhance the value of the work itself, not tied to a specific workplace or task" (Brockmannetal., 2008).

The dual vocational education supposes that theoretical knowledge and basic practical skills are provided at a vocational school, while practical knowledge and skills are developed in workplace settings at enterprises. The key focus in this training process is on mastering of workflow processes. The introduction and development of the dual VE system was not a logical and systematic process, but the result of a certain subordination of VE policies and didactic tools to economic requirements supported by widespread understanding and agreement of large industrial enterprises and public assistance (Spöttl, 2016).

"Dual" VE is characterized by the duality of curricula for training in vocational school settings and that in workplace settings. Reciprocity relations serve as the basis for collective organization of vocational training with active engagement of enterprises in organizing, financing and providing of practical training, as well as with the important role of social partners and intermediary associations in the management and reform of the VE system (Busemeyer, Trampush, 2013). In the dual training system, the government is responsible for ensuring the regulatory framework, and it contributes mostly theory-oriented part of the public training by administering the vocational schools. Practical part of vocational education is provided by enterprises. Together with trade unions, they determine the content of training programs. Thus, the dual system combines advantages for the three participating agents: government, enterprises and individual students (Spöttl, 2016).

National education standards (Ausbildungsordnungen) are important reference guides, and provide an overall conceptual framework in the development of skills (Tritscher-Archan, 2009a, b). Qualifications are generally seen as elements and tools of the education and training process, rather than independent levers of public policy (Young, 2007). Pervasive social partnership mechanisms and sectoral collective agreements on skill development contribute to the active participation of stakeholders in the development of qualifications. For example, sectoral qualifications in the construction sector in Austria are based on collective agreements (Kollektivvertrag), which are discussed in each sector between the Chamber of Commerce and Industry (Wirtschaftskammer Österreich) and the trade union (Österreichischer Gewerkschaftsbund).

The qualifications take account of the current and future skills needed by enterprises (skills needs related to technological and institutional development in workplaces) and by employees (skills related to career development and professional improvement). In Germany, collective agreements on wage development and management are regulated by sectoral and regional social partnership structures implying a wide range of classification of competencies and qualifications and being a problem for NQF reform (Gehmlich, 2009).

Vocational education systems being reformed in the countries that are on the path of extensive socio-economic transformations and transitions could be singled out as an institutional model of vocational education development. These are the countries in post-communist or post-colonial transformations. In these countries, the reform of vocational education and changes in the content of vocational education are implemented in the context of often radical and rapidly

changing political and economic changes in the absence of stable methodological and institutional support, which implies the iterative nature of the reforms and transformations themselves and the important role of adopting experience from other models. The shift to the competence-based approach in vocational education programs is an important element for improving competitiveness of human resources and correspondence of the vocational education offer to the needs of the labour market. Usually one of the main problems in these transformations is an inadequate capacity of social partners-employers and trade unions to actively participate in them undertaking specific responsibilities and duties in developing and implementing the standards and training programs, in organizing the learning processes and in assessing their outcomes. In addition, the standardization of vocational education content in post-communist countries was often an important element of the vocational education system reform and was aimed at protecting vocational schools from destructive influence of the radical economic restructuring. For example, in Hungary in 1993, the government introduced a national qualification register unifying the vocational education programs throughout the country, and in 2004-2006, these qualifications were updated by transforming them according to the competence-modular principle (Laczik, Farkas, 2018). New reforms in the content of vocational education in Hungary were initiated at the beginning of the second decade and focused on strengthening the centralized control over standardization of the vocational education in the context of the development of the dual form of vocational education or mentoring. This is due to strengthening of state regulation of the proposed vocational education programs and qualifications to the end of ensuring correlation between proposed qualifications and the needs of the labour market (Laczik, Farkas, 2018).

Along with a variety of institutional systems and models of vocational education, there is a variety of methodological approaches to competence and content of education. Mulder (2017) identifies 3 methodological approaches to competence - functional behaviourism, integrated professionalism and situational professionalism (Table 1):

Table 1. Methodological approaches to competence (Mulder, 2017)

	Methodological basis of competence	Place and role of competence in a training program	Priorities of training program content	Methodological and institutional approaches to training
Functional behaviourism	The set of knowledge and skills empowering to fulfil a specific function / task in occupational activities.	Basis for an individual unit of a training program – a module – offering the set of knowledge and skills empowering to fulfil a specific function.	Flexibility and speed of acquiring competencies. Cost-saving and fast training. Consistency of the training with the requirements of specific work tasks.	Training content is developed on the basis of functional analysis results, competence assessment criteria are based on typical behavioural responses while fulfilling the tasks.
Integrated professionalism	The set of knowledge, skills and abilities empowering to carry out a work process independently and professionally and being an important component of personal	Basis for the training units offering the knowledge and skills needed for independent and high-quality performance of the entire work process.	Offering the competencies required to mastering work processes regardless of their specifics as it may be in specific workplace settings. Offering resources for flexible response to the changes in	Training is based on performing real work processes (integrated tasks of work processes) composing occupational activity.

	occupational identity.		work processes. Developing lifelong learning in the context of occupational activities.	
Situational professionalism	Competence matters only in specific contexts and situations of professional activity which requires ensuring direct and close link between the education content and activity context.	Basis for planning and management of self-education and corporate education aimed at expanding or improving vocational competencies.	Guidance for planning and organization of self-education and corporate on-the-job training.	While developing training programs and evaluation criteria, priority is given to specific requirements of work processes and tasks and the context of vocational activity.

These methodological approaches are found in certain institutional models of vocational education. For example, functional behaviourism is typical of designing the standards and training programs in skill development models based on the liberal market, and is also widely perceived in the development of training programs in reformed vocational education systems in the countries in extensive socio-economic transformation and transition. Integrated professionalism is typical of the development of standards and training programs in the model of collective skill building based on social partnership and close relationship between training in vocational school settings and on-the-job mentoring, and elements of situational professionalism are present in the development of standards and training programs in a state-regulated, school-based model of skills building.

The launch of a competence-based approach in vocational education programs is usually accompanied by important changes in other processes of vocational education, especially in the organization of practical training and in didactic approaches. In particular, the introduction of a competence-based approach in the curricula of school-based vocational education systems requires a significant strengthening of on-the-job training. The introduction and development of on-the-job training is often part of comprehensive reform actions aimed at introducing a competence-based approach in VE practices, starting with curriculum development and ending with learning outcomes evaluation and awarding qualifications. In addition, the introduction of on-the-job training in VE school systems is carried out in various socio-economic, political and institutional conditions, where the interest, willingness and potential of social partners to participate in these processes play a very important role. Here, the government administration of the vocational education system and the reform of the content of vocational education play an important role, they largely determine the degree of the reform process centralization (the role of the state, social partners and vocational schools) and the degree of differentiation / unification of the programs content. A decentralized curriculum development process usually involves a wider variety of different stakeholders and ensures that the training programs are result-oriented, a specific set of occupation-specific competencies and learning outcomes related to curriculum subjects, general skills and other educational objectives. Decentralization of the curriculum development process can lead to the adaptation and contextualization of the training program which meets the needs of both employers and students in a more efficient manner. Training programs developed at the vocational school level depend on the establishment of partnerships and efficient negotiations at the local level. Here, students play an important role. Consultations with students in designing the programs provide the

chance to revise the learning outcomes to the end of making them more understandable and better corresponding to the students' needs.

The structure of learning outcomes and the way they are presented affect the process of teaching and learning. For example, some training programs separate learning outcomes related to theory from those related to practice — this is, for example, the case of English national vocational qualifications, while other programs integrate them (for example, the German concept of education areas), which is of impact on evaluation and teaching. The level of detail of the learning outcomes used in the training program may have important implications for teaching methods and evaluation of student attainments. A high level of curriculum standardization may improve reliability of evaluation and correlation of teaching with the required competencies. However, a high level of standardization can also lead to excessive complexity, too instrumental approaches to education (reducing the autonomy of teachers) and lack of correspondence with the specific needs of students and employers.

One of the most critical aspects for the launch of competence-based programs to be a success is adequacy of the available human resources (the competence of teachers in competence-based training methodological approaches), available methodological resources (availability of teaching guidebooks) and physical resources (such as availability of infrastructure for on-the-job training, project work, problem-based learning, etc.).

Various forms of on-the-job training in vocational school education systems are mostly launched during initial reforms of VE aimed at improving the correspondence between the skills and qualifications provided and the changing needs of the labour market. In these cases, the introduction of on-the-job training is often a component of comprehensive reform measures focused on introducing the competence-based approach in VE practices, from curriculum development to evaluation and training. In addition, the introduction of on-the-job training in vocational school education systems is carried out in differing socioeconomic, political and institutional settings, such as VE reforms in post-communist new EU member states (the case of Lithuania) or VE reforms in post-crisis countries where youth unemployment rates are high (Italy).

The development of a comprehensive institutional and legislative framework for the introduction of mentoring and on-the-job training in vocational school VE systems is carried out given quite occasional participation of social partners. At present, formal mechanisms of social partnership and bilateral cooperation between employers and VE suppliers are most often created in the areas of training program development, organizing practical training of vocational school students and evaluation of their competences, but the cooperation is not systematic enough to ensure smooth and rapid progress. One of the biggest problems is the lack of systemic social partnership mechanisms in primary VE at the level of industries.

2. DEVELOPMENT OF CONTENT INSTITUTIONALIZATION OF THE VOCATIONAL EDUCATION CONTENT IN UKRAINE

At present, vocational education in Ukraine is provided in accordance with the qualification descriptions of occupations included in the State Classifier DK 003-2010. The occupations are outlined in the Dictionary of Occupational Titles where occupation descriptions are systematized by economic activities and reflect the content of the Unified Wage-Rates and Skills Guide, however its

latest update was approved in 1985 in the Soviet Union. This indicates the obsolescence of qualification descriptions and the urgent need to establish occupational standards. Updating of the VE standards and, accordingly, the content of skilful worker training on the basis of the competence-based approach, is intended to address a wide range of problems, inter alia the following key objectives:

- ensuring the level of vocational education and the quality of training is in accordance with employers' requirements to qualifications, taking into account regional components of vocational education;
- mastering the competences by future specialists;
- ensuring academic freedoms of an educational institution in the process of shaping a flexible and variable content of education and organization of the educational process;
- ensuring the unity of the education content and its compliance with the standards and requirements to the educational process organization throughout the educational space of Ukraine;
- determination of the conditions and procedure for certification, testing workers' compliance with the requirements of the occupational standard;
- ensuring control over the vocational education training system efficiency and quality of education.

The focal areas of vocational education content development are related to standardization of vocational education content, introduction of a competence-based approach and modularization while developing vocational education standards and programs.

The development of the vocational education content is a complex process, where the factors contributing to the efficiency and quality of this process play an important role, inter alia active participation of employers in the development of standards and programs and their implementation at the local, sectoral and national levels, as well as the factors creating certain obstacles in this process, inter alia insufficient physical infrastructure for training provision, lack of readiness and competence among teachers, lack of methodological support for the development and implementation of new programs.

The development of vocational education in Ukraine after the restoration of independence in the tenth decade of XX century is also distinguished by political intentions, by strengthening the independence of vocational schools and delegating more responsibility to them for the content and quality of education. The regional focus in the economic development also sets certain pressure to decentralize the elaboration and development of the vocational education content, where regional private entities and social partners should play a critical role, corresponding to the specific needs of human capital in the regions.

Analysing the processes of development and implementation of occupational standards, vocational education standards, model education programs and plans, the following features can be distinguished:

1. The sectoral principle of developing occupational standards with an active role and initiatives of employers, but following the priority of the industry demand for qualifications, rather than the systemic support to standardization of all occupations and qualifications of economic sectors.

2. Combining the subject- and competence-based approaches in the development of the vocational education content, especially in the development of model training programs and plans.
3. Planning the entire training process in detail, to the level of a separate unit or lesson.
4. An attempt to introduce elements of the dual education model as an alternative to vocational school education based on the best practices of Germany and other countries.
5. The trend to consolidation of qualifications and training programs introducing the competence-based approach.

International projects on vocational education development directly or indirectly concerned the development and implementation of a competence-based approach in the content of vocational education. Here, we can mention the projects on development and implementation of systemic solutions and tools, such as the national qualifications system and qualification framework, as well as various projects improving the correspondence of vocational education programs to the needs of the labour market or projects on the development of non-formal lifelong learning.

Preliminary findings of the questionnaire survey among representatives of the vocational schools from four regions of Ukraine

420 respondents took part in the survey: 42 vocational school headmasters, 70 deputy headmasters, 28 senior masters of practical training, 126 masters of practical training, 28 educationists, 126 teachers.

The respondents' answers demonstrate that the most difficulties in using and interpreting of the definitions are related to using the definitions of competence, dual training and mentoring, and the most unified are definitions of qualifications, curriculum and syllabus. This may be due to the following: 1) the long-term use of the definitions and their unified use in the education legal framework (qualification, training program, curriculum), 2) new phenomena in the teaching practices, which are defined by different and not yet well-established terms (competence, dual training, mentoring).

The respondents' answers also indicate that the most important and relevant problems in development, decentralization of development and introduction of programs are:

- insufficient / inefficient participation of employers in the development and implementation of competence-based training programs,
- lack of employers' and other social partners' readiness to be actively engaged in the training processes in the framework of the development of training in the process of work (mentoring, dual training),
- lack of knowledge and experience in the development and implementation of competence-based training programs on the part of vocational school head masters and teachers.
- absence or weakness of common understanding among vocational schools and social partners about the development and implementation of competence-based training programs.
- possible insufficient readiness of vocational schools to introduce a competence-based approach into the training process, shifting to flexible education focused on the needs of the students and the labour market (lack of relevant knowledge and experience among teachers, lack of human and physical resources to reorganize the training process, etc.).

The above answers reveal that in order to successfully implement modular vocational education programs in the near future, it is necessary to strengthen the partnership between vocational schools and employers at the local level in developing programs and organizing the training process in accordance with the requirements of the competence-based approach. It also becomes clear that despite a relatively large number and wide distribution of various international projects related to the development of competence-based training content, the teachers, vocational school head masters and employers still lack knowledge and experience in developing and implementing competence-based training programs, which requires putting more systematic and concerted efforts in stakeholder training. Vocational schools also complain about the lack of human and physical resources to restructure the training process on a modular basis.

The respondents' answers also show that the vocational education content tools are at the initial stage of their development and implementation, therefore vocational school representatives still prefer to work with old-type tools, such as thematic lesson plans and subject-based curriculum or lesson schedules.

The interviewed teachers expressed an interesting opinion that they are almost ready to organize training based on the competence-modular approach (consulting and supporting students in their initiatives in the learning process, deeper, wider and more flexible peer-to-peer cooperation, organizing the training process on the basis of the competence-modular approach). However the interviewed teachers very critically assessed the readiness of students for partial self-mastering of competences (self-learning of the subjects) while organizing the training according to the competence-modular approach. This indicates that the introduction of competence-based modular training will require a lot of pedagogical efforts to prepare students for training in competence-modular programs.

The majority of respondents do not agree that there are enough methodologies, methodological guidebooks, other methodological assistance, as well as necessary sources of information for organizing the training process based on the competence-modular approach. They agree that the teachers need special training (retraining) on organization of teaching process based on the competence-modular approach.

Most of the teachers indicated that their educational institution is ready to organize training in accordance with the competence-modular approach, however they have problems related to the lack of financial and human resources to organize the training on the basis of the competence-modular approach. Also, the majority of respondents indicated the need to improve the quality and increase the intensity of cooperation between their vocational school and employers in organizing practical vocational training, as well as to change (supplement) existing legislative and other regulatory instruments in order to increase the motivation to cooperation between vocational schools and employers in organizing training based on the competence modular approach.

Almost half of the respondents agree that completely new training methods are needed to organize the teaching based on the competence-modular approach. The majority of respondents support the need for certain changes in the structure and content of work plans and programs when introducing the competence-modular approach. Most respondents also agree that the introduction of modular programs requires flexible cooperation between teachers of various subjects in the teaching module, as well as a significant change in the organization of training, including orienting the theoretical training process to employers' requirements, more intensive on-the-job training. A similar majority of the respondents indicate that the introduction of standards and educational programs based on the competence-modular approach faces significant challenges and has not yet

brought significant changes to the organization of the teaching process due to insufficient readiness of the vocational schools and teachers to provide teaching based on the principles of competence-modular training. Most respondents also agree that the introduction of modular programs in their vocational schools does not bring significant changes in the organization of practical training due to the insufficient engagement of employers and other social partners in the organization of on-the-job training. An absolute majority of the teachers are interested, in full or in part, in the launch of modular competence-based programs that require a radical change in the organization of the training process.

POTENTIAL SCENARIOS OF DECENTRALIZING THE DEVELOPMENT AND IMPLEMENTATION OF VOCATIONAL EDUCATIONAL CONTENT IN UKRAINE

Considering potential scenarios for further development of decentralization in development and implementation of vocational education content in Ukraine, it is extremely important to take into account certain conditions and limitations revealed by the research into the documents and the preliminary findings of the survey among vocational school representatives in 4 regions of the country (Table 2).

Table 2. Conditions and limitations of developing decentralization in elaboration and introduction of vocational education content in Ukraine

Conditions and limitations	Impact of decentralization and reform of vocational education training content	Possible counteraction or neutralization measures
Insufficient unification of the concepts and use of some basic concepts (definitions) of the vocational education content reform, for example, the definition of competence. A lack / weakness of common understanding among vocational schools and social partners about the development and implementation of competence-based training programs.	It prevents efficiency, uniformity and large-scale transition to new, decentralized forms of vocational education, prevents efficient skill-sharing in the development and implementation of competence-based training programs, hinders the adoption and implementation of strategic decisions in the vocational education reform.	Consolidation and unification of methodological tools for the development and implementation of vocational education programs. Coordinated and large-scale training for vocational school representatives and social partners.
Lack of employers' willingness to actively participate in the design and development of training programs at	The threat of merely formal, "paper" transition to competence-based training programs. The risk associated with potential lack of correlation between new modular programs	It is necessary to strengthen the partnership between schools and employers at the local level in the areas of developing programs and organize the training process according to the

<p>the local level, cooperation with a vocational school. Unwillingness of employers and other social partners to be actively engaged in the training processes in the framework of the development of on-the-job training (mentoring, dual training).</p>	<p>and competencies and the labour market needs, which may undermine the credibility of the programs among students, their families and social partners.</p>	<p>requirements of the competence-based approach. The need to improve qualitatively and increase the intensity of cooperation between the educational institution and employers in organizing practical vocational training, as well as to change (supplement) current legislative and other regulatory documents in order to increase the motivation to cooperation between an educational institution and employers in organizing the training based on the competence-modular approach. Gradual and slow process of engaging enterprises in the organization of the development and implementation of training programs encourage to choose scenarios for the gradual development of the transition to competence-based modular programs in individual industries and regions, where the dynamics of the development of this process would provide specific achievements, outcomes and efficient communication (success stories). The same concerns the launch of dual education and mentoring.</p>
<p>Lack of knowledge and experience in the development and implementation of competence-based training programs among vocational school head masters and teachers.</p>	<p>Direct and significant obstacle to the development and introduction of new competence-based training programs.</p>	<p>It requires a more systemic and concerted action in the training of vocational school head masters and teachers. Following the principle of decentralization, such training should take into account specific needs of local vocational schools and industry and region specifics while developing the content of training.</p>
<p>Potential insufficient readiness of vocational schools to introduce a competence-based</p>	<p>Direct and significant obstacle to the development and introduction of new competence-based training programs.</p>	<p>Special training (retraining) of teachers is needed in connection with the organization of training based on the competence-modular approach.</p>

<p>approach to the training process, to shift to flexible training focused on the needs of students and the labour market (lack of relevant knowledge and experience among teachers, lack of human and physical resources to reorganize the learning process, etc.).</p>		<p>The introduction of modular programs requires flexible cooperation among teachers of various subjects in the teaching module, as well as significant changes in the organization of training, including orienting the theoretical training process to the requirements of employers, more intensive on-the-job training.</p> <p>Parallel implementation and development of modular programs based on competences and various forms of on-the-job training, especially dual training / mentoring.</p>
<p>The vocational education content tools are only at the initial stage of their development and implementation; therefore, school representatives still prefer to work with old-type tools, such as thematic curriculum for the lessons or subjects or lesson schedules.</p> <p>Lack of methods, guidebooks, other methodological assistance, as well as necessary sources of information to organize training based on the competence-modular approach.</p>	<p>Completely new teaching methodologies are needed in the organization of training based on the competence-modular approach.</p> <p>Certain changes in the structure and content of work plans and programs are required when introducing the competence-modular approach.</p>	<p>Consolidation and unification of methodological tools for the development and implementation of vocational education programs.</p> <p>This also requires strict adherence to a certain consistency in the processes of developing and implementing the tools - first, occupational standards are developed and implemented, and on their basis, vocational education standards and modular programs.</p> <p>The introduction of a competence-based approach to the content of vocational education in the vocational school system of vocational education is a cultural change, which predetermines a slow, gradual nature of this process.</p> <p>The process of peer-to-peer learning in partnership / cooperation among stakeholders (teachers, vocational school head masters, social partners, representatives of management institutions, etc.) plays an important role here at the local, sectoral, regional, national and international levels.</p>
<p>Teachers are very</p>	<p>The introduction of competence-</p>	<p>Greater accent on the</p>

<p>critical in their assessments of the students' readiness to partial independent learning of competences (school subjects) while organizing training based on the competence-modular approach.</p>	<p>based modular education would require a lot of pedagogical efforts to prepare students for training in competence-modular programs.</p>	<p>development of skills of independent theoretical and practical training, using appropriate pedagogical techniques and methods - personalized training, problem-based training, on-the-job training, project-based training, etc. This fact also requires a "gradual" process of implementation and development of modular programs based on competencies.</p>
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Given the above conditions and limitations, the following key features of a possible scenario for decentralization of the development and implementation of the vocational education content in Ukraine could be outlined:

1. Consolidation and unification of methodological tools for the development and implementation of vocational training programs (methodological guidelines and procedures for the development and implementation of occupational standards, vocational education standards, modular programs, etc.). The state expert organizations authorized by the Ministry of Education and Science shall lead the coordination efforts in this area.
2. Development of human resources for the development and implementation of the content of vocational education requires efficient coordination by central public authorities, as well as regional and sectoral authorities. Therefore, planning, financing and overall coordination of this process can be delegated to central authorities or authorized expert organizations, and the implementation and management in this area can be carried out by various private actors and institutions, depending on the situation in the industry, region, etc.
3. The development and implementation of modular training programs in vocational school and workplace settings should be decentralized, depending on the needs and the existing capacity of local vocational schools and social partners. This will ensure a gradual but steady and continuous development of social partnership in these processes at the local and sectoral level. Establishing permanent regional or sectoral networks and partnerships may be encouraged towards the elaboration and development of the vocational education content, they can serve as catalysts for experts' skill-sharing at various levels.
4. An important prerequisite for the successful implementation of new training programs is a systemic and sustainable national system of teachers' and vocational training masters' training.