

TORINO PROCESS

BELARUS

2011





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List of acronyms and abbreviations

CIS	Commonwealth of Independent States
ETF	European Training Foundation
ILO	International Labour Organization
ISCED	International Standard Classification of Education
ME	Ministry of Education
QMS	Quality management system
RIPO	Republican Institute for Vocational Education
TVET	Technical and vocational education and training
UN	United Nations
UNESCO	United Nations Educational, Scientific and Cultural Organization
VET	Vocational education and training

1. Executive summary

In recent years there has been a rapid growth in socioeconomic development in Belarus that has resulted in an increase in the well-being of the population. Economic growth has been accompanied by a rise in the employment rate. In turn, this has led to a greater focus in national policy on human resources development, in which education at all levels plays a leading role.

The Belarusian education system, which is centrally managed and controlled by the state, still carries many features of the Soviet system. Transformational processes in education are aimed at bringing the system into line with the changes in the economy and society, and are evolutionary reforms rather than dramatic changes. The most dramatic change in education has been the recent shift to mass higher education.

It should be stressed that the educational reforms carried out by the Belarusian government are systematic. State policy is summarised in the major legal acts regulating education, and is implemented through state programmes for the development of technical vocational and secondary special education.

There is a need for caution in the implementation of reforms owing to the strong position of the education system in the social and economic policies, and the guarantee of government support. Belarus has maintained high enrolment rates in secondary schools and especially in institutions of higher education since independence, and has thereby maintained a high level of education among the population.

The latest legislative initiatives, such as the Code of Education of the Republic of Belarus, are a positive development. The draft Code of Education has the aim of 'improving the system gradually and smoothly rather than reforming it'. Its purpose is to create a unified national system of education and provide a unified strategy for its development, regulating relations between all levels of education. The Code is based on the educational legislation of Belarus, international agreements of the country in this area, and core agreements of the United Nations (UN), United Nations Educational, Scientific And Cultural Organization (UNESCO) and other international organisations.

The Belarusian labour market is characterised by low levels of registered unemployment and an increase in the employed population. As with many other countries with transition economies, Belarus is experiencing a demographic decline, with a reduction of around 40 000 people per annum. The Belarusian labour market also faces the challenges of an ageing population and labour force.

The increase in new jobs in industrial sectors has required a more knowledgeable and highly skilled workforce in such areas as modern production and new technologies. Employers are also interested in key competences of their workers, such as information technologies skills, initiative taking and operational independence. Economic development towards new technologies in industry and the increasing need for higher qualifications requires that the education system responds accordingly.

The main priorities in the development of the vocational education and training (VET) system are to increase its relevance to the labour market and its readiness for innovation, revise curricula, renovate educational buildings and equipment, upgrade teachers' and trainers' skills, and increase their salaries.

The Ministry of Education (ME) is putting a great deal of effort into strengthening cooperation between VET stakeholders, participants and employers in order to involve the employers in the development of VET. In order to make the VET system more attractive for students and parents and to increase the youth access to higher education, the ME is enlarging its structure and merging colleges with higher education institutions. As in many other countries in the Commonwealth of Independent States (CIS), students in Belarus prefer higher education to other levels of VET, a fact that is demonstrated by the declining enrolment rates in technical and vocational education and training (TVET) and the rapidly increasing enrolment rates in higher education in recent years.

Employers' understanding of the need to invest in human capital and their growing interest in participation in VET policy development are positive factors. Examples include the joint board meeting between the ME and the Ministry of Architecture and Building, the meeting of the SME Directors Club, and the meeting between the directors of the Bellegprom corporation and representatives of the Ministry of Education. E. The purpose of these events was to improve the exchange of information and communication between the education community, the labour market and employers' associations. Social partnership development in education is a key priority, as stated in all the strategic documents. New units have been developed under the ME, such as the Coordination Council for VET and Cross-Sectoral Council for Secondary Special Education, with a view to strengthening cooperation between national and local administrations, public organisations and educational institutions.

The Belarusian educational community and the education authorities have a high regard for international cooperation in education and training. The experience they have gained through educational projects has had a positive impact on the capacity building of local experts, the development of new approaches and mechanisms for educational reform, and the strengthening of cooperation between educational workers and institutions in different countries. In recent years Belarus has had limited opportunities to participate in international cooperation. Improving relations with the EU provides an opportunity for Belarus to review its achievements in the education system once again, by comparing them with examples of best practice in other countries.

There is a growing awareness in society that it is necessary to improve access for young people and adults to all levels of education, to diversify curricula, to improve the quality of foreign language teaching and to modernise the qualification structure for trained specialists. International cooperation is seen as an important means of achieving these objectives.

2. Vision and state of the art in vocational education and training (VET)

2.1 The vision(s) and understanding(s) of VET in Belarus

The VET system of Belarus was established in Soviet times and now includes:

- three levels of basic education – technical vocational, secondary special and higher education¹;
- further education – advanced training, staff training and retraining in educational institutions (their subdivisions), as well as directly in organisations.

Since 1988 VET institutions in Belarus have been directly subordinate to the educational authorities of regional executive committees or the education committee of the Minsk **City Executive Committee**, and in 1992 they were transferred into municipal ownership. In accordance with the municipal ownership law, **local councils of deputies** and their executive bodies are permitted to take decisions on a large number of basic issues relating to TVET development (establishment, reorganisation, liquidation) without the consent of the ME.

State policy on the most important processes of VET development and a constitutional guarantee (by the Constitution of the Republic of Belarus adopted in 1994) of access to VET that is free of charge have enabled the country to preserve a network of technical vocational schools and their material and technical infrastructure, to create favourable conditions for young people to enroll in VET according to regional needs, and to extend opportunities for adult retraining.

Retaining material and pedagogical resources should help the VET system to actively adapt to future socioeconomic conditions.

¹ The VET levels for ISCED 1997 are presented in Appendix 2.

The Belarusian VET system preserves its high status and is developing dynamically through support from the government. During the years of independence the VET system has not only continued to exist, but has been further developed. The network of educational institutions is being optimised in relation to the needs of the economy: the type of staff being trained (the list of occupations and the content of educational programmes) is being revised, and foreign students are being trained. The opportunities for training and retraining of the adult population through the establishment of contracts with enterprises and employment services are being extended, and training for persons with learning disabilities has been arranged. The Law on Technical Vocational Education (Article 3) states that the government should ensure the transition to primary training of workers (employees) within the TVET system.

The VET system carries out the activities set out in the Programme for Socio-Economic Development of the Republic of Belarus for 2006–10, the ***State Rural Areas' Revival and Development Programme*** for 2005–10 and a number of other programmes.

It can be concluded from the above that a great deal of effort is going into the creation of the conditions necessary to meet the needs of individuals in obtaining VET and the demands of society and of the government for skilled personnel. Diversification of the main and additional educational programmes for young people and adults is currently taking place.

2.2 What has changed in recent years?

Over recent years (2005–10) the VET system has faced a number of organisational and structural changes.

2.2.1 Updating and enhancing VET content and quality assurance

This involves:

- the development of educational standards;
- curricula documentation for all 104 training specialties in TVET and 162 specialties in secondary special education;
- implementation of a quality management system (QMS) in the Technical Vocational College affiliated to the Republican Institute for Vocational Education (RIPO) according to ISO-9000 standards;
- implementation of the innovation project for the development and implementation of the QMS in VET institutions.

2.2.2 Optimising the staff-training structure

Admission quotas for technical vocational and secondary special education institutions are drawn up in line with the contracts concluded and applications from employers: enrolment should be assured by not less than 80% contracts and not less than 90% graduates employment. In 2009 enrolment through enterprises' contracts and applications represented 94% of the total number enrolled (in 2005 the figure was 83%). The structure of vocational and qualification training can be adjusted in relation to the needs expressed by some industries. For example, the rapid development of the construction industry has required a considerable number of new staff. The enrollment was adjusted upwards. The enrolment rate made up 25.60%, the employment rate 23.23% of the general training structure. Whereas, the proportion of the workers employed in construction industry is 9.8%. During the period 2005–10 the network of TVET institutions was further optimised. By 2010, 223 such institutions were operating in Belarus (in 2005 there were 230): 64 technical vocational colleges (54 in 2005), 105 vocational lyceums (49 in 2005) and 54 technical vocational schools (127 in 2005). TVET is also provided by 9 secondary special education institutions (11 in 2005) of both state and private form of ownership.

2.2.3 Improving endowment

During the past 10 years, priorities have included the reinforcement of the material and technical infrastructure of VET institutions and the enhancement of the in-service training

provision by enterprises. In 2008 over 29 billion Belarusian roubles (BYR) was provided from national and local budgets for these purposes. Despite budgeting problems associated with the global financial and economic crisis, BYR 5 billion was provided in 2009 from national and local budgets for reinforcement of the material and technical infrastructure. Machines and equipment were acquired using educational institutions' extra-budgetary funds and funding from enterprises. In Belarus 16 separate in-service training subdivisions have been created in TVET institutions, in which various types of resources are concentrated; these allow for the study of new techniques, equipment, and technologies for students and the general labour force. All such institutions have concluded contracts of cooperation with supply organisations. A total of 614 such contracts were concluded, primarily with city-forming enterprises and those which contribute to gross domestic product (GDP). Contracts of cooperation, which can be adjusted on an annual basis, will allow educational institutions and industry management bodies to actively influence the labour force training process quickly responding to a real need for them and the training quality.

2.2.4 Personnel development

During the period 2005/06 to 2009/10 around 30% of the regular managerial and pedagogical staff underwent various types of vocational training every year. The proportion of employees who underwent in-house retraining and internship has increased. The proportion of masters and special and general teachers in professional disciplines who had internships at enterprises and organisations was 16% of the total at the beginning of 2009/10 (12% in 2005/06). The proportion of employees who participated in retraining was 9% of the total number of regular managerial and pedagogical staff of TVET institutions in 2009 (5% in 2007).

2.2.5 Improving methodological support

A system of complex methodological support exists for TVET institutions, and a network of leading specialist technical vocational and secondary special education institutions has been created in each region. National study materials are being developed and published, and 351 textbooks have been published.

2.2.6 Developing the educational environment

Sociopedagogical and psychological services have been arranged (a total of 107 study rooms have been established), psycho-pedagogical support is provided for students to help them to adapt to TVET. A database of gifted students has been created and support is provided to those with good abilities for innovations.

2.3 Translating the vision or understanding into policy measures

The key policy measures have been those aimed at providing the VET system with a legislative regulatory framework. Over the past few years the **National Assembly** of the Republic of Belarus has adopted a number of laws: the Law on Technical Vocational Education (2003), the Law on **Higher Education** (2005) and the Law on Education of Persons with Psychophysical Development Disorders (special education) (2004). In January 2011 the **National Assembly** adopted the Code of Education, which contains the following sections: technical vocational education, secondary special education, higher education and further adult education.

The Council of Ministers of the Republic of Belarus has adopted a number of regulations, including those on:

- the customer organisation of technical vocational and secondary special education institutions;
- the targeted training of qualified workers and specialists;
- labour force demand forecasting for the purposes of formulating orders for training from national and/or local budgets;
- the organisation of in-service training for students of TVET institutions;

- continuing training for employees.

The national classifier of the Republic of Belarus (OKRB 011-2001, Specialties and qualifications), which implements the basic principles of the state staff policy, is of considerable importance to the organisation of the training of qualified workers.

Social standards have been established in the country, 10 of which are directly relevant to education.

Public expenditure on education in average accounts for over 6.0% of GDP (ranging from 6.4% in 2005 to 5.2% in 2009). There is a target to gradually increase the budget for education to 10% of GDP.

2.4 Priorities for the VET system

The National Programme for Technical Vocational Education Development for 2006–10 specifies the following main priorities for the development of the VET system in Belarus:

- ensuring that the VET system conforms to the current social and economic needs of society; developing effective tools and mechanisms for closer cooperation between the VET system and economic and social sectors;
- extending educational services in line with the needs of different groups within the population and the demands of organisations;
- reviewing VET content and the list of occupations for which individuals are trained; updating and further developing educational standards and teaching materials;
- integrating TVET with the vocational training of workers, general secondary education and secondary special education;
- provision of methodological support to vocational schools and their staff; developing tool kits and handbooks for teachers and masters on in-service training;
- improving the material and technical infrastructure and refurbishing buildings; ensuring the efficient use of financial and material resources; attracting extra-budgetary sources of financing to education;
- upgrading the professional skills of the managerial and teaching staff of educational institutions.

VET policy priorities have been translated into clear implementation programmes specifying objectives to be achieved and the basic financial resources required. Implementation of the National Programme is a high priority for the government.

2.5 Major difficulties in TVET development

The major difficulties in the development of TVET over the past five years have been caused by:

- insufficient financing of VET institutions from national and local (regional) budgetary funds;
- an imperfect mechanism for forecasting the vocational and qualification profile of the workforce in organisations and economic sectors, despite the existence of relevant legal provisions (regulations on forecasting);
- orientation of a significant proportion young people and their parents towards studies in higher or secondary special education institutions.

Over the next five years the major difficulties in TVET development will be determined by:

- declining enrolment rates in VET institutions in the context of a real decrease in the number of school leavers, exacerbated by the competition between levels of education as a result of the distribution of school leavers between different educational pathways;
- the mismatch between the content of TVET and the needs of hi-tech economic sectors, and the lack of forward planning in relation to future training for innovative enterprises;
- underestimation of the limited possibilities to replenish the labour force with the young generations while there is a significant dropout from the working age of the workers, born during the postwar baby boom period;
- deficiencies in the types of professional orientation available to school students in relation to the needs of regional labour markets, based on the cooperation of educational institutions with market participants in the regions.

3. External efficiency: Addressing economic and labour market needs

3.1 Main economic challenges that shape the demand for skills

This section covers the challenges that can be addressed through the effective functioning of the VET system.

The economy in Belarus is currently undergoing significant transformation. This is not only due to the influence of global tendencies, determined by the creation of a knowledge society, the rapid pace of scientific and technical progress and the internationalisation of the labour market. It is also a result of the need to address national challenges that affect the creation of conditions for a dynamic breakthrough in national development.

A need for particular skills is created under the influence of state policy in the following directions:

- formation of a new national technological strategy, aimed at the development of an innovative economy;
- denationalisation and privatisation of enterprises;
- SME development;
- effective foreign economic and political activity, and closer seminal cooperation with foreign countries and international organisations.

Structural changes in the economy will lead to quantitative and qualitative changes in the pattern of demand for labour and a change in the structure of unemployment.

3.2 The success of the VET system in addressing these challenges

At the beginning of 2009 the structure of the labour force by level of education was as follows:

- 31.0% of workers had technical vocational education;
- 15.5% had secondary special education;
- 3.5% had higher education;

- 50.4% had no vocational education, but had acquired a qualification through in-service training, training centres, subdivisions of training, retraining or further training in educational institutions.

There is a special system for solving urgent problems that occur between VET and the labour market. This consists of the following measures.

- Admission to all levels of VET (which is free of charge) is carried out on the basis of applications and agreements with enterprises and organisations for staff training.
- Educational standards and programme documentation determining the content of educational programmes undergo expert review and are agreed with customer organisations and in the administrative bodies of economic sectors.
- Training in new occupations and specialisms is carried out at the request of customer organisations, including SMEs.
- Specialist departments (separate subdivisions) of in-service training have been established with funding from regional budgets and customer organisations in order to prepare learners for working with complex high technologies.
- Regional agencies for labour, employment and social protection help to find employment for graduates, initially in accordance with the occupation acquired in the educational institution. In the absence of real employment prospects in the local labour market, graduates can be sent for retraining.
- Learners who have undergone educational programmes at a particular level have the opportunity to obtain further vocational education at a higher level.
- The adult education system has been established as a substantial presence, and is provided by more than 70% of TVET institutions.

The private sector of the economy has so far had little involvement in the provision of VET. Specialists who graduated from the 10 private higher education institutions in 2009 represented 14.1% of the total number of higher education graduates, while those from the 12 secondary special education institutions represented 12.5% of all secondary special education graduates. In 2005 these indicators were 11.6% and 11.7% respectively. The basic training profiles in private educational institutions are economics, law and humanities.

The national statistical recording system does not allow to estimate to a full extent the share of the private sector in the vocational education provision.

One of the main concerns of the education sector is the adaptation of the current vocational and qualification structure of the labour force and specialist training to the needs of economy. In order to respond to the growing demands of employers, the ME has introduced an application system to bring the numbers of trainees for each sector and specialism closer to the requirements of enterprises, thus providing training in accordance with current needs. In order to receive qualified employees, enterprises must conclude agreements or apply to vocational schools in advance. This application system allows the number of students to be calculated and the training in vocational schools to be arranged in line with demand.

The government of Belarus currently considers this system of agreements and applications to be an efficient way of reducing the imbalance of supply and demand, and the practice is promoted in various ways. The ME undertakes measures to increase the amount of training for occupations in construction, metalwork and machine building. Discussions on ways of improving adult training and retraining in working professions within state vocational schools are also under way at national level.

Table 1. Distribution of TVET graduates by economic sector, 2008

Economic sector	Number of workers (end of 2008)		TVET graduates (2007/08 school year)	
		%		%
Total	2 399 118	100.0	49 526	100.0
Industry	835 031	34.8	15 695	31.7
Machine building and metalworking	276 186	11.5	7 804	15.8
Agriculture	354 245	14.8	7 815	15.8
Construction	245 117	10.2	11 116	22.4
Services	617 180	25.7	11 614	23.5
Other sectors	347 545	14.5	3 286	6.6

Sources: Statistical data collection, 'Regions of the Republic of Belarus', 2009, pp. 73, 193, 317, 438, 555, 635, 756; Statistical Handbook 'Institutions of the Republic of Belarus providing technical vocational education' (at the beginning of 2008/09 school year), Main Informational and Analytical Centre (GIATS), Ministry of Education of the Republic of Belarus, Minsk, 2009, p. 52.

A number of measures have recently been implemented in order to optimise the structure of VET. Educational institutions are strengthening their cooperation with enterprises with a view to:

- anticipating enterprises' demands for skilled workers and specialists;
- arranging in-service practice² and training³;
- developing requirements for the knowledge and skills to be acquired by graduates;
- developing educational standards;
- arranging employees' training, retraining and further training within departments (in groups) of educational institutions;
- attracting support from enterprises for equipping study rooms and workshops.

The ME is making an effort to bring together employers' associations, industrial sectors and the VET system to ensure the relevance of vocational education to economic demands.

In 2007 a new National Classification of Economic Activities was developed and introduced by the Ministry of Labour and Social Protection. This classification includes economic activities taking place in different economic sectors following the recent technical and structural changes in the Belarusian economy. Thus it provides the VET system with valuable information for the development and revision of training programmes.

In 2008 the Council of Ministers of the Republic of Belarus endorsed the Act on labour force demand forecasting in order to improve the planning of training for employees and specialists financed from national and (or) local funds. A mechanism for development of the demand for training has been defined according to this Act.

Also in 2008 the Council of Ministers adopted the Regulation for a 'supply organisation' aimed at strengthening the relationship with technical vocational and secondary special education institutions. This determines the type of cooperation and the procedure for interaction between educational institutions and the organisations/companies that are attached or

² In-service practice is the final stage of in-service training and it is usually carried out in the manufacturing environment.

³ In-service training encompasses initial, basic, final (in-service practice) stages, and can be carried out in TVET institutions, specialist institutions (separate subdivisions) for in-service training, customer and other organisations.

assigned to them, and stipulates the preferential provision of graduates to a supply organisation.

In 2009 the Decree of the President of the Republic of Belarus approved the Regulation on the formation and use of innovation funds procedure, whereby the resources of the innovation funds are directed to developing the material and technical infrastructure of the national educational institutions, providing vocational education and training for respective sectors of economy.

The Vocational and Technical Education Act provides employers with the right to initiate proposals for changes in the list of occupations, curricula and training programmes of educational institutions. The revision of training programmes is accompanied by an analysis of qualification requirements for specific professions. The educational standards are developed jointly with employers, evaluated in educational institutions and approved by economic sector administrators. The following have been developed for VET institutions, with the participation of all the partner:

- 102 educational standards;
- 100 sets of programme documentation, including 100 vocational qualification requirements;
- 650 training programmes;
- 297 thematic plans;
- 344 curricula;
- 100 lists of minimum requirements for machinery and equipment for in-service training.

More than 260 manuals and training aids have been developed to be published in cooperation with teachers from educational institutions and employees of customer organisations.

3.3 The involvement of enterprises, government institutions and the public in VET policy developments

The development of social partnership is a key priority in all the strategic documents for VET.

Having decided on the sources from which they will recruit their employees, organisations make an application and conclude agreements with VET institutions. The content and professional structure, the terms of staff training, and the development of the technical infrastructure and facilities of educational institutions are essential clauses of such agreements. There is a special emphasis in the agreements system on the cooperation agreement concluded according to the Regulation for a 'supply organisation', between an enterprise (or several enterprises) and an educational institution.

Organisations provide an appropriate environment and arrange in-service training and practice for learners. Representatives of both the enterprises and governmental authorities take part in the development and evaluation of educational programmes (standards, curricula etc.). They are also compulsory members of the state examination commission, which awards qualifications.

The ME is setting up a number of public governmental institutions and other bodies to contribute to social partnership development, namely the Council on Staff Further Training and Retraining, the Coordination Committee on Technical Vocational Training, and the Inter-Agency Board for Secondary Special Training. Their overall objective is to strengthen cooperation between national and local administrations, public employers' associations and representatives of economic sectors thus helping VET to better respond to the needs of the economy. As VET institutions are under the supervision of regional administrations, each of them has a Coordination Committee on youth vocational training and employment. These committees bring together the local administration, employers and public organisations. All the institutions at different administrative levels focus mainly on quantifying the demand for

technical vocational and secondary special education. They also participate in the development of recommendations for the modernisation of the VET system, initiate scientific research in education, carry out seminars, and develop publications on VET development. Since 2006 employers and their associations have been given the opportunity to become members of the Coordination Committee set up by the ME.

Despite these latest initiatives by the ME on the development of legal frameworks and the establishment of public governmental institutions, there is still a lack of communication between VET stakeholders and participants of the VET system, non-governmental organisations (NGOs) and employers.

So far, for VET planning quantitative labour market data have primarily been of importance. The question of content of training and the question of what type of skills and competences already trained workers should possess deserves greater attention from employers. As previously mentioned, while developing educational standards and vocational qualification requirements, skill needs studies and surveys are carried out by customer organisations and educational institutions, and are agreed upon by governmental authorities. In addition to the current educational standards, there is a strong drive towards the development of a new qualifications system and the involvement of more employers and their associations in its improvement. Although aligning VET with the needs of the economy is one of the priorities in education, it remains a major challenge and will require attention in the future.

3.4 Factors affecting the ability of the current VET system to respond to changing economic needs

The major reasons for the VET system's lack of flexibility in its response to labour market needs include insufficient budgetary financing, and the limited number of financial vehicles available. There are difficulties in providing training to qualified workers and specialists on the basis of modern technical infrastructure and facilities and with the application of new technologies.

The level of investment from enterprises in educational institutions is still insufficient. Enterprises do not bear enough responsibility for the failure to execute the agreements for staff training in TVET institutions.

There is a need to improve the system of data provision, collection and analysis on the skills and competences demanded by the labour market from all types of employers who are interested in the quality of staff training.

In cooperation with interested organisations, educational institutions and governmental authorities, RIPO is studying and summarising employers' requirements in respect of employees and their competences, while developing educational standards and programme documentation. There is practically no information from employers' associations that are not customers or sponsors of staff training in VET institutions, nor from other institutions, on the skills and competences that are in demand.

Employers, being customer organisations for VET institutions, often assess the necessity for various competences and skills of graduates only on the basis of their own current development issues. For instance, in 2005 a survey was carried out among organisations – most of which were huge and city-forming – that employed graduates. This showed that the knowledge and skills of TVET institution graduates relating to the manufacturing of new products and the mastery of emerging technologies and state-of-the-art manufacturing technologies and information technologies were not valued very highly by employers. Such competences as initiative, responsibility, vitality (64%), an ability to perform work in unconventional manufacturing situations (40%), and an ability to implement performance indicators were highly valued. At the same time, employers considered a lack of interest in the occupation, an inability to communicate with staff and a poor level of discipline to be important factors that would prevent graduates from adapting to industry (60–64%).

3.5 Breaking down barriers and addressing the challenges

The ME, in cooperation with regional education authorities, other ministries, and departments subordinate to the Council of Ministers of the Republic of Belarus, are working on forecasting labour force demand for the period up to 2015(20). As a result of this work it should be possible to form a clear understanding of the required staff qualification and training structure, sources of graduate recruitment and qualification requirements (grade, class, category).

The ME is working with regional education authorities on the optimisation of the network of TVET institutions, taking into account the dynamically changing demographic situation, with the aim of providing workers and specialists for regional labour markets.

In order to enhance the quality of workers' and employees' training, regular work is carried out on updating the content of VET and on provision of comprehensive methodological and learning materials to support the delivery of VET programmes.

Geographical job placement is still used by the government to provide the economy with an adequate labour force. A graduate who has completed a government-financed TVET programme is allocated to an enterprise under the agreement for training and is required to stay in this job for a minimum of one year. The job allocation of young graduates from VET institutions is implemented in line with training profiles and authorised qualifications.

In 2006 a scheme was implemented to reserve work places for citizens who need social protection and are considered unable to compete equally on the labour market. This type of government-managed job-allocation mechanism is possible when large numbers of jobs are in state-owned enterprises or in the public sector, which makes the labour market more predictable and stable.

With the growth in the private sector and an increase in employment outside the public sector, new flexible solutions will need to be found in the future to reduce the imbalance between supply and demand on the labour market.

3.6 Labour market and employment policy

Belarus has its own strategy for economic reforms in the sociolabour sector, which puts as a priority the maintenance of a certain low level of officially registered unemployment, an increase in the employment level and the maintenance of quality of human resources.

During the period 2005–08 the labour market in Belarus was characterised by positive dynamics. Labour demand, including the number of jobs created and the number of vacancies applied for by enterprises to the employment service, increased from 136 300 to 219 700, i.e. by around 60% (Economic Bulletin of the Ministry of Economy № 6,; Borovic L.S. "Labour Market Policy in Belarus: the Current State and Perspectives". Labour market stability was threatened by the consequences of the world financial and economic crisis, during which labour demand decreased.

The volume of labour supply is determined by the number of citizens applying to the labour, employment and social protection bodies for employment. During the period 2005–08 the volume of labour supply increased from 297 700 to 322 300 people.

The implementation of employment measures for graduates from educational institutions brought about a decrease in their proportion of the total labour supply from 9.5% in 2005 to 3.6% in 2009.

Official Belarusian statistics report low levels of unemployment. The data is based on those registered as unemployed with the employment service. The unemployment level recorded (as a percentage of the economically active population) was 0.9% in 2009. At the end of 2009 TVET institution graduates made up 0.49% of all those registered as unemployed, while in 2008 the proportion was 0.42%.

National employment programmes focus on issues relating to young unemployed people in particular, with active labour market projects and special measures being implemented.

Table 2 shows that most unemployed people have only general secondary education. The projected increase in employment in industry is likely to mean a higher demand for specialists and workers with VET in the medium and long term.

Table 2. Unemployed people by level of education (year end, % of total number)

	2005	2006	2007	2008
Total working population	100.0	100.0	100.0	100.0
Level of education				
Higher education	10.2	10.3	9.9	10.3
Secondary special education	18.2	18.0	17.1	15.6
Technical vocational education	21.4	22.0	21.9	23.0
General education	38.5	38.7	39.5	39.6
Basic education	11.7	11.0	11.6	11.5

Sources: National Statistical Committee of the Republic of Belarus, *Statistical Yearbook of the Republic of Belarus, 2009*, Minsk, 2009, p. 136.

Belarus does not carry out regular labour force surveys using the ILO methodology to calculate total unemployment as other transition countries do, which makes it difficult to obtain internationally comparative data on the labour force. The government makes the analysis of the labour market, calculating labour demand and supply, the economically active population and the total amount of employment in the formal economic sector.

3.7 Patterns of employment

The employment rate in Belarus is still high, accounting for 75.3% of total labour force. It is determined to a large extent by the focused implementation of the national policy measures. The number of people employed increased by 5.6% over the period 2005–08. The structure of employment is changing in favour of the services sector (Table 3). During the period 2005–08 the proportion of those employed in industry and agriculture decreased whereas the proportions increased for construction, transport, trade and public catering, housing and communal services, culture and art.

Table 3. Distribution of employed people by economic sector (%)

	2000	2005	2006	2007	2008
Economic sector					
Industry	27.6	26.7	26.5	26.4	26.6
Agriculture	14.1	10.5	10.2	9.9	9.4
Forestry	0.7	0.8	0.7	0.7	0.7
Construction	7.0	7.8	8.1	8.4	8.7
Transport	5.8	6.0	6.1	6.2	6.3
Telecommunication	1.4	1.5	1.5	1.4	1.4
Trade and public catering	12.0	13.7	14.1	14.3	14.5
Housing and communal services, non-production household services	4.7	5.5	5.4	5.4	5.4
Education	10.4	10.5	10.3	10.1	10.8
Culture and art	1.8	1.9	1.9	1.9	2.0
Science and scientific services	1.0	0.8	0.8	0.8	0.8

Source: National Statistical Committee of the Republic of Belarus, *Statistical Yearbook of the Republic of Belarus, 2009*, Minsk, 2009, p.111.

The following economic sectors have witnessed the largest growth in terms of workforce over the past 10 years: services sector, housing and communal services, trade and public catering, telecommunications and construction. At the same time agriculture, light industry, the production of construction materials, machine building and metal processing have seen a decrease in their workforce.

As in many other transition countries, the labour market in Belarus faces the challenges of an ageing population. Table 4 shows the distribution of the number of people employed, by age group. Over the period 2005–08 the proportion of employees in the 50–54 age group increased from 12.5% to 13.6%) and in the over-55 age group from 10.7% to 12.4%. Meanwhile, the proportion of employees from the most active working-age groups decreased: in the 30–39 age group, it decreased from 24.6% to 23.4%, and in the 40–49 age group, it fell from 28.7% to 26.6%. During the same period the average age of employees increased from 39.7 years to 40.1 years.

Table 4. Distribution of labour force by age group (year end, % of total)

Year	Total number of employed people	Age groups (%)					
		under 25	25–29	30–39	40–49	50–54	55 and over
2005	3 994 300	11.4	12.1	24.6	28.7	12.5	10.7
2006	4 065 200	11.7	12.2	24.0	28.2	12.8	11.1
2007	4 126 600	11.8	12.3	23.8	27.4	13.1	11.6
2008	3 987 500	11.6	12.4	23.4	26.6	13.6	12.4

Source: Statistical data collection, 'Regions of the Republic of Belarus', 2009, pp. 74, 194, 318, 439, 556, 636, 757.

During the period 2005–08 Belarus was characterised by a stable growth in the proportion of employees with TVET, a constant proportion with secondary special and higher education, and a decrease in the proportion with general secondary and basic education (Table 5). Employees trained in the higher, secondary special and technical vocational education system make up the majority of all employed people.

Table 5. Distribution of labour force by level of education (year end, % of total)

	2005	2006	2007	2008
Total number of working population	100.0	100.0	100.0	100.0
Levels of education				
Higher education	22.8	23.5	24.2	23.8
Secondary special education	22.8	22.8	22.8	22.7
Technical vocational education	18.9	19.4	19.8	20.3
General education	31.2	30.4	29.7	29.8
Basic education	4.3	3.9	3.5	3.4

Source: National Statistical Committee of the Republic of Belarus, *Statistical Yearbook of the Republic of Belarus, 2009*. Minsk, 2008, 2009, p.117.

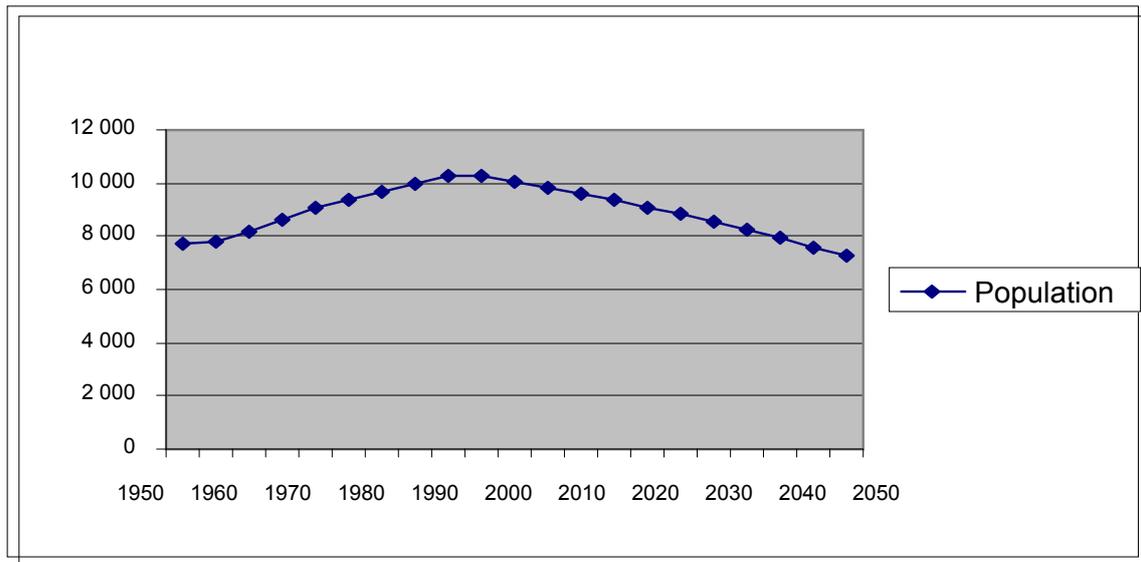
4. External efficiency: Promoting equity and addressing social needs in the area of education and training what are the three main challenges that shape the demand for skills and affect the development of VET?

4.1 Demographic challenges

The decrease in the number of young people in Belarus is seen as a demographic challenge. It has led to competition between different levels of VET and to a decline in interest in TVET.

Like other transition countries, Belarus has been suffering a demographic decline, and both in the coming years and in the longer term the population will be decreasing. The decrease began in Belarus in the mid 1990s, and the country has lost around 40 000 people annually. This is in spite of the fact that between 2005 and 2009 the number of people born increased by 21%. UN estimates indicate that in the future the population of Belarus will be decreasing in both absolute and relative terms: the number of children and teens will decrease, while the number of older people will rise. This will create a difficult situation for both : fordemographic policy and the education system.

Figure 1. Population of Belarus, 1950–2050 (thousands)



Source: UN, World Population Prospects, 2008.

Data on the distribution of young people in VET (Table 6) indicate declining levels of enrolment in TVET and increasing levels of enrolment in higher and secondary special education. This is in the context of declining population trends in the 15–29 age group. Despite some improvement in 2009, the gap in youth enrolment between technical vocational, secondary special and higher education is continuing to widen.

Table 6. Distribution of 15–29-year-olds in VET⁴

	2005/06		2006/07		2007/08		2008/09	
	thousands	%	thousands	%	thousands	%	thousands	%
Number of 15–29-year-olds (start of school year)	2 337.3	100.0	2 325.8	100.0	2 308.2	100.0	2 277.2	100.0
Number of students in VET (start of school year)	651.7	27.9	663.8	28.5	673.8	29.2	677.0	29.7
Technical vocational education	114.6	4.9	114.4	4.9	105.1	4.6	99.0	4.3
Secondary special education	154.1	6.6	152.5	6.6	155.0	6.7	157.3	6.9
Higher education	383.0	16.4	396.9	17.0	413.7	17.9	420.7	18.5

Source: National Statistical Committee of the Republic of Belarus, *Statistical Yearbook of the Republic of Belarus, 2010*, Minsk, 2010, pp. 57, 160.

Over the past five years the number of students in the TVET system has decreased, from 114 600 at the beginning of 2005/06 to 105 700 at the beginning of 2009/10. Within this period the number of students in TVET institutions has been the lowest for 25 years.

Table 7. Number of students in TVET institutions, 1985–2009

	1985/86	1989/90	1995/96	1999/2000	2005/06	2006/07	2007/08	2008/09	2009/10
Number of students (thousands) (start of school year)	161.2	146.9	130.1	135.1	114.6	114.4	105.1	99.0	105.7

Source: Ministry of Statistics of the Republic of Belarus, *Statistical Yearbook of the Republic of Belarus, 2000*, Minsk, 2000, p.142; National Statistical Committee of the Republic of Belarus, *Statistical Yearbook of the Republic of Belarus, 2010*, Minsk, 2010, p.160.

⁴ Vocational education covers technical vocational, secondary special and higher education.

The decreasing number of students in the VET system is only partly the result of demographic decline. Young people and their parents prefer higher education to any other type of education, regardless of the limited employment prospects in a number of occupations (e.g. lawyers, economists). Often employers offer to the graduates of the higher education institutions the vacancies of working professions which correspond to the level of TVET graduates or even not requiring any qualifications.

The attempt to raise the status of secondary special education institutions by transforming them into colleges and higher colleges, and merging them with universities (16 secondary special education institutions have recently merged with 12 universities) indicates the government's intention to make secondary special education system more effective and attractive for students and employers. Despite all the existing difficulties in graduate employment, the secondary special education institution system is attractive for the population as a whole and for young people. This is evidenced by both the high level of competition for enrolment and the existing demand supported by purchase capacity for this level of education.

TVET is still attractive in terms of its social function, namely the provision of schooling and meals to children from poor or low-income families, and assuring further employment.

Despite some social advantages, the decisive factor for choosing between different levels of post-secondary education should be the demand from the part of employers determined by the economic interests, encompassing vocational qualification profile and quality of training.

A great deal of effort will be required in order to ensure that the TVET system conforms to the economic and social needs of society and the state, and to guarantee that the training provided is of sufficient quality for students' career development. The network of vocational institutions should be further optimised in relation to the demographic situation in order to ensure access to education and training services.

Another problem is the fact that the VET system is not well oriented towards the demands of the private sector. The national VET (higher, secondary special and technical vocational education) system has remained oriented mainly towards the demands of large governmental or state-run organisations. Consequently there are an increasing number of complaints from the private sector and SMEs about the mismatch between the quality of the training provision and the working conditions within these enterprises. Statistical data from 2008 show that 48.0% employees (of the total employed population) work at privately owned enterprises, with 3.2% working in mixed and foreign-capital enterprises and 1.6% in foreign enterprises. During the period 2005–08 the number of small enterprises in Belarus increased two-fold to around 70 000. The majority of these (95.5%) were in private ownership, with 1.8% in state ownership and 2.7% in foreign ownership. Over the same period the number of individuals employed at these enterprises increased by more than 41% and amounted to 14% of the total number of those employed in 2008 (in 2005 the figure was 10.5%).

Recent trends in the redistribution of the labour force between sectors show a trend for growth of the private sector in terms of the number of employees, and the private enterprises have a right to express their requirements to the quality in staff training in VET. Under the Programme for Socio-Economic Development for 2006–10 the main priority of state policy is to enhance the effectiveness and efficiency of human resources development in order to meet production demands. The development of occupational standards is one of the long-term conditions for ensuring that the Belarusian qualifications framework is relevant to the demands of the country's public and private sectors.

A further problem is labour market underdevelopment, which limits labour mobility. The main features of the existing national labour market are an underdeveloped market infrastructure, a low level of territorial labour mobility, and a mismatch in relation to vocational qualifications between the vacancies available and newly created jobs. The labour market situation is more complicated in small and medium-sized towns, where the economic stability of one or two city-forming enterprises determines the social context and labour market conditions.

According to data from the Ministry of Education and Social Protection, at the end of 2009, 35.6% of all vacancies available were in Minsk, while only 11.2% of the total number of those registered unemployed number were in that city.

The number of employed in the formal sector in Minsk increased over the period 2005–08 by around 9%, whereas the increase in the country as a whole made up 5.6%..

In 2008 over 56% of all full-time higher education students and 37% of all secondary special education students in Belarus were in Minsk. The large number of educational institutions in Minsk results in youth migration from the centre to the regions owing to the need to find employment upon graduation, and primarily owing to the government-managed job-allocation process. However, a considerable number of graduates find employment in Minsk. There is no full reproduction of population in the rural area and district centres because of labour migration.

At the same time, another problem is arising: a number of graduates from fee-based programmes in public higher education institutions and private educational institutions, who are not part of the state job placement schemes and who have returned to the small and medium-sized towns and rural areas where they usually live, are unable to find employment owing to the mismatch between their qualifications and the jobs available.

4.2 The success of the VET system in addressing challenges

In order to minimise the impact of these problems, the network of educational institutions was optimised and the list of occupations for which individuals were trained was extended. During the period 2005/06–2009/10 there was a decrease (as a result of mergers) in the number of educational institutions where workers were trained from 241 to 232, and in the number of vocational education institutions from 230 to 223. Of those trained in TVET institutions, 65% are currently trained for industrial occupations, 31% for agricultural occupations, 47% for construction occupations, and 47% in services occupations (the total sum exceeds 100% because the training is multidisciplinary).

From the early 1990s VET has been provided in combined and integrated professions for the purpose of enhancing employment opportunities in the local labour markets. In 1993/94, 38% of graduates were trained in one profession, 43% in two, 17% in three, and 2% in more than three.

Over the past 15 years the proportion of graduates trained in one or two professions has increased, while the proportion of those with three or more professions has decreased owing to employers' demands for graduates with higher skill levels. In 2008/09 over 50% of graduates were trained in two professions, 40% in one profession, around 9% in three professions, and 1% in more than three professions.

The assessment criterion for the enrolment mechanism in vocational schools, based on customer organisations' demand, socioeconomic development forecasts for the regions, and vocational school graduates' demand, is the employment services' data on unemployed graduates and their further employment.

The ME, regional executive committees, Minsk City Executive Committee and educational institutions are working constantly to decrease enrolment in professions for which there is a surplus in regional labour markets, and to provide training in new professions and those that are in demand. Thus, in 2009 – at the suggestion of customer organisations – 18 new professions were included in the National Classifier of the Republic of Belarus 'Specialties and Qualifications', enrolment in professions that were in surplus ceased, and training was set up in 250 professions that were in demand in the regions. Optimisation of enrolment in VET institutions in professions that have become redundant in regional labour markets in recent years has allowed reductions to be achieved in the number of graduates registered as unemployed in the majority of these professions. In 2009 the number of unemployed graduates had decreased compared with 2008 by one-third in such professions as computer operator and hairdresser, almost three-fold in the secretarial profession, and by 32% in the cooking profession.

The current situation in relation to the unemployment among TVET graduates cannot be said to be unfavourable, in terms of both total number of unemployed and by professions. Even in the context of difficult conditions in the sociolabour sector and the global financial crisis, at the end of 2009 the proportion of unemployed TVET graduates made up 0.4% of all full-time education graduates and around 0.5% of the total number of those registered as unemployed.

However, the problem of analysing and optimising enrolment in educational institutions in line with regional labour market demand and supply remains urgent, and this was specified in a set of measures issued by the Prime Minister of Belarus that were aimed at the development of technical vocational and secondary special education.

TVET institutions are implementing additional educational programmes for children, young people and adults. The main consumers of additional educational programmes for training, retraining and further training of adults are employed and unemployed groups in the population. The training is fee-based, and is provided according to agreements with employment services, enterprises and citizens.

Since the mid 1990s the number of educational institutions providing further training for adults has increased considerably, the number of learners has increased and the structure of educational programmes has been expanded. In 1994 further training was provided by 20% of educational institutions, whereas at the start of 2009/10 the figure was 71%. This has increased the availability of technical vocational and secondary special education, and has helped to overcome the problems of supplying regions and industries with qualified personnel.

Over the past five years the educational programme structure has undergone great changes. In 2004/05 those trained under agreements with citizens accounted for 14% of the total number of learners, under agreements with employment services for 41% of the total, and under agreements with enterprises for almost 45%. In 2008/09 the proportion of those trained under agreements with citizens was increasing in the educational programme structure (32%), while for those trained under agreements with employment services (35%) and enterprises (34%) it was diminishing.

While implementing additional educational programmes for adults, VET institutions are oriented towards the regional demands of enterprises, the labour market and citizens. Thus, in 2008/09, of the 165 educational institutions providing training, retraining and further training, 92% provided vocational training in different industrial sectors, 42.4% in agriculture, 64.8% in construction, 68.5% in services, and 24% in other sectors.

The diversification of educational programmes compels the staff and managers of educational institutions to move away from traditional training principles and methods and towards new forms of additional education services provision. The structure of educational programmes for adults currently encompasses the implementation of educational programmes for training courses (lecturing, theme-based seminars, case studies, trainings and other types of courses), as well as educational programmes to develop individuals' potential and abilities.

4.3 Improving the attractiveness of VET

In order to enhance the TVET system, technical vocational colleges were established to provide two-level educational programmes (technical vocational and secondary special), together with vocational lyceums to provide in-depth studies in specific subjects. Since the beginning of the 1990s TVET institutions have been implementing a model in which TVET is integrated with secondary special education, as well as a model for providing in-depth studies in specific subjects. In addition to implementing such models, TVET schools have been transformed into technical vocational colleges and vocational lyceums.

Legislative and regulatory and institutional frameworks have been created for short courses in continuing education.

On the basis of the constitutional provision that assures the availability, free of charge, of TVET for citizens, certain conditions have been created to enable general upper secondary education to be obtained along with TVET. This enhances the attractiveness of TVET, improves the availability of secondary special and higher education for the best-qualified graduates from TVET institutions, and lays the foundations for retraining in more complex professions in the future in response to more significant technological changes within

enterprises. Currently over 12% of graduates from TVET institutions continue studying in secondary special or higher education.

The enrolment structure in the TVET system has been rationalised. Students can enroll in TVET following general basic compulsory education (after 9 years of schooling at a secondary school – ISCED 2A, 2B; 53% of students enroll at this point), or following general upper secondary education (after 11 years of schooling at a secondary school – ISCED 3A, 3B; 47% of students enroll at this point). A system of differentiated study durations has been implemented (one–three years). Students can be trained in several occupational profiles. Over 75% of graduates obtain two or more qualifications.

The state has given a guarantee that graduates from TVET institutions will be provided with their first job. This allows for almost all graduates to be employed in line with the profession for which they have trained.

4.4 The success of the VET system in providing learning opportunities for all

The diversification of educational programmes allows those who have completed general basic compulsory education or general upper secondary education, as well as those who have reached the age of 16 but have not completed basic education, to participate in TVET. The main full-time educational programmes following on from general upper secondary and general basic compulsory education are provided by 84% of educational institutions (of the total number of TVET institutions), 27% of which implement educational programmes without providing general upper secondary education; 9.4% provide programmes that follow on from general secondary special education only; 6.7% provide programmes that follow on from general basic compulsory education basis only, of which 53% do not provide general upper secondary education; 5.4% provide the main educational programme for evening courses, 5.8% offer distance learning.

Foreigners, stateless persons, residents of Belarus, refugees, Belarusians residing abroad and citizens of the Russian Federation, Kazakhstan, Kyrgyzstan, and Tajikistan can obtain vocational education free of charge in public TVET institutions in Belarus. **People with learning disabilities and other disabilities** can also obtain TVET. At the start of 2009/10 one in three vocational education institutions were providing training for children with learning disabilities; these individuals can subsequently be employed according to a special enterprises' reservation measure.

The training for this group of individuals is regulated not only by general legislative and regulatory documents that determine the activities of vocational education institutions, but also by a special legislative and regulatory framework: this includes the Law of the Republic of Belarus 'On the **Education of People with Learning Disabilities** (special education), 'On the Rights of the Child', and 'On the Social Protection of Disabled Persons'. The Regulations of the Council of Ministers of the Republic of Belarus, adopted in 2006, regulate the employment of this category of graduates. These regulations include those 'On the procedure for the reservation of jobs for citizens who are in need of social protection, who are unable to compete on equal terms at the labour market', 'On the procedure and conditions for the first workplace assignment of public educational institution graduates, persons with learning disabilities and compulsory-duty servicemen, dismissed from military forces or other forces and formations of the Republic of Belarus'. According to these regulations, graduates can be assigned to jobs through a special reservation measure.

Children who are orphaned or deprived of parental care, or whose parents are veterans, disabled service personnel, or deceased, receive material support guaranteed by the state. This is regulated by the current legislative-regulatory framework, particularly by the Law of the Republic of Belarus adopted in 2005 'On social guarantees for orphans, children deprived of parental care'. In addition, individuals from these groups are guaranteed places in certain specialties (professions) in technical vocational, secondary special and higher education institutions without going through a competitive process and have the costs of their studies covered from national and/or local funds.

4.4 What actions are foreseen for addressing such challenges?

The Parliament of the Republic has adopted the Code of Education, which was developed with the aim of making the education system more effective. The ME and the Ministry of Social Protection and Labour are taking measures to optimise the distribution of young people to various educational pathways. At a meeting with the Prime Minister a specific set of measures on the development of technical vocational and secondary special education was elaborated and has subsequently been implemented. This covers the improvement of the material and technical resources of educational institutions, pay increases for teachers and masters of in-service training, the strengthening of cooperation between industry and technical vocational and secondary special education institutions, and the enhancement of the cooperation between national and regional authorities.

5. Internal efficiency, quality, governance and financing

5.1 Main problems for internal efficiency and effectiveness in the VET system

The proportion of GDP allocated to the consolidated budget for education remained almost unchanged from 2001 (6.5%) to 2005 (6.2%). Since the beginning of 2006 this proportion has been decreasing: in 2007 it was 5.7%, in 2008 5.1%, and in 2009 5.0% (**Social environment and living standards in the Republic of Belarus**, Minsk, 2010, p. 35). In relation to international standards, public expenditure on education as a proportion of GDP is at a sufficiently high level; it is much higher than in Russia (3.9% in 2006) and in many other European countries, and is above the mean value of countries in the Organisation for Economic Cooperation and Development (OECD).

Over the past few years BYR 55 billion has been allocated from national and local budgets for the purchase of equipment and machines for VET institutions. Expenditure per student in these institutions is constantly increasing. Over recent years alone this expenditure has doubled, from BYR 2.4 million per student in 2005 to BYR 4.5 million in 2008.

Extra-budgetary activities are being developed in order to compensate for the lack of budgetary funds in TVET institutions. Currently such institutions gain financially by charging for goods, work and services provided. This income is generated by operating production and training workshops and agricultural training, in-service training, fee-based education services and other services for the population and organisations (transport, tourist, household, rental, communal etc.); arranging vocational training, retraining and further training paid for by labour, employment and social protection bodies; and arranging other activities.

The ME has adopted a programme for the development of fee-based education services at all levels of vocational schooling (technical vocational, secondary special and higher education) in order to fulfill the planned expansion of fee-based education that was specified in the Integrated Programme of Services Sphere Development in the Republic of Belarus for 2006–10. The target of the programme is to meet the growing needs of the economy for education services and to provide access to such services.

The following fee-based education services should be provided through TVET institutions:

- advanced learning of disciplines and in-depth studies on main and supplementary subjects;
- fee-based training at the secondary special education level in technical vocational colleges;
- training, retraining and further training of employees, at a cost to citizens;

- additional services in *aesthetic education*, sports and health-improvement studies for children, young people and adults (fee-based trainings and courses etc.).

In 2009 income from TVET institutions' extra-budgetary activities made up 15% of the budgetary financing volume nationally.

According to the study on best practices in the development of extra-budgetary activities, in addition to an improvement in fee-based education services in TVET institutions, income from these activities in some institutions accounted for 50% or more of the amounts received from regional or national budgets. Most extra-budgetary amounts are used to cover improvements to the material and technical infrastructure.

The amount of income received directly from customer organisations at the moment is modest. According to the Regulation on the formation and use of innovation funds procedure, approved by the Decree of the President of the Republic of Belarus (07.12.2009), innovation fund managers may allocate funds for the development of the material and technical infrastructure of educational institutions, and providing staff training for organisations, being subordinate to them .

The programmes for the development of TVET have being implemented in TVET institutions within the past 10 years, the main targets being the refurbishment and reinforcement of the material and technical vocational education infrastructure. Measures taken to improve this infrastructure within the past 10 years have allowed a considerable degree of refurbishment to be undertaken of machines and equipment, study rooms, laboratories and workshops, the establishment of a number of separate subdivisions for in-service training in different profiles in TVET institutions so as to learn state-of-the-art technologies, and an expansion of the number of student places for in-service training in different economic sectors.

The National Programme for Innovation Education Development presupposes the development of the material and technical infrastructure of educational institutions with the further involvement of the representatives of customer organisations. Financing for innovative development programme activities comes from national and regional budgets, extra-budgetary funds of educational institutions, innovation funds and other funding sources that are not prohibited by the legislation.

5.2 Evaluating the VET system

The operating efficiency of TVET institutions is evaluated by looking at the employment rates of graduates, and the efficiency of the VET system by examining the relevance of its outputs to the regional and national demand for staff with particular qualifications.

Regardless of the type of ownership, all educational institutions are subject to an accreditation procedure that takes place every five years. Accreditation aims to confirm adequate levels of quality and content of education and training to meet the requirements of the established national educational standards. Accreditation entitles the educational institution in question to issue a standard national certificate of education of a corresponding level.

5.3 Governance and financing mechanisms to improve efficiency and quality

The following actions are envisaged for further improving governance mechanisms and the efficiency and quality of the TVET system:

- organisation of a long-term demand-forecasting system in order to allocate appropriate provision for staff training from the national and/or local budgets, and the adjustment of this system on an annual basis;
- social partnership development, primarily within a framework of cooperation involving educational institutions and supply organisations;

- optimisation of the TVET institution network caused by the increasing amount of educational institutions with small number of students and TVET resources allocation in the most efficient TVET institutions;
- implementation of task-oriented work for staff in educational institutions, with the aim of expanding the amount of income from extra-budgetary activities and the development of the most effective types of such activities, as well as fee-based education services;
- introduction of a QMS in line with ISO-9001 standards into all TVET institutions.

5.4 The success of the VET reforms

The VET system in Belarus has survived the period of economic downturn relatively well. On the one hand, companies themselves have not dismantled the existing cooperation channels with TVET institutions, while on the other hand, the VET system has strongly promoted the development of social partnerships with enterprises and state authorities from the economic sector. It is for this reason that the VET system has not collapsed or become completely isolated, as has happened in many other countries of the former Soviet Union.

Generous government support during the 1990s gave rise to changes in the VET system. There is an opportunity to amend some of the legislative framework and legal structure of VET so that it better matches the requirements of the socially oriented market economy:

- sectoral ministries and departments are involved in labour force demand-forecasting for the provision of staff training (by the Resolution of the Council of Ministers);
- the Ministry of Labour and Social Protection provides information on unemployed graduates from all the regional TVET institutions who have applied to employment centres for employment assistance, as well as information on vacancies in the labour markets by profession, which allows to improve the match between training and needs of the labour market,
- there exist a Coordination Committee on Vocational Training and a Council on Staff Further Training and Retraining under the ME, which allow for the involvement of representatives of the national economic and social sectors in formulating the vocational qualification framework for TVET institutions, as well as the requirements on the quality of training;
- the Decree of the President of the Republic of Belarus enables the managers of innovation funds to use them for the development of the material and technical infrastructure of TVET institutions, as well as for the equipment for students' working areas.

The VET system faces the challenge of matching the main and additional educational programmes to the current national economic growth priorities and, primarily, increasing its attractiveness to young people.

5.5 Priorities in VET provision for increasing efficiency and quality

The current debates on the VET system and human resources development policies in Belarus are unfolding in the following directions:

- The guiding principle of VET system planning should be the improvement of long-term workforce demand forecasting to determine the numbers of training places required for professions and qualifications, while taking into account the current demand and supply situation in national labour markets.
- Occupational standards should be the most important element of the information used to forecast requirements in relation to graduates' knowledge, skills and competences.

Strengthening partnership and cooperation between stakeholders and VET system participants, as well as searching for new forms of work, impels the development of further cooperation mechanisms.

- The development of areas for the further refurbishment of VET institutions' material and technical infrastructure should be implemented with the involvement of public and regional education authorities, supply organisations, sectoral representatives, high-technology industries.
- The content of educational standards and programme documentation should be reviewed according to occupational standards (if these have already been developed) or with the involvement of a considerable number of employers in their development and approval.
- Employers' human resources policies and social measures are crucial for job stability among young people, since the low status of skilled workers and the lack of attention given by employers to young vocational graduates cause a high turnover from industry after the obligatory job-allocation repayment period.
- Wage increases are essential in tackling the shortage of highly skilled vocational teachers and trainers.

5.6 Addressing the efficiency and quality challenges of the VET system

The following measures have been envisaged for enhancing the efficiency and quality of VET system:

- annual adjustment of the enrolment structure and terms of study in order to respond to the demands of the economic and social sectors for qualified staff;
- development of the QMS in VET institutions in line with ISO-9001;
- annual monitoring of outcomes of the regional TVET systems, and of the quality of training;
- implementation of pilot and innovation projects on VET development by educational institutions.

6. Innovation, partnership and entrepreneurship

6.1 Innovation in VET provision

The major areas of innovation in VET provision have been as follows:

- development of additional adult education provision;
- establishment of TVET colleges vocational lyceums;
- establishment of separate departments for in-service training in different profiles on the basis of TVET institutions;
- elaboration of course contents for further studies in the main and supplementary disciplines;
- elaboration of comprehensive methodological support for TVET;

- elaboration of scientific-methodological support for social and educational work;
- elaboration of scientific- and educational-methodological support for the training of workers through secondary special education;
- implementation of the model for the organisation of the teaching process in separate subdivisions of in-service training (OPPO);
- implementation of the QMS in TVET institutions according to the STB ISO-9000 (the standard of the Republic of Belarus).

6.2 Support for innovation from donor projects, national projects and VET policies

Innovations by educational institutions are being supported by social partners in education.

Case 1. The first School of Culinary Craftsmanship in Belarus was established in November 2008 under the Slutsk Technical Vocational College of the Processing Industry, a public educational institution. This was the result of close cooperation between the Federation of Trade Unions of Belarus, the college management, the German company RFTIONAL (which has developed innovative technologies for state-of-the-art *public catering kitchens*), and its major partner in Belarus, the company VeLS (which provided the equipment free of charge to the educational institution, and maintains it).

The main task being undertaken by the School of Culinary Craftsmanship is the improvement of the quality of education in respect of employers' demands. The School of Culinary Craftsmanship holds seminar-workshops, refresher courses, and master classes for cooks and confectioners, and provides training on state-of-the-art high-technology equipment.

In July 2009 a separate subdivision of in-service training (OPPO) was established, based on the high-technology equipment and work experience of RFTIONAL cooks, for the students of the college and other VET institutions, and for the provision of additional educational services in line with the implementation plan of the National Programme for Technical Vocational Education Development for 2006–10. In 2009/20 TVET institution students underwent training on the basis of the OPPO; the training was provided for unemployed people on the basis of agreements with the Committee on Labour, Employment and Social Protection; and training and retraining was provided for specialists on the basis of agreements with organisations.

Case 2. The overall shortage of qualified operators, programmers and engineers in the field of computer numerical control is a problem that is encountered by almost all the companies working in the precision machinery industry. In order to solve this, Haas Automation is successfully implementing a programme which involves establishment of Haas Technical Education Centers (HTEC). The aim of the programme is to enable TVET institutions to convert out-of-date metalwork training equipment so that it is suitable for a hi-tech environment with state-of-the-art CNC machinery, technologies and equipment for mechanical engineering.

In October 2007 a Technical Education Centre was established in Minsk at the Technical Vocational College affiliated to RIPO. Equipment was provided on favourable terms with a guarantee of high-quality service maintenance. The centre provides training for Technical Vocational College students, and renders additional educational services relating to training, based on agreements with enterprises and the employment service. A separate in-service training subdivision is being established as part of the Technical Education Centre, and this provides training for students from other TVET institutions on state-of-the-art machinery and the use of metalworking high-technologies.

Material and financial support for innovation processes has been provided by national and local authorities, the National Agricultural *Producer Support Fund* within the national development programmes, and the Ministry of Agriculture and Food. National organisations of various types of ownership, as well as foreign organisations, have been involved in equipping individual subdivisions of educational institutions and regions with state-of-the-art facilities and high-tech equipment on the basis of preferential sales.

At the end of the 1990s international donor organisations and the ETF provided active support for the VET system. Under the auspices of the ME, the National Observatory was established on the basis of RIPO, which analysed the relationship between the VET system and the labour market, and provided support for VET restructuring. As a result, this cooperation represented significant capacity building for local experts, and their competence was raised in terms of the use of new methods for restructuring the VET system.

The relationship established as a result of this cooperation between Belarus and its neighbours still exists. For instance, in 2009 on the basis of RIPO, the following occurred.

- An international conference 'Technical Vocational Education and Education for Sustainable Development' was held with the participation of UNESCO, the ETF, the ILO and other international organisations. Scientific-methodological materials produced by the participants were subsequently published.
- An international workshop, 'Dissemination of the ETF results on the elaboration of the National Qualification Framework', took place. On the basis of the results, collaborative activities on the elaboration of the national qualification framework were defined.
- A Belarusian section in the Russian magazine *Vocational Education. The Capital* (No. 9/2009) was developed and published, through international cooperation.

6.3 How do VET policies support innovation?

National VET policies need to take an innovative approach in order to solve a range of issues.

- An educational institution can only operate effectively if it gains sufficient financial support by implementing innovations in extra-budgetary activities (e.g. fee-based education services, manufacturing work, providing services to the population).
- Innovation approaches must be used in the development of scientific-methodological support, in order to design educational standards and programme documentation (e.g. system design, level approach, structural elements, hierarchy of training goals etc.).
- Broadening the range of education services has called for innovations in special education, adult further education, arrangement of evening classes and remote learning, external studies etc.

6.4 Obstacles to the upscaling or mainstreaming of innovation

During the implementation of national policy goals, obstacles to the development of innovations have been brought about by a shortage of financial resources, a lack of cooperation with customer organisations, and the insufficient skill levels of staff in relation to economics and management.

The intensity of cooperation with customer organisations depends on the organisations' state of business. In some cases, contractual relations are formal in character and are not executed to their fullest extent.

The low skill levels of management staff are related to the lack of appropriate background and experience. Around 76% of directors and 68% of deputy directors have a pedagogical or engineering-pedagogical background ('Institutions in the Republic of Belarus providing technical vocational education as of the beginning of 2008/09 school year', statistical handbook, Minsk, 2008).

6.5 Measures to support innovation in VET

The Code of Education envisages:

- arrangement of the conditions required for satisfying the demands of individuals for education, and the demands of society and the state for the training of qualified personnel;
- arrangement of special conditions to enable people with learning disabilities to obtain education;
- ensuring the participation of national economic authorities and public associations for the development of the education system;
- increasing educational expenditure to 10% of GDP;
- enabling transition to general secondary compulsory education;
- targeting training for specialist workers.

These and other national policies promote innovation in VET.

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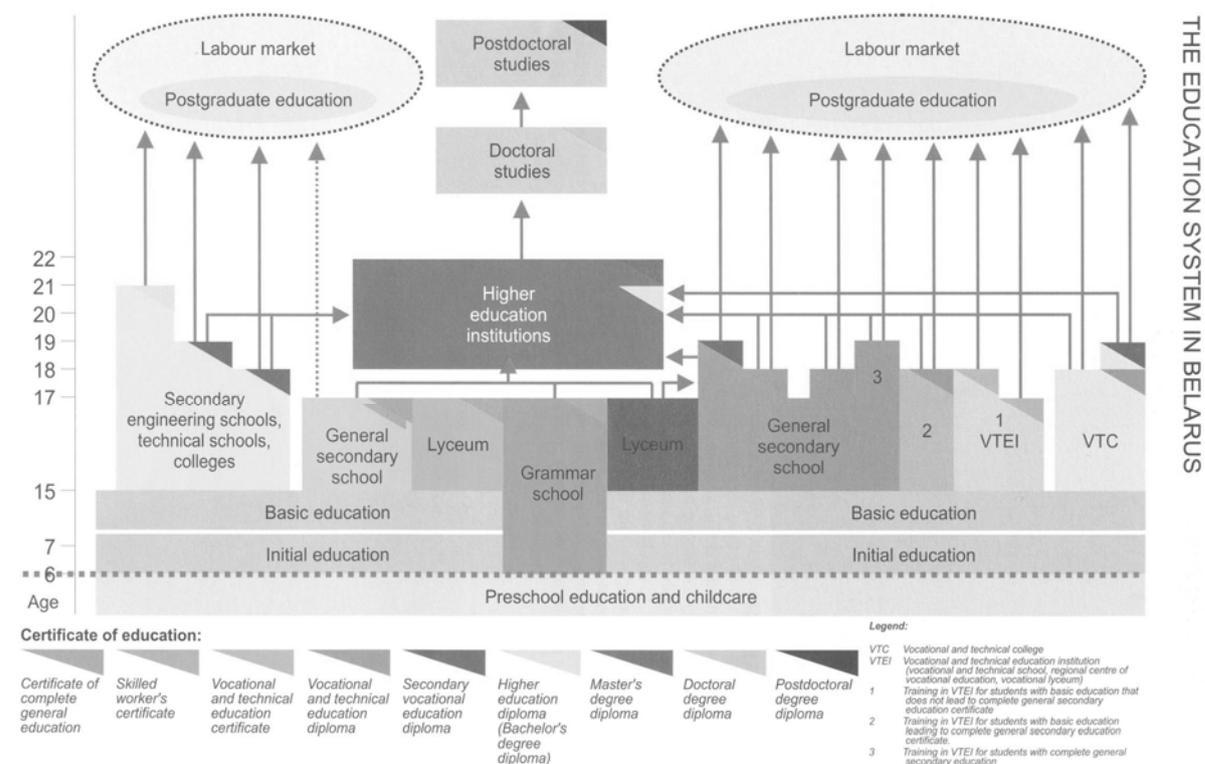
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Annex 1. Additional data: scope, and legal and institutional frameworks of the VET system

A1. Structure of the system and subsystems

The levels of schooling in Belarus are primary education, general basic compulsory education, general upper secondary education, technical vocational education, secondary special education, higher education and tertiary education.

Figure A1. The education system in Belarus



Following completion of compulsory basic education, students in Belarus have a number of options, including general upper secondary, technical vocational or secondary special education. Students can enrol in technical vocational or secondary special education institutions free of charge (except foreigners and stateless persons, since the Regulation of Foreigners Education in the Republic of Belarus envisages the reimbursement of tuition fees). They can also enter secondary special education institutions free of charge or on a fee-paying basis, depending on the results of the competition for limited places.

The VET system includes the following types and levels of schooling.

- Technical Vocational Schools (PTU) have two types of programme: a TVET programme with a certificate of professional qualification (one to two years); and a TVET programme with a diploma of professional qualification and general secondary education (three years). The main age group covered is 15–17 years.

- Professional lyceums offer a three-year training programme for in-depth TVET with a diploma of vocational and general secondary education, by assigning appropriate qualifications. The major age group covered is 15–17 years.
- Technical vocational colleges provide four types of programme: a TVET programme with a certificate of professional qualification; a TVET programme with a diploma of professional qualification and general secondary education; a training programme for workers with secondary special education; a programme of secondary special education, integrated with the TVET programme with a diploma of technician qualification. The age group covered is 17–19 years.

Vocational training is provided on the third level of general education during the last two (three) years of schooling for students aged 15–17 in parallel with upper secondary education. It is provided, for example, at general comprehensive schools, at training and production workshops, at vocational schools and at centres of professional education and career guidance. A total of 33.3% of students in the age group 15–17 years undergo vocational training, and 72.9% of these acquired a VET qualification in 2006/07.

It should be noted that the classification of VET institutions in Belarus is not sufficiently harmonised. Although all of these institutions train students for specific qualification levels, the whole VET system is focused on qualifications at ISCED levels 3 and 4. This could also indicate that there is no clear distinction between different levels of qualifications. The VET system is mostly school-based, and the type and status of the institution determines its programmes, financing, structure and operations.

A2. Legal, institutional, regulatory and policy framework governing the different subsystems

A2.1 Management system for VET

The fundamental laws determining VET operations are as follows:

- Law of the Republic of Belarus 'On Education in the Republic of Belarus', 29.10.1991, **National Register** of Legal **Acts of the Republic of Belarus** 15.03.2001 No. 2/303;
- Law of the Republic of Belarus 'On Technical Vocational Education', **National Register** of Legal **Acts of the Republic of Belarus** 07.07.2003 No. 2/965;
- Law of the Republic of Belarus 'On **Education of People with Peculiar Psychophysical Development** (special education)', **National Register** of Legal **Acts of the Republic of Belarus** 27.05.2004 No. 2/1037;
- Law of the Republic of Belarus 'On the Employment of Population of the Republic of Belarus', **National Register** of Legal **Acts of the Republic of Belarus** 19.06.2006 No. 2/1222.

VET management in Belarus is characterised by both centralisation and decentralisation tendencies. The distribution of responsibilities at different management levels is governed by the current level of priority given to particular tasks.

The prevailing tendency in VET management is decentralisation, through the delegation of a number of functions from the ME to regional agencies and educational institutions. The main element of the delegation of powers to lower management levels has been the change in the financing of TVET institutions from the national to regional budgets, as well as the transfer of national property to regional authorities. A regional management level currently acts as the owner of VET property and financial resources. VET institutions act as managers of the funds provided and of the property.

The distribution of management functions according to the levels of schooling is not yet accurately determined by a specific law, and is governed by general national legislation. These management functions are currently as follows:

- vocational education policy development;
- selection of priorities and areas for qualitative changes in the types of educational institution,
- the elaboration of the national standards and supporting tool kits.

A number of national development programmes for education and training have been developed at the instigation of the ME. The implementation of such programmes has considerably enhanced cooperation between the central and regional authorities, and between managers of educational institutions. Management efficiency can be further enhanced by the increase in the ME's powers and by finding new ways for development of social partnership..

Education institutions arrange teaching process themselves, and undertake financial, economic and other activities within the framework established by legislative acts, the standard provisions of educational institutions, and their statutes. They also collaborate with enterprises and regional and local labour markets, develop enrolment plans for different professions and specialisms, arrange commercial activities, and manage property. Educational institutions agree all the main managerial decisions with regional education authorities.

Regional education authorities handle the appointment of the directors of educational institutions and methodological services, the feasibility of financing, and other key issues such as the arrangement of teaching and job-training processes; they also monitor the implementation of local child and youth social protection functions.

The ME and the Ministry of Labour and Social Protection cooperate in many directions. A standard provision has been elaborated for the regulation of relations between the Ministry of Labour and Social Protection, the ME, sectoral ministries and departments and other central and local authorities in the provision of continuing VET for workers and training for unemployed people. The ministries' functional space and the sphere of cooperation have been considerably extended as a result of a strengthening of the centralisation function in relation to the management and elaboration of medium- and long-term forecasts and programmes for the development of the various economic branches and sectors. Mutual understanding has been reached through finding solutions to such issues as the determination of qualification requirements, vocational education for unemployed people, and the guarantee of a first job for graduates of educational institutions. However, problems regarding financing, and employment forecasting by sectors, territories and professional groups remain difficult to solve.

Issues relating to economic growth and financing are agreed with the Ministry of Economics. This partnership is principally restrictive, as all the social programmes depend on general financial and monetary forecasting estimates and their adjustment. The extension of the functions of the Ministry of Economics (including the elaboration of programmes for the socioeconomic development of Belarus until 2010, long-term development programmes for industrial complexes and other sectors, and programmes for qualitative transformation, aimed at restructuring, retooling and modernisation) enhances the opportunities for social partnership in VET.

The procedure for the system of further training and retraining for staff in Belarus was set out in the National Standard of the Republic of Belarus (STB 22.7.1-2001).

The Administration of the President of the Republic of Belarus has general operational control of the national state administration bodies, local executive and regulatory administrative bodies, as well as the educational institutions that provide further training and retraining for the directors of the state administration bodies. It also exerts control over the ME's operations on the licensing of educational institutions that provide further training and retraining for

directors of state administration bodies, as well as over the expenditure of the relevant budgetary funds.

The Council of Ministers of the Republic of Belarus:

- defines the main strands of the national policy on the staff further training and retraining subsystem;
- approves national programmes for the development of this subsystem;
- sets standards for the funding of state-financed educational institutions that provide staff further training and retraining;
- sets standards for salaries for employees working in the staff further training and retraining subsystem, as well as wages for trainees who are undergoing further training and retraining off-the-job or *part*-time.

The ME ensures the implementation of unified national policy in the further training and retraining subsystem and determines its primary development areas. It is also responsible for the development of the legislative-regulatory framework for the subsystem, for the registration, restructuring and dismantling of educational institutions providing staff further training and retraining, and for management support of the scientific-methodological subsystem. This ministry arranges the preparation and publication of manuals, textbooks and scientific-methodological materials for state-financed educational institutions that provide staff further training and retraining.

The Ministry of Labour and Social Protection plays a key role in providing organisation-methodological support for staff further training and retraining. It establishes standard qualification requirements for professions and occupations, determines the amount of, and the vocational qualification framework for, the further training and retraining of unemployed and unoccupied individuals that is to be paid for from the State **Employment Promotion Fund**, and summarises and disseminates best practice in the provision of further training and retraining for unemployed and unoccupied groups.

National state administration bodies establish sectoral further training and retraining subsystems, and manage them within their competence according to the National Standard (STB 22.7.1-2001) and the regulations for staff further training and retraining. In reality such training activities are coordinated at the level of the Council of Ministers through a process of harmonisation of activities by the ME and the Ministry of Labour and Social Protection.

Departments of local executive committees carry out the organisational and methodological management of the regional further training and retraining subsystems, taking into account regional characteristics and the socioeconomic development context. The directors of associations, institutions, organisations and enterprises are responsible for arranging staff in-service further training and retraining. They establish services (management services, departments, bureaus) and appoint technical experts to carry out various forms of staff further training and retraining.

According to Article 43 of the Law of Education, institutions (and their subdivisions) that provide staff further training and retraining can include the following:

- academies;
- institutes;
- training centres;
- industrial training complexes;
- faculties and special faculties of higher education institutions;
- departments of institutions providing secondary special and vocational technical education;

- courses;
- training facilities.

Departments of institutions that provide technical vocational, secondary special and higher education can arrange further qualification and retraining for staff in different professions and specialisms that correspond to the profile of the main educational activity.

The employment services under the Ministry of Labour and Social Protection are mainly engaged in providing retraining for unemployed people by sending them to educational institutions. The Fund for Social Protection provides financial resources to support the training of unemployed people. Trainees receive a standard document (certificate) of education based on the results of further training, retraining or probation. All the organisations and institutions (including private organisations, business education companies and foreign educational institutions) must obtain a licence from the ME in order to carry out educational activities for staff further training and retraining. The main requirements for such a licence are as follows:

- an appropriate number of educational staff in relation to the qualification characteristics of the employees' positions;
- availability of curricula in each specialism (training specialism);
- availability of the training programme, teaching aids and assignments for submission, as well as a library stock on each discipline being studied in the particular academic year;
- appropriateness of the material-technical support for the teaching process, including buildings and (or) their divisions to the norms and standards stated in technical and other legislative-regulatory acts of the Republic of Belarus.

A2.2 Quality assurance

The Law on Education addresses the issues of control over the quality of education, and defines state control as being a regular activity for measuring how educational content and quality correspond to legislation and national standards. Quality control, as stated in the law, is arranged through self-assessment, inspection and attestation.

- Self-assessment is a method of quality control implemented at school level in accordance with the strictly regulated procedures set up by the ME. A self-assessment report is produced and presented to the external body during the attestation process.
- Inspection is arranged mostly by the local administration to oversee different areas of school activity. It takes place regularly several times during each academic year. Extra-curricula activities for children in vocational schools are an example of an area that is often inspected.
- Attestation is a control and assessment procedure covering the overall activity of schools; it mainly evaluates the extent to which the content, level and quality of training correspond to educational standards. It is carried out once every five years according to regulations established by the ME.

Regardless of the type of ownership, all educational institutions are subject to an accreditation procedure that takes place every five years. Accreditation aims to confirm adequate levels of quality and content in education and training, in order to meet the requirements of established educational standards. It entitles the institution in question to issue a standard certificate of education at an appropriate level.

The Law on TVET, for example, interprets quality as effectiveness of learning, which can be evaluated only through the final assessment and as a learning outcome. . In VET programmes the emphasis is more on the modernisation of curricula and equipment and the further training of teachers and trainers as the main factors in ensuring quality.

There is a specific department within the ME that is responsible for quality concept development and quality regulations in education.

The Code of Education envisages a review of existing norms in the control system. It sets out a QMS and identifies new quality procedure norms. In future all education authorities will actively participate in the development and implementation of the quality concept.

A2.3 Funding and institutional autonomy

Public TVET institutions are financed mainly from regional budgets; 3.4% of students in full-time education are financed from the national budget.

According to the Provision of the Council of Ministers of the Republic of Belarus, a the norm for public expenditure per student in institutions providing TVET was included in the system of national social standards for the provision of service to the population of Belarus. The standard for fiscal capacity foresees minimum financing amounts per student, with the aim of ensuring that TVET is accessible, and is available free of charge.

The standards for fiscal capacity are to a considerable extent differentiated according to the regions, as they are established with regard to the location, the availability of infrastructure, and the material and technical facilities. It should be mentioned that following the adoption of the Provision for social standards, the rate of the standard for fiscal capacity of expenditure per student has changed only twice: in 2004 it was set at BYR 1.4 million, and in 2006 at BYR 2.2 million. Actual budget expenditure per student in Belarus amounted to around BYR 2.8 million in 2006, BYR 3.2 million in 2007 and BYR 4.5 million in 2008.

As part of the overall system for social education standards, the ME is responsible for the execution of the standards for fiscal capacity of expenditure per VET student; annual departmental reporting on the execution of these standards was introduced in 2010. According to the functional features the following cost pools are defined in total expenditure:

- labour costs;
- scholarship fund;
- material costs and their equivalent (supplies and consumables; business trips and work journeys; transport services; communication services; utility services; other expenses for purchase of goods and payment for services).

Expenditures related to fixed assets include purchase of equipment and durable goods and capital repairs. The Ministry of Finance and the ME set cash expenditure rates for meal expenses in TVET institutions according to the standard rates. Given that the number of students funded from public sources has increased, the amount of expenses for meals has also risen.

The proportion of gross expenses of technical vocational and secondary special education institutions accounted for by wages is constantly increasing (33.0% in 2005, 45.7% in 2007, up to 58.0% in 2010). Wages and payroll charges make up a substantial proportion of total allocations. There has been a reduction in the allocation for such elements as 'supplies and consumables' and 'other current expenses'. Allocations for 'transport services', 'communication services' and 'utility services' remain unchanged in spite of price rises.

In order to work effectively, educational institutions need to find ways to attract additional financial resources. These can be resources from enterprises and other organisations, and resources generated by educational institutions themselves through extra-budgetary activities. Analysis has showed that on average, the extra-budgetary activities of TVET institutions make up around 20% of their total income. Fee-based education services, training, retraining and further training commissioned by the employment service, and in-service training in organisations are the most profitable types of extra-budgetary activity. Fee-based services should be further developed in order to fund the implementation of additional educational programmes for students, over and above the established national levels. Running costs account for 60–70% of the extra-budgetary resources (payment of wages, payroll charges, acquisition of supplies and consumables); a portion of the cash resources is

committed to paying for transport and utility services. Part of the extra-budgetary resources is used for capital expenditure.

A3. Key data

Table A1. Labour force in Belarus

Indicators	2005	2006	2007	2008*
Total labour force (thousands)	6 210	6 228	6 241	6 252
Activity rate (%)	71.3	71.7	72.5	74.2
Employment rate (%)	70.0	70.6	71.7	73.5
Unemployment rate** (%)	1.7	1.4	1.1	0.9

Sources: Ministry of Statistics of the Republic of Belarus, *Statistical Yearbook of the Republic of Belarus, 2005*, Minsk, 2005, p. 131; National Statistical Committee of the Republic of Belarus, *Statistical Yearbook of the Republic of Belarus, 2009*, Minsk, 2009, p. 106; ETF calculations.

Notes: *Belstat estimates. According to the Ministry of Labour website, unemployment was at 0.8% in January 2009. **Unemployment rate is based on the number of people officially registered as unemployed, as Belarus does not carry out regular LFSs.

A4. Key elements of the VET reform

TVET in Belarus fulfils three basic functions, namely sociocultural (educational), economic and social protection. Its primary aim is to meet an individual's demand for education, the level and content of which should correspond to the needs of the society in the citizens, ready for social adaptation, adoption of social rules and guidelines.

TVET institutions provide training in the form of evening classes and remote learning for citizens who have already achieved a qualification through training within an enterprise or through employment service courses, but who have no education. This gives them an opportunity to acquire VET of a higher level in the future.

All TVET programmes are standardised. There are currently educational standards in 102 training specialties in the VET system, including 430 professions which support effective implementation of the educational function in VET.

Over 150 teachers, masters of vocational training, and resource specialists from national VET institutions have participated in the process of elaborating educational standards, and in their revision – 197 institutions, including 17 higher education institutions, 12 secondary special education institutions and 45 organisations and companies of different economic branches and services. All the educational standards are agreed between the Ministry of Labour and Social Protection, sectoral ministries and organisations that are subordinate to the government.

In line with the requirements of TVET standards, a new generation of curricula has been developed. Over the past 10 years, collections of curricula documentation have been developed and approved for 100 training specialties, including 353 qualifications. Lists of the minimum requirements in terms of machines and equipment for in-service training for 104 specialties have been developed and approved by the ME, according to the requirements of the educational standards. Coordination of the educational standards and curricula documentation development with sectoral ministries, customer organisations has enabled to take into account their requirements to the quality of the labour force training – thus the standard training programmes also include the study of new machinery and technologies.

A centralised methodological support system for educational processes in TVET has been created. A corresponding plan to create the elements of integrated methodological support has been developed and is being implemented. Methodological materials are posted on the RIPO methodological support website.

There is a special focus on the quality of VET. In order to provide skilled employees for enterprises that work according to international quality standards, a QMS in line with ISO-9001 is being developed and implemented in technical vocational and secondary special education institutions.

Useful work is being carried out to prepare national manuals; 351 manuals have been published so far.

To optimize the number of the trained workers and specialists in the TVET system and to ensure the quality of trained personnel in line with the needs of the economy continuous work on the improvement of the educational institutions network is on-going. It includes the creation of separate in-service training subdivisions to provide training in up-to-date complex technologies.) The work on the improvement of the professional and qualification structure of the trained personnel is also carried out. In each region and in Minsk there is on-going monitoring of TVET system.

In recent years over BYR 105 billion has been provided for the refurbishment of the material and technical infrastructure of TVET institutions; this has come from various sources, including BYR 83 billion from the national budget. There is a precedent for such funding: the Ministry of Architecture and Construction provided Minsk Industrial Pedagogical College, which is affiliated to RIPO, with BYR 1.5 billion from the innovation fund for the development of its material and technical infrastructure. In addition, over BYR 3.2 billion was provide **for these purposes from the Agricultural Producers, Food and Agrarian Science Support Fund.**

Special attention is given to educative and social work with students, including:

- the creation of socio-pedagogical and psychological services, pedagogical and psychological support for students in adapting to TVET institutions;
- the creation of a database and support for talented students, and for those who are gifted in activities relating to invention and rationalisation.

Appendix 2. List of education programmes in the national education system, ISCED 2011 and ISCED 1997*

ISCED 2011				EQUIVALENT IN THE BELARUSIAN EDUCATION SYSTEM			ISCED 1997			
Level	Category	Subcategory	Level label	Name of level and degree of the education system	Educational programme	Notes	Level label	Level	Purpose	Orientation
0	0.1	0.1.0	Early childhood development	Pre-primary education	An educational programme for pre-primary education, targeting children aged less than three	early age	not covered in ISCED 1997			
	0.2	0.2.0	Pre-primary education		An educational programme for pre-primary education, targeting children from the age of three until their enrolment in an educational institution to obtain general secondary education	pre-school age	pre-primary education	0	not applicable	not applicable
1	1.0	1.0.0	Primary education	Primary education - I degree of general secondary education	An educational programme for primary education	with access to a higher level of education	primary education or the first stage of basic education	1	not applicable	not applicable
2	2.1 (general)	2.1.0	Lower secondary education	Basic education - II degree of general secondary education			lower secondary education or second stage of basic education	2	A/B	general / pre-vocational
		2.1.2			An educational programme for general basic compulsory education	with access to a higher level of education			A/B	
	2.2 (vocational)	2.2.0							C	vocational
		2.2.1							C	
		2.2.2							A/B	

* This list does not include education programmes for further education.

ISCED 2011				EQUIVALENT IN THE BELARUSIAN EDUCATION SYSTEM			ISCED 1997			
Level	Category	Subcategory	Level label	Name of the level and degree of the education system	Educational programme	Notes	Level label	Level	Purpose	Orientation
3	3.1 (general)	3.1.0	upper secondary education	secondary education - III degree of general secondary education			upper secondary education	3	A/B	general / pre- vocational
		3.1.2			An education programme for general secondary education	With access to a higher level of education			A/B	
					An education programme for secondary special education, providing a specialist qualification (worker qualification) and with secondary special education	On the basis of general basic compulsory education (first two years of training – I stage)				
	3.2 (vocational)	3.2.0		secondary special education					C	vocational
		3.2.1		technical vocational education					C	
					Educational programmes for technical vocational education, providing a worker qualification	On the basis of general basic compulsory education without obtaining general secondary education, Without access to a higher level of education				

ISCED 2011				EQUIVALENT IN THE BELARUSIAN EDUCATION SYSTEM			ISCED 1997			
Level	Category	Subcategory	Level label	Name of the level and degree of the education system	Educational programme	Notes	Level label	Level	Purpose	Orientation
3	3.2 (vocational)	3.2.2	upper secondary education	Technical vocational education	An educational programme for technical vocational education, providing a worker qualification and general secondary education	on the basis of general basic compulsory education providing general secondary education, with access to a higher level of education	upper secondary education	3	A/B	vocational
4	4.1 (general)	4.1.2	post- secondary non-tertiary education				post- secondary non-tertiary education	4	A	General
	4.2 (vocational)	4.2.1							C	vocational
		4.2.2		Technical vocational education	An educational programme for technical vocational education, providing a worker qualification	on the basis of general secondary education, with access to a higher level of education			A/B	

ISCED 2011				EQUIVALENT IN THE BELARUSIAN EDUCATION SYSTEM			ISCED 1997				
Level	Category	Subcategory	Level label	Name of the level and degree of the education system	Educational programme	Notes	Level label	Level	Type	Position	Cumulative duration in tertiary education
5	5.1	5.1.0	tertiary education; short cycle				tertiary education, first stage	5	A	not applicable	< 2 years
		5.1.1						5	A	not applicable	< 3 years
	5.2	5.2.0						5	B	not applicable	< 2 years
		5.2.1		secondary special education	<p>an educational programme for secondary special education, providing a specialist qualification (worker qualification) having secondary special education</p> <p>an educational programme for secondary special education, providing a specialist (worker) qualification having secondary special education and integrated with educational programmes for technical vocational education</p>	<p>on the basis of general basic compulsory education (II stage of training), with access to a higher level of education</p> <p>on the basis of general secondary education, with access to a higher level of education</p> <p>on the basis of technical vocational education with general secondary education, with access to a higher level of education</p>		5	B	not applicable	< 3 years

ISCED 2011				EQUIVALENT IN THE BELARUSIAN EDUCATION SYSTEM		ISCED 1997				
Level	Category	Subcategory	Level label	Name of the level and degree of the education system	Educational programme	Level label	Level	Type	Position	Cumulative duration in tertiary education
6	6.1	6.1.0	tertiary education; Bachelor's level or equivalent			tertiary education, first stage	5	A/B	1 st	3–4 years
	6.2	6.2.0		tertiary education, I degree	an educational programme for tertiary education of I degree, providing a specialist qualification having higher education an educational programme for tertiary education of I degree, providing a specialist qualification having higher education and integrated with educational programmes for secondary special education		5	A/B	1 st	> 4 years
	6.3	6.3.0					5	A/B	2 nd	
7	7.1	7.1.0	tertiary education; Master's level or equivalent			tertiary education, second stage	5	A/B	1 st	> 4 years
	7.2	7.2.0		tertiary education, II degree	an educational programme for tertiary education of II degree, forming knowledge and skills for research pedagogical and research scientific work, providing a Master's degree an educational programme for tertiary education of II degree with in-depth specialist training, providing a Master's degree		5	A/B	2 nd	> 4 years
	7.3	7.3.0					5	A	2 nd / further	
						tertiary education, second stage	6	not applicable	not applicable	not applicable

ISCED 2011				EQUIVALENT IN THE BELARUSIAN EDUCATION SYSTEM		ISCED 1997				
Level	Category	Subcategory	Level label	Name of the level and degree of the education system	Educational programme	Level label	Level	Type	Position	Cumulative duration in tertiary education
8	8.0	8.0.0		post-graduate education, I degree – post-graduate course (pos- graduate military course)	an educational programme for post-graduate course (post-graduate military course), providing with a scientific qualification of research worker	tertiary education, second stage	6	not applicable	not applicable	not applicable
			tertiary education; doctoral level or equivalent	Post-graduate education, II degree – doctorate	an educational programme for a doctorate					

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