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PROJECT FOR SKILLS DEVELOPMENT AND INNOVATION SUPPORT (SDISP)

CONCEPT PAPER ON MODERNIZATION OF THE SECONDARY TVET

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TABLE OF CONTENTS

GLOSSARY	5
ACRONYMS	8
INTRODUCTION	9
1.RATIONALE FOR THE CONCEPT PAPER	10
2.BASIS FOR THE CONCEPT PAPER	11
2.1. Legal grounds	11
2.2. Documentation	12
2.3. Contemporary tendencies in European TVET	13
3.FUNCTION AND VALUE OF TVET	15
3.1. TVET Function	15
3.2. Core values of TVET	16
4.OBJECTIVES AND TASKS OF TVET	17
4.1. TVET objectives	17
4.2. TVET tasks	17
5.BASIC PRINCIPLES OF TVET	18
5.1. Inclusiveness	18
5.2. Quality	18
5.3. Social responsibility	18
5.4. Relevance	18
5.5. Employability and entrepreneurship	18
5.6. Flexibility	19
5.7. Cooperation and partnership	19
5.8. Transparency	19
5.9. Autonomy and responsibility of educational institutions	19
5.10. Lifelong learning	19
5.11. Standardisation	19
5.12. Finance	20
5.13. Inclusion of soft skills	20
6.SYSTEMATIC CHARACTERISTICS OF TVET	20
6.1. Harmonisation of qualifications with the National and European Qualifications Framework	20
6.2. Educational sectors and qualifications	21
6.3. Occupational standards	23
6.4. Qualification standards	24
6.5. Learning outcomes and competencies	27
6.6. Assessment criteria for learning outcomes	28
6.7. Modular Approach in Programming	31
6.8. Module structure	34
6.9. Credit system in TVET	39
7.PROGRAMME STRUCTURE OF TVET	45
7.1. Curriculum for Competence Based Learning	45
7.2. Proposed structure for a reformed 4-year TVET Programme	48
7.3. Structure of syllabi	54
7.4. Duration of education	55
7.5. Monitoring and assessment of students' achievements based on competencies	55

7.6.	Final examination and matura	59
7.7.	Enrolment and mobility of students	60
8.	ORGANIZATION OF THE EDUCATIONAL PROCESS	62
8.1.	Student centred learning	62
8.2.	Establishment of regional school centres	65
8.3.	Creating conditions for efficient realization of the learning process	66
8.4.	Organization of the work-based learning and teaching process	67
8.5.	Continued matching of the education process with the labour market demand	68
8.6.	Career guidance and counselling of students	70
9.	TEACHING STAFF	72
9.1.	Teachers and trainers	72
9.2.	Professional development of teachers	73
9.3.	Career development of teachers	76
10.	QUALITY ASSURANCE IN TVET	77
10.1.	Delivery of quality in TVET	80
10.2.	Internal evaluation	81
10.3.	External evaluation	82
10.4.	Verification of educational programmes	82
10.5.	Accreditation of educational institutions (service providers)	82

GLOSSARY²

Assessment	the process of the evaluation of knowledge, skills and competencies according to predefined criteria and learning outcomes, which includes written, oral and practical tests, exams, projects and a portfolio (NQF Law 2013)
Competencies	a set of acquired and skills, that is, proven capability to use the knowledge and skills in situations of learning or work (NQF Law 2013)
Credit	a qualitative measure for expressing the volume of learning, based on the volume of work that is required of the participants, so that they can achieve the expected outcomes of the learning process at a given level (NQF Law 2013)
Credit system	a system of accumulation and transfer of credits based on the transparency of the learning outcomes and the learning processes (NQF Law 2013)
Credit transfer	the process by which the value of the learning achieved in a system or institution can be determined in another system or institution (NQF Law 2013)
Curriculum	the inventory of activities implemented to design, organize and plan an education or training action, including definition of learning objectives, content, methods (including assessment) and material, as well as arrangements for training teachers and trainers (CEDEFOP 2011)
ECVET	Technical framework for transfer, validation and, where appropriate, accumulation of learning outcomes by individuals, to achieve a qualification. ECVET tools and methodology comprise a description of qualifications in units of learning outcomes with associated points, a transfer and accumulation process and complementary documents such as learning agreements, transcripts of records and ECVET users' guides. (CEDEFOP 2014)
Key competencies	a set of competencies to a certain level, required to satisfy the personal, social or professional needs of the individual in the process of lifelong learning. They are: communication in one's mother tongue, communication in a foreign language, mathematical, technical and scientific competence, civic awareness, information technology,

² This glossary and the terminology used throughout this Concept Paper are based on the best EU practices and will be subject to final approval by MoES.

	entrepreneurship, learning how to learn and cultural expression
Knowledge	a set of acquired and systematic information, a set of theoretical and factual information. (Methodology for inclusion of qualifications in MQN, March 2015)
Learning outcomes	statements about what the participant knows, understands and is able to do, as a result of the formal, non-formal or informal learning process. Learning outcomes are defined in terms of knowledge, skills and competencies (NQF Law 2013)
Macedonian Qualifications Framework (MQF)	an obligatory national standard that regulates the acquisition and use of qualifications in the Republic of Macedonia and an instrument for establishing a system of qualifications in the Republic of Macedonia that provide the bases for the transparency, access, transfer, acquisition and quality of qualifications (NQF Law 2013)
Module	an independent unit of learning that is complete or part of an educational programme (NQF Law 2013)
Occupation	a set of activities and working duties which according to their content and type are very similar and inter related from organizational and technological point of view so that they can be performed by one individual who possess the relevant competencies, knowledge and skills to perform the working duties (National qualification of occupations 2015)
Occupational Standards	statements of the standards of performance an individual must achieve when carrying out a function in the workplace, together with specifications of the underpinning knowledge and understanding
Programme (educational/study)	a set of educational components, based on learning outcomes, which are recognised for the award of a specific qualification (NQF Law 2013)
Qualification	a formal result of the evaluation and confirmation process that is acquired when the responsible institution certifies that an individual has achieved learning outcomes in accordance with established standards (NQF Law 2013)
Skills	the ability to apply knowledge, perform tasks and solve problems. Skills are described as cognitive (involving the use of logical, creative and intuitive thinking) and practical (manual work and the use of methods, instruments, tools

and materials)(NQF Law 2013)

**Work Based Learning
(WBL)**

learning that occurs when people do real work. This work can be paid or unpaid, but it must be real work that leads to the production of real goods and services (ETF 2014)

ACRONYMS

AL - Adult Learning
BDE - Bureau for Development of Education
CAL - Centre for Adult Learning
CEDEFOP - European Centre for Development of Vocational Education and Training
ECVET - European Credit System for Vocational Education and Training
EPR - European Peer Review
EQR - European Qualifications Framework
EQAVET - European Quality Assurance in Vocational Education and Training
ESA - Employment Service Agency of the Republic of Macedonia
ETF - European Training Foundation
EU - European Union
HE - Higher Education
HVS - Higher Vocational Specialisation
LLL - Lifelong Learning
LM - Labour Market
MaE - Monitoring and Evaluation
ME - Ministry of Economy
MF - Ministry of Finance
MLSP - Ministry of Labour and Social Policy
MoES - Ministry of Education and Science
NIL - Non-formal and Informal Learning
NQF - National Qualifications Framework
QA - Quality Assurance
SE - Secondary Education
SEC - State Examination Centre
SEI - State Education Inspectorate
(formerly EQARF)
SEN - Special Education Needs
SS - Secondary Schools
SSO - State Statistical Office
SVET - Secondary Vocational Education and Training
TVE - Technical Vocational Education
TVET - Technical and Vocational Education and Training
VET - Vocational Education and Training
VET Centre - Vocational Education and Training Centre
VET schools - Schools for Vocational Education and Training
VNIL - Validation of Non-formal and Informal Learning
ZELS - Association of Local Self-Government Units

INTRODUCTION

Globalization and the technological development are moving at a fast pace in countries around the world. This affects the nature of working positions and occupations and the types and characteristic of the skills that are required. These changes in structure may lead to areas of unemployment and greater inequality. These are challenges in designing a more flexible architecture of economic growth and education. If these challenges are accepted, and planned change is implemented, then new opportunities will arise.

Vocational Education and Training (VET) is a system which is affected by global transformative processes, which have had major impact in the past years in the Republic of Macedonia. The technological innovations have caused fast changes in the type of working positions and the job description in the national economy, making permanent changes in the demand of qualifications and new skills; the complexity of the demands for new skills in the labour market demand new and flexible changes the structure, organization and content of vocational education and training.

More than half of the young people in the Republic of Macedonia (57,31%) between the age of 15 and 19 years old that enrol in secondary education go to vocational secondary schools. The secondary vocational education (VET) has gone through deep changes in the last twenty years. The most important changes are made in the 4 year secondary technical vocational education (TVET) covering 53,60% from all high school students and 93,52% from all VET schools.³ This educational sub-system generates the highest number of future university students and job seekers, the future work force in the country. Thus, special social and economic importance should be given to TVET.

TVET has critical areas that need interventions. Also, the level of development in certain parts of the TVET system needs to be determined.⁴ Current topics and most significant issues that need to be resolved in the upcoming period are:

- The attractiveness of TVET;
- The relevance of the curricula and syllabi in TVET and their compatibility with the labour market needs and the continuation of education;
- Modular programming structure of TVET
- The learning process and the assessment of the student achievements;
- The link and cooperation of the TVET system and the business sector;
- The quality assurance in TVET;
- The decentralization in managing and financing of TVET;

³ State statistical office of Republic of Macedonia, Primary and secondary schools from the end of the school year 2013-2014.

⁴ See: ETF (2010) : Collaborative evaluation about the influence from the reformed TVET education; ETF (2012): Skills Needs Forecast and Qualifications System, Turin; Ministry of Education and Science (2005), National programme for development of education in Republic of Macedonia 2005-2016, Skopje; Rutkowski J. (2010), *Demand for Skills in Macedonia*, Technical Note, to serve as Input for a World Bank Workshop and the Government of Macedonia, June 16, 2010, Skopje.; MoES/ETF (2013): Strategy of vocational education and training in the context of lifelong learning 2013 – 2020, Skopje

- The monitoring (the process and the outputs) and the evaluation in TVET;
- The legislative environment.

In this context the new Concept Paper for TVET is caused by the need to address the need for developing and strengthening the knowledge of citizens of Republic of Macedonia.

This Concept Paper aims to assist in the development of a more consistent and effective system of TVET. Proposals given in the Concept Paper can act as a base for construction of an educational architecture based on appropriate values to the main characteristics of a modern TVET system and powerful enough to address the most important and urgent needs of the individuals and the general public, without marginalizing the national culture and tradition.

Naturally, all future reforms in TVET have to be in line with the comprehensive reforms from the global educational system and in the context of the National Strategy for Vocational Education and Training 2013-2020.

1. RATIONALE FOR THE CONCEPT PAPER

Faced with deep changes in national and international economic and social structures, many countries are reforming their educational systems and are looking for various ways for altering and strengthening and further development in order to achieve higher quality, efficiency and effectiveness. In order to overcome the traditional status quo situation and uniformity of the educational systems, there is now a greater emphasis on, for example, “societies that learn” or “societies based on knowledge”. This indicates that the emphasis is on the process and the way of learning has increased.

In the last two decades, TVET, as a separate subsystem in the framework of the educational system in many European countries, is under a great pressure for modernization.

TVET is central to the accumulation of the human resources as a requisite for achieving the economic growth and better employability, mobility and safety at the work place. TVET encourages the development of competences of the young people and adults that addresses the needs of the modern, flexible and competitive labour market. TVET needs to adapt readily to frequent economic and social change. It needs to offer students flexible learning opportunities and acquiring skills that will be needed for their career development and will stimulate their entrepreneurial spirit, encourage their participation in further training and education, and their contribution to active citizenship and personal fulfillment.

The following needs and reasons are seen as the basis for introduction of changes in TVET and designing a modern concept for this type of education:

- The current programme structure of TVET does not correspond to labour market needs and the contemporary situation, and is not flexible enough to provide horizontal and vertical mobility;
- There are a significant number of narrow qualifications which do not correspond to the technical and technological changes and the structure changes of the labour force;
- The last major changes in TVET have been made in the State Curriculum for Reformed Vocational Education (adopted in 1999);
- New amendments and supplements to the Law on Vocational Education and Training have been adopted in order to oblige finding conceptual solutions in the TVET;
- In October 2013, the Law on National Qualification Framework was adopted;
- Strategy for Vocational Education and Training in the context of Lifelong Learning 2013-2020 has been adopted;
- National programme for development of education in the Republic of Macedonia 2005-2015 has been adopted, covering the global directions for the development of TVET which needs to become operational;
- EU principles relating to lifelong learning should be implemented in a reformed TVET system
- TVET schools' capacity has areas of dissonance with the current labour market

2. BASIS FOR THE CONCEPT PAPER

2.1 Legal grounds

The legal framework on which the Concept Paper is based is the following

- Law on Secondary Education (1995)
- Law on Vocational Education and Training (2006)
- Law on the Bureau for the Development of Education (2006)
- Law on Adult Education (2008)
- Law on Higher Education (2008)
- Law on State Examination Centre (2008).
- Law on National Qualification Framework (2013)

Implementation of this Concept Paper will be ensured through relevant amendments and supplements to the aforementioned laws and by-laws.

2.2 Documentation

The TVET Concept Paper takes into consideration the strategic views and goals that are defined in the comprehensive Strategy for Vocational Education and Training in the context of Lifelong Learning 2013-2020 with Action plan. This Concept Paper recognizes many of the recommendations from the European initiatives for development of vocational education contained in, for example: "Education for All" programme (2000)⁵, *Millennium Goals* (2000) of the UN⁶, Lisbon Agenda (1997 and 2001)⁷, The Copenhagen Declaration (2002)⁸, A Memorandum on Lifelong Learning (2000)⁹, Maastricht Communiqué (2004)¹⁰, Bordeaux Communiqué (2008)¹¹, Bruges Communiqué (2010)¹², The Torino Process (2010)¹³, Education and Training – 2020 of the European Commission¹⁴ and *documents of the Bologna Process*¹⁵. Taken together, these represent a reference framework.

The implemented activities, linked to the reform and modernization of certain parts and levels of VET, were initiated by the European training foundation (ETF), SEA Project, GTZ Programme, USAID Programme and other programmes and projects that have been implemented by the Government of Republic of Macedonia and the Ministry of Education and Science (MoES) in cooperation with the Centre for Vocational Education and Training (VET Centre), Bureau for Development of Education (BDE) and the Centre for Adult Education. The possible solutions that are listed in this Concept Paper have come from these projects in the area of: legislation, institutional development, human resource development, gather information from the labour market, innovative teaching plans and programmes (curricula and syllabi), organization of the teaching process, and modernization of the school management.

The Concept Paper's starting point is the reformed goals which are defined in other strategic documents, adopted by the Government of Republic of Macedonia, which refer to the employment, economic growth, entrepreneurship, poverty reduction, social inclusion and other significant areas.

⁵ UNESCO (1990): World Conference on Education for All - Meeting Basic Learning Needs, Jomtien, Thailand, 5-9 March

⁶ UNDP (2000), Millennium Development Goals (MDG) - United Nations Millennium Declaration, Millennium Summit in New York, 6-8 September

⁷ EC (1997), Convention on the Recognition of Qualifications Concerning Higher Education in the European Region, Lisbon; Commission of the European Communities (2001), Report from the Commission: The Concrete Future Objectives of Education Systems, Brussels, 31.01.2001, COM (2001) 59 Final

⁸ European Council (2002): Declaration of the European Ministers of Vocational Education and Training, and the European Commission, convened in Copenhagen on 29 and 30 November 2002, on enhanced European cooperation in vocational education and training - "The Copenhagen Declaration", Copenhagen

⁹ Commission of the European Communities Brussels, 30.10.2000 Sec (2000) 1832 Commission Staff Working Paper - A Memorandum on Lifelong Learning

¹⁰ Maastricht Communiqué, on the Future Priorities of Enhanced European Cooperation in Vocational Education and Training (VET), 14 December 2004 (http://ec.europa.eu/education/lifelong-learning-policy/doc/vocational/maastricht_en.pdf)

¹¹ The Bordeaux Communiqué on enhanced European cooperation in vocational education and training, Communiqué of the European Ministers for vocational education and training, the European social partners and the European Commission, a meeting in Bordeaux on 26 November 2008 for reviewing the priorities and strategies of the Copenhagen Process

¹² The Bordeaux Communiqué on enhanced European cooperation in vocational education and training for the period 2011-2020, Communiqué of the European Ministers for vocational education and training, the European social partners and the European Commission, a meeting in Bruges on 07 December 2010 for reviewing the strategic approach and priorities of the Copenhagen Process

¹³ The Torino Process, available at: http://www.etf.europa.eu/Web.nsf/pages/Torino_Process_EN

¹⁴ The Council of the European Union (2009): Notices from European Union Institutions and Bodies, Council conclusions of 12 May 2009 on a strategic framework for European cooperation in education and training ('ET 2020'), Official Journal of the European Union (2009/C 119/02)

¹⁵ Bologna Process European Higher Education Area: Available at <http://www.ehea.info/>

2.3 Contemporary tendencies in European TVET

New times require new skills. New times require new position of the technical education, strong capacities and the competence to create new and real life values in an innovative way for the people, economy and the society they live in. This is the key dimension for TVET development for the future.

The world movement “Education for everyone”, started at Jomtien in 1990, and was continued in Dakar in 2000, and a definitive stage was reached at the world conference in Incheon in 2015. At the conference, the representatives from the governments from countries all around the world agreed that this movement should take the direction of an inclusive and fair quality education and lifelong learning for everyone.¹⁶: The focus is places on the quality rather than the mass education, understood as a public benefit, basic human right and ground for guaranteeing the realization of other rights. It is a key to achieving full employment and a path for eliminating poverty.

The Incheon Declaration supports free education, qualified and motivated teachers, the central role of equality and inclusion, quality education and a commitment for financing education.

Thus it is necessary to ensure that political and legal frameworks consistently support responsibility and transparency, together with participative governance.

In 2015 Unesco set the agenda for transformation of the TVET for the future. In “Unleashing the Potential - Transforming Technical and Vocational Education and Training¹⁷”, taking into account the Shanghai consensus from 2012, asking how TVET can become more effective and more popular.

TVET should improve the access of young people and adults to work opportunities to allow them progression on the labour market and to increase their potential. This will assist reduction on exclusion of the world of work and society in general. Through increasing productivity, innovation and continuous adaptation to an ever-changing labour market modern TVET can reduce poverty and social differences, and assist processes for sustainable and peaceful future.

Efforts are focused on several key areas in the TVET¹⁸:

1. Improving the relevance of TVET;
2. Expanding access to and improving the quality of TVET;
3. Adjusting the qualifications and development of various learning directions;
4. Strengthening the management and increasing the partnerships;

¹⁶ Incheon Declaration, Education 2030: Towards inclusive and equitable quality education and lifelong learning for all, World Education Forum, Republic of Korea, 2015

¹⁷ P.T.M. Marope, B. Chakroun and K.P. Holmes (2015): Unleashing the Potential - Transforming Technical and Vocational Education and Training, Unesco, 2015

¹⁸ UNESCO-UNEVOC (International Centre for Technical and Vocational Education and Training): Revisiting global trends in TVET: Reflections on theory and practice, Bon, 2013

5. Increasing the investments in TVET and finding new ways/directions for financing;
6. Increased advocacy/lobbying for TVET.

The development of a new TVET strategy by Unesco¹⁹ is an opportunity to implement the potential of TVET to sustainable development.

The new strategy depicts a different economic and environmental landscape. The contributions by TVET in areas such as youth employment, sustainable development and e-learning are more than recognized and are becoming more relevant. The question remains, how to transform the TVET sector in order to increase its potential?²⁰

The key elements of the strategy are the following:

Firstly, the results should, to the greatest extent possible be measurable and directly linked to student learning outcomes. Quality results need to be produced that will be acknowledged by the industry. In that context, measuring the results needs to be introduced, before the employment/ at the work place including further education/training as a positive outcome.

Secondly, development of more efficient learning pathways for the students between the levels and types of education/training.

The strategy needs to be focused on larger number of areas such as:

1. **Access to TVET:** The access needs to be understood as a need to increase the number of students that are enrolled in TVET. The participation should be based on the approach for lifelong learning, where the participation of young people, adults, employed and unemployed can be equally encourage and valued;
2. **Quality assurance in TVET:** The quality of TVET programmes needs to be improved through appropriate mechanism for quality assurance. Establishing standards, examinations and inspection, employment and career development of the employees, management and leadership are also very important in quality assurance. The TVET curriculum, qualifications, modules, equipment and evaluation should be reflected in the work place, working conditions and the time needed for acquiring the skills;
3. **TVET management:** the TVET system needs to establish a better balance between the skills and the working positions, between the educational offer and educational demand. Without balancing these two, there is a risk of inconsistency and lack of skilled workers and structural unemployment. It is necessary to ensure updated information about the levels and the trends for skill supply and demand. The focus should be more on the inter-ministerial coordination, especially between the education, labour and the ministry for economic development;

¹⁹ UNESCO-UNEVOC, Unesco TVET Strategy 2016 – 2021, Bonn, 2016

²⁰ UNESCO-UNEVOC, Unesco TVET Strategy 2016 – 2021, Bonn, 2016

4. **Inclusion of the business sector:** The business community should face the challenge to consider the training and development and to understand that investing in the human capital is a crucial precondition for improving the business performance and the market growth. Stimulating the skills demand is of the essence, especially in the areas where it is on a very low level.;
5. **TVET institutions** should be encouraged to provide better conditions for students and to satisfy the labour market needs through changes in the financing system;
6. **Financing:** A greater focus should be made in diversification of the finances outside of the public sector.

3. FUNCTION AND VALUE OF TVET

3.1 TVET Function

The *primary functions* of TVET are achieved by ensuring conditions for:

- acquiring initial (technical) and continuous vocational education;
- acquiring necessary knowledge for continuation of the education;
- acquiring qualification, relevant vocational competences needed for labour market inclusion (employment and self-employment);
- adoption of key competences for lifelong learning in accordance to the potential of the individual and expansion and training of the learning vocational knowledge in accordance to the labour market needs;
- training the individual about creativity, innovation and entrepreneurship.

The primary function of the TVET reflects *the right to work and the right to education*. The right to work is link with fulfilling of one very important condition- *competence* to perform certain type and complex work, which is provided by the technical education as a *final function*. On the other hand, TVET is constantly and fully available to all members in society in accordance to their possibilities and realistic needs.

This definition of the primary TVET function and the systematic, meaningful, organization and process solutions, show the complex and much differentiated systematic and social character consisted of:

- socializing of the whole generation through transferring the general and national cultural values and preparing the citizens to fulfil their duties in a democratic society;
- producing competent workers with technical education to fulfil the labour market needs and for continuation of the education;
- comprehensive range of the generation that is finishing primary school;
- further development and enhancement of education on the basis of the standard for mandatory nine-year primary education;
- fulfilling the individual educational needs for all categories of young people and adults through certain programmes for standards of qualifications;

- learning in conditions in a way where the realistic needs and opportunities of those who are learning are in line with the possibilities and needs of the environment;
- expansion of the learning possibilities through institutions, programmes and organizational pluralism in the implementation of the education and the link between the formal and informal education;
- entering, leaving and re-entering the VET system in accordance to the individual needs or the labour market needs.

This way the creation of an individual tempo and way for the development of the competences and acquiring knowledge and skills is enabled, which is one of the key steps for democratization of the education into a quality education.

In order to respond to the challenges, TVET is constantly using all available information of the labour market trends and the socio-economical and technical and technological changes. Using this information, the qualifications and standards of qualifications will be established, based on the competences and learning outcomes which all students should have.

3.2 Core values of TVET

Technical education, receives special value because is in close relation with the economy, labour market and other social system.

By introducing strategic change in TVET, its modernization must include a flexible and transparent level of education based on the principles of lifelong learning, which need to match the individual needs as well as those needs of the labour market on a national and global level. The TVET needs to support the socio-economic development of Macedonia offering the future students, all individuals, the possibility to get the knowledge, skills and competences necessary to execute the job, i.e. to get the necessary qualifications for the labour market as well as to be able to continue with the education. It should make technical education open and flexible enough to satisfy different educational needs.

Establishing the social partnership and cooperation with all relevant stakeholders in the area of VET which will ensure:

- Increasing the role of the employers in the process of designing TVET, in accordance to the changes in the labour market;
- Strengthening the influence of the employers in shaping the educational programmes (curricula) and increasing their involvement in the practical training of students;
- Strengthening the influence of the employment agencies;
- Strengthening the role of the chambers and union regarding problem solving in the area of education etc

This remodelling of TVET implies that the students will:

- fulfil their educational needs, that is they will gain knowledge and develop skills which are necessary in the work place in different areas of the labour market;

- gain relevant qualifications which will enable employability and adjustment to the changing circumstances;
- achieve competence including implementation of skills and knowledge that are necessary for performance of various working activities in different context;
- be ready to initiate, create and react fast to the change;
- be able to develop their competences, their personal and professional integrity;
- be well behave and prepared as responsible, constructive and democratic citizens responsible for their personal and social life;
- be ready for lifelong learning, etc.

4. OBJECTIVES AND TASKS OF TVET

. TVET should offer each person in the society the opportunity for full social participation, personal choice, employment, improving quality of life, further educational and continuous professional development..

4.1 TVET objective

The primary **objective** of TVET is to ensure the development of the competences needed to find satisfying employment for young people and adults, and successful continuation of education, fulfillment of the civic and social role, building a suitable living culture and lifelong learning.

4.2 TVET tasks

The TVET **tasks** are:

- to ensure attractive, relevant and quality education for young people and adults;
- to ensure each person to have optimal development of the individual competences in certain areas of the labour market through various and flexible learning opportunities and acquiring skills;
- to enable acquiring qualifications relevant for the labour market;
- to enable development of key and vocational competences for gaining qualifications with clearly defined learning outcomes;
- to enable acquiring competences for personal and professional development, as well as lifelong learning;
- to stimulate the spirit of entrepreneurship at young people and adults;
- to contribute to a higher employability, mobility and security at the work place;
- to encourage business competitiveness;
- to enable acquiring and transferring (acknowledgement) of learning outcomes on a national level;
- to enable acknowledgement of the qualifications and previously acquired competences in the international mobility;
- to support initiatives and creativity and fast and appropriate reactions to change;

- to educate and prepare innovative, constructive and active citizens responsible for their personal and social living environment, tolerance and mutual understanding.

5. BASIC PRINCIPLES OF TVET

5.1 Inclusiveness

The principle of inclusiveness means developing higher consciousness about interrelations, dependence and solidarity among all stakeholders in TVET, regardless of their race, gender, and their social, ethnic, religious and cultural affiliation, as well as their financial and health condition, difficulties in development or disability.

5.2 Quality

Quality assurance in TVET means building relevant educational standards and their harmonization with European standards of quality in education and consequently, standardized procedures for measuring and evaluation thereof.

5.3 Social responsibility

Social responsibility of the TVET covers the integration of general civil values, rule of law, human rights and obligations in the educational process, which will result in citizens who will possess relevant competencies for living and working, cooperation, tolerance and mutual respect and communication.

5.4 Relevance

A quality TVET system is considered a key pillar of any successful economy. It should be based on labour market needs, the needs of the narrower and broader community, as well as on the individual students' needs.

5.5 Employability and entrepreneurship

TVET should enable a wide range of educational services that would lead towards obtaining and enhancing certain competencies which are necessary for employment.

Development of entrepreneurship in the TVET is crucial not only because it is an instrument for fighting unemployment, but also because it is an opportunity for development of competencies that would develop the competitiveness, transferability and mobility on the labour market. Integration of entrepreneurship as a trans-curricular competence in TVET is one of the most powerful tools for acquiring entrepreneurial spirit and rooting the ideals for active, responsible, innovative personality with leadership skills.

5.6 Flexibility

Technical education must be responsive to the real needs of the labour market and the economy. It means increasing its flexibility and adaptability to the often rapid changes in the labour market, which can be accomplished by continuous and timely modernisation of curricula and syllabi, professional development of teachers, equipping the educational institutions with the necessary technical equipment etc.

5.7 Cooperation and partnership

The success of TVET is very much dependent on the development of a collaborative approach by all stakeholders: the business sectors, local self-government, educational institutions, teachers, students and parents. Collaborative approach means collaboration during the curricula development, delivering the educational process and acquiring professional competencies, professional development of teachers, as well as creating easier access of students to jobs.

5.8 Transparency

Transparency in TVET is developed through the respect of educational quality standards. It means respecting the principles of clarity and comprehensibility for all stakeholders in the process: students/adults, teachers, parents and business sector.

5.9 Autonomy and responsibility of educational institutions

The decentralisation process in the field of education implies partial autonomy of technical education. TVET should have the opportunity for development of closer cooperation in various segments with the stakeholders leading up to improving the quality of the outcomes. On the other hand, each educational institution should have responsibility towards all stakeholders involved in the TVET system in relation to the quality of educational services offered, professionalism of the teaching staff, practical training etc.

5.10 Lifelong learning

Lifelong learning as a concept is present in all sub-systems for education and training, and it focuses on providing opportunities for continuous and impeded education and training during the entire life, which will contribute for development of citizens prepared to actively participate in the knowledge-based society. The imposed pace of changes taking place in the fields of economy, education and society calls for a stronger focus on the various forms of lifelong education and training.

5.11 Standardisation

The need for standardisation of educational services is very important for establishing quality in the TVET system. Thus, the competencies acquired by individuals will be harmonised, which on the other hand will increase the transparency and mobility in the educational system and labour market. Building a

system for recognition on non-formal and informal learning is also a crucial element in rounding up the process of standardisation of TVET.

5.12 Provided and smooth financing

In order to create a successful TVET system, it is necessary to have continuous and smooth financing thereof. To that end, a full and dedicated support by the state is needed, by applying various measures and instruments for financing TVET.

5.13 Inclusion of soft skills

The current global economy does not rely solely on specific occupational competencies of individuals. The need for other types of skills that contribute to the development of productivity and efficiency of working processes becomes more and more evident. These "soft skills" all impose a need for introducing changes in the educational system, particularly in the TVET. They should be focused on developing individuals with a broader range of general competencies, which will give them increased flexibility in their jobs and the labour market in general, as well as possibilities for continuous professional development.

6. SYSTEMATIC CHARACTERISTICS OF TVET

6.1 Harmonisation of qualifications with the National and European Qualifications Framework

Increasing the competitiveness, opportunities for mobility and quality assurance in the TVET are very much dependent on the harmonisation of national qualifications with the European Qualifications Framework.

As of 2013 along with the amendments from February 2016 the Law on National Qualifications Framework will have entered into force and it should serve as a pathway for putting into function the NQF, which has been positively assessed by the EU member countries, since it corresponds to a great extent with the European Qualifications Framework.

Implementation and harmonisation of the NQF involve clear and full insight as well as standardised procedures during the definition and elaboration of:

- *Competencies (including the reference framework for development of competencies);*
- *Standardisation of competencies (as quality standards)*
- *Occupational standards (defined by the competencies);*
- *Certification of competencies (which involves creation of competence-based education and learning, i.e. learning outcomes).*

TVET Standardisation, i.e. harmonisation and compatibility of the national with the European qualifications framework increases the possibility for mobility, transparency and recognition of the Macedonian TVET in the European education.

By making the NQF operational, the recognition process of prior non-formal education and informal learning

6.2 Educational sectors and qualifications

For the purpose of grouping the educational process, several European countries use the term "educational sector" or "group of sectors", but they also use other terminology. In the concept papers developed so far in the field of VET in the Republic of Macedonia, (General State Curriculum for Reformed VET, Concept paper for 2-year VET, Concept paper for 3-year VET and Concept paper for post-secondary education, the term "струка" ("vocation") has been used or "група струки" ("group of vocations"). In order to harmonise the national terminology with the terminology used in many European countries, in the future documents pertaining to education, the term "струка" ("vocation") or "група струки" ("group of vocations") will be replaced by the term "sector" and it will be used in all strategic, systematic and programming documents in the field of VET.

Qualifications are grouped in economic sectors, according to the common sectoral, technical and scientific grounds of the work they cover. The Sector is the highest level of grouping in the educational process in the VET. It is defined by the existence of common contents for all qualifications at a certain level within the sector. This criterion is used for defining the common modules for general education and vocational and sectoral contents for a larger number of similar qualifications. Thus, narrower sectors are created that cover just one area of the labour market or broader sectors that cover several areas.

General education and vocational contents are determined through syllabi for individual sectors. This is the way to rationalise TVET education, ensure easier horizontal and vertical mobility of students in the course of their education and create grounds for continuing to higher levels in particular sector. Also, the grouping ensures greater mobility of graduated students on the labour market, easier re-qualification in larger number of qualifications within a particular sector, when this is imposed by technological and organisational changes.

Depending of characteristics of the work, i.e. how related are the demands for certain education, all vocational qualifications in the vocational education and training ending with Level V b of the National Qualifications Framework are divided into 14 (fourteen) sectors:

01	Geology, mining and metallurgy
02	Construction and geodesy
03	Graphical sector
04	Economy, law and trade
05	Electrotechnical
06	Health and social care
07	Agriculture, fishery and veterinary
08	Personal Services
09	Mechanical

10	Traffic, transport and storage
11	Textile, leather and like products
12	Catering and tourism
13	Chemistry and technology
14	Forestry and wood-processing

For each economic sector, the VET Centre develops a **Standard of economic sector**, based on the separate **Methodology for development of standards of sectors**.

The National Board of the Macedonian Qualifications Framework established sectoral commissions for qualifications, which, inter alia, have the competence to analyse the situation in a particular sector, areas of work, follow the development tendencies in the sectors and promote them appropriately.

For more rational organisation of the TVET, occupations which have similar competencies (knowledge, skills, competencies) are grouped into **qualifications**. Qualification may refer only to one occupation or to a group of similar occupations. In order to ensure greater rationalisation of TVET and increased mobility of students after completion of their education, broader qualifications are defined, allowing for preparation for several similar occupations. For each qualification, a separate syllabus is prepared and relevant modularised curricula. Defined like this, qualifications represent a good basis for vertical advancement in the educational system and horizontal mobility in the work area, without any formal impediments in all occupations covered by the qualification. Objectively (normatively), the qualification defines the necessary competencies (knowledge, skills and competencies) enabling (and leading towards) employment, whereas subjectively, the qualification reflects the comprehensiveness of competencies, i.e. learning outcomes, that the student has acquired during his/her education.

Qualification ensures correlation between general and vocational content and knowledge for a particular occupation/occupations. It means that employers' needs, in particular the needed competences for employment and working in a particular occupation should be taken into consideration when defining a new or re-defining an old qualification. An qualification should be a complex specification for a particular qualification in the TVET. It serves as a basis for the development of syllabi and modularised curricula and contains the following elements:

- *Identification data;*
- *Horizontal and vertical mobility and advancement;*
- *Starting points for developing the qualification;*
- *Description of the qualification;*
- *Targets of the education that can be achieved under the qualification;*
- *Educational process;*
- *Assessment and evaluation of students' achievement etc.*

Qualifications are developed and standardized on the basis of a separate **Methodology for development of qualifications standards**, developed by the VET Centre.

During the development of qualifications, one has to bear in mind that under one sector, as a rule, for one level of qualifications, there are common general and vocational education topics for all qualifications. Hence, the syllabus and modularised curricula must be developed in a comprehensive manner, and not as a simple request for development of modularized curricula for each qualification under the same sector. At the same time, it must also be taken into consideration that the occupation is obtained in the world of work and the qualification, the syllabus and modularised curriculum and the obtained vocational education are only a pre-condition for entering the world of work (employment).

Matching the demand and supply on the labour market in our country requires innovating (redefining) and defining new qualifications that would correspond to the needs of the economy and the economic development. The VET Centre in cooperation with all relevant social partners and on the basis of a separate methodology, determines the qualifications in certain sectors of the TVET.

6.3 Occupational standards

Recommendations contained in the documents of the European Union pertaining to the development of the VET, as well as the provisions of the Law on National Qualifications Framework represent the grounds of development and introduction of occupational standards. According to these documents, data about the employers' needs in terms of the knowledge, skills and competencies should be collected on a continuous basis. Also, the description of job duties and activities under particular occupations should be defined and occupational standards developed that would serve as basis for the development of qualification standards and modularised curricula in the VET.

The introduction of these changes involves identifying the indicators according to which the competences acquired in the TVET will be evaluated. This means that each occupation must clearly and precisely indicate what the students who completed the education for that particular occupations know and can do (work). This type of statement is known as an *occupational standard*. It is a document which contains a description of job activities performed under a particular occupation (profile of occupation) and description of knowledge, skills and competencies (in a narrower sense of the word) necessary to efficiently perform the activity.

The profile of occupation is a precise description of the basic functions, responsibilities, work and tasks as part of a certain occupation; it is the basic vocational document depicting the things that the worker does as part of a certain occupation. The profile of occupation is developed on the basis of the conducted monitoring of the working process and it describes the knowledge, skills and competencies that the worker must possess in order to successfully perform the work. The profile of occupation serves as a basis for development of an occupational standard and is a constituent part of it.

The primary function of occupational standards is to provide efficient communications among interested parties in the process of defining, implementation and evaluation of certain TVET qualifications. They are the result of an agreement among all relevant stakeholders on the labour market regarding the optimum knowledge, skills and competences for a particular occupation (to independently and responsibly perform the work).

Occupational standards provide for the following:

- harmonisation of interests of all stakeholders in the TVET;
- quality assurance;
- development of labour force relevant of the labour market needs;
- identification of the necessary knowledge, skills and competencies for performing activities under a certain occupation;
- development of qualification standards;
- design of modular programmes (curricula) for conducting the educational process;
- development of procedures and mechanisms for accreditation and certification;
- career guidance and counselling etc.

During the development of occupational standards, the following **principles** should be respected: occupational standards should be broad, competence-based, flexible, relevant and transparent.

Broadness - description of knowledge, skills and competencies for the full performance of functions under a particular occupation. The broadness ensures adaptation of the employees in different and unpredicted situations, as well as a variety of roles that the employee performs during the work.

Competence-based - comprehensiveness of all required competencies for a particular occupation. The occupational standards should also cover the existing values based on acquired competencies.

Flexibility - ensuring versatility of occupational standards considering the changing demands of the labour market. They should not be perceived as rigid and unchangeable documents, on the contrary, they are documents that are constantly supplemented and enhanced.

Relevance - meeting the current and future needs of job positions in the economy.

Transparency - availability of occupational standards for all interested entities, that is, availability of information - from global to the most detail level of information.

Occupational standards, on basis of a separate methodology for their development, are developed by the VET Centre in cooperation with the social partners, employers and other stakeholders in the VET system.

6.4 Qualification standards

According to the EQF, Qualifications for lifelong learning (European Parliament and the EU Council 2008), a *qualification* is a formal outcome of the assessment and

evaluation process which is acquired in case where a competent body determines that the individual achieved learning outcomes on the basis of a given standard. In the Macedonian Qualifications Framework, the qualification is defined as "a formal outcome of the process of assessment and certification obtained when a responsible institution certifies that the individual has achieved the learning outcomes according to defined standards." Both definitions contain the idea for standardisation of qualifications, i.e. development of qualification standards, as a result of the link between the labour market and education. The main reasons for standardisation of qualifications are to develop transparency, quality assurance and grounds for validating the non-formal and informal learning.

Occupational standards and educational standards are integrated in the qualification, that is, they are mutually related with it and make visible the link between working and learning. The qualification standard provides information about the competencies possessed and demonstrated by an individual by transferring the needs and expectations of the labour market.

A qualification standard is defined as a type of norms and characteristics that regulate the award of qualification. This standard, with its systematic descriptions of occupations included in it, is expected to simplify the qualifications on the level of their relevance with the labour market needs, providing information at the same time about the profile of occupation.

Learning outcomes contained in the qualification standards make the competencies clear and transparent. These are acquired upon the completion of a particular programme leading to a qualification. They provide for transparency, comparison, recognition and transfer of qualifications in various educational institutions on national level. Also, the learning outcomes, as a common reference basis, also play an important role in international mobility, as well as in the lifelong learning and evaluation of various learning experiences.

Quality assurance in qualification standards stems from the definition of learning outcomes contained within qualifications, agreed among all relevant TVET stakeholders. The use of methods for analysis of work and inclusion of main stakeholders in defining the standards are particularly important for utilisation of feedback and assuring quality and relevance of qualifications to the employers' needs and other users thereof. The quality of qualifications is ensured by respecting the agreed values of basic characteristics of qualifications (level, scope and type of qualification) and the conditions for acquiring them, assessment criteria, assessment methods etc.

Standardisation of qualifications on the basis of clearly prescribed conditions for acquiring and evaluating the learning outcomes offers opportunities for evaluation and recognition of non-formal and informal learning. For those sets of learning outcomes, which according to the qualification standards can be acquired in a non-formal and informal manner, a detailed set of standards for evaluation are prescribed. Evaluation, recognition and obtaining certificates for such sets of learning outcomes are made according to a separate System (Methodology) for accreditation and certification of prior learning.

A *qualification standard* is a document based upon an occupational standard - a document which defines the contents and structure of a particular qualification and contains all data necessary for determining the level, scope and type of qualification and information necessary for ensuring and enhancing the quality of the qualification. Qualifications obtained through TVET are designed and developed in compliance with the descriptors under the Level IV and are introduced in the National Qualifications Framework. They describe the expected learning outcomes, mandatory and optional learning units with competencies, time schedule for implementation and assessment criteria.

The level of qualification indicates the complexity and achievements regarding the acquired competences, with the help of which the acquired knowledge and skill are described, necessary for performing a certain activity.

The scope of a qualification indicates the total amount of acquired competencies, and is expressed through ECVET points.

The profile of a qualification, indicates the work area and acquired competencies, and is expressed through a title.

The quality of a qualification indicates the credibility of issued public document regarding the indicated level, scope and profile of acquired competencies.

The title of a qualification is a language expression which, by way of using lexical methods, indicates the individual qualification. For practical reasons, the title of a qualification should be shorter (one word or a few words), and at the same time it should give a concise information about the level of vocational competence, expressed in the spirit of the Macedonian language and at the same to be easy for translation in other languages. The title of the qualification is proposed by a working group which develops the qualification standard.

The qualification as a formal result of the quality assured assessment process leads to a diploma/certificate. It is obtained when a competent body determines that the individual achieved the learning outcomes according to the defined standards. It represents an official recognition of the value of learning outcomes on the labour market and/or in the education and training.

The qualification can be obtained through formal educational programmes, non-formal courses or informal learning. It should meet the criteria set for verification of qualifications, contain measurable learning outcomes, be subject of quality assured assessment and lead to diploma/certificate.

Achieving a certain type of qualification means that the individual is capable to advance in the education or training and shows that s/he is competent to work in a particular work area.

Basic profiles of qualification are developed by the Sectoral Commissions, whereas the qualification standards at the level of education from I to V-B are developed by the VET Centre according to a separate *Methodology for development of qualification standards*.

6.5 Learning outcomes and competencies

Learning outcomes are clear and precise description of what the student should know, understand or be able to do, after finishing the learning process.

The requirements for clear and explicit formulation of learning outcomes are part of a broader context in which the teacher-centred teaching process is moved away and focused towards student-centred learning process. The teaching and learning processes are focused on achieving the previously defined learning outcomes.

Understanding the education in this way imposes the assessment of the learnt material to be transparent and closely related to the clearly defined learning outcomes.

Importance of learning outcomes: the clear, transparent and precise definition of learning outcomes are important for the following:

- teacher - *they serve as basis of planning curricula contents, teaching material and teaching methods. Learning outcomes which should be accomplished, dictate the method of assessing the knowledge, which must in a transparent manner be related to each of the learning outcomes;*
- student - *learning outcomes should be presented to the students at the beginning of the educational process, since they represent a clear message of what is expected of them and they limit the room for making arbitrary interpretation of whether each students achieved the expected outcomes;*
- potential employers, faculties and the community in the general, *since the learning outcomes facilitates the recognition of certain qualifications and titles;*
- recognition of certificates on international level and greater mobility of students;
and
- quality assurance in education, *since the learning outcomes are used for defining the quality standards which are used as a benchmark for comparing them with the acquired and presented knowledge and skills of students at the end of the learning process.*

Defining learning outcomes: Learning outcomes are usually defined through acquired knowledge, skills, mental processes (intellectual transformation of collected information) which graduated students are able to perform, do and develop during the learning process.

The best test of learning outcomes is to check whether the processes and processes used for measuring the capabilities of students can be assessed.

Learning outcomes are activities and they describe the outcomes that the student should be capable to show or achieve and how s/he should show or prove that s/he achieved the outcomes.

Relation between learning objectives and learning outcomes: Learning objectives and learning outcomes are different terms both according to their role and the manner of their formulation. The role of objectives is very important in the

planning and development of curricula, whereas the learning outcomes allow for monitoring, measuring and evaluation the outcomes understood as students' achievements. When speaking of formulation, learning objectives are described with gerund forms (e.g. preparing, giving guidelines...), whereas learning outcomes are described with active verbs. These verbs show which things the student will be able to perform after completing the learning process (upon completion of a certain course, subject, training, module, programme etc.)

Learning outcomes on the level of subject/module: Learning outcomes are defined for each module and they are in compliance with the overall learning outcomes for the educational programme. They should clearly indicate the role of certain modules in achieving the final learning outcomes of the overall curriculum. *Learning outcome are then defined for each teaching unit.*

6.6 Assessment criteria for learning outcomes

“The purpose of assessment criteria is to provide clear and unambiguous standards of achievement in respect to each learning outcome. They should describe what the learner is expected to do in order to demonstrate that the learning outcome has been achieved” (NICATS 1998)²¹

In general terms, assessment criteria specify how learner performance in respect to the module's learning outcomes are to be recognised. They are statements which describe the standards that must be met and what evidence will be collected to show the achievement of learning outcomes. Assessment criteria should specify how satisfactory performance of a module's learning outcomes are to be demonstrated.

Learners have a right to know what they should be learning and the basis on which their work will be judged. Clearly written assessment criteria should make it clear to the learner what s/he is expected to know or be able to do in relation to each learning outcome. Furthermore, they indicate to the learners, teaching staff, examiners and employers the standards that are being demanded of learners. As such, this adds transparency to the whole learning process.

Assessment criteria usually consist of two parts; an observable action verb such as demonstrate, interpret, discriminate or define and content referent which should indicate what the learner should be able to know or do on completion of a learning process.

When writing assessment criteria brevity and clarity are very important as is the need to avoid ambiguity (the same applies to writing learning outcomes). The language should be clear to all those who use assessment criteria including students, teaching staff and employers. Assessment criteria must be capable of being measured or assessed in a valid and reliable way.

Assessment criteria, together with learning outcomes, should be designed in relation to all three learning domains: that is, cognitive, affective and psychomotor.

²¹ NICATS: Northern Ireland Credit Accumulation and Transfer System

Additionally, assessment criteria should also be designed to cover General Education/Related Theory, Technical Education and Work Based Learning elements of the curriculum.

It is useful to describe Assessment criteria are described through the **aspects** and **indicators** of assessment.

Aspects are key areas of assessment of a particular competence, that is, global parts of a competence. Aspects are defined on the basis of key outcomes - sets of competences and most often they depict the most important working processes.

Indicators are measurable indicators showing that the working process contained in the set of competences has been completed according to the standards. Indicators contain description of activities, stated in a form of facts (standard of behaviour during performance of working activities) which are visible and measurable.

They should also be designed to cover both 'soft' and 'hard' skill development. Three examples²² of assessment criteria, linked to learning outcomes, are given below.

No	Occupation	Learning outcome	Assessment criteria
1	Cosmetic technician	Prepare for a customized facial treatment package in a beauty salon	<ul style="list-style-type: none"> a) Identify and describe the skin structure b) Identify the functions of the skin c) Identify and describe skin types d) Describe common skin conditions e) Identify factors which would prevent treatment taking place
2	Construction technician	Select and use basic construction tools and materials in specified tasks	<ul style="list-style-type: none"> a) Select and use construction materials appropriate to specific tasks b) Select and use tools for specified tasks c) Use tools correctly and solely for intended purpose d) Use basic construction drawings and specifications for given

²² These examples are taken from various course specifications prepared by the Scottish Qualifications Authority (SQA)

			tasks e) Comply with health and safety requirements during all specified tasks
3	All occupations ('Soft' skill example)	Review own performance in relation to the development of specified employability skills	a) Identify strengths and weaknesses in specified employability skills b) Gather feedback from others on own skills and abilities c) Identify areas for improvement in specified employability skills and set relevant goals d) Evaluate progress in achieving identified goals

It is very important that assessment criteria should reflect and support learning at the relevant MQF level. So, for example, assessment criteria written for MQF Level 4 should be more demanding of the learner's performance than those written for MQF Level 2 as the complexity of these two levels, as described in the MQF level descriptors²³, is quite different.

This difference in the qualification levels of complexity in the MQF levels is illustrated in the following table which contains excerpts of MQF qualification level descriptors for levels 4 and 2

MQF Level	Knowledge and understanding	Skills	Competences
4	Possesses systematic theoretical and professional knowledge within the specific area of work or study which includes analysing and connecting facts and theoretical principals while performing the work, while at the same time enabling further studying	Is able to collect, analyse , select and use relevant information from various sources , tools, methodologies, techniques and materials in the area of study	Independently performs complex assignments and solves problems , adapting his/her behaviour in accordance with the set guidelines in changeable conditions
2	Possesses basic	Possesses practical and	Works

²³ **Levels descriptors:** these are generic statements describing the characteristics and context of learning expected at each level, against which specific learning outcomes and assessment criteria can be reviewed in order to develop modules and units and assign credit at the appropriate level.

	theoretical and vocational knowledge necessary for the requirements of the work and can apply them while performing simple work tasks , at the same time enabling further studying	creative skills for conducting simple or less complex and previously defined tasks in familiar and foreseeable situations	independently under known conditions and under intermittent supervision and with limited responsibility for performing working tasks
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Comparison between the words and phrases marked in bold in these excerpts of MQF level descriptors clearly indicates that the knowledge, skills and competences expected from Level 4 students is much more complex and demanding than that expected from Level 2 students.

It is also important not to confuse assessment criteria with the actual system of assessment or assessment tasks used in a TVET programme. Assessment criteria are the standards by which a learner’s performance in an assessment task is judged. An assessment task could be a written or oral examination, coursework, project work, or a practical test. It is important not to confuse assessment criteria with the actual assessment tasks. The assessment criteria specify how the assessment task (e.g. oral, written, practical test) will be judged. They should not include guidance on which assessment instruments should be used, the assessment specification for a module or about the overall assessment system related to a TVET programme.

6.7 Modular Approach in Programming

Modules are free standing learning units which can be independent or part of an educational programme.

Modules are sets of learning outcomes (knowledge, skills and/or competences) that constitute a coherent part of a qualification (CEDEFOP 2015).

Modules may be designated as **mandatory or optional**, according to their importance in enabling students to achieve the learning outcomes for the programme as a whole

Mandatory modules serve a fundamental role within the curriculum for a programme of study, and achievement of the credits attached to these modules is essential for the qualification.

Mandatory modules normally provide specific preparation for other modules, either at the same level or at a higher level. Students normally take mandatory modules in a specific designated order. Mandatory modules may be taken together or it may be specified that they are taken sequentially.

Optional modules are offered to students in order to provide an element of choice in the curriculum, and are designed to complement mandatory modules. Often, but not always, these should be taken after specified mandatory modules are completed,

Modules do not necessarily have intrinsic status as mandatory or optional, as defined above, but are designated as such in relation to a specific programme of study. The same module may therefore be defined as mandatory in one programme and optional in another.

The Modular Approach is used widely in advanced countries, and is generally seen to have clear benefits.

For example, it promotes 'demand driven' rather than 'provider driven' VET provision which encourages increased participation from employers in the TVET process. For students, a major benefit is the emphasis on developing an individual profile suited to lifelong learning, thus also supporting the development of a modular qualification system (and a National Qualifications system and framework. This allows for credit accumulation and transfer in line with the European Credit System for Vocational Education and Training (ECVET - the European Parliament has placed a strong emphasis on this system). The European authorities stress that the modular approach develops a clear link between initial and continuing education/training by increasing vertical and horizontal mobility between programmes.

Several research papers have shown that both teachers and students develop a sense of 'ownership' of the education/training programme, with the approach improving student-teacher relationship. In the 15 EU countries covered in recent CEDEFOP research (2015) further benefits observed included:

- greater flexibility (both external and internal) introduced to the VET system
- VET becomes more attractive, with improved status
- Participation rates and early dropout were improved
- A positive effect on youth employment.

Modularisation is a key factor in bringing fast and flexible updating of curricula in line with changes in the labour market at local, national and international level, thus encouraging student transition between different educational/training tracks or pathways and places of learning. It minimises the continuation of outdated curricula or 'dead ends' thus giving students more flexibility and variety than conventional linear courses.

By changing the curriculum from 'objective-based' to 'competence-based' the modular approach strengthens the link between theory and practice. The related assessment criteria and procedures promote 'formative' rather than 'summative' assessment. Furthermore, the use of continuous assessment throughout a TVET programme increases student motivation and reduces 'examination stress'. The pressure of 'all-or-nothing' terminal exam is removed.

At the same time, it must be recognised that there are also some less positive results that should be taken into consideration.

For example, particularly in the early stages of crossing from linear courses/educational programmes into modules, the time needed for assessment and administration is increased vis a vis linear courses. It has sometimes also proven difficult to combine general subjects and vocational modules in one timetable because of different durations and exam schedules. Without sufficient introductory training and explanatory materials, it can lead to 'fragmentation' of learning.

Provided that short training is offered to teachers, the implications for them and their experience are mainly positive, with CEDEFOP and UNEVOC research, showing that in most countries there was no need for an additional number of teachers upon the introduction of modularisation.

Requalification of teachers is never necessary and experience shows that a two or three-day briefing session for existing teachers is all that is required – mainly focusing on changed assessment and feedback techniques.

In the research mentioned, most teachers report that Modular approach helps them to:

- Gain earlier information about individual student progress
- Give regular and frequent feedback to students
- Make early intervention to raise student performance or to change their own teaching methods
- Give students early opportunity to re-sit modules

Teachers in the modular assessment system appreciate the better planning opportunity and the clarity of the focus of their teaching requirements. In particular, they appreciate not having to re-motivate students at the end of the year.

The evidence from international studies is that modularisation neither increases nor decreases cost per student, with costs essentially remaining neutral.

The Republic of Macedonia's Strategy for VET in a Lifelong Context 2013 -20 and Action Plan (MoES/ETF 2013) gives strong support to the modular approach:

- "Secondary education syllabi have not been modularised and their design does not take into account credits. This is a great obstacle for those students wishing to change their type of education"
- "Education supply can be strengthened by the introduction of modularised programmes for learning and training, establishment of new programmes based on competences, accumulation and transfer of credits "

The Strategy and Action Plan calls for rapid action to develop and implement a methodology for the revision of curricula following the principles of

outcome/competence based learning and modularisation with the aim of their harmonisation with European trends for the implementation of ECVET.²⁴

6.8 Module structure

Recent CEDEFOP research²⁵ on modularisation in VET throughout the EU indicates that there is no single 'right' structure or template for a VET module²⁶. Since the late 1970's to the present day different countries within the EU have developed varying forms of modularisation which reflects their different historical, cultural and local labour market needs. However, despite this variety, there are **common elements** in the development of modules. These common elements include module title, module code, NQF level, credit value, duration, learning outcomes, assessment criteria etc.

This section of the Concept Paper will focus on the design of a **generic module template** which will reflect the minimum requirements of modular design applicable to the current state of modularisation in the Macedonian VET system. As modularisation is currently being introduced, for the first time, into the Macedonian VET system, it is very important, at this sensitive stage, that its modular design reflects **essential but minimum modular design requirements** rather than being overly ambitious. In the coming years, and based on professional reflection and evaluation of progress in the implementation of modularisation in Macedonia, a more complex and detailed modular design may be introduced if thought necessary.

The following module template addresses the **basic minimum elements** necessary in the design of a **competence-based module** which will form part of a vocational qualification at Level 4 in the Macedonian Qualification Framework (MQF).

The module template below consists of the following 16 elements²⁷:

1. Module title
2. Module code
3. Module type (mandatory or optional)
4. Module level
5. Module Credit Value
6. Module Sector(s)
7. Qualifications of which the module is a component
8. Scope of the module (total Credits and duration)
9. Entry or enrolment requirements
10. Aim and purpose of the module
11. Competent provider institutions
12. Competent institutions for the issuing of public documents
13. Learning outcomes
14. Assessment Criteria
15. Assessment methodology
16. Eligible Assessment Instruments

²⁴ The role of modularisation and unitisation in vocational education and training (CEDEFOP 2015) Effects of modularisation by Carmel L Vidal Roderio and Rita Nadas (Research Division, Cambridge Assessment: 2011)

²⁵ 'The role of modularisation and unitization in vocational education and training' (CEDEFOP 2015)

²⁶ In some EU countries **modules** are called **units, building blocks or learning activities**

²⁷ For the purpose of consistency within the current TVET reform process in Macedonia, this module template is exactly the same as that developed, and currently being used to design new curricula for the 3 Year VET Programme within the framework of the Enhancing LLL Through Modernizing the VET and Adult Education Systems being implemented by the British Council

Standard TVET module template

The 16 elements listed above form the basis for a standard TVET module template which is shown below.

Module Title	
Module Code	
Module Type	
Module Level	
Module Credit Value	
Module Sector(s)	
Qualifications of which the module is a component	
Scope of the module (Total Credits and duration)	
Entry or enrolment requirements	
Aim and purpose of the module	
Competent provider institutions	
Competent Institutions for the issuing of public documents	

Module Learning Outcomes		
No	Learning Outcomes	Assessment Criteria
1		
2		
3		
4		

Assessment Methodology	
Eligible Assessment Instruments	<ul style="list-style-type: none"> • • • • •

Below is a completed example of this standard TVET module template being used for a mandatory module titled **Vehicle System Fault Diagnosis and Rectification** which could form part of a MQF Level 4 Automechanic Technician - Mechatronics programme²⁸.

²⁸ This example of a module is for **illustrative purposes only** and does not form any part of existing 4 Year TVET curricula

Module Title	Vehicle System Fault Diagnosis and Rectification
Module Code	H/505/3191
Module Type	Mandatory
Module Level	MQF Level 4
Module Credit Value	10
Module Sector(s)	Mechanics
Qualifications of which the module is a component	Automechanic Technician – Mechatronics : Level 4 MQF
Scope of the module (Total Credits and duration)	60 hours
Entry or enrolment requirements	To access this module the learner should have reached the standards of knowledge, skills and competence associated with MQF Level 3 and must already be enrolled in Motor Vehicle Technician – Level 4 MQF Programme
Aim and purpose of the module	This module aims to give learners the skills and knowledge needed to recognise fault symptoms, apply fault diagnosis and rectification procedures and confirm system integrity in a range of vehicle systems. It is an essential part of the 4 year Motor Vehicle Technician programme

Competent provider institutions	
Competent Institutions for the issuing of public documents	

Module Learning Outcomes		
On completion of this module a learner should:		
No	Learning Outcomes	Assessment Criteria
1	Be able to identify vehicle system faults	<p>1.1 identify two mechanical system faults on each of two different vehicles from given symptoms</p> <p>1.2 Identify two electrical system faults on two different vehicles from given symptoms</p>
2	Be able to prepare and use diagnostic equipment and procedures to confirm faults	<p>2.1 two vehicles for fault diagnosis</p> <p>2.2 Use appropriate diagnostic equipment and procedures to diagnose faults on two different mechanicals on each of two different vehicles</p> <p>2.3 Use appropriate diagnostic equipment and procedures to diagnose faults on two different electrical on each of two different vehicles</p>
3	Know alternative rectification procedures	<p>3.1 Describe an alternative rectification procedure for two faults on different mechanical systems</p> <p>3.2 Describe an alternative rectification procedure for two faults on different electrical/electronic systems</p>

4	Be able to rectify faults and confirm system integrity	<p>4.1 Carry out rectification procedures on two different faulty mechanical systems, conforming with manufacturers' specifications and safety and legal requirements</p> <p>4.2 Carry out rectification procedures on two different faulty electrical/electronic systems, conforming with manufacturers' specifications and safety and legal requirements</p> <p>4.3 use appropriate equipment, procedures and documentation to confirm system integrity</p>
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Assessment Methodology	In order to pass this module the evidence that the learner presents for assessment needs to demonstrate that s/he can meet all the learning outcomes for the module.
Eligible Assessment Instruments	<ul style="list-style-type: none"> • Practical tests • Exercises • Written test • Oral examination • Multiple choice test

6.9 Credit system in TVET

ECVET is based on common principles for quality assurance adopted by the Council of Europe on 28 May 2004 for Quality Assurance in VET and in the Recommendation of the European Parliament and of the Council on 18 July 2009 for establishing a European reference framework for Quality Assurance in VET²⁹.

²⁹ Official journal of the European Union, 8.7.2009, p1.

ECVET applies to all learning outcomes where the basic principle can be achieved through various forms and ways of education and learning on all levels of the European Qualification Framework in the context of Lifelong learning (EQF), and then they should be transferred and acknowledged. This way ECVET contributes to the global goals and improving of lifelong learning and strengthening the employability, openness towards the mobility and the social inclusion of those that are part of the labour market and those that are in the education process. This encourages the development of flexible and personalized paths and acknowledgement of the learning outcomes which have been achieved by informal or formal learning.

ECVET should be compatible, comparable and complementary to the credit system which is used in TVET and the European Credit Transfer System (ECTS), which is used in the higher education. This should contribute towards greater penetration between the different levels of education and training, in accordance to the relevant legislation and practice.

ECVET implementation in TVET should:

- Facilitate and encourage student mobility in and outside of the education system;
- Pave the way to the labour market, through evaluation and recognition of the acquired competences;
- Enable accumulation of the credit points, which are needed for finalizing the educational programme (curriculum) and credit point transfer from one to another educational programme (curriculum);
- Enable the re-joining of persons in the educational and lifelong learning process;
- Facilitate the acknowledgement of the learning outcomes, acquired in the formal, informal and non-formal learning;
- Support the planning process of various types of learning activities for students in order to achieve the programme goals (practical training, project work, seminar papers, self-directed learning etc).

The ECVET tools and methodology contain a description of the qualifications as types of modules with appropriately appointed points, transfer process and accumulated and complementary documents such as *learning agreements, transcripts of documents and guidelines for using ECVET*.

ECVET has the purpose to acknowledge learning outcomes in accordance to the national legislation, as part of the mobility, in order to acquire qualification. It should be mentioned that ECVET doesn't imply any newly acquired rights of citizens to automatically recognize learning outcomes or points. Its implementation of a certain qualification complies with the legislation, rules and regulations which are applicable in the Republic of Macedonia and is based on the following principles and technical specifications:

a) ECVET modules

A module is a component from a qualification, consisting of coherent set of knowledge, skills and competences which can be evaluated and validated with a

certain number of proportionate ECVET points. In principle, one qualification consists of several modules i.e. whole set of modules. This way one student can acquire qualification through accumulation of necessary modules, achieved in different countries and different contexts (formal, and where appropriate, informal and non-formal), complying with the national legislation which refers to module accumulation and acknowledgement of the learning outcome.

The modules that are part of one qualification should be:

- described in a comprehensive and understandable way and to point out the knowledge, skills and competences;
- constructed and organized in a coherent way with regards to the broad qualification;
- constructed in such a way which allows discrete evaluation and learning outcomes validation which are contained in that module.

The module can be specific to one qualification or joint for several qualifications. The learning outcomes which define the module can be achieved regardless of the place or manner where they are acquired. The module is not equal to the component of the formal programme for education and training.

The rules and procedures for defining the characteristics of the learning outcome modules and for combining and accumulating modules of a certain qualification can be defined by the relevant institutions and partners which are involved in the training process in according to the domestic and regional regulations.

The size of each module in an education plan (syllabus) in TVET which has started and finished in one school year shouldn't have less than 4 ECVET points or more than 10 ECVET points. It is recommended that the narrower vocational modules should have the same number of ECVET points. This allows to combine several modules and to ensure diversity in the final qualifications and to ensure that the acquired credit points, meaning the successfully completed modules, can be transferred between different syllabi and curricula. The same goes for the elective modules.

In the light of enhancing the flexibility of the TVET curricula, the process of defining the core-curricula for all TVET levels should determine the scope of theory and practical training only with the total number of ECVET points (percentage of classes), without allocation by individual subject or year of education.

b) Transfer and accumulation of the learning outcomes, ECVET partnerships

In ECVET, the modules, achieved in one area, are evaluated, and then after the successful evaluation they are transferred in to a different area. In this second context, they are validated and acknowledged by the appropriate institution as part of the qualification requirements which the individual should aim to acquire. After that, the modules can be accumulated towards accomplishing the qualification, in accordance to the domestic and regional regulations. The procedures and guidelines

for evaluation, validation, accumulation and recognition of the modules should be designed by the relevant authority institutions and partners included in the training process.

The credit transfers of ECVET which uses learning outcomes acquired in the formal educational context should be achieved through establishing partnerships and networks with relevant institutions authorized to award qualifications or units or credits for achieved learning outcomes due to transfer and validation.

The creation of partnerships has the purpose to:

- Enable a general framework for cooperation and networking of partners, supported by **Memorandum for understanding** with which a climate of mutual trust is establish;
- Assist the partners in the process of designing the specific location of the credit transfer for the students.

The memorandum should confirm that the partners will:

- Accept the status of the other partners as relevant institutions;
- Accept the criteria and procedures of the other partners for quality assurance, assessment, validation and acknowledge them as satisfactory for the purpose of the credit transfer;
- Comply to the conditions of functioning as partners, such as goals, duration and the solutions for review of the Memorandum;
- Comply to comparing the qualifications regarding the goals of the credit transfer, applying the referent EQF levels;
- Establishing other participants and relevant institutions along with their functions to join the process.

In order to implement the ECVET to the learning outcomes achieved in a non-formal and informal learning context or outside of the prescribed Memorandum, the relevant institutions, which have the power to appoint qualifications or modules or credits, should establish the procedures and the mechanisms for identifying, validating and acknowledging these learning outcomes through appointing certain modules in relation to the ECVET points.

c) Learning contracts and individual transcript

Two partnering institutions and a mobile student participate in the implementation of ECVET with credit transfer. The procedure involves conclusion of a **Learning Contract** between the two partnering and competent institutions for the training process and validation, and the student who relies on the contents from the *Memorandum of Understanding*.

The contract should:

- specify the relevant “institution-sender” and the “institution-receiver”³⁰;
- define the required conditions in the mobility period, such as the student identity, mobility duration, learning outcomes which are expected to be achieved and the appropriate ECVET points.

The learning contract should confirm that if the student achieved the expected learning outcomes and they are positively assessed by the “institution-receiver”, the “institution-sender” should validate and acknowledge this as part of the requirements for qualification, in accordance to the rules and procedures established by the relevant institutions.

The transfer between the partners can refer to learning outcomes achieved in a formal, and where appropriate informal and non-formal context. So the credit transfer of the achieved learning outcomes has three phases:

- „institution-receiver” assess the achieved learning outcomes and appoints credits to the student; achieving learning outcomes and the appointed ECVET points can be acknowledged in the “*individual transcript*” of the student³¹;
- „institution-sender” “validates the credits in the form of an appropriate document for student achievements;
- then the “institution-sender” acknowledges the achieved learning outcomes; this acknowledgement enables awarding modules and the appropriate ECVET points in accordance to the rules of the “institution-sender” system.

The validation and the acknowledgement by the relevant “institution-sender” depends on the assessment of the learning outcomes and successful by the relevant “institution-receiver”, in accordance to the agreed procedures and criteria for quality assurance.

d) ECVET points

ECVET points give complementary information regarding the qualifications and the modules in a numerous form. They don't have any value apart from the acquired learning outcomes for a certain qualification which they refer to, and they reflect on the achievement and accumulation of the modules. In order to enable a unique approach in using the ECVET points, a convention is implemented with which 60 points for learning outcomes are being awarded which are expected to be achieved within one school year of formal regular TVET.

In ECVET, the points are usually allocated in 2 phases: ECVET points are allocated first per qualification as a whole and then per module. For a certain qualification, it is considered as a reference one formal learning context and based on the convention the total points for that qualification is determined. From this total number, ECVET

³⁰ „Institution-sender” is the institution which validates and acknowledges the learning outcomes achieved by the student. „Institutions-receiver” is the institution where the learning outcomes training takes place and which assess the achieved learning outcomes.

³¹ Individual transcript is a document in which the detailed data of the achieved learning outcomes, the units and the appointed ECVET points are written.

points are being allocated to each module according to her relative difficulty as part of the qualification.

For qualifications that don't have referent formal learning paths, ECVET credit points can be allocated with an estimation done through comparison of those qualifications which have referent formal context. In order to determine the comparability of the qualifications, the relevant institution should call upon the appropriate level of NQF and EQF, or the similarities of the learning outcomes in the comparable vocational field.

The relative weight of one module with regards to a certain qualification can be determined with the following criteria or a combination of them:

- Relevant importance of the module for participation on the labour market, training towards other levels of qualifications or for social integration;
- The complexity, scope and volume of the module;
- Necessary burden for the student to acquire knowledge, skills and competences which are needed for the module.

The relevant weight of any module which is common for several qualifications, depicted in ECVET points can vary from one to another qualification.

Allocation of credit points for each module includes:

- Number of teaching classes (contact classes) between the student and the teacher planned in the module
- Number of classes for individual work of certain module i.e. homework, literature studies, preparation of the class, seminar or project papers, individual design of illustrations, models etc.
- Number of classes for practical education/training (at school or at a company)

The ECVET allocation is usually part of the design of the qualifications and the modules. They are defined by the relevant institution which is responsible for the design and maintenance of the qualification and is authorized for this assignment.

The range of extra curricula activities should be depicted in credit points, as well as the final exam and the state Matura. The Final exam should be appointed total of 5 credit points, and the state Matura with total of 10 credit points.

The successful acquisition of qualification or of a module entails granting appropriate ECVET points, independent from the real time that is needed for them to be acquired.

The module transfer is usually transfer of the appropriate ECVET points so that those that are involved can acknowledge the transferred learning outcomes, in accordance to the domestic and regional regulations. It is up to the relevant institutions to review, if necessary, ECVET points that need to be taken into account, as long as the rules and methodologies established for this purpose are transparent and are based on the principles for quality assurance.

Any qualification acquired through non-formal and informal learning which can be established with formal learning path, its corresponding modules ECVET have the same points as the reference value because they are achieved through the same learning outcomes.

7. PROGRAMME STRUCTURE OF TVET

7.1 Competence Based Learning

Adopting a learning outcomes approach when developing syllabi and curricula, valuing what a learner knows, understands and is able to do on completion of a learning process – irrespective of how, when and where this learning takes place - is seen by many European countries as an effective way to avoid such potential inconsistencies and promote active learning and inclusive teaching.

For VET providers and employers, outcome-oriented syllabi and curricula can offer a valuable platform for bridging the worlds of education, training and work, providing a common language between competences acquired in learning and the needs of occupations and the labour market.

For teachers, a curriculum built on knowledge, skills and competences that learners can acquire through an interdisciplinary approach, is more challenging than traditional approaches but also more flexible in designing learning programmes tailored to the needs of learners and applying innovative pedagogies and assessment procedures.³²

Competencies are a combination of qualities, skills and attitudes. They can be subject-specific or generic. The very purpose of curricula is to develop competencies; they are developed in all modules and assessed at different stages of a programme.

Competencies are, in fact, reference points for curriculum design and evaluation, not as straightjackets. They allow flexibility and autonomy in the construction of the curriculum. At the same time, they provide a common language for describing the aims of the curricula.

The use of learning outcomes and competencies approach might also imply changes regarding the teaching, learning and assessment methods which are used in a programme.

When speaking of *generic competencies*, we refer to such things as capacity for analysis and synthesis, general knowledge, awareness of the European and international dimension, capacity for independent learning, cooperation and communication, tenacity, capacity for leadership, organizational and planning abilities, etc. In other words, speaking of qualities which are of use in many

³² Cedefop, Learning outcomes approaches in VET curricula - A comparative analysis of nine European countries, Research Paper, No.6, Luxembourg: Publications Office of the European Union, 2010

situations, not only those related to the specific subject area. Furthermore, most of them can be developed, nourished or destroyed by appropriate or inappropriate learning/teaching methodologies and formats.

There are three types of generic competencies distinguished:

- Instrumental competencies: cognitive abilities, methodological abilities, technological abilities and linguistic abilities; e.g.: basic general knowledge - capacity for analysis and synthesis; oral and written communication in the native language, proficiency in a foreign language.
- Interpersonal competencies: individual abilities, like social skills (social interaction and cooperation; e.g.: ability for criticism and self-criticism; teamwork - ability to work in interdisciplinary teams; interpersonal skills; ethical commitment.
- Systemic competencies: abilities and skills concerning whole systems (combination of understanding, sensibility and knowledge; prior acquisition of instrumental and interpersonal competencies is required). Example: ability to apply knowledge in practice; research abilities - ability to create new ideas (creativity), project development and management; ability to adapt to new situations.

In the context of the changes in the spheres of work and life in general, the following have been distinguished as the most important generic competencies: the capacity for analysis and synthesis, the capacity to learn and problem solving.

Other generic competencies which are seen as being very important for employability are: the capacity for applying knowledge into practice, the capacity to adapt to new situations, concern for quality, information management skills, ability to work autonomously, team work, capacity for organizing and planning, oral and written communication in the native language and interpersonal skills.

In addition to these more general competencies, it is necessary to foster more *specific subject competencies* (skills and knowledge). The subject related skills are the relevant methods and techniques pertaining to the various discipline areas, e.g., analysis of ancient scripts, chemical analyses, sampling techniques, and so forth, according to the subject area.

The subject related theoretical and practical and/or experimental knowledge includes the actual contents, that is, specific factual knowledge relating to the discipline, ways in which problems are approached and solved, knowledge of the history of the subject and of current developments within it, etc. Here, too, careful analysis must be made, in terms of definition of priorities and required levels for each kind of subject related knowledge, in order to design a satisfactory curriculum.

The same learning outcomes and competencies can be reached by using different types of teaching and learning methods, techniques and formats. Examples of these are: performing specific assignments, practicing technical skills, writing papers of increasing difficulty, reading papers, learning how to give constructive criticism on the work of others, chairing meetings (of seminar groups, for example), working under

time pressure, co-producing papers, presenting papers, making abstracts or summarizing, doing laboratory or practical exercises, fieldwork, and personal study.

The use of learning outcomes and competences is necessary in order to make study programmes and the related courses (or modules within them) student centred and output oriented. This approach required that the key knowledge and skills that a student needs to achieve during the learning process determine the content of the study programme. Learning outcomes and competences focus on the requirements both of the curriculum and of society in terms of preparing for citizenship and employability.

The curriculum should be understood as “the inventory of activities implemented to design, organise and plan an education or training action, including the definition of learning objectives, content, methods (including assessment) and material, as well as arrangements for training teachers and trainers”.³³

To this we must add that the concept of competency is a key to TVET curriculum development and a main thrust behind the process of change.

It can further be defined as “the development of complex capacities that enable students to think and act in various fields of activity [...]. It consists of achieving knowledge in action, the result of a sound knowledge base that can be put into practice and used to explain what is happening”³⁴

Competence as an organising principle of the curriculum brings real life situations into the learning environment³⁵.

The competences refer not only to practices in the workplace but to wider social and personal practices. Learning outcomes are placed in educational context and are verified through their relation with competences. Thus curriculum must be more than a part of building a set of qualifications, and should be concerned with interdisciplinary as well as disciplinary understanding and the development of entrepreneurship and its associated character and resilience.

Thus students need to develop and apply a set of key competences and relevant job-specific skills which cannot be acquired through fragmented, and often content-overloaded linear curricula that are at a distance from real life and often-changing workplace requirements. The way curricula are designed and taught affects students' motivation to remain in education and training and to go on to further studies.

The concept of an integrated yet flexible curriculum, whilst open to multiple interpretation and definition is thus essential to clusters of competencies and to qualifications that are relevant to regional, national and international contexts.

³³ Cedefop, The Shift to Learning Outcomes Reference Series 57, 2009

³⁴ Braslavsky, C. Modules and the Development of Curricula 2001

³⁵ Jonnaert, P. et al, Prospects, UNESCO, 2007

As well as being driven by national frameworks, integrated curriculum can be developed and implemented using a variety of approaches (locally, regionally or nationally organized) including:

Work placements (problem solving and/or project related activities)

- Case studies or simulations
- Virtual learning environments (VLE including joint creation/team work/peer support)
- The Recognition of Prior Learning (RPL)

Multiple stages in the design process of curricula may lead to the involvement of a greater number of diverse stakeholders and ensure that an outcome-oriented curriculum takes account not only of a particular set of occupation-specific competences but also of learning outcomes associated with curriculum subjects, generic skills and other educational objectives.

In more detail, the extent of decentralisation of the curriculum design process depends on national political, social and economic factors, but always brought a greater adaptation and contextualisation of the curriculum to serve the needs of both employers and students more effectively. Always this curriculum changes enhanced relations between schools and local companies. Over a period of time, and under guidance, the updating of curricula may be lowered to local/school level. . Such a planned move would bring Macedonia into line with best practice in EU countries.

Where consultation does involve students, parents and employers, the result was that outcomes were more suited and better responsive to students' needs and employer satisfaction.

The level of detail of the learning outcomes used in curricula may have important implications for teaching methods and for students' assessment. A high level of prescription may increase the reliability of assessment and the consistency of teaching and, accordingly, help to ensure that TVET provision reflects the competences required more accurately. However, a high level of prescription may also have negative effects, leading to excessive complexity, reduced teacher involvement and flexibility and a negative impact on the relevance for particular students and employers at a distance from the perspectives of the centre.

7.2 General Programme Structure of TVET

Young Macedonians who will make the transition from school to work on successful completion of a reformed 4 year TVET programme must be adequately skilled to play an effective role in a rapidly changing 21st century labour market. As Macedonia, like other leading European countries, enters into a knowledge-based economy the labour market will demand that its young workers have a skill set based on highly developed cognitive and interpersonal skills. As well as being competent in the 'basic' foundation skills of literacy, numeracy and digital literacy tomorrow's young workforce must also be competent in a whole range of transversal skills or

employability skills including communication, collaboration, creativity and critical thinking skills.

In the Law on National Qualifications Framework (2013) these employability skills are referred to as Key Competencies and are defined as

a set of competencies to a certain level, required to satisfy the personal, social or professional needs of the individual in the process of lifelong learning. There are eight key competencies: communication in one's mother tongue, communication in a foreign language, mathematical, technical and scientific competence, civic awareness, information technology, entrepreneurship, learning how to learn and cultural expression

Furthermore, the NQF Law states that one of the goals of the MQF is to “promote the importance” of these key competencies as well as professional/technical competencies.

The reformed 4-year TVET programme must be capable of promoting the development of ‘broader’ skills and key competences which are now demanded by the labour market. Among other things, including syllabi, curricula and assessment reform, this reform should be based on new approaches to the four key elements³⁶ of a reformed 4-year TVET programme which are:

- **General Education;**
- **Vocational Education;**
- **Practical Education and training;**
 - **Practical education**
 - **Work Based Learning**
- **School Programmed Content.**

A short description of these four elements, as part of a reformed 4-year TVET programme is given below.

General Education (GE) At present, the GE part in the syllabi consists of ‘Common Subjects’ and ‘Subjects relevant to the sector’³⁷. GE in the reformed 4-year TVET programme should only consist of ‘Common Subjects’. It is recommended that ‘Subjects relevant to the sector’³⁸ to be removed from the GE element and transferred to the Vocational Education element where they are more relevant. The main focus of the GE element should be on the development of language, communication, literacy, numeracy and digital literacy skills. The development of these skills should be closely aligned to the development of Key Competences as

³⁶ The current Optional Education element of the 4-year TVET programme should be deleted as its function will be replaced by the concept of Mandatory and Optional Modules which will constitute the curriculum design of the reformed 4-year TVET programme

³⁷ In the reformed and modularised 4-year TVET programme, ‘Subjects’ will be replaced by ‘Modules’

³⁸ Mathematics, which is currently listed as a ‘Subject relevant to the sector’ should become part of the numeracy curriculum in Common Subjects as recommended above.

described in the Law on NQF and should support the development of higher level cognitive and interpersonal skills as required by the labour market.

Subjects including History, Art, Music, Sport etc. should continue to be included in GE.

Vocational Education (VE) At present, much of the knowledge content of 'subjects' included in VE is too academic, contains 'theory for the sake of theory' and bears little relationship to the needs in the labour market. The VE knowledge content should only reflect the 'related theory' requirements of the occupation (s) or educational sector being studied. This related theory should be determined by employers as they are in the best position to define the knowledge requirements of their respective sectors and occupations. The curricula content of VE, as well as GE, will need to be redesigned to reflect a competence-based and modularised approach to TVET.

Practical education and training is delivered through practical education and work based learning

Practical education is an organised school form which allows the students to acquire knowledge, skills and habits which are necessary to perform the work under the qualification. It also enables them to quickly get involved in the processes of specific technologies of work.

In addition to the vocational skills, the practical education allows the students to acquire skills such as: team work, communication, organization skills, professional approach etc.

With the implementation of practical education, students get a clearer picture of the qualification they are studying and about the work they will be able to perform.

Practical training is implemented as follows:

- as practical education in school facilities (workshops, laboratories, school companies etc.);
- as practical education in real working processes i.e. in relevant companies.

Work Based Learning (WBL) WBL is Learning that occurs when people do real work. The work can be paid or unpaid, but it must be real work that leads to the production of real goods and services (ETF 2014).

WBL should not be confused with Practical Education, Work Simulation or other forms of 'off-the job training' which is traditionally provided by TVET schools in their own workshops and laboratories. However, WBL can take place in an actual company which forms an integral part of a TVET school.

The function, organisation and contents of summer practice is one type of work based learning. It is organised after the end of the school year, and by rule, it is conducted continuously and in relevant companies. By exception, summer practice

may also be organised by the school itself if it possesses an organised and relevant production or other service related processes.

The educational area **School Programmed Content** is not a compulsory element for students. Instead, its function is to satisfy broader needs of students, who may elect to study other content not covered by the mandatory classes. They may also become involved with the local community or cooperate with relevant social partners to develop further generic competences in order to enhance career development.

The programme content is organised and implemented on the basis of students' interests and needs stemming from the local community and labour market, but are dependent on actual school conditions. This content is developed by schools, based on separate Guidelines developed by the VET Centre. Formal approval for implementation of programmed content is given from the VET Centre.

Students will take two classes per week during all of their four years. The student will choose which of the classes and activities they will take in addition to the mandatory 30. If a student decides to take the additional classes or activities, then they become mandatory.

School programmed content is assessed, but these grades do not have an impact on the overall assessment grade. However, this part of their programme is evaluated if it is relevant when applying and enrolling to higher education institutions or moving to employment.

Reform of the Macedonian 4-year TVET programme must, inter alia, transform it into a broad-based skill development programme in which learners are provided with the opportunity to develop key competences while, through a process of skill sampling supported by ongoing career guidance and counselling, are allowed to defer their occupational choice until the end of their second year at the earliest.

To promote and reflect this move towards a broader-based programme, the GE to VE ratio in each year of the 4-year TVET programme has to be altered. The following **approximate ratios** for each year, phased in over the 4-year period, are more likely to support the transition from a narrow to a broader vocational focus than the current ratios:

Year	General Education	Vocational Education
1	70%	30%
2	60%	40%
3	40%	60%
4	30%	70%

A key advantage of this proposed new structure is that it will facilitate the transformation of the 4-year TVET programme from its current narrow occupation-specific focus to a broad based skills development programme which is much more relevant to modern labour market needs.

The **first year** of the reformed 4-year TVET programme should be regarded as a broad-based 'foundation year' during which the young learners will be introduced to

the world of work. The VE emphasis during this year should not be about technical skill development for a specific occupation but instead should focus on the development of broad key competences while, at the same time, introducing young learners to the working world. A process of 'skill sampling' should be introduced during this year, and continued into the second year, to allow the young students to get a 'feel for work' and assist them to begin the process of determining, in broad terms, what field of work they have an **aptitude** for. To that end, students in the first year should be more involved in activities such as visiting companies and observing experienced workers performing in a wide variety of occupations.

During the first year all students will follow the same broad based TVET programme. However, this will have to take into consideration the size, location, staffing and technical resources of each TVET school.

At a very basic level, they should be able to decide in which sector do they see their career. In other words, students should be helped to determine which sectors they do or do not have an aptitude for. The approximate ratio between GE and VE during the first year should be 70/30.

The **second year** should build on this foundation year but should focus more on intra-sectorial skill development. During the second year students should have determined which sector they have an aptitude to work in and should begin to focus on this sector in order to be in strong a position to make a realistic choice of the future qualification. The approximate ratio between GE and VE should be 60/40 during year 2.

During **year three** students should continue to focus on qualification-specific skills development, and should begin to developed skills in relation to a more specific occupational area. During this year skill sampling should be replaced by longer periods of WBL or in-company training. Well planned and supported WBL should account for between 25% to 35% of the available VE time allocated to year 3. During year 3 the approximate ratio between GE and VE should be 40/60 as the 4-year TVET programme, at this stage, becomes increasingly more vocationally orientated.

The primary focus of **year four** of the reformed 4-year TVET programme should be on quality assured WBL with between 50% to 60% of available VE time during the fourth year being devoted to either one or two periods of WBL in companies which need and use the occupations the students have chosen as their career choice. The approximate ratio between GE and VE should be 30/70 during year 4.

This overall structure for a radical reform of the 4-year TVET programme is illustrated below.

Proposed structure for a reformed 4-year TVET programme

Year 4	Career Guidance and Counselling	Occupation specific skills development		Work Based Learning
		General Education (30%)	Vocational Education (70%) (to include 50 to 60% Work Based Learning)	
Year 3		Sector specific skills development		Work Based Learning
		General Education (40%)	Vocational Education (60%) (to include 25 to 35% Work Based Learning)	
Year 2	Intra- sectoral skills development		Skills Sampling	
	General Education (60%)	Vocational Education (40%) (to include skills sampling)		
Year 1	Foundation skills development		Skills Sampling	
	General Education (70%)	Vocational Education (30%) (to include skills sampling)		

7.3 Structure of TVET syllabi

The existing structure of syllabi³⁹ for the 4-year TVET programme reflects a 'subject-based' or 'inputs' approach to education with an emphasis on General rather than Vocational Education. Close examination of this existing syllabi structure indicates that it supports a narrow occupation-specific 4-year TVET programme rather than a broad-based 4-year TVET curriculum demanded by a modern labour market.

The need to radically reform the existing 4-year TVET curricula and syllabi into broader, competence-based, modularised curricula is described above in Section 7.2 of this Concept Paper. It will be necessary to amend, and simplify the structure of new syllabi to reflect and support this proposed reform of the 4-year TVET programme. The main features of a revised syllabi structure are:

- The reduction of the existing six programme areas listed above to four, namely General Education, Vocational Education, Practical Education and Training (Practical education and Work Based Learning) and School Programmed Content
- The replacement of Subjects with Modules which are either Mandatory or Optional
- The ratio of time allocated to General Education and Vocational Education (including Practical Education and Training) should be 45/55 across the four years of the TVET programme
- The following phased changes in the annual ratio between General and Vocational Education: Year 1 - 70/30; Year 2 - 60/40; Year 3 – 40/60; Year 4 – 30/70⁴⁰.
- The Vocational Education element focuses largely on the Related Theory needs of the sector/occupation being studied
- In the revised syllabus, Work Based Learning should form an integral part of the Vocational Education element
- A much greater emphasis on Work Based Learning in Years 3 and 4 as the programmes become much more vocationally orientated.

³⁹ A description of the current syllabus structure is provided in Section 10 of the report **Structural and Functional Analysis of Technical Education (TVET)** which was prepared in June 2016 for the World Bank Project for Skills Development and Innovation Support (SDISP)

⁴⁰ These proposed ratios are approximate and should reflect the overall ratio of 45/55 in relation to General Education and Vocational Education referred to above

7.4 Duration of education

Technical education, i.e. acquiring qualifications for the Level IV education generally lasts four years. This period is determined on the basis of complexity of this level of qualifications, learning objectives and learning outcomes to be achieved by the student.

The overall load for acquiring Level IV qualifications on education level is 240 ECVET credits.

7.5 Monitoring and assessment of students' achievements based on competencies

The concept of monitoring and assessment of students' achievements based on competences has not been developed yet in the VET System in the Republic of Macedonia, even though, the grounds for its implementation have been established with the strategic and legal framework for secondary education in the Republic of Macedonia.

Monitoring and assessment of students' achievements based on competences is a key element of the quality assurance system in VET in any modern country. It ensures monitoring and analysing the achieved learning outcomes, and has a direct impact on improvement of teaching and the overall educational system.

The basis for enhancing the quality of education is the introduction of standards of achievements (learning outcomes) and general output of education (general and vocational competences). Acquiring general and vocational competences is the primary aim of VET, whereas the assessment is made according to the qualification standard.

7.5.1. Basic principles of competence based monitoring and assessment of students' achievements

Main features are:

- **Teacher's and student's role** - the teacher very often plays the role of a moderator, who tries various learning possibilities through teaching theory, exercises and work-based learning. The student obtains greater autonomy in the learning process, which encourages him/her to use various resources for acquiring knowledge and practice skills outside the classroom and independently research during the learning process.
- **Learning process** - learning is not an individual, but a social activity which is very much dependent on the interaction with others. Such characteristics of the learning, recognised in the contemporary theory, justify all applied forms of work in the education process, such as the group, cooperative and mentoring work;

- **Integration of syllabus and curricula/modules** - the need for linking the curricula/modules belonging to the same area in the syllabus, so that a particular area of the syllabus is not perceived as a summary of several subjects, but as an integration of subjects within a syllabus;
- **Diversity** - students learn in different ways and acquired diverse skills During the mentoring, these differences should be respected instead of treating all students as one individual;
- **Creative skills** - critical thinking skills - developing skills for thinking on a higher level, known as critical thinking.
- **Applicative monitoring and assessment** - new forms and methods of monitoring and evaluation need to be introduced in practice in order to replace the traditional methods (oral exam, written tasks, tests) which are used to test the knowledge and skills at lower level and by nature are making students only to reproduce the learnt material. A range of methods of monitoring and assessment of achievements (observation, interview, case study, simulation, practical work diaries, portfolio, projects) can be used in order to get an overall picture of what students can do or to which extent they are equipped to apply the knowledge in practice.

7.5.2. Characteristics of competence-based monitoring and assessment of students' achievements

Competence-based monitoring and assessment of students' achievements is characterised by the following:

- **Context related** - competence-based monitoring and assessment of students' achievements should, if possible, be made in the real life context or in similar situations (simulation).
- **Integration of learning outcomes** - competence-based monitoring and assessment should not focus only on knowledge, individual skills or attitudes, but on development of skills for taking initiatives, communication, decision-making and problem-solving.
- **Diverse instruments for monitoring and assessment** – In addition to written tests, this requires use of several types of instruments in order to measure in a valid and credible manner the various (integrated) learning outcomes under a particular competence;
- **Reflection as a constituent part of monitoring and assessment process** Self reflection, during which, students have a chance to explain *why* they chose that particular approach to perform the task is crucial.

7.5.3. Functions and types of competence-based monitoring and assessment

Orientation towards learning outcomes in TVET will lead to fundamental changes in the way schools perceive the function and nature of competence-based monitoring and assessment. The basic idea is to perceive the competence-based monitoring and assessment, teaching and learning as integrating processes.

Monitoring and assessment of students' achievements has several functions:

Diagnostic function refers to monitoring and assessing achievements and is conducted at the beginning of the learning process. This type of initial testing serves to determine the skills, competences, interest, experience, level of achievements or difficulties of the student or of the entire class. This ensures efficient planning and organisation of learning process and individual approach towards learning.

Formative function allows the monitoring and assessment to be used as an indicator of student's progress during the education. The teacher is focused on how the student learns; the teacher gathers information about student's achievements and based on that modifies the teaching and activities in which the student is involved. Students need a full understanding of learning outcomes which they are to achieve and their knowledge of the criteria for successful grades.

Effective and efficient and regular feedback by the teacher assists the student, and this function of the assessment is also an indicator of the quality of teacher's work, efficiency of methods applied, teaching aids and curricula.

Summative (final) function - it refers to the measuring in the final phase, in order to assess whether students achieve the learning outcomes in relation to competences belonging to their qualification. Summative assessment is used to make a decision when issuing a certificate (diploma) which is valid and recognised in the country.

Based on the functions, two types of competence-based monitoring and assessment can be defined: **formative and summative**. Formative and summative monitoring and assessment of students' achievements are procedures which involve systematic collection of information or evidence pertaining to the learning process of an individual. The essential difference between these two types of monitoring and assessment is the time when they are conducted. If monitoring and assessment of students' achievements is performed at certain moments during the delivery of the curriculum, the teacher needs to collect information about students' progress in relation to learning outcomes prescribed by the curriculum and give feedback. This process is called formative assessment.

Summative assessment is performed upon completion of the curriculum or part of. It is crucial that the assessment ensures balance between the requirements of the continuous formative and summative assessment.

Formative assessment can be efficient only when the student is given an opportunity to show his/her knowledge, skills and attitudes on several occasions, and when this process is followed by prompt feedback information.

The grade is formed on the basis of sufficient amount of information and evidence (observation of performance, student's products from his/her work). When these preconditions are fulfilled, it can be said that the assessment is really in the function of learning. Also, the summative assessment is important because it provides evidence about acquired qualification or competence, evidence, recognised by employers and educational institutions. Based on the assessment results, it is possible to make decision about the achievement of learning outcomes, or whether

the student is competent or not and issue a certificate or a diploma. Also, decision can be made for giving (or limiting) the access to the next level of education.

Characteristics of competence-based monitoring and assessment, particularly the focus on learning outcomes define the quality of this type of assessment in practices, as well as the main preconditions for that. During the monitoring and assessment, it is essential to ensure that assessors, assessed and all others understand what is being monitored and assess and what is to be accomplished with this process. Meeting certain requirements regarding the quality in monitoring and assessment minimised the possibility for any doubts in the assessment results. Students, parents, employers and the public want to be guaranteed that the assessment results are truthful and credible. The monitoring and assessment system will be trusted by everybody should the principles pertaining to the quality of monitoring and assessment are respected and necessary preconditions for their implementation are created.

7.5.4. Methods for competence-based monitoring and assessment

There are various typologies by which the assessment methods can be classified. One of them distinguishes the methods based on whether the evidence material is collected through direct observation, indirectly or through a third source (external testing). Evidence, i.e. information about students' progress which are comparable with the learning outcomes can also be collected by direct **observation**, indirect **examination** (oral or written) or by **analysing** the product (student's product).

Hence, it is important to take into consideration the conditions where the assessment is performed. Collection of evidence, i.e. information can also stem from activities performed on the job, in an employer's company, during practical training where students have authentic opportunities for interaction with users of services and/or with colleagues at work. In other cases, it is necessary to provide conditions which look like real work environment, where students' activities will be monitored by way of simulation. Nevertheless, the assessment is most frequently performed and evidence material collected in a classroom or a workshop in the school. Independent collection of evidence material by a "third source", employers or trainer for practical training is a specific and powerful aspect of competence-based assessment, but it also means that the assessors are carefully selected and trained for using objective instruments (protocols for observation or check-lists)

Regardless of the method, during the design of the assessment process, the context of learning and teaching should always be taken into consideration, that is, the approach towards learning and conditions in which competences are acquired. Most frequently used methods for assessment in TVET that can be applied individually or in combination and can contribute for efficient competence-based assessment are: Multiple choice tasks; tasks for supplementing missing parts and short answers; simulation; assessment of practical skills; case studies; self-assessment, assessment of group work; interview; presentation; project; portfolio; practical training diary; role playing etc.

7.5.5. Scale of scores

When speaking of assessment instruments, it is important to have a **scale of scores**, i.e. scoring system. Scoring means giving numerical values in the process of measuring the achieved outcomes.

In the preparation of assessment instruments, the following needs to be done:

- to define the scale (method) of scoring;
- to define the scale for converting the score into a grade - achievement;
- to define the fail/pass threshold.

In our practice so far, normative scale of scores have been used since they are equal to school grades. As the assessment is based on competences, the instrument is formed on the basis of aspects and indicators as operational outcomes that should be achieved by the student. However, it is possible to choose other types of scales and combine them. In the check-lists which are most frequently used in our VET schools, dichotomous scales are used *competent-incompetent performance* or its variants - *correct-incorrect, true-false*. This approach has proven to be objective as it meets the requirement that indicators for competences cannot be measured partially. Learning outcome must be fully achieved, because only then we can speak about competent performance.

In formative assessment, it is possible to use more sophisticated scales (with several levels) which can cover various students' achievements and which allow to monitor students' progress and guide them in order to correct the mistakes during the performance.

7.6 Matura and final examination

TVET ends with an examination which is the final act for completion of the education and a confirmation of student's capability to independently continue with his/her personal and professional life. Students finalize their education by taking **vocational matura** or **final examination**. Vocational matura can be partially or fully external by its form, whereas the final examination is internal. Examinations contain theoretical and practical parts, through which the general and vocational and theoretical knowledge are checked, as well as the skills and competences for performing certain tasks. Examination programmes for vocational matura and for the final examination are developed externally, and they are based on the defined learning outcomes in relevant modules. Upon taking these examinations or assessments, students obtain a diploma for completed TVET for a certain qualification and education sector. The selective role is more emphasized in the vocational matura (for continuing the education), whereas the certification role is more emphasized in the final examination. Both examinations allow to sufficiently check the competencies of students for entering the labour market. Later, students who will have passed the final examination will also be given the opportunity to take the vocational matura. Students who will have passed vocational matura, under special conditions may also take the general state matura.

The structure of vocational matura and final examination is defined by a separate **Concept for vocational matura and final examination** prepared by the VET Centre, and adopted by the Ministry of Education and Science.

The manner of organisation, conditions and evaluation system for these examinations are regulated with a separate by-law developed by the State Examination Centre, adopted by the Ministry of Education and Science.

7.7 Enrolment and mobility of students

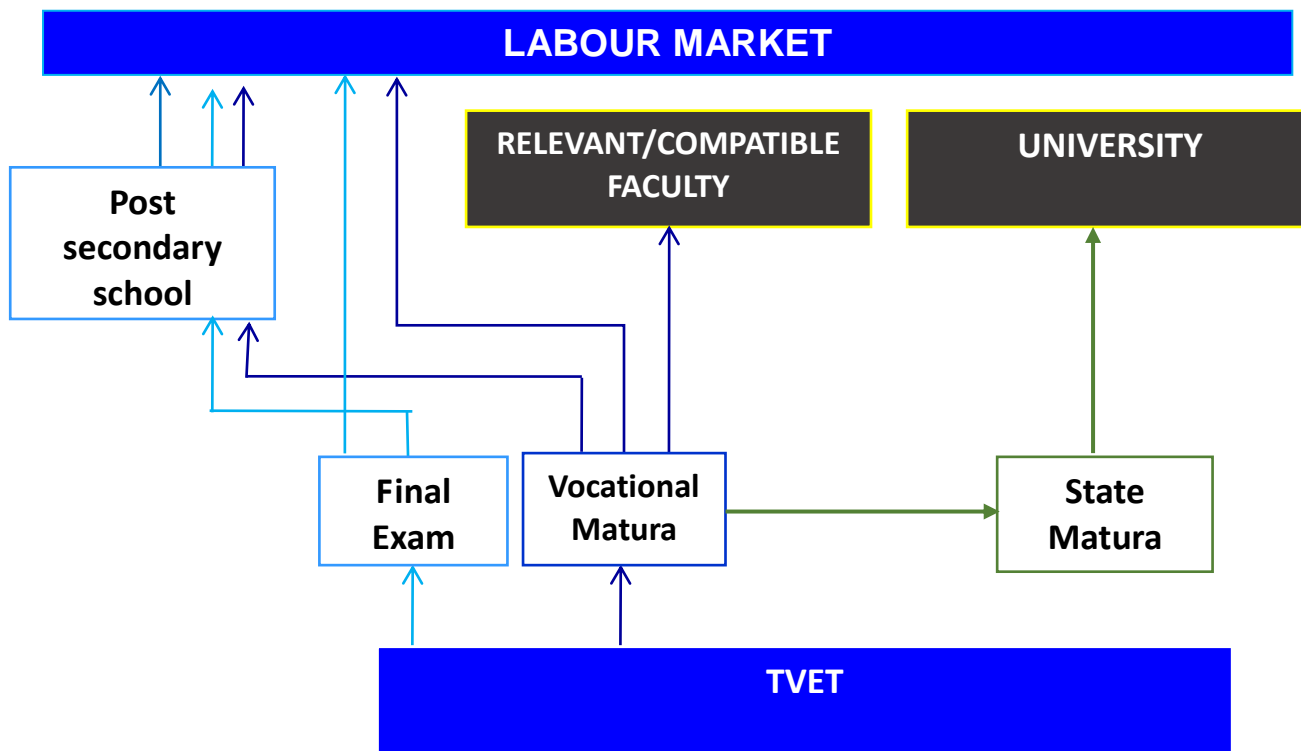
Enrolment of students in TVET is harmonised with the labour market needs, the economy and possibilities for continuation of education at higher education institutions in the Republic of Macedonia.

Students who completed primary education (eight-year or mandatory nine-year) may enrol. In the first year of TVET upon a public call announced by the Ministry of Education and Science. Students who not older than 17 years have the right to enrol in the first year.

VET schools make the selection of applicants based on the criteria defined in the public call for enrolment of students (these criteria usually include: average success from V-VIII grade, i.e. VI-IX grade, average success for the two subjects important for the sector in which they will be gradually directed through elective programme and results achieved at national and international competitions).

During the enrolment in the first year, students choose elective programme which will direct their study to one or several similar sectors. Students who have a particular interest in a certain sector or similar sectors, based on the information they have obtained during or upon completion of their primary education, should, during the enrolment, search for the nearest VET institution that offers elective programme relevant for that sector or similar sectors and based on that information, to enrol to the relevant institution. Thus, students in the first year will complete the curriculum (programme) common for all students in TVET and the elective programme which will allow them to gradually direct their education towards a sector or similar sectors during the second year. VET institutions are obliged to offer such elective programmes and organise elective education in all sectors for which they are verified.

GRAPHIC ILLUSTRATION OF MOBILITY AND PATHWAYS IN TVET



In the second year, students make a decision and enrol in a particular sector, where advantage will be given to the students who during the first year, studied elective programme relevant for the sector. During this year, VET institutions are obliged to offer elective programmes (for sectors for which they are verified), which have the function of providing gradual direction of students to certain qualifications.

During the third year, students select the qualification from level IV (according to the National Qualifications Framework) within the sector they have chosen during the second year. Advantage will be given to the students who during the second year studies elective programme relevant for the qualification.

Mobility of students is determined by programme solutions which allow for horizontal mobility from one into another sector and from one to another qualification. Horizontal mobility can be conditioned by taking differential examinations or by recognizing prior learning outcomes. Depending on differences in the contents between educational profiles, schools define the competences, i.e. differences in the contents that should be acquired by the students, as well as the period during which the student is supposed to do so. As concerns the method and dynamic of taking the differential examinations, the school where the student wishes to continue his/her education has the right to decide autonomously.

During their education, students can also change the level of qualification. Changing the level of qualification can be conditioned with additional testing of acquired competences. The school where the student wishes to continue his/her education

makes an autonomous decision about the manner and procedure for proving the required level of competences and passing the differential examinations (if needed).

Vertically, students may continue their education to continuous post-secondary education and to post-secondary education upon acquiring relevant working experience over a period of two years. Students who will pass the vocational matura obtain the right to enrol to higher education institutions (vertically) in line with the defined enrolment conditions.

8. ORGANIZATION OF THE EDUCATIONAL PROCESS

In the past decades the labour market worldwide has become increasingly polarized. According to the nature of the tasks involved, the polarization relates to: routine versus non-routine and cognitive versus manual work tasks for given jobs. Routine jobs are those that follow relatively set rules and consist largely of repeated actions. By contrast, non-routine jobs require flexibility and often well-developed social skills. The second dimension, cognitive versus manual, reflects the mental versus physical focus of the required tasks. Non-routine jobs rely heavily on abstract reasoning skills, tend to pay better, and generally employ highly educated individuals; they include mostly professional and technical occupations, such as management, medicine, law, engineering, and design work.⁴¹

Such trends are also reflected in the setup of Technical and Vocational Education and Training, in particular in the organization and performance of the learning processes. Traditionally, the results of TVET are expressed in terms of skills or competencies relating to the specific professional domains, i.e. occupations /jobs, and, more recently, in terms of increased interest in basic skills (e.g. literacy, numeracy and IT literacy).

8.1 Student centred learning

During the past 30 years or more, the concept of a 'job for life' has been decreasing in relevance or reality for today's students moving from school to the world of work. The youth of today are much more likely to work across job or career paths throughout their working lives, and within and between several countries. They will also participate in upskilling courses – within or outside the workplace - as the norm. New or revised competences develop as requirements for new occupations, thus the concept of 'lifelong learning' is becoming increasingly important for today's workforce.

The traditional model of initial TVET which focused on training students in the skills and knowledge required for their first jobs has decreasing relevance. The 'chalk and talk' or 'show and tell' methods which have been traditionally relied on in education/training are no longer relevant when developing a modern workforce.

⁴¹ Valleta, Rob, Higher Education, Wages, and Polarization, Forbs Economic Letter, 2015-02, January 12, 2015

However, this section is very much based on more recent research and developments in practice.⁴²

It is now well-established that teaching/training methods must be based on 'andragogy' rather than 'pedagogy' where the learner is encouraged to develop into a responsible and independent young adult instead of remaining a dependent child. In order to promote this, learning methods must not be characterised by "show and tell". **Student-centred** learning means inverting the traditional teacher-centred understanding of the learning process and putting students at the centre of the learning process. In the **teacher-centred** classroom, teachers are the primary source for knowledge. **Student-centred learning** involves the students in the teaching decisions affecting them through their learning programme (course), by giving them responsibility for setting, achieving and monitoring their day to day objectives. Student-centred learning can be defined as an approach to teaching which involves the students in the teaching decisions affecting them through their learning programme (course), by giving them responsibility for setting, achieving and monitoring their day to day objectives.

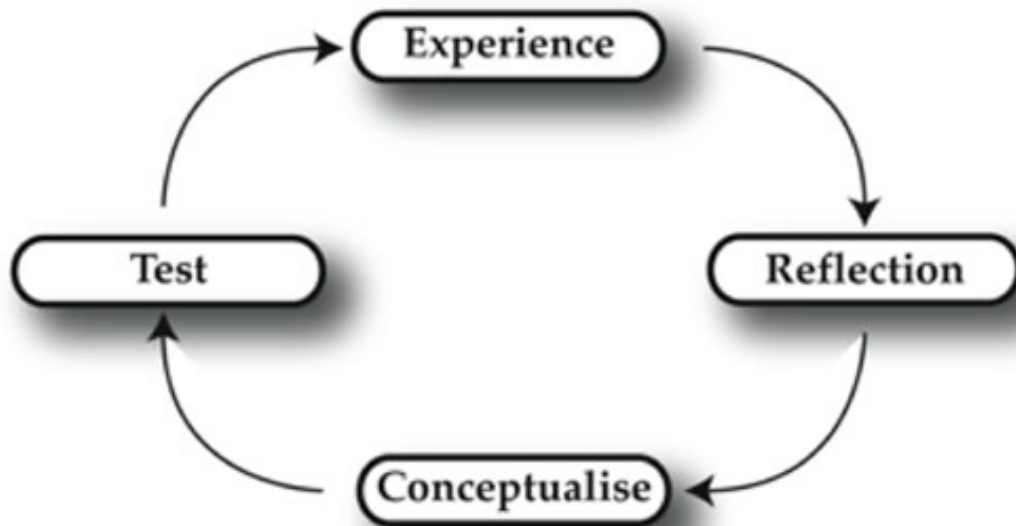
Thus teaching and learning methods should encourage:

- learning rather than teaching;
- active rather than passive learning;
- adult centred learning techniques;
- placing the learner, rather than the teacher/trainer at the centre of the learning process;
- allowing learners to take responsibility for their own learning;
- training based on real life work situations rather than theoretical inputs.

In many European countries the preferred training method is the **action-oriented learning process illustrated** below (also known as the problem-solving method).

⁴² in particular,

- Student-Centred Learning - Toolkit for students, staff and higher education institutions (This publication is part of the project Time for a New Paradigm in Education: Student Centered Learning, the **European Commission 2010**).
Cedefop Working Papers:
- No 11 - Lifelong guidance across Europe: reviewing policy progress and future prospects
- No 49 - Work-based learning in continuing vocational education and training: policies and practices in Europe
- No 47 - Vocational pedagogies and benefits for learners: practices and challenges in Europe



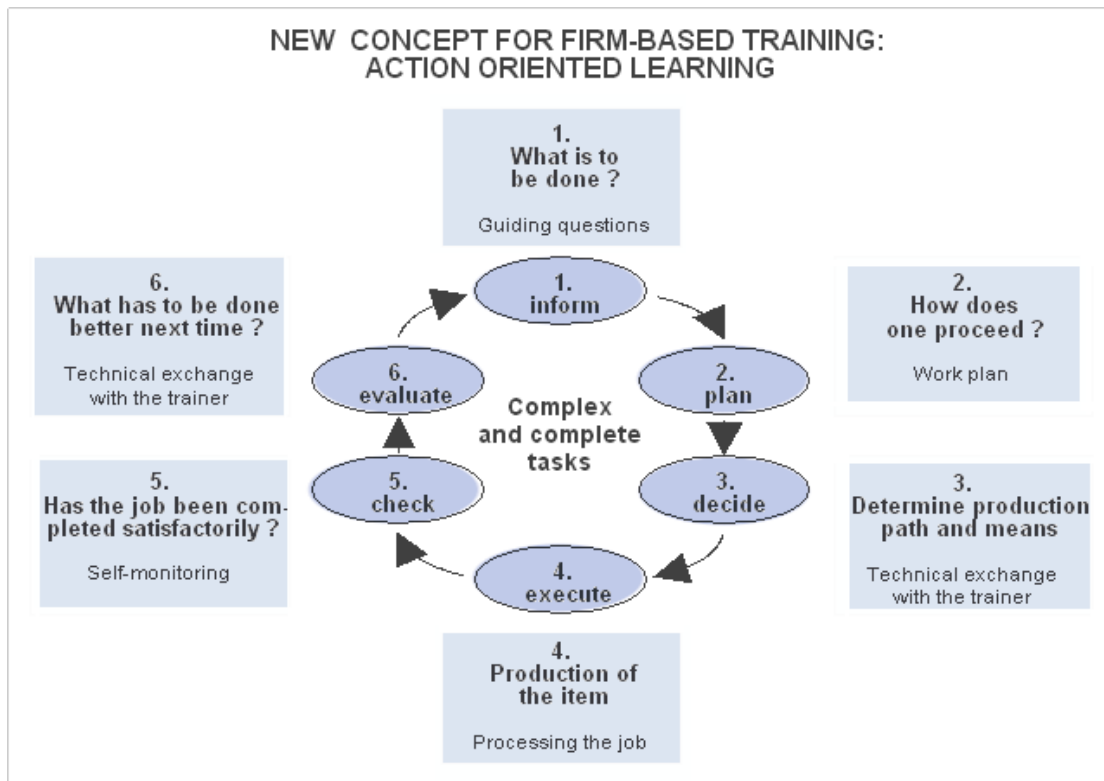
This model is in contrast to the more traditional teacher-centred vocational training method, which employs the 4–step process of

1. preparation
2. demonstration
3. imitation
4. exercise/practice

Action-based learning requires the learners to work in teams and typically follow a six–step approach to carry out tasks which they can expect to perform in real work situations. These six steps are:

1. the trainees are given a task plus basic explanation, if necessary. They try on their own to find the information they need
2. trainees plan and organize the necessary steps and resources
3. the plan is discussed with the trainer who supports decision-making
4. the trainees execute their plan in teamwork largely unaided or, in the case of complex tasks, in a team
5. trainees control, discuss and assess the final product. This check should be carried out first and foremost by the trainee him/herself, so that s/he learns to judge the quality of his/her own work
6. after self-monitoring, the trainees present their results to the trainer. They discuss problems, difficulties, and draw conclusions for future activities

This six-step action–based learning process is illustrated below within the context of a work-based or in-company vocational training programme.



Thus, student-centred teaching methods shift the focus of activity from the teacher to the learners. These methods include **active learning**, in which students solve problems, answer questions, formulate questions of their own, discuss, explain, debate, or brainstorm during class; **cooperative learning**, in which students work in teams on problems and projects under conditions that assure both positive interdependence and individual accountability; and **inductive teaching and learning**, in which students are first presented with challenges (questions or problems) and learn the course material in the context of addressing the challenges. Inductive methods include *inquiry-based learning*, *case-based instruction*, *problem-based learning*, *project-based learning*, *discovery learning*, and *just-in-time teaching*. The major references above illustrate the fact that student-centred methods have repeatedly been shown to be superior to the traditional teacher-centred approach to instruction, a conclusion that applies whether the assessed outcome is short-term mastery, long-term retention, or depth of understanding of course material, acquisition of critical thinking or creative problem-solving skills, formation of positive attitudes toward the subject being taught, or level of confidence in knowledge or skills.

8.2 Establishment of regional school centres

The commitments for gradual adaptation of the network of vocational schools to meet the needs of the local economy and the local developmental plans take a special place in the Strategy for Vocational Education and Training in the Context of Lifelong Learning 2013 – 2020. The Strategy emphasizes that "The network of VET schools

must correspond to the economic, demographic and cultural environment in which it operates. Forecasts of labour force development and skills needed should be in tune with local development and the local economy in the context of the wider economic development of the country. The planning of education profiles and skills that will be required in the future should primarily stem from local needs and development plans.”

This has adverse effects on the transition of the graduates to higher education. Sometimes TVET graduates opt for study programmes that do not match the character of their secondary education.

The network of VET schools should also closely meet employers' interests in quality and rationality of education. Within this context, well-equipped **regional vocational education and training** centres of optimal size could be established, for different sectors, in some cases possibly including general secondary education classes.

Such regional VET centres would also be able to pursue research, development and guidance activities, where the State's and social partners' interests in TVET, as well as in adult education are matched, coordinated and linked.

8.3 Creating conditions for efficient realization of the learning process

The new professional pedagogy should prepare the teachers and trainers to work efficiently with young people and adults in an environment of evolving living and working conditions. Teacher training has to include training in companies, too, both during and following the completion of the initial education. This requirement is particularly relevant for those teachers who are responsible for practical training.

The new approach to pedagogy requires adequate support and services to be provided by the professional institutions mandated for the development and monitoring of curricula. In this regard, the capacities of the Vocational Education and Training (VET) Centre, the Adult Education Centre (AEC), and the Bureau for Development of Education (BDE) should be strengthened by virtue of further development of the advisors' skills in innovative development of curricula, including the introduction of ECVET and distance learning programmes for adults, as well as their skills in competence-based student/learner assessment.

The concept of a "learning organization" highlights the need to involve companies and their employees in a dynamic process of learning as a source and a point of improved performance. This concept ensures that teaching and learning in TVET is carried out by means of innovative ways of interaction and cooperation between the companies and the providers of education and training services. The promotion of teamwork, learning partnerships, as well as the more frequent involvement of the companies' employees in the teaching and learning processes within the education institutions will improve the quality of learning to a great extent.

It is necessary to improve the situation in TVET schools by providing new or improved laboratories, workshops, demonstration facilities, equipment and

consumables. There should also be national and local strategies for utilizing the capacities of companies in the process of students' acquisition of practical and vocational competencies.

Local self-government should be encouraged to provide additional resources to support local TVET development, and the companies “should increase the investment in initial TVET, in particular through their involvement in alternative training models, but also by supporting schools with adequate equipment”. Education providers themselves should be encouraged to, and rewarded for, initiate and develop activities generating additional income, which, whilst ensuring staff are remunerated and motivated for additional efforts, should also be used to improve the quality and relevance of education and training provided to all beneficiaries throughout the institution.

8.4 Organization of the work-based learning and teaching process

Work-based learning is an educational strategy that provides students with real-life work experiences. Work-based learning provides students with an opportunity to see how classroom instruction connects to the world of work and future career opportunities. Work-based learning enables them to learn a variety of skills by expanding the walls of classroom learning to include the community. It gives the students an opportunity to:

- apply the learning in a real-world setting
- establish a clear connection between school and work
- assess their interests, aptitudes, and abilities while learning about the career possibilities available to them
- improve their post-graduation employment opportunities
- develop and practice positive work-related habits and attitudes, including the ability to think critically, solve problems, work in teams, and resolve issues relating to possible careers
- assess and understand the expectations of the workplace
- expand and refine their technical skills
- participate in authentic, job-related tasks
- observe the demeanour and procedures of workplace professionals
- increase their motivation to work and/or continue their education

Work-based learning occurs in a work setting, typically at an employer's worksite. The work-based learning activities must be coordinated with school-based activities in an attempt to show students the "why" of what they are learning. Work-based learning strategies provide career awareness, career exploration opportunities, career planning activities, and help students reach competencies such as positive work attitudes and employability skills.

The work-based learning experience may last from a few hours to hundreds of hours. Thus, for instance, job shadowing usually lasts a half-day or a full day. At a large company, job shadowing could last for more than one day. Most forms of work-based learning last over 100 hours.

Work-based learning can be tied to a specific course using the cooperative method, or can be independent from specific coursework. In cooperative education, the work-based learning is tied directly to a specific course. This allows the teacher to have the students connect what they are learning in the classroom with what they are learning in the workplace. Job shadowing, mentorship, and volunteer learning are often not tied to a specific course and would be considered independent work-based learning. Work-based learning experiences may be paid or unpaid. The companies may include different discounts or scholarships as a form of remuneration.

The TVET strategies provide an opportunity to apply several different types of work-based learning, such as:

- Apprenticeship
- Business/industry field trips
- Cooperative education
- Entrepreneurial experiences
- Sandwich teaching
- School-based enterprise
- Virtual school-based enterprise

Cooperation between institutions for VET education and employers is crucial for ensuring quality VET, particularly in the area of conducting the practical training for students at employers. Schools should provide quality vocational, theoretical and basic practical education in compliance with the curricula and financial and technical resources, whereas the employers should take greater responsibility for the students to acquire competences through quality practical training in a working process at the employer.

For an employer to be verified for providing practical training for students, it must meet certain conditions according to the Law VET in terms of the space, equipment and relevant staff, especially in the field of continuous training of the professional and other staff (mentors) from employers and enforcement of Article 15 of the Law on VET that regulates the rights and duties of employers involved in the practical training of students, especially the employers' rights to obtain certain financial, customs and tax benefits.

8.5 Continued matching of the education process with the labour market demand

In order to overcome the disparity between the education supply and demand, in 2008 the European Commission launched the "New Skills for New Jobs" initiative. This initiative aims to promote an improved anticipation of the future skill demand, develop an improved matching of the skills supply and the labour market demand, and to bridge the gap between education and the world of work.⁴³ Anticipating and

⁴³ European Commission (2010): Agenda for new skills and jobs: EU sets out actions to boost employability and drive reform, Strasbourg, 23 November 2010

matching the skills with the labour market demand has emerged as a top priority for the EU. To this end, in the forthcoming period the European Commission shall support the establishment of sector skills councils at European level in the cases when the initiative is raised by stakeholders such as the social partners or the relevant observatories.⁴⁴ Within this context, many EU Member States have established skills anticipation offices, councils or observatories needed by the labour market by pooling the efforts of labour market representatives and education and training service providers.

Forecasts of labour force development and skills needed should be in tune with local development and the local economy in the context of the wider economic development of the country. The planning of vocational qualifications and skills that will be required in the future should primarily stem from local needs and development plans.

It should put special emphasis on the practical training of students in the industry. The system design should facilitate the cooperation between companies and TVET schools. Such design should take into account the solutions applied by European countries in this regard, i.e., active involvement of the local self-government in the process, establishment of training funds, accreditation of companies for practical training of students and licensing the company staff/mentors training the students, etc.

Employers should be encouraged to cooperate, co-invest and participate in the activities of education and training institutions, particularly in technical and vocational education and training. This partnership can develop and update skills profiles, multidisciplinary curricula and qualifications, and facilitate the provision of work-based learning.⁴⁵ To this end, the government should undertake activities to ensure the effective implementation of legislative, institutional and funding arrangements for continuing TVET, encourage the enterprises and individuals, for example through incentives, to invest in skills development including validation of prior learning, as well as use appropriate approaches to lifelong career guidance and counselling.⁴⁶

In regard to mechanisms for curriculum interventions, it is evident that the VET Centre, as an institution with competencies for curriculum development, needs to strengthen its presence and work in the field. There is a need for more frequent contacts with school and employers; the functionality of the curriculum and the suggestions of the stakeholders can be assessed only out in the field.

The continued alignment of the TVET with the labour market includes the following measures:

⁴⁴ COM (2008) 868, 16.12.2008. Council conclusions of 9.3.2009 and 7.6.2010. 'New Skills for New Jobs: Action Now' Expert Group Report, February 2010

⁴⁵ European Commission (2010): Agenda for new skills and jobs: EU sets out actions to boost employability and drive reform, Strasbourg, 23 November 2010

⁴⁶ Unesco (2012): Transforming Technical and Vocational Education and Training Building skills for work and life, United Nations Educational, Scientific and Cultural Organization, Paris 2012

- To align the current TVET syllabi and curricula with the adopted NQF;
- To improve the process of development, application, and stakeholder involvement in the analysis of the labour market and the demand for qualifications, knowledge and skills;
- To establish a systemic cooperation among the Employment Service Agency, the VET Centre and higher education institutions for the purposes of continuing monitoring the skills needs and exchange of information on the labour market demand, employability of graduates and their further education;
- To continuously strengthen the relevance of curricula in TVET;
- To strengthen the relevance and functionality of the TVET network under an operational plan for gradual adjustment to the needs of the local economy and the local development plans;
- To apply different work-based learning models for the TVET students;

The TVET system should provide an offer that matches the labour market needs. This implies:

1. Possessing good information on the labour market needs
2. Established mechanisms to match the skills supply with labour market needs
3. Variety of contributions and good learning pathways
4. Strengthened social partnership in designing the TVET system

8.6 Career guidance and counselling of students

In the secondary schools in Republic of Macedonia the system for career guidance and counselling of students requires further development. The effect of recent measures and the representation of activities for career guidance and counselling of students have only been partially established in many secondary schools. Even in those with established career centres and trained teachers and associates, there is considerable room for improvement.

Taking into account the high unemployment rate of young people which have graduated only from secondary school as well as the acknowledged positive effects from the career guidance and counselling of students, it is necessary to do more work on:

- Identifying ways and paths for further development of the career guidance and counselling of students in the secondary schools;
- development and implementing standards, programmes and methodologies for career guidance and counselling of students in the secondary schools;
- quality assurance in adoption of the strategic and inter-sectorial coordinative policies.

The career guidance and counselling of students concept is a “string of activities which enable the individual at any age and at any life period, to identify its own abilities, competences and interests in order to make a decision which will determine its education, qualification and profession and to manage the life paths in the area of education, work and the other areas in which he/she can acquire and implement

his/hers abilities and competences” (Resolution of the Council of ministers of EU, 2004)

In determining priorities in this process, these factors need to be taken into account:

- High youth unemployment percentage in Republic of Macedonia. According to the data from the State Statistical Office for 2016, the youth unemployment rate at the age 15-24 is 52.1%. The biggest number of unemployment can be seen with persons that have graduated from secondary education 42%, and for primary schools' dropouts as well as primary school graduates its 18%;
- High percentages of young people are currently not in the education system nor are registered on the Employment Service Agency as unemployed. The number of young people that are in this category at the age of 15-24 is around 25%;
- Teachers and expert associates in the secondary schools, which are organizing the activities connected to career guidance and counselling of students, recognize that the value of career guidance and counselling is high especially since it encourages the young people to take responsibility for managing their own career in their own hands and to accept that they are creators of their professional future;
- With the Career guidance programme, the young people are woken up, encouraged and have started planning their development and they have seen the link with the real life. The schools shouldn't be only a place where you can study, but a place where young people can be prepared for what is to follow after graduation, continuation of the education or inclusion on the labour market.

All young people in the secondary education should be provided an accessible, quality, functional and sustainable service for career guidance and counselling. In accordance to the concept for lifelong guidance and lifelong learning, the career guidance and counselling should be harmonized with the career guidance and counselling in the primary education as well as in the higher education and it should be organized in other sectors as well. The career guidance and counselling services are not only for young people in the secondary schools, but they should include their parents as well.

In conceptual terms, it is necessary to:

- Develop and adopt a Programme and Methodology for career guidance and counselling in the secondary schools in cooperation with the stakeholders;
- MoES in cooperation with the social partners and civil society organization should consider a bylaw for career guidance and counselling for the secondary schools. If necessary, the bylaw would help progress could implementation of the Programme and Methodology for career guidance and counselling. Development of a Strategy and defining of the roles of all stakeholders in the process of development of career guidance and counselling;
- Establishing a database and constantly updating in order to collect the necessary information for career guidance and counselling in the secondary education;

- Using this and other relevant data, involve relevant institutions that will have the authority to periodically conduct research for monitoring the development of the career guidance and counselling in the secondary schools, evaluation of the quality and assessment of the effects. Based on the research, the specific obstacles need to be identified for the development of career guidance and counselling and to establish effective actions for their resolution;
- The VET centre and the BDE remain key partners in this process;
- The career guidance and counselling training should be standardized and based on learning outcomes;
- A revised strategy and structure should include training selection for expert associates, programmes;
- In the educational programme for initial education of teachers as part of the group of pedagogical and psychological subjects, career guidance and counselling can be included as a separate subject;
- Development of mechanism for encouraging the teachers to be more involved in career guidance and counselling, promoting the importance of this area and acknowledging the additional work that the teachers do as career counsellors in addition to their primary work.

Further development of a base for resource that the schools are using for the career guidance and counselling is needed. It is desirable to provide rulebooks, online instruments and guidance, which the teachers can use when helping the student in their career planning. The schools need to achieve and develop cooperation with numerous institutions and organization such as: Employment centres, civic associating, economic chambers, employer associations, student associations, other schools etc. The schools should pay more attention on their programmes for career guidance and counselling and to envision activities for active participation of the parents and activities linked to using the European funds in order to achieve mobility and exchange of experiences which can be beneficial for improving the programmes, and activities for career guidance and counselling.

9. TEACHING STAFF

9.1 Teachers and trainers

TVET is implemented by several types of teachers:

- Teachers of general education
- Teachers of vocational education-theoretical education
- Teachers for practical training

9.2 Professional development of teachers⁴⁷

Continuing professional development for TVET teachers is an important issue for Macedonia which is being addressed primarily by development of new policies and strategies.

There is high awareness of the issue of continuing professional development for TVET teachers that is reflected in different strategic and development documents. To that end, the Law on Teachers in Primary and Secondary Schools⁴⁸ and Law on Academy for Teachers⁴⁹ were adopted, as well as by-laws, that more closely regulate the professional development of teachers also in TVET.

The intention of the **Law on Academy for Teachers** is to strengthen the capacities of current and future teaching staff in pre-school, primary and secondary education, to enhance curricula for teacher education and to introduce a system for continuous training. This law, inter alia, envisages the following:

- Introducing a system for professional and career development of teachers by creating precise categories of teacher-mentors and teacher-advisers, accompanied by additional financial benefits, i.e. increasing the monthly salary of teachers;
- Introducing a licensing system for teachers which will be mandatory for future teachers, but will not be mandatory for current teachers, who, if they wish to go through the licensing procedure, will receive financial benefits;
- Introducing a selection of candidates for enrolment of future teachers, by selecting the best students since the entry exam and the continuous support through scholarships for the purpose of achieving better results;
- Introducing a new concept for education and selection of quality management staff, which will manage schools, through training and passing an examination for school principal, transparency of the exam and mandatory continuous development.

The Law on Teachers regulates the conditions for performing the teaching occupation in primary and secondary schools in the Republic of Macedonia, employment, categories of teachers, working duties of teachers, continuous professional development, career advancement (career development) and revocation of a title.

Teachers are obligated to dedicate at least 40 classes to the continuous professional development during three school years, of which 20 to accredited training programmes. On annual level, the teacher should attend at least 13-14 classes for continuous professional development, of which 6-7 classes to accredited training programmes.

⁴⁷ Adapted from: Velkovski, Zoran, Draft Report on Continuing Professional Development (CPD) in the Republic of Macedonia, ETF, 2015

⁴⁸ Law on Teachers in Primary and Secondary Schools, Official Gazette of the Republic of Macedonia no.10/15, 2015

⁴⁹ Law on Academy for Teachers, Official Gazette of the Republic no. 10/15, 2015

Proposed training programme for professional development is developed and proposed by the Bureau for Development of Education, in cooperation with the VET Centre, State Examination Centre, State Educational Inspectorate and the Academy for Teachers.

Professional development is achieved through accredited training programmes, through approved projects by the Ministry, in-school professional development, regional collaboration study teams and through individual forms of learning.

For the personal professional development, the teacher creates a personal plan for professional development for each school years, based on the self-assessment in relation to key professional competences, results from integral evaluation, external assessments of students' knowledge, reports from visits by advisers front eh BDE, VET Centre and State Educational Inspectorate.

A professional record is kept for the professional development of each teacher. The form, contents, and method of keeping the professional records are prescribed by the Minister, upon a proposal by the BDE.

In accordance with the law, the competences for continuing professional development of teachers in secondary vocational schools rest with the Bureau for Development of Education and the Vocational Education and Training Centre.

The Bureau for Development of Education has the competence to accredit programmes for continuing professional development of teachers in secondary vocational schools and provision of continuing professional development, which is something that the Vocational Education and Training Centre lacks. This arrangement perhaps needs reconsideration.

There is scope for development of an effective system for accreditation of regular providers of continuing professional development for TVET teachers, and there is no catalogue of continuing professional development programmes that schools and teachers can draw upon to satisfy their needs. It is necessary to expand the number of providers of continuing professional development for TVET teachers through greater support from the Government, the Bureau for Development of Education and the Vocational Education and Training Centre.

Training of trainers/mentors in companies is insufficiently developed in the Republic of Macedonia. There are several initiatives that address this issue through the development of training standards and programmes, but they are still limited to specific project-related activities and do not form a part of an established system for training of trainers/mentors.

Teachers and trainers in TVET, in additionl to the formal conditions for performing the teaching profession, should also posses special andragogy education, i.e. to have acquired competences for adult teaching and training. This is important considering that TVET school provide services not only to young and regular students, but also to adult students. Adult students may have a status of non-

participating students or students covered by various models of organisational forms of lifelong learning.

During the work with adults, teachers have the role of facilitators, instructors, consultants, mentors, i.e. they should support and enable the learning. They have the obligation to support adult learning and education, to facilitate their learning and education process and equip them with sufficient sources of information.

With regard to the system for continuing professional development, the Ministry of Education and Science (MoES), the Bureau for Development of Education, the Vocational Education and Training Centre, municipal authorities, VET schools, providers of continuing professional development services and other stakeholders and social partners should work together to:

1. Improve the participation of stakeholders in the development of policies for continuing professional development.
2. Consider allocating appropriate resources so as to enable the responsible bodies, the Vocational Education and Training Centre and the Bureau for Development of Education (and, in the future, the Academy for Teachers), to plan and deliver appropriate continuing professional development for TVET teachers.
3. Integrate initiatives and programmes for continuing professional development, which have been supported and designed by multiple internal and external agencies, into the national system.
4. Develop a catalogue of training programmes and providers.
5. Establish an open, on-line continuing professional development platform for TVET teachers and mentors offering information, research findings, examples of good practices in CPD and programmes for continuing professional development through e-learning.
6. Develop programmes for continuing professional development in line with the different career levels of TVET teachers.
7. Make use of the Catalogue of competences for TVET teachers to facilitate the teachers' training needs assessment, which should inform the design of continuing professional development programmes and the analysis of needs.
8. Agree and implement external evaluation for continuing professional development programmes and monitor the impact of training upon teaching and learning so that continuing professional development can be developed and improved over time.
9. Ensure that the requirements for accreditation of continuing professional development programmes are observed, in particular in terms of the use of an appropriate methodology (suitable for adult TVET teachers) and their effectiveness.
10. Develop programmes for training of trainers employed by providers of continuing professional development for TVET teachers.
11. Explore ways of improving quality assurance for continuing professional development provision, for example, the introduction of the European Peer Review Model for Quality Assurance and requirements concerning the qualifications of trainers.
12. Research the professional development needs of TVET teachers, instructors and of TVET schools.

13. The analysis of professional needs of teachers should become a regular practice in schools.
14. The planning and provision of school-based continuing professional development should be a regular activity and should be a subject of internal and external evaluation.
15. There should be greater use of different kinds of feedback for TVET teachers, in particular one focusing on teaching and learning (e.g. feedback from peers, feedback using student assessment data).

With respect to the funding of continuing professional development:

1. Legislative requirements for continuing professional development for TVET teachers should be backed up by earmarked funding.
2. Funding of continuing professional development for TVET teachers should be transparent and constitute an identifiable element of the budgets of the MoES, VET Centre, BDE and TVET schools.
3. The plans of the Bureau for Development of Education and the Vocational Education and Training Centre for continuing professional development programmes should be defined annually and should be accompanied by relevant financial commitments necessary for their successful implementation.
4. Financial planning should account for the financial contributions of international donors and other partners so as to ensure that the budgeting process is based on comprehensive information and reports about the available resources.
5. Consideration should be given to alternative mechanisms that could increase efficiency and effectiveness, for instance, delegating part of continuing professional development budgets to schools or issuing vouchers for the teachers.

9.3 Career development of teachers

The enhancement of job titles is usually a motivational factor for teachers to invest in themselves in order to achieve professional development and to have additional working obligations. Acquiring a senior job title in most cases is connected to pay rise.

The career development in Macedonia, according to the current legislation, takes into consideration the vocational development of teachers, the results from the external examination, the results from the internal evaluation, individual assessment by the State examination inspectorate (SEI) and the teacher's portfolio.

According to the changes and amendments of the Law on secondary education ("Official Gazette" no. 14, 2014, article 69) the secondary school teachers can be improved, trained, developed based on the previously prepared Primary professional competences for teachers and Standards for teacher-mentor and teacher-advisor, in the following titles:

- *Teacher-apprentice* is a teacher who is employed for the first time at a school. The apprenticeship can last up to one year. He/she can be promoted into the following job titles:
- *Teacher*

- *Teacher mentor*
- *Teacher advisor*

The competences refer to the overall professional engagements of teachers in curricula and extra curricula work with students, colleagues, and the community. They cover the professional knowledge, skills and values and competences developed for teachers as part of the innovative projects that have been implementing in the Republic of Macedonia in the past 15 years.

The standards of teacher-mentor, apart from development of professional competences in the educational work with a high teaching quality, the focus is made on the competences of the teacher for development of the educational work in the school as a whole. The teacher-mentor should have the knowledge and skills regarding how to improve the effectiveness of the school work in general and is dedicated to achieving the school goals. He/she should encourage learning and work well to support both students and colleagues. These competences include initiating and encouraging discussions and activities for effective education and improving the student results.

On the other hand, the standards for teacher-advisor focus on the competences for improving the educational process in the regional and on a national level. Apart from the teacher-mentor competences, the teacher-advisor should possess knowledge and skills for building and guiding professional learning communities on a regional or national level in order to improve the education in the specific subject/module or area, but also to improve the educational system as a whole.

10. QUALITY ASSURANCE IN TECHNICAL AND VOCATIONAL EDUCATION AND TRAINING

One of the most discussed, but also the most marginalized issues in terms of practical realization is the issue of the development of a quality assurance system in TVET. The term "quality assurance" has not established itself yet in the TVET system in the country. The terms "quality control" or "provision of quality" are used instead. Any country striving to establish a high level of management with the quality in TVET should focus on quality assurance. Quality control in TVET can be external and internal. Quality control is a part of the quality management system focusing on fulfilling the basic quality requirements. The control is carried out during or upon the completion of the education process.

Quality control in VET is carried out internally (self-evaluation) and externally (integral evaluation).

Accreditation and certification, including the mechanism for validation and recognition of previous learning, still do not form a part of quality control system. The competencies in this domain lie with the MoES.

Apart from the system for quality control in TVET, there is no system to support quality and/or system for quality assurance, which would decentralize the issue of quality assurance through active participation of a broad base of stakeholders in the process of strengthening the quality in TVET.⁵⁰

The annual report of CEDEFOP 2012 highlights that for establishment of any quality assurance system, a National Qualifications Framework needs to be established first.

National Qualifications Framework is a sound and comprehensive prerequisite for a valid quality assurance system.

When speaking of the structure of a common system of quality, which can serve as basis for quality assurance system in VET, EQAVET provides good guidelines for the desired characteristics, such as:

- regular evaluation of institutions, their programmes or quality assurance systems by external bodies for monitoring their work or institutions;
- external bodies for monitoring the work or institutions that control the quality should also be subject of regular controls;
- common principles regarding the important elements of quality assurance systems;
- clear and measurable objectives and standards;
- guidelines for implementation, including involvement of all stakeholders;
- relevant resources;
- consistent methods of assessment, linking the self-assessment with external testing;
- feedback mechanisms and procedures for improvement;
- widely available results from the assessment.

With the Bruges Communiqué (2010) an agreement was reached that participating countries should establish a framework for quality assurance in compliance with EQAVET recommendations summarised below. Communiqué agreement requires "undertaking relevant measures for implementation of EQUAVET recommendations and achieving progress regarding the national quality assurance frameworks in VET" by 2014. Furthermore, by the end of 2015, participating countries were supposed to establish on national level a quality assurance framework compatible with EQAVET framework for institutions providing VET education, including the entities offering work-based learning.

It should be emphasised that there are rare cases where the quality assurance system has been designed according to the first principles. In most of the cases, these systems developed over time as a response to reactions from the public about certain problems in VET, international trends regarding the "good practices" and the cooperation and interests of creators of policies and politicians who have a tendency to look for coherent, universal arrangements, service providers who have a tendency to highlight the flexibility and the attention of individual "special cases" and employers

⁵⁰ Strategy for Vocational Education and Training 2013 – 2020

who look for both at the same time. Even though countries occasionally revise parts of quality assurance system, they rarely or almost never revise the system as a whole. Discussions in Bruges stimulated the development of a "system as a whole", recognising at the same time the unique social and economic systems of each country.

Most of the EU member countries have achieved a significant progress in regard to their commitment to these principles and have reached the objectives stemming from these recommendations. Generally speaking, most of them have changed their quality assurance systems in which decisions were made "top down" into systems which encourage the involvement of all stakeholders - teachers, employers and parents.

Over time, quality assurance systems in VET in EU member countries have started to stem from one of the following facts:

- the fact that service providers are publicly financed or financed by the system of nationally recognised qualifications; here the mechanisms for quality assurance are very much based upon the development and provision of qualifications.
- the fact that others were focused on providers of training services (whether or not they have permission to award qualifications) i.e. to provide good value for money they receive from the tax payers.
- more recent approach in quality assurance, which relies on statistical mechanisms; new capabilities for collection and aggregation of data and new statistical techniques for analysis which paved the way to monitoring the achievement and learning from these practices.

In these circumstances, Macedonian practices in the last area mentioned above are not yet established in a systematic way.

As concerns the first two items above, the State Education Inspectorate, if it remains the key entity for quality assurance on external level, it will have to change the focus of its role so as to harmonise with the EQAVET requirements (significant activities are requested in the light of the approach described in the third item, and this, of course, may impose introducing legislative changes - see the previous section regarding the key laws regulating the responsibilities).

Also, the VET Centre has a crucial role in abandoning the "top down" approach. The VET Centre is a public institution which, inter alia, has a responsibility to harmonise and integrate public interests and interests of social partners in VET (Article 31 of the Law on VET, "Official Gazette" no.71/06 and 117/08). In compliance with Article 32 of the aforementioned law, the VET Centre performs specialised supervisions, evaluation, mentoring, promotion and research and development activities, as well as other tasks in compliance with the Law and the Statute. The VET Centre also plays a key role in the development and functioning of quality assurance system in VET, whereas the Bureau for Development of Education (BDE) must undertake a clear obligation in the light of creation of a comprehensive quality assurance system in

order to get relevant data which will help it to fulfil its responsibilities during the design of curricula, maintenance and innovations.

In this summary, key points are:

- need for further progress in the light of the good EQAVET practices;
- need for reforming attitudes and activities that will not arise from the inspection approach "top down", but will involve all stakeholders in a consistent manner.
- need for establishment of a system that will develop models which will use data generated on all levels of the decision making process and responsibilities in the VET.
- and most importantly, full recognition of unique characteristics of the Macedonian economy and society.

10.1 Delivery of quality in technical and vocational education and training

Improving the attractiveness, accessibility and quality of TVET is of paramount importance in order to allow vocational education and training to play a major role in the strategies for lifelong learning and to facilitate enhancement of equality, business performance, competitiveness and innovation, and to create opportunities for young people and adults to acquire skills that are necessary for their career development, that enable them to participate in training, to be active citizens and achieve personal fulfilment. This entails improvement of the quality of TVET, through enhancement of the quality and competences of school teachers, trainers and management, through introduction of flexible pathways in all education levels and through improving the public awareness on the opportunities offered by TVET.

Quality as an overarching value in any education system and subsystem, including TVET lays the foundation for the specific goals, aimed at improving practical teaching and training, ensuring delivery and acquisition of key competences, improving management of and support to the TVET system, etc. In order to ensure that quality is sought and achieved, one must develop appropriate procedures, mechanisms and instruments, organized in a system for quality assurance.

In addition of highly motivated and high quality teachers and trainers, quality in TVET also requires the establishment of a quality assurance system, which includes a sustainable monitoring and evaluation system based on TVET processes and outputs, which assesses the situation in VET, the impact of new programmes on students, on the labour market and higher education, registers and promptly responds to feedback from TVET beneficiaries - students, employers, universities, schools and other stakeholders.

The quality assurance system to be instituted in support of improving the quality of TVET as a guarantee for employability and competitiveness, must take into account specific requirements and principles:

- QA should be constituent and integral part of the management and development of TVET providers and should promote accountability and transparency;
- Policies and procedures for QA should be harmonized with the NQF and the national ECVET system (European credit system for vocational education and

training), and with EQARF (European Quality Assurance Reference Framework) at EU level, and address adequately input, context, process and output dimensions and pay special attention to outcomes and outputs, including destinations of graduates;

- QA procedures should bring together internal and external mechanisms, and serve as a platform for stakeholder involvement and empowerment; and
- Active participation of the Republic of Macedonia in the EQAVET Network.

Quality assurance in VET should include the following elements:

- clear and measurable objectives and standards,
- guidelines for implementation, including stakeholder involvement,
- appropriate resources,
- consistent evaluation methods, associating self-assessment and external review,
- feedback mechanisms and procedures for improvement,
- transparency of the evaluation results.

10.2 Internal evaluation

TVET facilities are obligated to carry out a self-evaluation of their performance and outputs. Self-evaluation is monitored and supported by the Vocational Education and Training Centre.

Self-evaluation is carried out in the following key areas:

- planning and programming of work;
- realization and support to learning;
- students' achievements;
- material conditions and human potentials;
- professional development of the employees;
- interpersonal relationships in the institution;
- management and governance; and
- cooperation with the stakeholders.

Out of the stakeholders, depending on the obligation or task, only those key partners who can contribute the most for the enhancement of the VET institution shall be selected. The areas where such partnership can play a crucial role are: financing, maintenance, management, professional support and counselling, and primarily in provision and exchange of information and ensuring quality through participation in unofficial voluntary external evaluation. Furthermore, the engagement in quality assurance should be voluntary and developed through cooperation.

One of the more modern trends in building a single methodological approach to quality assurance in secondary vocational education and training in Europe is the promotion of Peer Review as an approach that is appropriate for the entire methodology. It is becoming increasingly used and significant in the European countries. It enables a collaborative approach to evaluation and makes a strong contribution to quality assurance. The integral evaluation, which is already applied in the schools, can be strengthened by including this model of external evaluation.

However, the introduction of this methodology should be preceded by an analysis of the situation and the potential for its application.

The TVET institution establishes a Quality Assurance Council with representatives from the ranks of:

- teachers;
- stakeholders; and
- beneficiaries.

The Quality Assurance Council is obliged to carry out the self-evaluation and to make possible its linking with the external evaluation of the quality in the institution. Representatives of the stakeholders should take part in the Council's meetings, in quality assessment, in the development of the institution's policy and take an advisory role in the development components.

10.3 External evaluation

The external quality control is defined through the role of the State Education Inspectorate. By carrying out the external integral evaluation, it carries out its obligation for conducting supervision/control of quality in the VET institutions. The Rulebook on the manner and procedure for conducting the inspection supervision of the education inspection⁵¹ makes reference only to the integral evaluation, without addressing the issue of quality assurance, with special focus on indicators developed for assessing the quality of the work of the schools. Unfortunately, some of the quality indicators are not appropriate for the specificities of TVET, are too general and in poor communication with the European Quality Assurance Reference Framework for TVET.⁵²

Quality assurance should be linked with quality assurance initiatives at national and international level and they should be aligned in a way that ensures visibility, correlation, synergy and system analysis.

10.4 Verification of curricula

The TVET syllabi and curricula, are adopted by the Minister of education and science upon a proposal by the VET Centre.

10.5 Accreditation of educational institutions (service providers)

Accreditation and certification, including the mechanisms for validation and recognition of previous learning, should become a part of the quality assurance system in TVET. This implies that the institutions with competences for information, identification and recognition of previous learning, diplomas and certificates at national and international level should be constituent parts of the quality assurance

⁵¹ Official Gazette of RM, No. 86/2006.

⁵² Strategy for Vocational Education and Training 2013 – 2020

system in TVET. These institutions should be competent for the adoption of guidelines for licensing, accreditation and quality assurance in TVET, as well as for the adoption of clear, transparent and available criteria for the implementation of the accreditation, quality review and assessment procedures in the TVET institutions.

The accreditation of TVET institutions is carried out by the Ministry of Education and Science, upon a proposal by the VET Centre.