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KA 2 STRATEGIC PARTNERSHIP PROJECT

“Through Entrepreneurship Education towards improving the
quality of VET”

CONTRACT No. 2016-1-CZ-KA202-024066

**Intellectual Output 1: The state of play report of each
country**

TABLE OF CONTENTS

INTRODUCTION	3
DESCRIPTION OF THE VOCATIONAL EDUCATION AND TRAINING	4
Czech Republic	4
Latvia.....	11
Austria	17
Portugal	20
DESCRIPTION OF THE VOCATIONAL EDUCATION AND TRAINING IN EQF LEVEL 3.....	23
Czech Republic	23
Latvia.....	28
Austria	29
Portugal	31
QUALITATIVE RESEARCH.....	36
Czech Republic	36
Latvia.....	47
Austria	57
Portugal	65
CONCLUSIONS	72
APPENDIX.....	79

INTRODUCTION

The purpose of this project is to develop a specific training programme for teachers of secondary vocational schools, vocational schools and training centres in supporting entrepreneurship. Entrepreneurship education is not yet included systematically in training programmes for teachers/ trainers in the involved countries. It is necessary to provide teachers/ trainers with the adequate competences to teach entrepreneurship. Teachers/ trainers will gain experience from foreign partners of the project, which will be reflected in other ways and habits, characteristics of the country. They will become familiar with the partner countries, the ways of doing business and part of the knowledge can be used in their activities in practise.

The aim of the project is to encourage exchange in the partner countries in the area of the Entrepreneur education in the line with the Lisbon strategy for growth and employment according to which Europe needs to stimulate entrepreneurial mindsets among young people. According to Entrepreneurship 2020 Action Plan, issued in 2013, which states that between 15% and 20% of students who participate in a mini-company programme in secondary school will later start their own company. This project is collaborated internationally among 4 partners.

The aim of this report is to map and analyse the situation in the area of entrepreneurship education in the countries involved in the project. Firstly, all partners described the Vocational Education and Training in each of their countries; a description of the Vocational Education and Training in EQF level 3 was made.

Each partner carried out a research targeting VET teachers, trainers, staff and students to find out the current situation in each country regarding entrepreneurship education. On the basis of this research a specific training programme will be created for teachers of secondary vocational schools, vocational schools and training centres in supporting entrepreneurship education.

DESCRIPTION OF THE VOCATIONAL EDUCATION AND TRAINING

Czech Republic

VET position in educational system

The Czech system of education has undergone several important reforms during the past 20 years. Several reform processes and changes are of especially high importance. The Czech education system is divided into 4 stages - pre-school education, basic education, secondary education and higher education. According to the content of education it is considered as general or vocational.

The Education Act set a two-level structure for educational programmes for pre-primary, compulsory and upper secondary education (incl. initial vocational education and training). Framework Educational Programmes specify the concrete objectives, form, length and compulsory content of education and some general conditions for their implementation, as well as conditions for the education of pupils with special educational needs. Each school has to draw up its own School educational programme in accordance with the Framework Educational Programme and the school's conditions.

In the area of higher education, the Bologna process has fundamentally influenced the system of tertiary education in the Czech Republic. Besides significant massification of higher education, all initiatives approved by the Ministers in the framework of Bologna process have been adopted (i.e. 3-structure system, ECTS, diploma supplement, quality assurance, etc., the national qualification framework is being developed).

The following graph provides an overview of the Czech school system. Sectors that can be assigned to VET range from the secondary level II to the tertiary level.

of basic education. Most graduates (about 95%) of elementary compulsory education continue their studies in upper secondary vocational (80%) or general (20%) education.

Upper secondary schools (*střední školy*) provide mainly upper secondary education (ISCED 3) which may be general or *vocational* (with a higher or lower share of general component), while vocational courses prevail. This type of education is post-compulsory provided in two to four-year programmes and pupils usually enter them at the age of 15 after they have completed compulsory schooling.

It offers a wide range of professional fields of study at several levels and covers educational needs of the whole 15-18-year-old age group. Some secondary schools (multi-year secondary schools – *víceletá gymnázia*) provide also the lower secondary education (general education).

Upon successful completion of a relevant educational program in an upper secondary school pupils have achieved a level of:

1. secondary education with a *school-leaving examination* (*střední vzdělání s maturitní zkouškou*) (ISCED 344 /general education/ or 354 **/VET/**, completed with a school-leaving examination);
2. secondary education with an *apprentice certificate* (*střední vzdělání s výučním listem*) (ISCED 353 - **VET**; completed with a final examination);
3. secondary education (*střední vzdělání*) (ISCED 253 **/VET/** or 353 **/VET/**, completed with a *final examination*).

Following types of study are organised at upper secondary schools for those who have achieved secondary education with an apprenticeship certificate or a school-leaving examination and want to achieve other qualification:

1. follow-up courses (*nástavbové studium*) (ISCED 354 **/VET/**, completed with a school-leaving examination);
2. shortened courses (*zkrácené studium*) aimed at achieving secondary education with a school-leaving examination (ISCED 354 **/VET/**);
3. shortened courses aimed at achieving secondary education with an apprenticeship certificate (ISCED 353 **/VET/**, completed with a final examination).

Only secondary education with a school-leaving examination (Maturita) entitles graduates to enter a tertiary level of education.²

Main features of VET in the Czech Republic:

- The main body responsible for IVET is the Ministry of Education, Youth and Sports.
- Most VET schools are public and founded by regions.
- Early tracking (choosing about general or vocational education is made at age 15)
- IVET is school-based
- Proportion of practical training (at schools, in workshops, practical training centres, and authorised companies and/or work placements) and general education depends on the type of programme. But general subjects are very strong part of the educational programmes (about 30 – 70 %)
- Drop-outs - early leaving is very low (about 5,5 %)
- Due to demographic changes the number of young learners is decreasing
- Social partners' representatives cooperate with schools, are involved in the development of the educational curriculum, participate at the leaving school examinations, providing practical training to students in real work environment and in the final exam committees of upper secondary vocational programmes (ISCED 353), cooperate at the newly introduced uniform assignments for final examinations (ISCED 353), and profile (vocational) parts of maturita exams (ISCED 344, 354).
- Any adult can study any VET programme at the formal educational system
- The system of recognition of prior learning works from 2007 year, the National system of qualification is gradually developed. Certification in upper secondary education can also be obtained without prior participation in an educational or training programme if the applicant submits a set of certificates for (partial) professional qualifications. These certificates which together entitle the holder to full qualification enables them to take a final or school-leaving examination without prior participation in organised education.

² Countries. Description of national educational systems. Czech Republic. EURYDICE 2016. On-line. Available at https://webgate.ec.europa.eu/fpfis/mwikis/eurydice/index.php/Czech-Republic:Upper_Secondary_and_Post-Secondary_Non-Tertiary_Education

Duration (years, semesters) of VET studies

ISCED LEVEL	EDUCATION/ QUALIFICATION CERTIFICATE AWARDED	CHARACTERISTIC OF EDUCATION	INSTITUTION	LENGTH (YEAR)	TYPICAL AGE
354 344	School leaving examination (maturita examination)	With several specializations: pedagogical, economical, technical, etc. - the proportion of general education accounts for approximately 70% of the curriculum.	Lyceum (ISCED 344)	4	15-19
		Professionally oriented programmes which include a general education component, forming roughly 50% of the course content. Graduates may continue in tertiary education or enter the labour market. The programmes include work placements in companies and other institutions.	Secondary technical school (střední odborná škola) ISCED 354		
353	Final examination - Apprenticeship certificate	Lead to a qualification, are practically oriented and have a smaller general education component (approximately 34%). Part of these programmes is vocational training, which takes place in training facilities or school workshops/ laboratories or, in the second and third year, usually in a real workplace environment. Education in these	Secondary vocational school (střední odborné učiliště)	2/3	15 – (17) 18

		programmes is concluded with a final examination in which students demonstrate that they are prepared for relevant work activities.			
354 or 554	School leaving examination – maturita (after 4 years) or absolutorium (after 6 years)	Artistic education in the fields of music, dance, or drama	Conservatoire	6 or 8	15-(19/20)
253	Upper secondary general and vocational education, primarily for students with special needs and disadvantaged students	Develop manual skills and working habits and prepare students for performance of simple auxiliary tasks in production or services.	Secondary vocational schools (střední odborná učiliště– SOU) or practical schools (praktické školy)	1 or 2	15- 17

Linking vocational education with the labour market (collaboration with entrepreneurs etc.)

“Political changes and economic transformation after 1989 had a substantial impact on the Czech system of vocational education and training (VET). State-owned companies, which previously used to be the main providers of VET and employers of VET graduates, fell apart in the course of the privatisation. Practical training shifted largely to school workshops and laboratories whose equipment by far did not match existing needs and rapid development and the teachers themselves started to lose contact with new technologies. During the following period of rapid economic growth and demographic decline, the lack of skilled workers particularly in the fields of craft became a major obstacle to further business development. The mismatch between employers’ needs and the capacity of the school system to satisfy those requirements thus led to the recovery of the employers’ interest in cooperation with schools aimed, in particular, at securing provision of skilled graduates in the future. The employers’ interest has intensified especially in recent years.”³

³ KAŇÁKOVÁ, Martina, ŠÍMOVÁ, Zdeňka and Věra CZESANÁ, ed. Apprenticeship-type schemes and structured work-based learning programmes in the Czech Republic [online]. In: . National Training Fund (NTF)

The aim is to link VET with the requirements of the labour market by introducing cooperation mechanisms between employers and schools (e.g. by means of sectoral agreements). Enhancing the role of employers and increasing their participation in VET is one of current national priorities.

The requirements should be reflected in:

- curricular reforms,
- by increased efficiency of the counselling system and
- enhanced cooperation between schools and external partners while providing practical training to students in real work environment.

However, schools should not prepare students neither for highly specialised working positions nor for a particular employer. As many employers, as possible should be involved in shaping the curricula.

Social partners can influence vocational education at national and regional levels particularly **through co-operation on the preparation of curricula**. A relatively new type of entities operating nationwide (since 2006), primarily in the process of defining occupations and qualifications, are the sector councils. They bring together representatives of key players, especially employers, in particular fields. Sector councils consisting of the representatives of employers, educators and ministries working on the qualification standards, skills needs analysis of the labour market in sectors, and standards of vocational qualifications in relation to occupations and jobs defined in the National Register of Occupations (www.nsp.cz).⁴

Social partners' representatives **participate in the final exam committees** of upper secondary vocational programmes (ISCED 353), **cooperate at the newly introduced uniform assignments for final examinations (ISCED 353), and profile (vocational) parts of maturity exams (ISCED 344, 354)**.

The Czech Republic is developing the National qualification framework which is based on a national qualification register and national qualification Framework for tertiary education. Labour market requirements described in the qualification standards for complete vocational

and National Institute for Education (NUV), 2014 [cit. 2016-12-20]. Available at: http://www.refernet.cz/sites/default/files/download/cz_2014_article_on_apprenticeship.pdf

⁴ Šímová Zdeňka and Czesaná Věra, National Training Fund (NVF), Prague CEDEFOP 2014. Czech Republic VET in Europe – Country report

qualifications **will gradually play a key role in creation and revision of the initial (vocational) education curricula.**

“Several measures have been already introduced (such as tax incentives), pilot projects testing the possible future solutions have been launched and further ways of making the whole system more effective are being considered – e.g. conceptual transformation and also modifications in VET funding in the future are suggested most often.” For more details see:

https://cumulus.cedefop.europa.eu/files/vetelib/2015/ReferNet_CZ_2014_WBL.pdf

Latvia

VET position in educational system

The main Latvian education system elements are: (A) pre-school; (B) primary; (C) secondary education; (D) the highest (tertiary) education. Pre-school education is compulsory for all five to six year olds. It is followed by nine years of compulsory primary education and three non-compulsory secondary education years. Primary education is mostly general; but at its last stage there can be implemented vocational training. Secondary education can be acquired in general and vocational education programs. Higher (tertiary) education also includes both – academic and vocational study programs.

Up to secondary level vocational education system similarly like general education system is state funded on the basis of number of students / pupils. The difference is that in general education this provision applies only to teacher’s salaries. In vocational education funding is allocated per one student, i.e., it covers all the expenditure per one student – vocational education staff salaries, scholarships for students, training practices (including accident insurance) hostel maintenance costs as well as cultural and sports purposes.

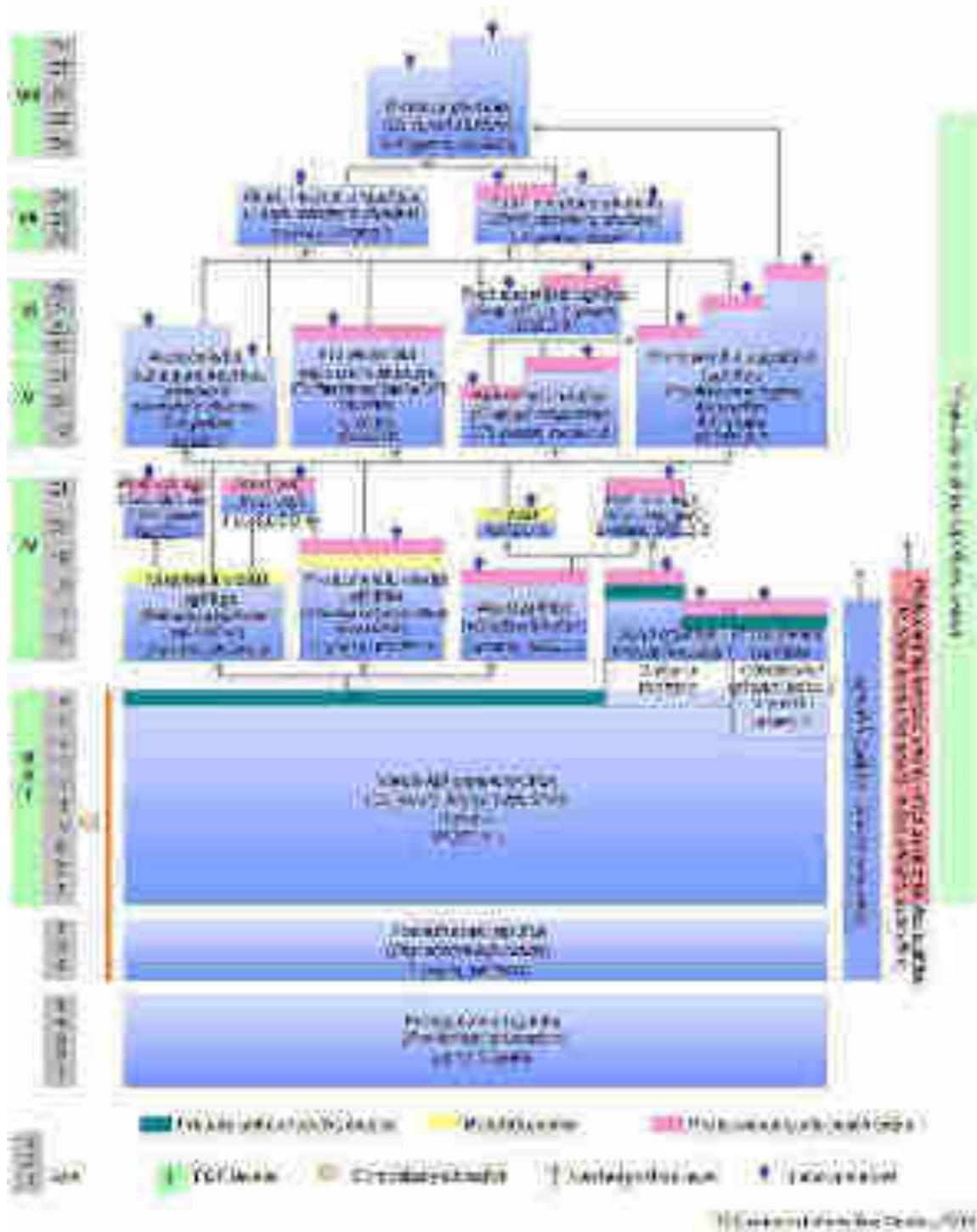


Image 1 “Levels of educational system in Latvia”

Initial vocational education

Vocational schools offer programs in all educational thematic areas. There are identified three vocational training levels: (A) primary vocational education; (B) secondary vocational education; (C) higher vocational education: (i) the first level professional higher education (college education); (ii) the second level professional higher education (University / university education).

Vocational education programs are mainly provided in educational institutions. Practical training takes place either in the same specially adapted educational institutions or in companies. Vocational schools can be public and private.⁵

(A) Vocational primary education

Vocational primary education programs (3 years of study) are mostly implemented in vocational primary schools. These education programs are built for young people who have reached 15 years of age, regardless of their previous level of education. They can get a certificate of vocational primary education, which allows to continue their studies at secondary school level, and gain the EQF level 2 in professional qualification, i.e., the first Latvian professional qualification level, for instance, assistant cook.

Most of the schools that provide such education are boarding schools. Since this education is available for young people who have reached 15 years of age, regardless of their previous education, part of them are school drop outs, part – people with special needs as well as part of the programs include pedagogical correction. For those students who have reached 15 years of age but have not obtained diploma of general primary education programs provide opportunity to finish studies in general education while simultaneously studying for profession. Graduates receive certificate of vocational primary education. Variety of programs is quite large, professions obtained limit qualifications to assistant's position under supervision.

"Woodwork production", duration of studies – two years, the qualifications obtained – "Carpenter's assistant", and "Catering", duration – two years, the qualifications obtained – "Assistant cook" alongside with "Construction work" with qualification "Building worker" and "Repairman" are the most widespread vocational primary programs in Latvia. Other programs are "Agricultural auxiliary", "Waiters", "Agriculture", "Construction work" with obtained qualification "Mason", "Metalworking" ("Locksmith"), "Catering ("Pastry assistant"), "Household" ("The Maid"), "sewn products manufacturing technologist" ("Sewer assistant") etc.⁶

(B) Vocational secondary education

Vocational education programs (3 years of study) are taught in vocational schools. Vocational education programs (partial secondary level vocational education) last for 2-3 years for students with basic education (nine years' compulsory) or persons at least 15 years old,

⁵ Cedefop (2015). *Profesionālā izglītība Latvijā: Īss apraksts*. Luksemburga: Eiropas Savienības Publikāciju birojs. Cedefop information series.

⁶ http://cip.saldus.lv/izglibas_cevedis_skolniekiem_ar_specilm_vajadzibm.pdf

and graduates receive a **Certificate of vocational basic education and vocational qualification Level 2 (EQF 3⁷)⁸**, for instance, a cook. These education programs do not give the right to study in higher (tertiary) education programs. In order to start their studies at tertiary level, they must take one extra year that includes levelling course of secondary education.

These vocational education programs include:

- Theory and practice in the ratio of 35:65,
- General education and vocational subjects in the ratio of 60:40.

Vocational educational programs include following general education subjects:

- Language and communication studies 45%
- Mathematics, natural sciences, technical sciences 33%;
- Social sciences and cultural studies 22%.

However by completing vocational secondary education (vocational upper-secondary education) (4 years of study) which is offered in vocational secondary schools and technical schools, students acquire general secondary education certificate as well as the automatic right to enrol in higher education programs because at the end of program students have to pass national centralized examinations in general subjects: Latvian language, mathematics, foreign language and one student's chosen subject. Additionally, they obtain diploma of vocational secondary education and the EQF level 4, i.e., qualification of Latvian Level 3 (for example, car mechanic).

Vocational secondary programs include:

- Theory and practice in the ratio of 50:50;
- General education and vocational subjects in the ratio of 60:40.

General subjects are distributed as follows:

- Language and communication, 45%;
- Mathematics, science, technology, 33%;
- Public knowledge and cultural knowledge, 22%.⁹

⁷ EQF level 3 is the target of ENTER Project.

⁸ <http://www.eqavet.eu/gns/what-we-do/implementing-the-framework/latvia.aspx>

⁹ Cedefop (2015). *Profesionālā izglītība Latvijā: Īss apraksts*. Luksemburga: Eiropas Savienības Publikāciju birojs. Cedefop information series.

(C) Higher vocational education

Higher education programs may be academic (degree) and professional (degree and / or professional qualification). According to data more than two-thirds of all higher education students are studying in vocational programs. Higher vocational education programs include continued progress of the EQF levels from 5 to 7. Higher educational institutions, including colleges, offer full-time, part-time and distance learning at all levels of study. Higher education institutions provide a full range of professional programs, while colleges offer only first level professional higher education programs, obtaining first level professional higher education diploma (EQF level 5).¹⁰

Linking vocational education with the labour market

Latvian vocational education does not use the English term "trainer". Educators provide both: theoretical and practical training. All vocational education teachers can work in both initial education and continuing training and elementary and secondary education. Professional subject teachers must be at least: (A) higher education in a given field (eg, engineering), which is supplemented by a course in pedagogy (72 hours); (B) vocational secondary education (or master craftsman) level qualification supplemented by a course in pedagogy (72 hours).

Recent reforms in the vocational education system are based on collaboration between state and the social partners. Sectoral councils played an important role, aligning vocational education with economic needs. After researching fourteen vocational sectors sectoral qualifications structure was established and developed in accordance with the descriptions. Continuing qualification standards for basic and essential requirements development and updating. Since 2015 Ministry of Science and Education together with the employers has started to plan significant changes in all 37-vocational school's management to link schools more to the labour market. One of the main novelties is change of form of school – idea is to form so called “convent” or "collegial governance of institutions” with main tasks to determine the directions of school development, to advise the director and to encourage cooperation with businesses. However, main tasks of Ministry of Science and Education for developing quality of vocational education to include modernization of infrastructure, teachers' professional competence development, career support, improving the quality of educational programs, adapting vocational education programs more to the labour, gradual transition to modular programs, improvement of practices and development of innovative approach to studies, such as the work-

¹⁰ Cedefop (2015). *Profesionālā izglītība Latvijā: Īss apraksts*. Luksemburga: Eiropas Savienības Publikāciju birojs. Cedefop information series.

based learning environment. Particular emphasis is put on developing work-based learning environment. In school year 2013/2014., six vocational schools launched the work-based learning training program, which was attended by 140 students and 29 companies, but in school year 2014/2015 number of participants in new work-based learning program had already significantly increased. Based on the results of the project evaluation discussions with entrepreneurs and social partners about efficient implementation of the work-based learning in educational system and the necessary changes in the legal framework continue. According to the Education Development Guidelines by year 2020 it is planned to involve in work-based learning programs at least 50% of vocational students, allocating the ESF funding.¹¹

In practice situation is not so brilliant. The main form for gaining experience and practical skills in chosen profession during the studies is mandatory practice or apprenticeship in cooperative companies. However, survey shows that majority of entrepreneurs are not willing to take in trainee or apprentice. Latvian Employers' Confederation from December 2014 till March 2015 conducted a study on availability and quality of practices in Latvia. They surveyed Latvian companies and young people who have registered online in prakse.lv (practice.lv). The following summarizes the most important findings and conclusions. 750 surveyed companies were asked:” Would your company be interested to attract trainees and/or apprentices in the following year?” 38% answered that not in any case, 23% answered that rather not. 22% answered that rather yes and only 11% answered that they certainly would be interested in attracting young trainees to their company.

From the same survey data was gathered that about half of young people find their internships quickly, but with the help of relatives, friends or acquaintances. Those who are looking for internship on their own, on average will visit 10 different companies or authorities before they find their placement. 44% of Latvian entrepreneurs have never provided a place of practice, 42% of companies have had trainees in the last five years (mainly producing companies), while 13% of businesses have experience of providing internships for trainees longer than five years in a row (mostly in the construction sector).

Companies with experience of taking trainees, but which do not express will to continue, usually as the main reason for that mention employees' lack of time. Companies without experience indicate that they have no vacant practice positions or that they have not considered such possibility as providing internships.

¹¹ Ilze Buligina, Izglītības un zinātnes ministrijas vecākā eksperte, Eiropas Savienības Mūžizglītības programmas projekts, „VET TO WORK: pāreja no profesionālās izglītības uz darba tirgu”. Projekta Nr.: 550462-LLP-1-2013-1-LV-KA1-KA1ECET

In practices employed young people reflect that ~ 57% of internship time is devoted to skilled employment and ~31% - for low-skilled work and on average 22% of the time is devoted to training. Every fourth trainee for his work during the practice has received or is receiving remuneration, although most of the trainees do the practice without any salary.

63% of young people who are currently in practice would like to stay in the company or institution after finishing their studies and receiving diploma. Relatively large part of trainees / apprentices (37%) admit that they would not want to continue their work after practice is finished. As main reasons, they mention lack of opportunities to grow professionally, lack of interest in a particular profession or field, or personal aversion to employer. Although 63% of young people indicate that they would like to stay to work in their place of practice, the proportion of young people who actually remain is only 25%. 22% of entrepreneurs indicate that when they are looking for new prospective employees they take into account whether the person has undergone the practice. While 77% of employers want their staff with prior work experience and practice, in their opinion, is not considered as alternative. ¹²

Austria

VET position in educational system

The following graph provides an overview of the Austrian school system. Sectors that can be assigned to VET range from the secondary level II to the tertiary level.



13

The VET system in Austria is an alternative to general education programmes and takes up a large part of secondary level II and higher. *Initial vocational education and training (IVET)* is mainly carried by VET schools and by a strong apprenticeship system. In Austria, in addition

¹² Anita Līce, Latvijas Darba devēju konfederācija, Eiropas Savienības Mūžizglītības programmas projekts, „VET TO WORK: pāreja no profesionālās izglītības uz darba tirgu”. Projekta Nr.: 550462-LLP-1-2013-1-LV-KA1-KA1ECET

¹³ European Commission/EACEA/Eurydice, 2016. The Structure of the European Education Systems 2016/17: Schematic Diagrams. Eurydice Facts and Figures. Luxembourg: Publications Office of the European Union. https://webgate.ec.europa.eu/fpfis/mwikis/eurydice/index.php/Publications:The_Structure_of_the_European_Education_Systems_2016/17:_Schematic_Diagrams

to the formal education from the ninth school year, both VET schools (i.e. BMS) and colleges (i.e. BHS) provide different programmes and paths at various levels. They include for example part-time vocational schools or schools and colleges with different focus (e.g. engineering, arts and crafts, business administration, tourism, social occupations, agriculture and forestry, nursery teaching, social pedagogy). At the transition from secondary level I to secondary level II approximately 80% of the students choose a path in the VET sector, which reflects the importance and the growth of VET schools and colleges.

Duration (years, semesters) of VET studies

In the following, different types of schools in the VET sector are listed. Age group, focus, requirements and duration are described. The chart above may be used to better map the individual school forms.

Prevocational school (Polytechnische Schule, PTS):

Age: 15 years

Access requirement(s): completion of secondary level I

Focus: pre-VET, general education

Duration: one year

Apprenticeship / dual system (Lehre / duales System)

Age: 15 to 19

Access requirement(s): completion of obligatory schooling

Focus: practical company-based training, obligatory attendance of part-time school for apprentices

Duration: two to four years

School for intermediate vocational education (berufsbildende mittlere Schule, BMS)

Age: 15 to 18

Access requirement(s): completion of year 8 of compulsory schooling
Focus: complete VET for certain occupations, general education
Duration: one to four years

College for higher vocational education (berufsbildende höhere Schule, BHS)

Age: 15 to 19

Access requirement(s): completion of year 8 of compulsory schooling; sometimes also pupil's record of achievement, entrance examination

Focus: high-quality specialised training, thorough general education; double qualification –

VET and access to higher education

Duration: five years

Reifeprüfung and VET Diploma (Reife- und Diplomprüfung)

Students: graduates of colleges for higher vocational education

Type: double qualification – unrestricted access to higher education and VET for high-level jobs

Age: 19

Berufsreifeprüfung (BRP)

Students: graduates of schools for intermediate vocational education and apprenticeship
Type: unrestricted access to higher education

Age: 19+

Post-secondary VET courses (Kolleg)

Age: 18+ Duration:

two years

Access requirement(s): HE entrance examination

Focus: VET, targeted at graduates of secondary academic schools (upper level)

University college of education (Pädagogische Hochschule)

Age: 18+

Duration: four to six years (Bachelor, Master)

Focus: training of teaching staff for primary and secondary I level

Fachhochschule

Age: 18+

Duration: four to six years (Bachelor, Master)

Focus: research-oriented education, vocational education and training

Linking vocational education with the labour market (collaboration with entrepreneurs etc.)

Due to the dual system in Austria, VET is highly linked to company-based training and therefore a direct connection to the labour market is established (especially apprenticeship training, which takes places at two different locations: company-based training of apprentices at one hand and compulsory attendance of a part-time vocational school for apprentices at the other hand). VET curricula provide for a combination of general education and intensive training on specialized matters (acc. to the vocation) in theory and practice. Action-oriented

teaching is a key basic principle: the work in workshops, laboratories, kitchens, practice firms, etc. and mandatory work placements lasting several weeks in business constitute compulsory parts of the training. When working on projects or diploma thesis (part of the final exam at BHS) with specific tasks from the business sphere or technology, students can gather fundamental subject-related experiences and learn to apply project management methods. They can test their key skills and set up initial contacts for their later entry into the world of work.

In the non-formal education sector, companies and providers are an important reference point in the labour market by preparing programs and courses according to current needs. There are labour market policy programs that promote the training of employees (such as the educational leave scheme, or skills development under the ESF¹⁴) and job seekers (such as labour foundations, the “New Skills” Scheme).

CET¹⁵ institutions throughout Austria offer a wide range of programs, especially so that people can deepen and extend competences and skills and obtain qualifications. The main reasons for participation in CVET¹⁶ are the following: the employee's preservation of sustainable employment, improvement of his / her professional position, and reintegration into the labour market.

Portugal

Introduction, general framework

The participation of secondary school pupils in vocational education and training (VET) in 2015 was 45.8%, below the EU average of 48.9%; while the participation of adults in Lifelong Learning has remained stable over the last 3 years, 9.7% slightly below the EU average of 10.7% in 2015. The employment rate of graduates from secondary education increased from 65.2% in 2014 to 68.6% in 2015.¹⁷

The reintroduction of vocational training in Portugal, which was suspended in 1974, took place with the integration into the European Economic Community (1986), after the approval of the legislative pillars of the educational system, Law no 46/86, from 14 October. The VET system, since 1984, comprises vocational training system, dual certification and formal learning system. It is regulated by the Law of 205/96 from 25 October, which stresses the need of adjustment between education/training supply and labour market needs/changes. As for governance, the **Ministry of Education** is responsible for most types of education, including school-based vocational education and training, while the **Ministry of Employment** is responsible for the

¹⁴ European Social Funds

¹⁵ Continuous Education Training

¹⁶ Continuous Vocational Education Training

¹⁷ Monitor da Educação e da Formação de Portugal, European Commission, 2016
https://ec.europa.eu/education/sites/education/files/monitor2016-pt_pt.pdf

apprenticeship system and active labour market policies. The ministries share responsibilities for school-based VET and develop key policies, while the respective regional bodies for the implementation.

The national qualifications system (SNQ) integrated into one single system the institutional and the labour market based parts of VET education; and adopted the same 8 qualification levels and descriptors as the EQF, except one learning outcome descriptor. Instead of competences, the Portuguese NQF uses ‘domain of attitudes’, where „attitude¹⁸ is designed to accommodate directly observable behaviours that can be demonstrated through concrete actions (evidence of learning or performance), in accordance with a specific context of application."

The **Portuguese VET system** offers several existing courses for youngsters; hereunder we list the main types¹⁹:

- VET programs at **basic education level** (VET programs for young people: cursos de educação e formação de jovens (CEF), are school-based and include work-based learning (WBL, referred to as ‘practical training’ in the national context).
- VET programs at **secondary education level** (vocational programs, CEF and art education programs) are school-based and include WBL, except for some art education program
- **Apprenticeship programs** include 40% workplace training. A contract between the enterprise and the apprentice is compulsory.
- Programs at **post-secondary, non-tertiary level** combine general, scientific and technological training in school with work-based learning. WBL is 30 - 46% in technological specialization programs (TSP) and 18% in post-secondary CEF.

Current challenges in the Portuguese VET system

Important reforms took place to address in the framework of ‘New Opportunities Initiative’ (2005-10) which increased VET at upper secondary level, ensured that IVET courses lead to double certification, as well it catalysed the RVCC system development. To encourage further progress, national authorities are reinforcing measures such as creating centres specialised in high-quality career guidance for young people and adults and expanding the apprenticeship offer. The most important education and training challenges on the policy agenda are the followings (Cedefop, 2013/2014):

¹⁸ Report on the Referencing of the National Qualifications Framework to the European Qualifications Framework, 2011 http://www.eqavet.eu/Libraries/EQF/PT_EQF_Referencing_Report.sflb.ashx

¹⁹ “WORK BASED LEARNING - LOCAL AND INTERNATIONAL” Project number 2015-1-LV01-KA202-013386, Output 1 - Summary Research Report by ISQ, 2015

- Further reducing early leaving from education and training, and preventing the entry of unqualified young people in the labour market;
- Reinforcing efforts to increase educational attainment of the adult population by widening access to learning through modularization;
- Modernizing learning provision by developing new learning methodologies and providing a wider variety of vet courses leading to competence-based qualifications;
- Organizing IVET and CVET provision more in line with present and future labour market requirements and the needs of emerging economic sectors;
- Developing the qualification level of vulnerable groups and promoting their socio-professional integration.

Labour market

Portugal is currently facing challenges to bridge between workers' skills and the skills needed by companies, especially in the areas of tourism, information technology and engineering associated with industry²⁰. A study²¹ carried out by the Business Council for Sustainable Development (BCSD Portugal) involving 47 companies identified the **five scarcest competencies in Portugal**.

- **Technological Engineering** (for network technicians, programmers and systems analysts)
- **Economics** (risk managers and management controllers)
- **Commercial, Marketing and Information Communication** (customer relations management (CRM), relational marketing, e-commerce)
- **Operations and Logistics** (logistics operations technicians and logistics warehouse responsibilities)
- **Automation** (robotics technicians, CNC programmers, automation programmers)

However, the indicator measuring the discrepancy between needed and offered competences on the market was rather low, there are also positive changes reported in the past 3 years relating to the flexibility of the education system and the labour market. VET programs, especially dual training programs have increasing role in filling in the labour market gaps.

According to the president of the 'Institute for Support to Small, and Medium-sized Enterprises and Innovation (IAPMEI)' there is a difference between the recruitment attitude of smaller and

²⁰ <https://www.publico.pt/2015/10/27/economia/noticia/portugal-esta-entre-os-paises-com-maior-desequilibrio-entre-oferta-e-procura-de-trabalhadores-qualificados-1712444>

²¹ <http://www.e-konomista.pt/artigo/profissoes-em-falta-em-portugal/>

larger companies.²² While small companies still tend to focus on hard skills, for larger companies it is not only a question of technical knowledge, but also of ensuring the presence of a set of skills based on personal and relational characteristics. Most of these are essential entrepreneurial skills, e.g. the ability to take risks, to negotiate, to communicate effectively, to manage priorities, to adapt to new contexts and realities, to hold critical and positive attitude, and to establish interpersonal relationships effectively. It is important for micro or small business to understand, that these competences represent key element for business success, and they need to value, hold and train soft skills as well.

DESCRIPTION OF THE VOCATIONAL *EDUCATION* AND TRAINING IN EQF LEVEL 3

Czech Republic

Professions obtained

The Act on recognition of the outcomes of continuing education (2007) defines the national register of vocational qualifications that contains descriptions of qualifications in the form of standards for the so called (a) vocational and (b) complete vocational qualifications. More information is on the web site

<http://www.narodnikvalifikace.cz/en-us/>.

Considering apprenticeship occupations, there are currently 63 vocational qualifications at National Register of Qualifications on the EQF level 3 which can be awarded by authorized entities in accordance with the relevant evaluation standards. Linking VET programmes with qualifications in the national register of qualifications (NSK) is also expected to increase responsiveness to labour market needs.

General description of practical training and/or curriculum

All IVET programmes are school-based but practical training and work placements are an integral part of curricula. General subjects are a strong component in all types of VET programmes. Their proportion varies depending on the programme, representing 30% to 70% of instruction time. Practical training is shifted largely to school workshops and laboratories whose equipment sometimes does not match existing needs and rapid development.

²² http://www.jornaldenegocios.pt/negocios-em-rede/formacao-de-executivos/detalhe/competencias_comportamentais_cada_vez_mais_valorizadas_pelas_empresas

“National curricula so called Framework Educational Programmes (FEPs) define the general obligatory framework for creating school curricula (School Educational Programmes - SEPs) for all fields of study in preschool, basic education, art, language and secondary education. Framework Educational Programmes were incorporated into the education system of the Czech Republic by law No. 561/2004 Coll. on Preschool, Basic, Secondary, Tertiary Professional and Other Education (the School Act). This law has been amended in 2015 by the Decree No. 82/2015.

The Framework Educational Programmes are issued by the Ministry of Education, Youth and Sports after due deliberation with relevant ministries. Every school creates its own curriculum – so called School Educational Programme – in accordance with the Framework Educational Programmes and the rules which they set up.

A School Educational Programme which is based on a Framework Educational Programme must work in accordance with the given Framework Educational Programme. Within the context of the school curriculum, the learning content may be offered in coherent blocks of learning, such as subjects or modules.

Now at the level EQF 3 (fields category H) there are 84 Framework Educational Programmes.

Description of development and training of transversal and entrepreneurial skills in vocational education:

Based on curriculums and qualitative research conducted in at least two to three VET EQF level 3 training programs (schools).

“National framework curricula define key competences in upper secondary VET as a set of knowledge, skills, attitudes and values for personal development, employment and active role in society. They are universally applicable in various situations and are developed through both general and vocational theory learning and complementary activities in VET, e.g. vocational skills competitions, learner projects and work placements provided by employers.”²³

²³ Kašparová, J. (2016). Key competences in vocational education and training – Czech Republic. Cedefop ReferNet thematic perspectives series.

Employment and entrepreneurial competences are incorporated in the national and school curricula as subjects of civic education, legal education and economics and, the cross-subject topic Man and the world of work.

Cross-subject topic prepares for the labour market orientation, the job search, including communication and negotiation to acquire basic business skills, etc. Financial literacy is included in the subjects: mathematics, economics, civic education – a topic Man and the economy. Schools have autonomy in implementing these cross-curricular objectives into their education plans. However, the Manual for Development of School Education Programmes contains strategies for key competences development and fulfilment.

“In ISCED 3, entrepreneurial competency should be developed:

- offering students activities that support their ability to make decisions independently, plan, prepare and implement some activities – 'school academies' (students' performance and presentation of student's activities), graduation ball, textbooks exchange, etc.
- encouraging students to evaluate their own procedures and results of their work
- involving students in group, class or school projects

These activities are monitored by teachers and the teachers offer students professional help. They help students to discover and develop their abilities through school or national competitions and include activities in instruction that familiarise students with career opportunities.”²⁴

Strategies promoting key competences

- The lifelong learning strategy of the Czech Republic 2007-2015 [Strategie celoživotního učení ČR 2007-2015] and its implementation plan 2007-15 [Implementační plán Strategie celoživotního učení ČR] - the importance of key competences in initial and continuing education. Entrepreneurship is not, however, explicitly mentioned.

http://libserver.cedefop.europa.eu/vetelib/2016/ReferNet_CZ_KC.pdf

²⁴PUBL. BY THE EDUCATION a AUDIOVISUAL AND CULTURE EXECUTIVE AGENCY.
Entrepreneurship education at school in Europe national strategies, curricula and learning outcomes. Text compl. in March 2012. Brussels: Education, Audiovisual and Culture Executive Agency, 2012. ISBN 9789292012526.

- This strategy was followed by the Strategy for Lifelong Learning Implementation Plan, approved in 2009, which supports curriculum reform with an emphasis on increasing the functional literacy of students and the development of key competences. This can, for example, be done by the implementation of larger student projects, such as the setting up of training firms.
- New measures fostering VET (2013) [Nová opatření na podporu odborného vzdělávání]
 - A policy document which promotes key competences, particularly career management, problem solving and communication skills and ability to work in teams.
- Strategie vzdělávací politiky ČR do roku 2020 (2014) The Education Policy Strategy of the Czech Republic up to 2020 recognises the need for common elements in the curricula at secondary education. This includes the recognition of skills and competences for young people to successfully enter the labour market.
- Implementation document of The Education Policy Strategy of the Czech Republic up to 2020 Long-term plan for education and the development of education system of the Czech Republic for the period 2015-20. [Dlouhodobý záměr vzdělávání a rozvoje vzdělávací soustavy České republiky na období 2015-2020] - suggests adjusting the national secondary education framework curricula – including those for VET – to emphasise learning outcomes.
- The new operational programme, called Research, Development and Education, funded through the European Structural and Investment Funds, running from 2014 to 2020 bring more attention to entrepreneurship education at schools. This operational programme sets entrepreneurship as one of the priorities and thus entrepreneurship skills will be more extensively promoted in the coming years and new initiatives are expected to be launched.

Examples of on-going initiatives addressing entrepreneurship education

- Career counselling services – at the national level, the National Institute for Education (NÚV, www.nuv.cz).
 - research, methodology and dissemination of information related to career counselling, and supports the teaching of subjects dealing with labour market issues.
 - the development of an integrated information system (ISA) and the related website www.infoabsolvent.cz that (information on the situation and employment of school leavers in the labour market and thus provides useful source of information for career decision making (for students, counsellors and also adults).

- Project Creative Entrepreneurship in Schools (CENTRES) - international project implemented in the Czech Republic (National Institute for Education), Denmark, Estonia, Lithuania, Finland, Poland, Slovenia and the UK.
 - target – secondary schools
 - an online forum for sharing good practice in creative entrepreneurship education.
 - the website of the project (<http://centres-eu.org/>) contains a diverse set of materials, links and references, predominantly from the countries involved. They include a number of best practice examples but also policy recommendations.
- Methodological portal RVP.CZ (www.rvp.cz) portal was created as the main support of teachers and to support the introduction of framework educational programs to schools. The aim was to create an environment in which teachers can inspire each other and can inform on their experiences. In upper secondary VET, there are 15 documents in the area of entrepreneurship education available.
http://dum.rvp.cz/vyhledavani/prochazet.html?rvp=OL&svp=-&svp_ch=off
- Practice Enterprises Centre (CEFIF): The Practice Enterprises Centre – CEFIF – coordinates activities carried out by a network of practice enterprises active in the Czech Republic, provides support and consultation services to pupils and teachers involved in practice enterprises. The centre is a member of the international network EUROPEN – Pen International gathering practice enterprises from all over the world. Web page <http://www.nuv.cz/p/centrum-fiktivnich-firem/o-fiktivni-firme?lang=1>
- Junior Achievement Czech Republic (<http://www.jacr.cz/o-junior-achievement.aspx>) - educational programme which uses a simulation programme. These programmes are available for secondary education: JA Firma (JA Firm), JA Etika v podnikání (Ethics in Business), JA Poznej svoje peníze (Know your money), Počítačová simulace (computer simulation), JA TITAN, JA e-Ekonomie. Students, which take part, go through a process which shows them the problems of decision-making and introduces them to some of the basic principles of the market, such as finance and competitor analysis.
- Yourchance o.p.s. (<http://www.yourchance.cz>) promotes the necessary changes in teaching financial literacy, business principles and entrepreneurship pupils in primary and secondary schools and in the integration of young adults leaving foster care institutions.

Latvia

Vocational education in Latvia, EQF level 3: Vocational education programs

Vocational education programs 3 years of study and according to national qualification system **EQF level 3 conforms to the second level of professional qualification.** This education provides the opportunity to perform a qualified worker's job. Graduates receive certificate of vocational education.

Similarly, like in EQF level 2 program variety is quite large. These programs provide next level of qualification, i.e., unaided positions:

“Construction work” with qualifications obtained “Plasterer” and “Mason”, “Dry construction builder”, “Hairdresser services” with qualification obtained “Hairdresser”, “Catering”, with the qualifications obtained – “Cook” and “Pastry cook”, “Administrative and secretarial services” with the qualification obtained – “Clerk”, “Accounting” with the qualification obtained – “Accountant”, “real estate management” with the qualification obtained – “House management master”, “heat, gas and water management” with the qualification obtained – “Sanitary equipment assembler”, “Make-up” with the qualifications obtained – “Make-up artist”, “Metalworking” etc.²⁵

General description of practical training and/or curriculum

Theoretical knowledge and practical training in VET programmes for EQF Level 3 is divided 35:65. However, a part of the 65% practical training is carried out in schools in laboratories, part of it during school training and only a part of it is carried out in enterprises where students have to carry out their qualification practical training.²⁶ The qualification practical training is carried out in enterprises and companies. The law states that the Vocational Education institution either should offer internship possibilities to the students or they have to approve a company that students themselves have found.²⁷

Description of development and training of transversal and entrepreneurial skills in vocational education (based on qualitative research)

“There should be a connection between the study courses which would strengthen the student's confidence so they would believe that they can not only be the employees, but become the employers.”

²⁵ http://cip.saldus.lv/izglbtbas_vededis_skolniekiem_ar_specilm_vajadzbm.pdf

²⁶ Cedefop (2015). *Profesionālā izglītība Latvijā: Īss apraksts*. Luksemburga: Eiropas Savienības Publikāciju birojs. Cedefop information series

²⁷ <http://likumi.lv/doc.php?id=252862>

“Basics are being acquired in schools -> practical skills in qualification training -> develops their own business or...”

“A link between study courses and the needs of the employer, by predicting the skills which will be necessary in the future. It is necessary to acquire skills which correspond with the needs of the labour market now and in the future. It is necessary to involve employers and learn their requirements during the qualification training. A skill to adapt to the ever-changing work environment and the development of technologies.”

In conclusion, the VET staff would like to see more correlation between the study subjects, so students could become more confident in themselves. They would like to involve employers in the student qualification process, so students could learn all the requirements that their future employers might have.

Austria

Detailed description of the vocational **education and training in Austria in EQF level 3**

- Professions obtained
- General description of practical training and/or curriculum
- Description of development and training of transversal and **entrepreneurial** skills in vocational education

Professions obtained

The professions that can be learned are very diverse and are closely related to the specific learning environment. Considering apprenticeship occupations, there are currently 199 industrial and 15 agricultural and forestry apprenticeships in Austria.

They are governed by federal law and available as single, group, focus or modular apprenticeships. All legally recognised industrial apprenticeships – and related skills and competences to be achieved - can be seen in the document provided here at this link http://www.ibw.at/components/com_redshop/assets/document/product/1386769855_lehrberuf_sbeschreibungen_de_en_2013.pdf.

A training regulation is passed by the Minister of Economy for each apprenticeship. This regulation is obligatory for the training in training enterprises. Agricultural and forestry apprenticeships have their own regulations: The *Agricultural and Forestry Vocational Training Act* (LFBAG) sets the principles of the training. The individual federal states build on those acts and issue detailed regulations.

When it comes to CVET the content differs slightly. The interests of the companies play a major role as well as the specific interests of learners. The main motive for companies to train their staff is the improvement of the professional and social skills of employees. Other factors such as familiarisation with company-specific processes, developments in legal and technical environments, increasing motivation, use of new technologies in the company etc. may have an impact as well. Austria has a great variety of institutions and a broad range of services regarding CVET. The approximately 1,800 CVET providers offer a wide range of training programs, which are primarily aiming at expanding and acquiring occupational skills and qualifications. Preservation of employability, improvement of professional position and reintegration into the labour market are main reasons for participating. It should be noted that not all vocational training from the non-formal sector lead to legally regulated qualifications.

General description of practical training and/or curriculum

In apprenticeship training (company and part-time vocational school), company-based training comprises about 80% of the apprenticeship time. The apprentice is involved in the production or service-provision process and acquires the necessary skills under real-life conditions of working life. For every apprenticeship occupation, there is a *training regulation* (“Ausbildungsordnung”), which is valid across Austria and includes the *job profile* (“Berufsbild”). This is a type of curriculum for the company-based part of training that lays down the minimum knowledge and skills to be taught to apprentices by companies. The *competence profile* (“Berufsprofil”), which is also specified in the training regulation, formulates in a learning outcome-oriented manner the competences apprentices should have acquired by the end of their training. The social partners are essentially in charge of taking decisions about what in-company curriculum and/or competence profile an apprenticeship occupation is based on and they exert a decisive impact on the structure and content of apprenticeship training via their work in advisory councils.

In the non-formal or CET sector, various qualifications can be acquired in different institutions (special school forms, establishments of employers, CET establishments, etc.). The educational establishments themselves design the education and training courses and the qualifications. They are geared towards the labour market and sectoral requirements. Teaching is usually very practice-oriented. CVET in companies is of great importance. According to the fourth *European Continuing Vocational Training Survey* (CVTS4) from 2010, the number of companies actively involved in CET, at 87%, well above the EU-28 average of 66%. Here the companies either offer in-house training or the program offered by CET institutions. The share of employees who attended CET courses was 33% in 2010 (based on the employees of all companies).

Description of development and training of transversal and entrepreneurial skills in vocational education²⁸

As already stated, economic experts play a huge role in curriculum development regarding *BMS* and

BHS. Schools can set the extent of individual teaching subjects and develop own priorities to meet (regional) economical needs.

Entrepreneurial competence is both, interdisciplinary principle and key course element. With the introduction of the *Entrepreneur's Skills Certificate* by the European Commission in 2006, the importance of entrepreneurial skills was emphasised in the formal education sector also in Austria. In the 2015/16 school year, more than 260 schools across Austria have been offering the *Entrepreneur's Skills Certificate*.²⁹

The CET institutions of the social partners are active in entrepreneurial training as well. The *Institute for Economic Promotion* (WIFI, educational institute of the Economic Chamber – social partner on the employers' side) offers courses and training for nearly all economic sectors. The available courses range from management training onto offers for specific sectors. The education programme of the

Vocational Training Institute (bfi, the CVET institution of the Chamber of Labour and the Austrian Trade Union Federation – social partner on the employees' side) comprises areas including personal development and management, IT training, office and business administration, etc. The *Institute of Agrarian Education and Training* (LFI), the education and training company of the Chamber of

Agriculture (employers' side), offers CVET in all specialist branches of agriculture and forestry and also training in the area of business management. Additionally, many other services are offered which concentrate on the training of basic and transversal skills. However, there are many other and independent providers offering CET contents in Austria and they may either be focusing on phases in the education, sectors or learner groups.

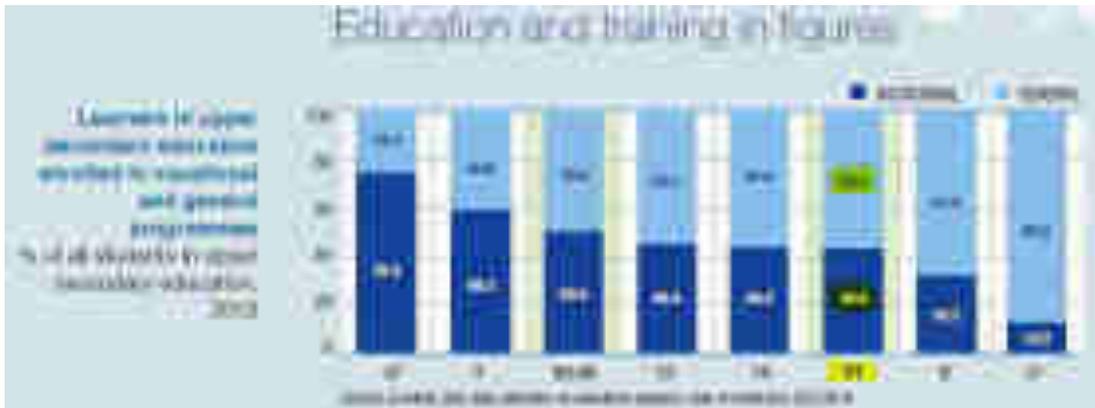
Portugal

VOCATIONAL EDUCATION AND TRAINING AT LEVEL 3

²⁸ Based on curriculums and qualitative research conducted in at least two VET EQF level 3 training programs (schools)

²⁹ For more information about the Entrepreneur's Skills Certificate see following link https://www.wko.at/Content.Node/kampagnen/ufs_en/index.en.html

Level 3 Secondary Education, designed for those intending to continue their studies in higher education has been subdivided into courses aimed at young people and those offered to adults.³⁰



Young People’s Secondary Education

There are two main types of education and training courses for young people at Level 3, the first one is to provide students with the necessary knowledge and skills to enter higher education after completion of the secondary studies; while the latter has VET element.

- a. Science and humanities courses (Sciences and Technologies, Socioeconomic Sciences, Languages, Humanities and Visual Arts)
- b. Specialized training courses for the arts (Cursos do Ensino Artístico Especializado)

Specialized training courses for the arts

There are various types of secondary school VET courses (Music, Dance, Visual Arts), but only one corresponds to Level 3; the specialized training courses for music. (In secondary education, the former two corresponds to Level 4)

Specialized Training Courses for Music were designed to provide specialized training in music facilitating the advanced mastery of the instruments as well as vocal techniques. These courses are for those who have a vocation and will to develop your artistic skills or talents; want a training of excellence that allows them to practice a profession in this artistic field; or aspire to be better prepared for higher education in Music / Dance.

The course can be attended in the modality of integrated, articulated or supplementary regime:

- Integrated Regime (IR) - students attend all components of the curriculum in the same educational establishment;

³⁰ Report on the Referencing of the National Qualifications Framework to the European Qualifications Framework, June, 2011

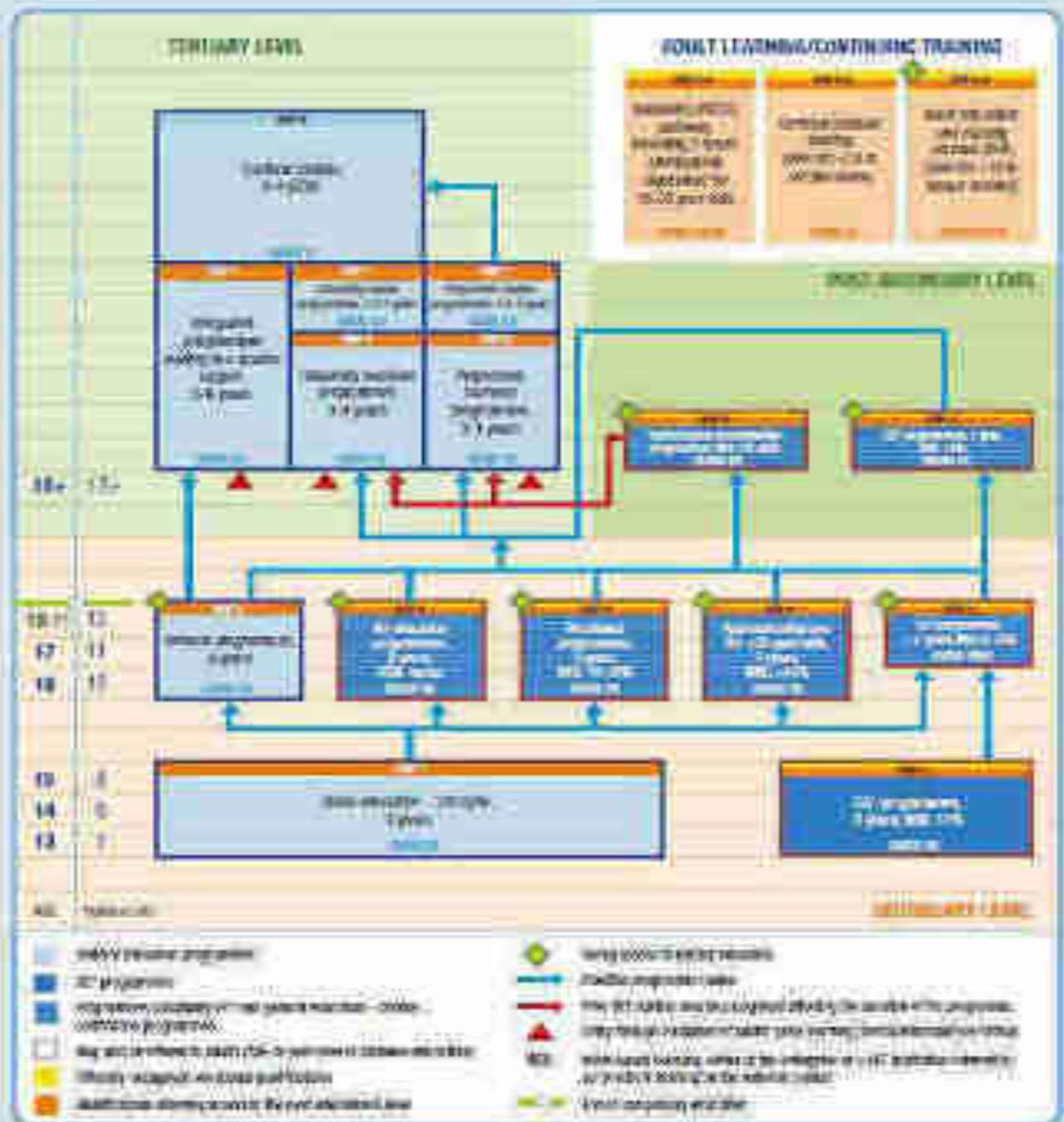
- Articulated regime (AR) - specialized artistic education is ensured by a school of specialized artistic education and the other components by a general education school;
- Supplementary regime (RS) - students attend the specialized artistic disciplines in a specialized school, regardless of the qualifications they have.

Specialized training courses are broken down into three training components: general, scientific and technical-artistic. In case of music education, there are three main course types, with variable course duration; secondary course of music, secondary course of song and secondary course of Gregorian chant.

The internal summative evaluation requires the accomplishment of an Artistic Aptitude Test (PAA); the elaboration of a project demonstrating the knowledge and technical-artistic skills acquired by the student throughout the training to be presented to a jury in the final year. Besides, the evaluation of the final disciplines of the scientific and technical-artistic training components may require global tests, with a maximum possible weighting of 50% in the calculation of the discipline's obligatory attendance.

The successful completion of specialized art courses implies students to gain approval in all subjects of the course syllabus as well in the PAA. Students in the supplementary study regime, who obtain the approval of both the PAA and all the disciplines of the specialized curriculum, as well complete the general training subjects (in general secondary education), are entitled to the diploma and certificate. The sole certification of the completion of a secondary course in singing or Gregorian chant is not equivalent to the completion of national final exams. The students who want to continue their studies in higher education have to take the national exams.

VET in the Portuguese education and training system



MC - Ministério da Educação e Ciência, Direcção Regional do Alentejo, 2013. VET and its role in the local economy. (Cedefop)

Source: Spotlight on VET Portugal. 2013/2014. European Center for Development and Vocational Training. (Cedefop)

Adult education

Adult Education and Training Courses (AET)

The purpose of these course types is to offer pathways for adults to upgrade their qualifications and reintegrate to labour market or progress professionally. Adults already holding the 3rd cycle of basic education who wish to obtain a double certification may be entitled to attend the AET course related training component only. Conditions of eligibility: 18 years of age or older; pretend to complete upper secondary education; only candidates over 23 years can attend secondary level AET on daily or full-time regimen.

The AET Courses are organized along the following guidelines:

- a lifelong learning perspective;
- the course is defined based on an initial evaluative diagnosis or a process of recognition and validation of the competences that the adult has acquired throughout life;
- integrate basic training and technological training;
- modular training model, based on the training references that are part of the National Qualifications Catalogue;
- "Reflective Learning Portfolio", training centered on reflective processes and skills acquisition.

The Recognition, Validation and Certification of Competences (RVCC)

Adults over the age of 18 may apply for educational RVCC at the secondary level, provided they have at least three years' professional experience. RVCC process is embedded into the Adult Education and Training Key Competences Reference System (secondary level). On completion of RVCC, depending on the competences, adults receive partial certification or full certification (the latter is at Level 3).

All adults completing a secondary-level RVCC process may continue on to higher education by taking special exams managed by higher education establishments, or by taking the national exams of secondary education.

Secondary-level completion program

The completion programs are aimed at adults who attended but did not complete courses, which are no longer in existence (up to six subjects per year). The certification of courses primarily designed for further study, and of general courses are both

equivalents to Level 3 (while certification of courses leading to professional qualifications corresponds to Level 4). The completion and general certification (without course specification) of secondary-level education is achieved by taking exams in selected subjects, but without the necessity to fulfil exams in case of subjects which match with subjects the student's original (previously fulfilled) course of study.

Modular training

Modular training is for adults aged 18 and over, without adequate qualification in progress (or completed) and without the completion of secondary education. The successful completion of short modular training units integrated to the secondary-level qualifications pathway may lead as well to a level 3 certification of qualification.

QUALITATIVE RESEARCH

Czech Republic

The number of participants of the target groups (1) teachers / trainers was 7, (2) principle, administrative staff was 3, (3) of students (2) was 10 from various VET institutions.

Comprehension of entrepreneurial skills (what do they understand with entrepreneurial skills?)

Teachers, trainers as well as directors of the schools have different approaches of the understanding of entrepreneurial and transversal (soft)-skills but most of the participants of the target groups teachers and staff agree that transversal skills are important for people who are employees and also for people who want to do their own business. They identified soft transversal competences (for example effective communication, planning and organizing work, exploring and orientation in information,.) and transversal skills vocational / technical (foreign language, use a PC, driving license, basic legal and economic awareness) which are a part of the qualification requirements for vocational school graduates. They define what an employee / entrepreneur should manage beyond his expertise; In other words, in terms of capability to handle certain complex activities regardless of their specialization.

Entrepreneurial skills are defined in Framework educational programmes and School

educational programmes. In the FEP these skills are defined in the competence to enter labour market and carry out business. Those skills are considered very important for the graduates of secondary vocational schools in the labour market.

How entrepreneurial skills can be developed in their study subjects?

Teachers and staff do not consider entrepreneurship as a separate skill, but as a concept that requires key skills, such as creativity, knowledge technologies and project management. Teachers and staff gave the following ideas on how entrepreneurial skills could be developed:

- Practical sessions like fictive firms, mini-businesses
- Junior achievement programmes
- Meetings with successful entrepreneurs
- Mentoring of the students in practical sessions
- Organizing various activities: for example, concerts, thematic activities, sport activities, selling events at school (hand made products, clothes and so on)
- Practical training in firms
- Discussion activities
- Counselling
- Strong relationship and identification of the companies with the School;
- Projects developed throughout the course in a real context.
- Learning by working in small groups

Profile of successful school graduate (what kind of professional traits should their students obtain after graduation of their educational institutional?)

In addition to technical skills successful school graduate should also have general skills (key competences), e.g. communication, cooperation, initiative and creative thinking, skills in order to increase their employability, but also in order to boost graduate self-esteem.

Obstacles to developing integrated entrepreneurial education:

All teachers and staff consider entrepreneurial education very important. They identified that some theoretical teaching methods are ineffective. They feel lack of money and time to be able to integrate the practical element of entrepreneurship to subjects. They also said that they feel lack of time for practical projects and activities in education. They are missing training of teachers in the adequate teaching methods.

The necessary internal or external support to developing integrated entrepreneurial education.

All participants feel that entrepreneurial education is necessary to support because they believe that entrepreneurship is a driving force in an economy and entrepreneurial thinking and mindsets cannot be encouraged or achieved through traditional teaching. But teachers feel lack of support. They would like to use more innovative ways of teaching and learning. They would like to implement entrepreneurial education as an integrated approach that is embedded naturally throughout the learning programme.

Recognition of entrepreneurial skills in already existing teaching program.

„The introduction of key competences and the cross-subject topic “Man and the World of Work” in all study programmes fosters, inter alia, pupils’ employability, their orientation on the labour market and their ability to respond in a flexible manner to changes in the labour market. „³¹

The pupils should acquire these general competences and skills:

- To identify and formulate their own priorities;
- To work with information search, evaluation and use of information;

³¹ KAŇÁKOVÁ, Martina, ŠÍMOVÁ, Zdeňka and Věra CZESANÁ, ed. Apprenticeship-type schemes and structured work-based learning programmes in the Czech Republic [online]. In: . National Training Fund (NTF) and National Institute for Education (NUV), 2014 [cit. 2016-12-20]. Available at: http://www.refernet.cz/sites/default/files/download/cz_2014_article_on_apprenticeship.pdf

- Responsible decision based on the evaluation of information;
- Verbal communication during important negotiations;
- Written expression in official correspondence.

The main objective of cross-subject topic is to equip pupils with the knowledge and competencies that will help make optimal use of their personal and vocational prerequisites for successful labour market and fulfilment of building a career. Achievement of this objective requires:

- Encourage pupils to realize the responsibility for their own lives, the importance of education and lifelong learning for life, so they are motivated to active professional life and a successful career;
- Orientate the students in the world of work as a whole and the economic structure of the region, to teach them to evaluate the factors characterizing the content of the work and compare these factors with their assumptions, to familiarize them with alternatives of professional jobs after graduation studied field of education;
- Teach students to seek and assess information about professional opportunities, orient them and create a basic idea about them;
- Teach students how to find and evaluate information on educational possibilities, orient themselves in it and assess it in terms of their abilities and career goals;
- To teach students both in writing and verbal presenting when meeting with potential employers, formulate their expectations and their priorities;
- Explain to the students the basic aspects of the employment relationship, the rights and obligations of employees and employers as well as basic aspects of private business, learn how to work with the relevant legislation;
- Orientate students in employment services, bringing them to the efficient use of their information base.³²

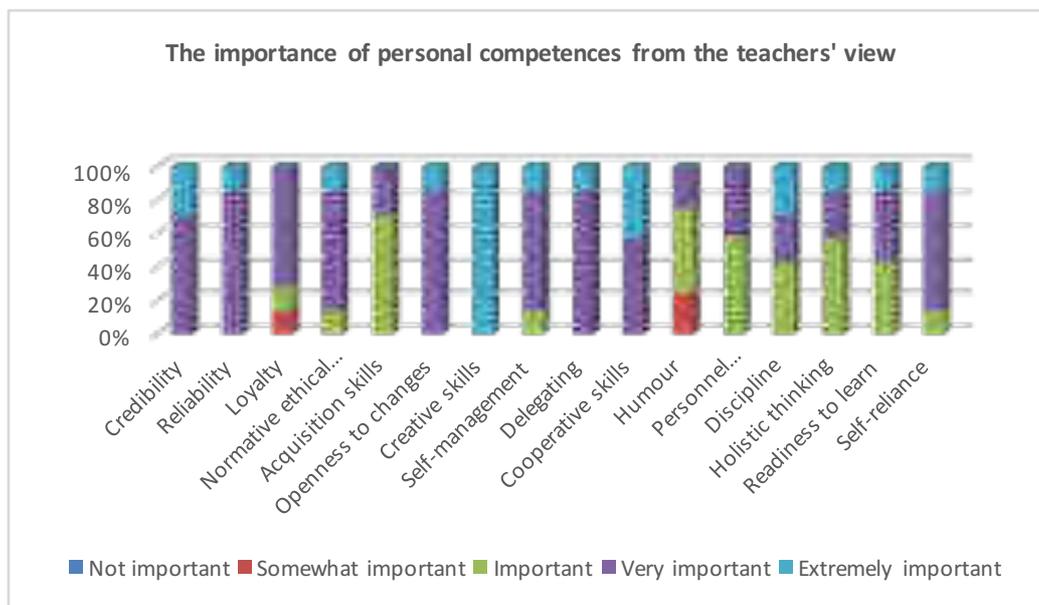
³² Ministry of education, youth and sports. Rámcový vzdělávací program pro obor 23-51-H/01 Strojní mechanik. MSMT. 28. 6. 2007, č. j. 12 698/2007-23. [online]. [cit. 2016-12-20]. Available at: <http://zpd.nuov.cz/RVP/H/RVP%202351H01%20Strojni%20mechanik.pdf>

Survey questionnaire

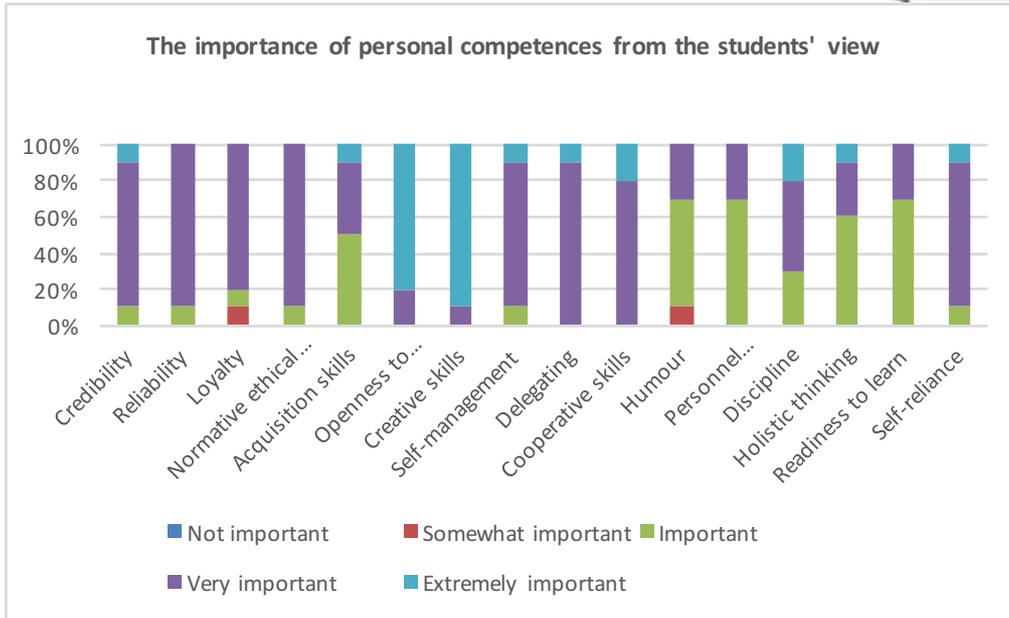
The survey questionnaire was filled out by 7 teachers/ trainers from secondary vocational and technical schools and 10 students currently in the VET studies, EQF 3. We asked them about the four competence groups (personal, operational, social-communicative, technical and methodological), what importance these skills have in an entrepreneur's life.

Personal competences

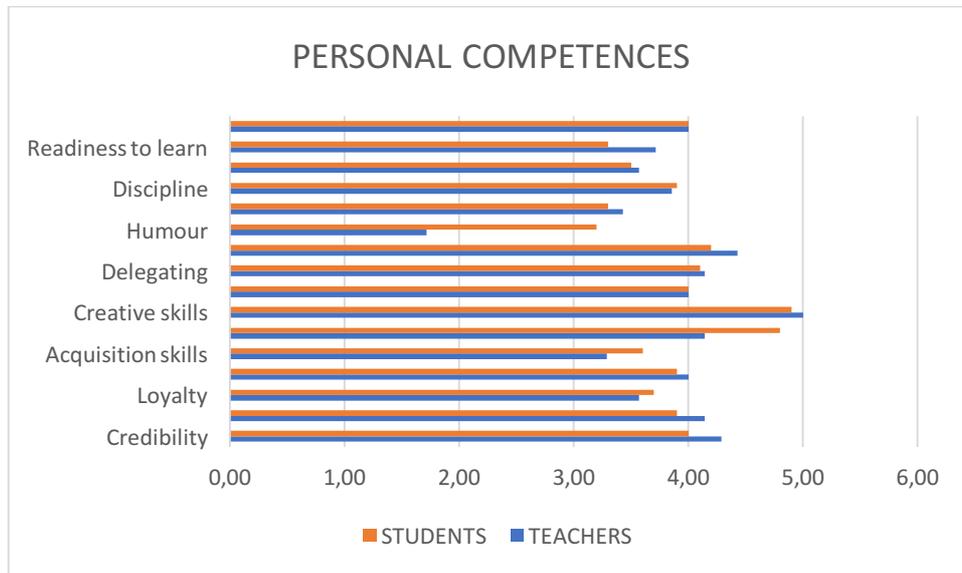
Based on the weighted average of their answers we found that the most important personal skills according to teachers, in descending order were creative skills (5 / 5), cooperative skills (4.43 / 5), credibility (4.29 / 5), delegating, openness to changes and reliability (4.14 / 5). Sense of humour and delegation received the lowest scores (1.71 / 5).



Based on the weighted average of their students' answers we found that the most important creative skills (4.90 / 5), in descending order were openness to changes (4.8 / 5), cooperative skills (4.2 / 5), delegating (4.10 / 5) and credibility, self-management and self-reliance (4.0 / 5 each) and humour was the least important (3.20 / 5), just as in case of the teachers.

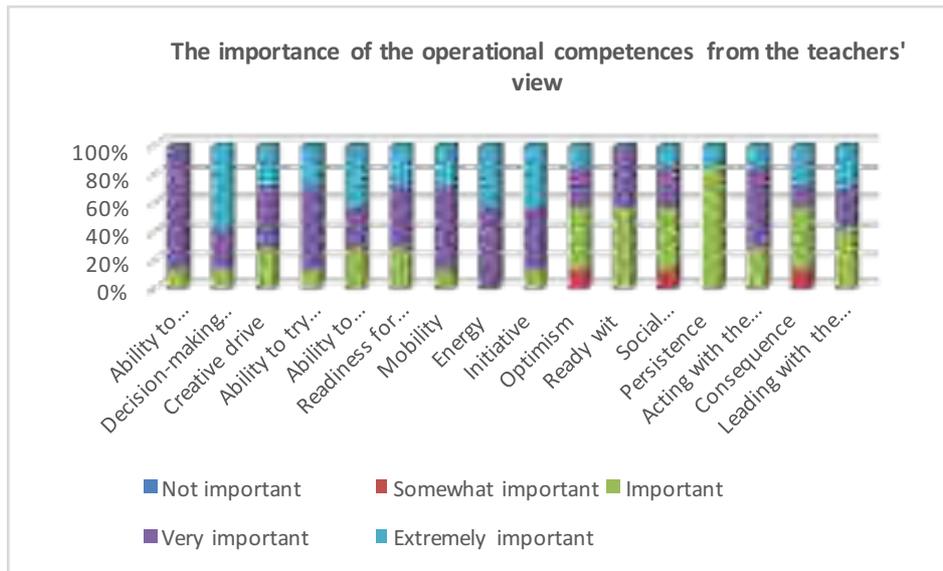


The following graph shows comparison views of teachers to students on the importance of personal competences.

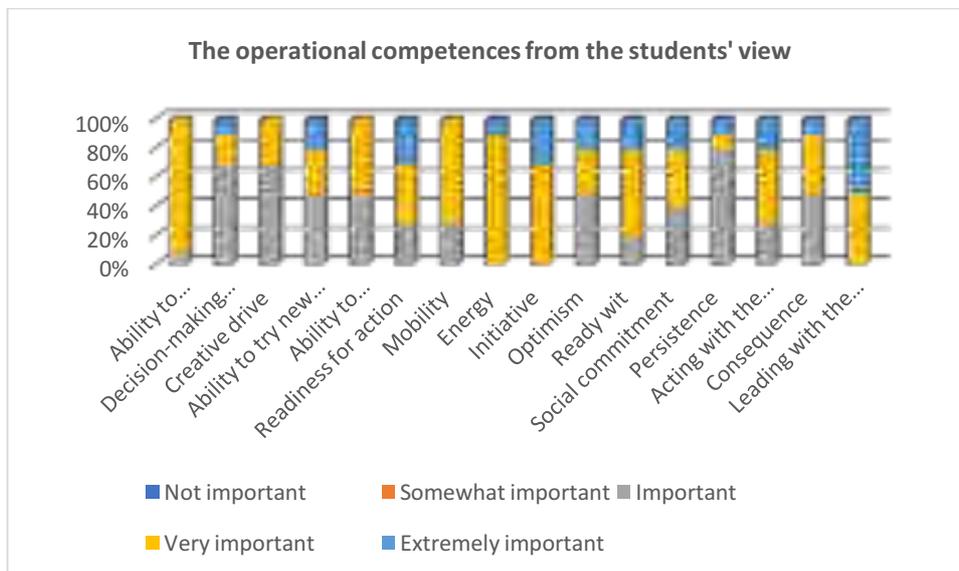


OPERATIONAL COMPETENCES

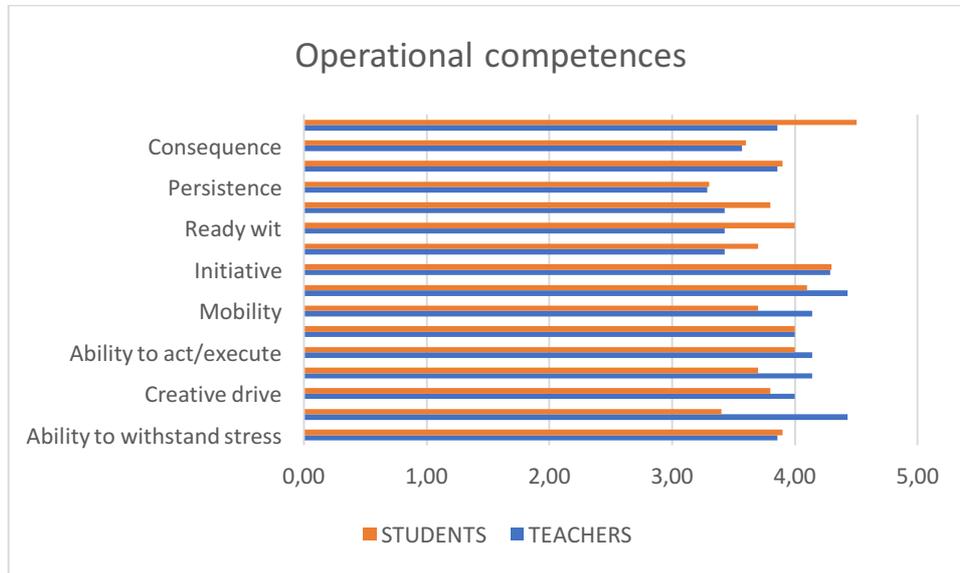
Teachers ranked as the most important operational competences decision-making ability and energy (4.43 / 5 each), Initiative (4.29 / 5), ability to try new things, ability to act/execute and mobility (4.14 / 5 each); while the least important were persistence (3.29 / 5), social commitment (3.43 / 5) and ready wit (3.43 / 5).



Students put on the first place leading with the target in mind (4.50 / 5), initiative (4.30 / 5) and energy (4.43 / 5). Social commitment and ability to act were the weakest based on the weighted averages (3.95 / 5). While the least important were persistence (3.30 / 5), the same as teachers.

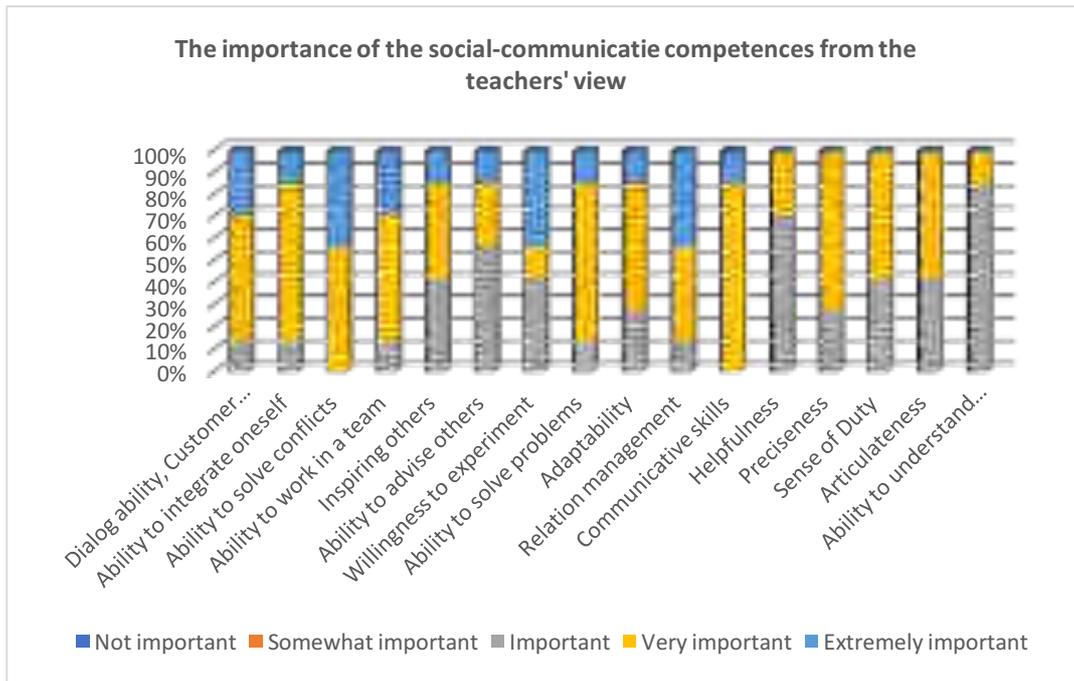


The following graph shows comparison views of teachers to students on the importance of operational competences.



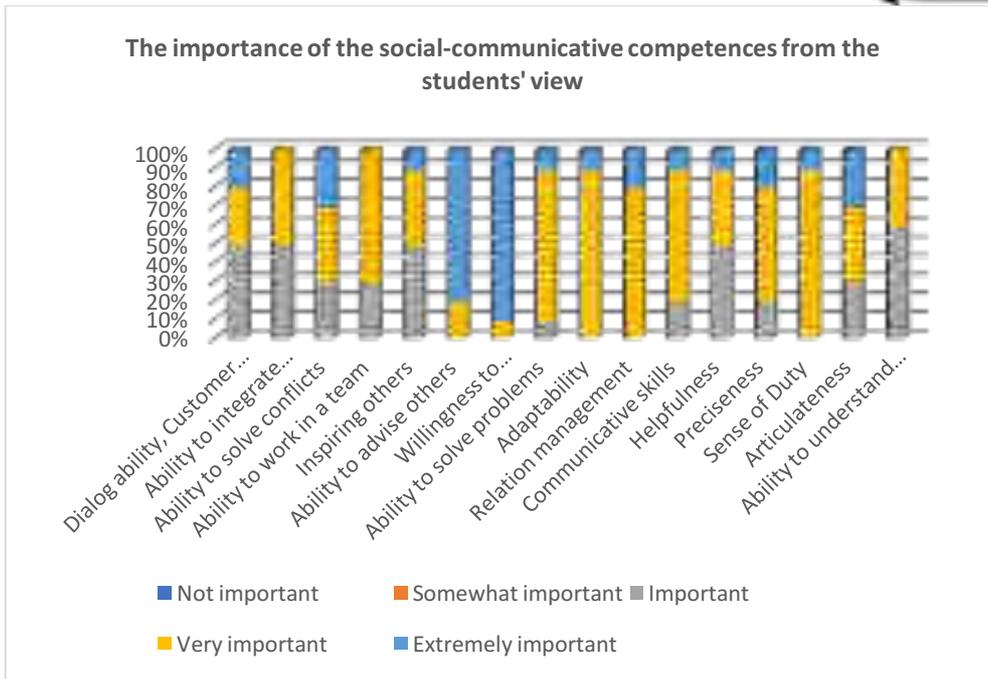
SOCIAL-COMMUNICATIVE COMPETENCES

Among social-communicative competences, the highest weighted averages within teacher's answers appeared ability to solve conflicts (4.43 / 5), relation management (4.29 / 5), dialog ability, customer orientation, ability to work in a team and communicative skills (4.14 / 5 each). The 'weakest' competences were the ability to understand others' perspectives (3.14 / 5) and helpfulness (3.29 / 5).

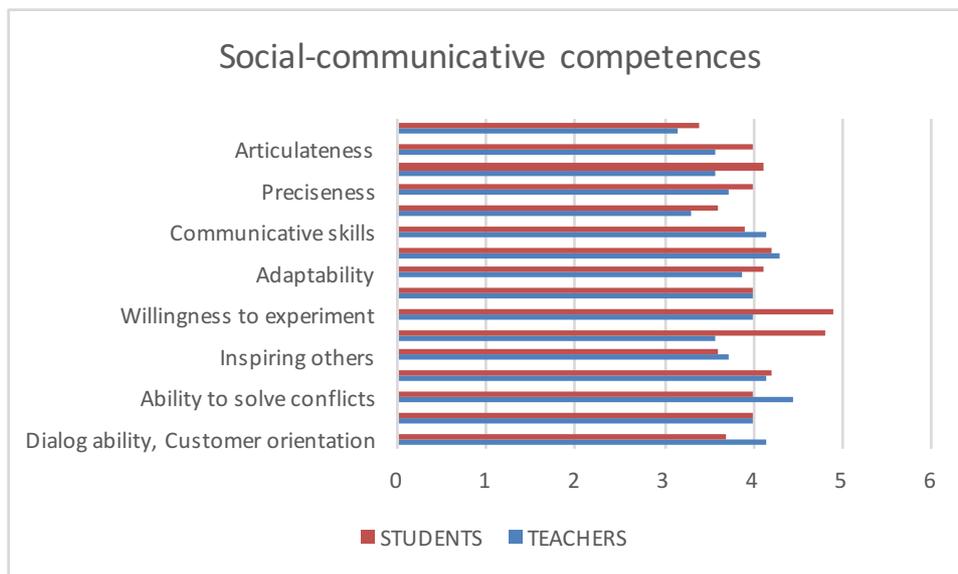


Students gave the highest importance to willingness to experiment (4.90 / 5) and to the ability to advise others (4.80 / 5). Compared with the other competences, ability to understand others' perspectives (3.40 / 5) and helpfulness and inspiring others (3.60 / 5 each) are less important according to them.

Students' and teachers' opinions matched in case of ability to understand others' perspectives, the lowest rated competence mutually.

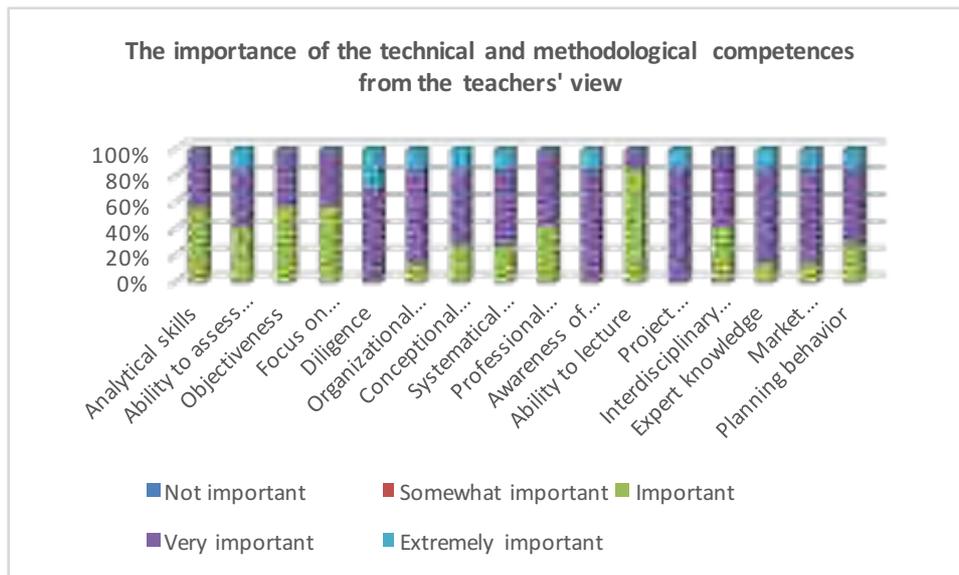


The following graph shows comparison views of teachers to students on the importance of social-communicative competences.

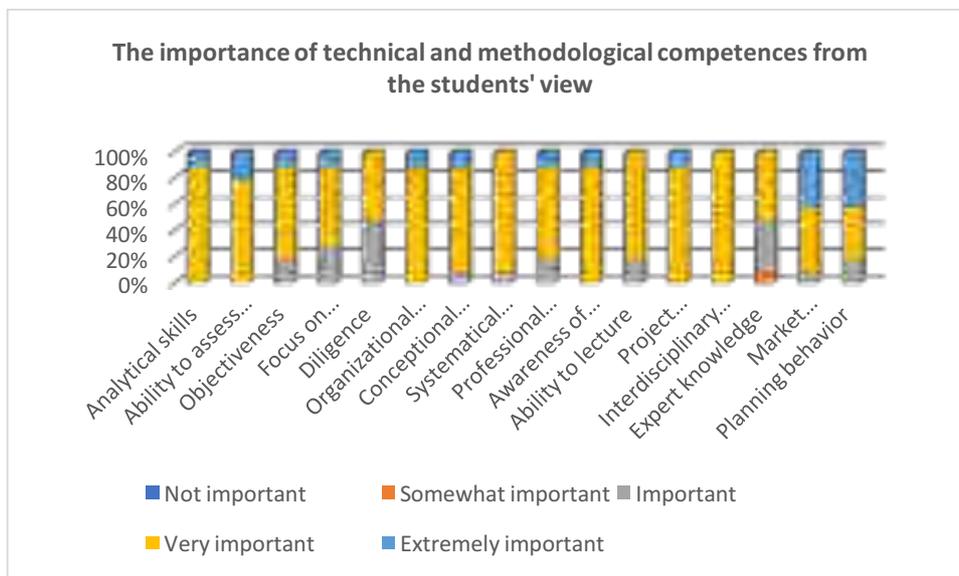


TECHNICAL AND METHODOLOGICAL COMPETENCES

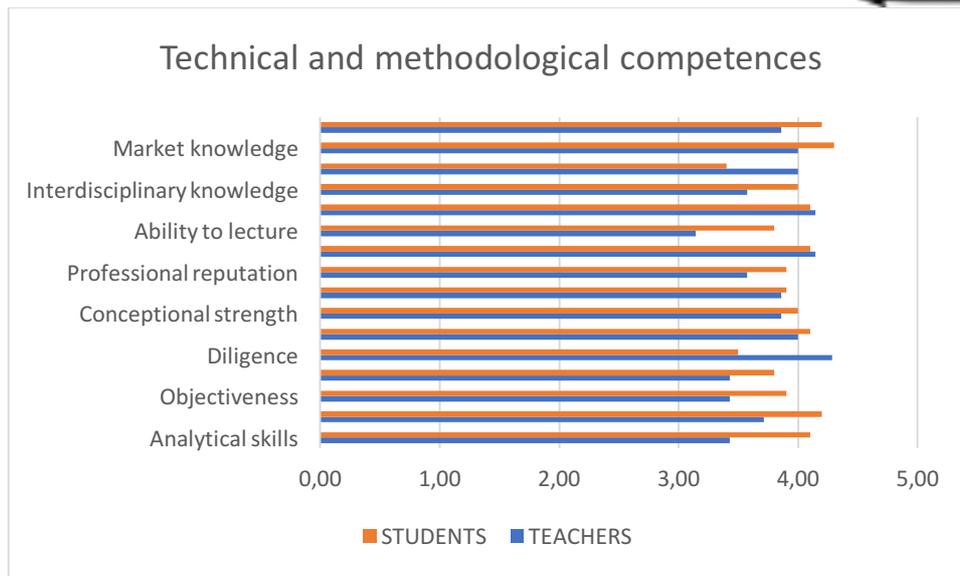
In the last competence group, technical and methodological competences, teachers gave the highest importance to diligence (4.29 / 5), awareness of results and project management (4.14 / 5 each). The ‘weakest’ competences were ability to lecture (3.14 / 5) and analytical skills, objectiveness and focus on knowledge (3.43 / 5 each).



Students put to first place market knowledge (4.30 / 5) and to the planning behaviour ability to assess things (4.20 / 5). Compared with the other competences, expert knowledge (3.40 / 5) and diligence (3.50 / 5 each) are less important according to them.



The following graph shows comparison views of teachers to students on the importance of technical and methodological competences.



Latvia

Questionnaires produced for this survey were used with three main target groups in the ENTER project, namely:

- (1) Teachers and trainers in VET
- (2) Administrative staff, school principle in VET
- (3) Students in VET, EQF level 3

The number of participants of the target group (1) was 7, of target group (2) was 3 and of target group (3) was 9. The following summary shows the findings concerning the topics foreseen as follows:

Comprehension of entrepreneurial skills (what do the participants understand with entrepreneurial and transversal skills?)

Most of the teachers were confused by the term “transversal” and could not answer what they understand with the term, but they agree that it is important to have entrepreneurial skills so students could open up their own businesses and be not only employees, but also employers. Teachers and administrative staff also stated that it is important for students to have these skills so they could develop their careers, find job opportunities and integrate more easily in a new working environment. There were a few teachers who thought that it is not necessary for students to have their own

business, but most of the teachers and staff disagree. Here are some direct quotes from the participating teachers:

“It is important for students to develop entrepreneurial skills, because, if they will study their chosen profession well, then they will find a company where to work.”

“If the student will be a good professional in their field, then there will be a demand for their skills and then they will be able to open up their own business.”

“Students of this programme should be able to develop entrepreneurial skills, so they could create more opportunities for themselves in their future careers.”

“Transversal skill is a skill to use the knowledge you have in practise. It is important for students to develop entrepreneurial skills, because part of the programmes in this school are suited to start your own business after graduation.”

“It is a skill where one can use their theoretical and practical knowledge in practice. A skill to establish one's own company and successfully develop one's own business. Students should develop their entrepreneurial skills, because in the future students might start their own businesses, they could become the heads of departments. Entrepreneurial skills are necessary for everyone, so they could successfully integrate in a new job environment.”

How can transversal and entrepreneurial skills be developed in their study subjects?

In teacher's opinion, entrepreneurial skills during their specific subject could be developed with the help of some new technologies, special computer programmes or teachers could give examples of successful entrepreneurs who have started their own business.

VET staff thinks that these skills could be developed partly. On one side, there are programmes in which the study course “Basics of Entrepreneurship” is included, but in those programmes in which this study course is not in the curriculum, the course could be integrated in other study subjects. In each study, subject interpersonal, global citizenship, selection, critical and innovative thinking skills are being developed.

Profile of successful school graduate (what kind of professional traits should their students obtain after graduation of their educational institutional?)

In the opinion of VET teachers and staff, their school graduates should be:

- Disciplined;
- Punctual;
- They should have a positive attitude towards their chosen profession;
- Logical and critical thinking;
- With clear goals;
- Ambitious;
- They should have the ability to freely lay out and defend their opinion;
- Good communicators;
- Tolerant;
- Patient;
- Thorough;
- Friendly towards their clients;
- With a desire to learn;
- With higher self-assessment;
- Motivation for further education;
- Motivation to work;
- Diligent;
- They should be able to make their own decisions;
- Able to work in a team;
- Should have organizational skills.

Obstacles to developing integrated entrepreneurial education

VET staff (deputy directors) think that the biggest obstacle might be the Professional Study Standard. The main reason for that would be the fact, that if entrepreneurship education themes or courses would be included in the curriculum, then other courses for professional education would need to be cut from the curricula.

The necessary internal or external support to developing integrated entrepreneurial education

Students should have the desire to learn the basics of entrepreneurship, the aim and application of the course should be made clear. Changes in the Educational Standard and correct, appropriate study course proportion should be implemented.

Students' position on the need for entrepreneurial skills and the practical existence and/or the establishment in training program

In student's opinion transversal and entrepreneurial skills are developed not only in schools, but also in everyday life and work outside school. Mostly, students mention communication as the skill that school helps them develop, as well as readiness to learn. Some students would like for their school to participate in more projects that are related to the profession they are acquiring. During practical assignments students mostly had to use, diligence, communication skills and ability to work in a team.

Here are some quotes from students who participated in the survey:

"In my opinion, these skills are developed not only in school, but also in everyday life and in work."

"Communication among everyone, or the breaking of the psychological walls, even after graduating. It helped me a lot."

"School helps us to develop communication skills and ability to work in a team."

"Readiness to learn, you can develop these skills in school, because there is motivation to study with good grades as then you can get a scholarship."

"By making and getting involved in projects that are related to my study programme"

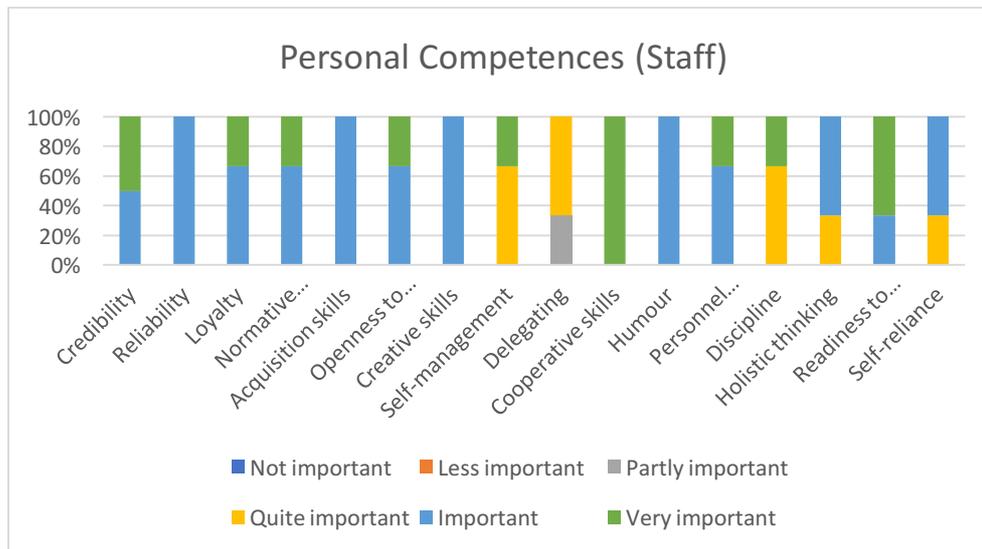
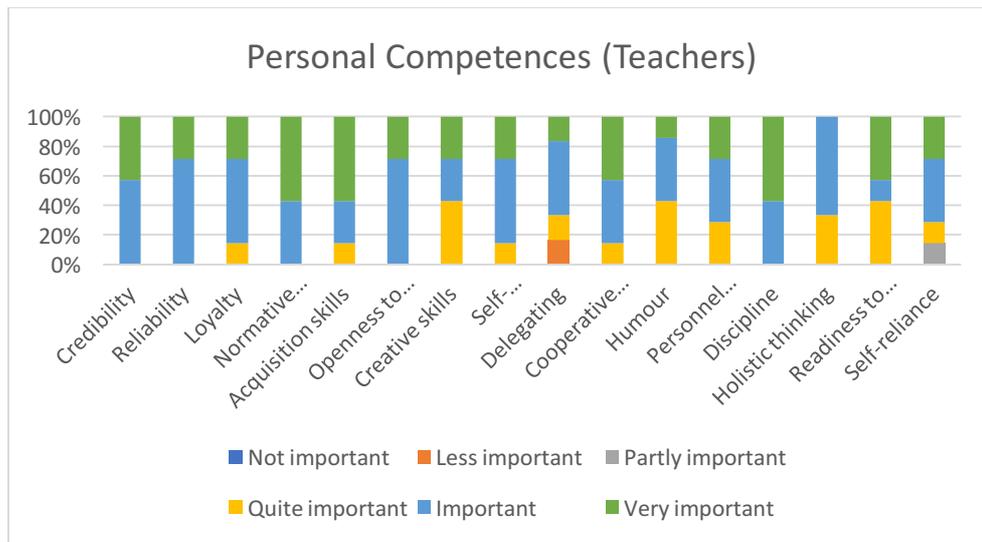
"Diligence is an individual work which I have faced the most in the study process. Without it I would not have come so far."

"It was necessary to work in a team. It is hard to explain how it happened because the term speaks for itself."

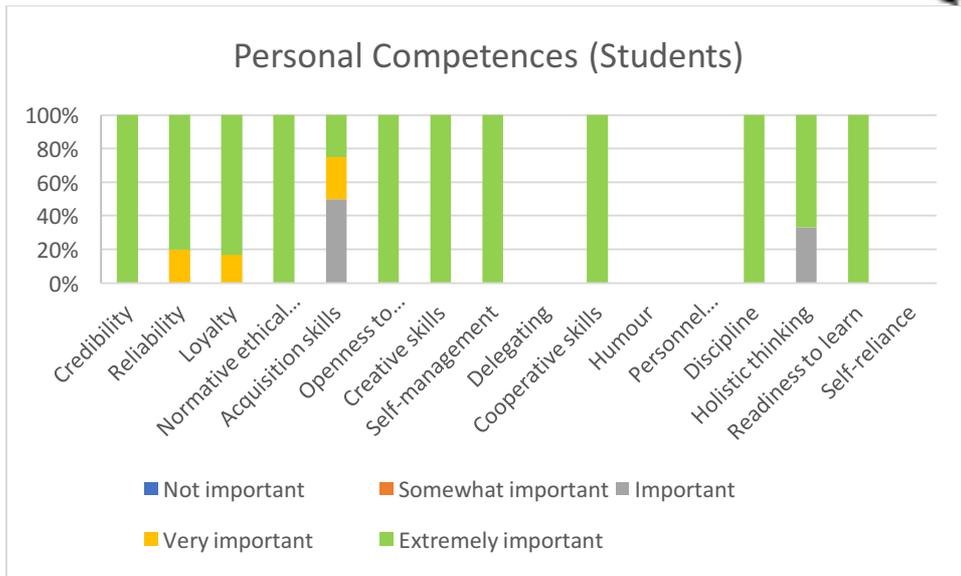
"During our training, we have to communicate with clients and we have to resolve conflicts"

Comparison of teachers'/ trainers' and students' opinion about entrepreneurial competences

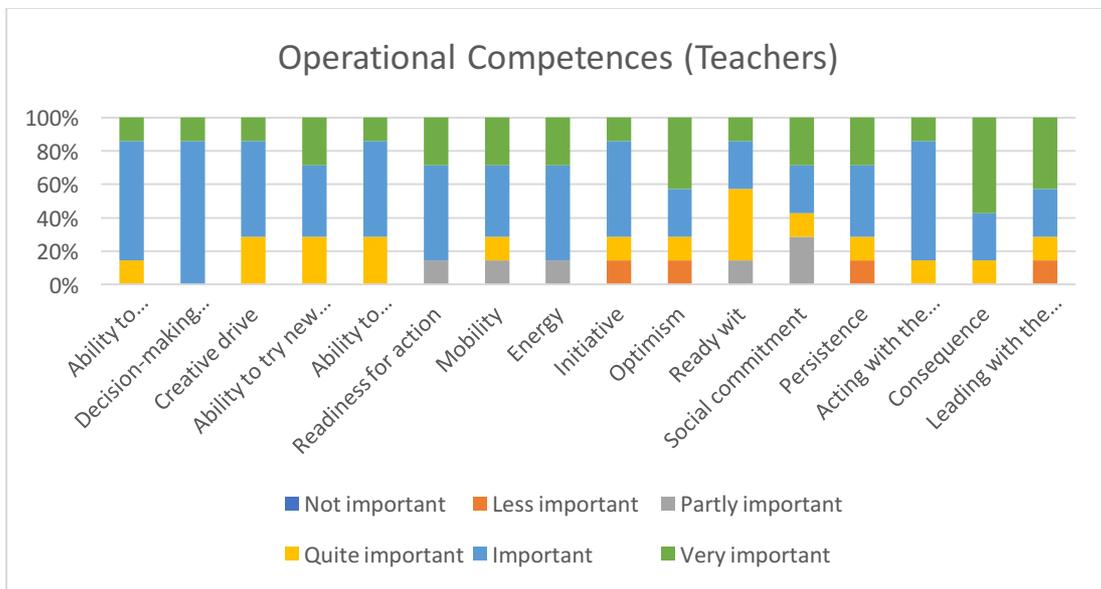
During the research teachers, staff and students of VET institutions filled in a Kodex questionnaire where teachers and staff had to mark the skills that in their opinion are the most important for an entrepreneur, however, students had to choose 3-5 skills in each skill field, which entrepreneurs should have.

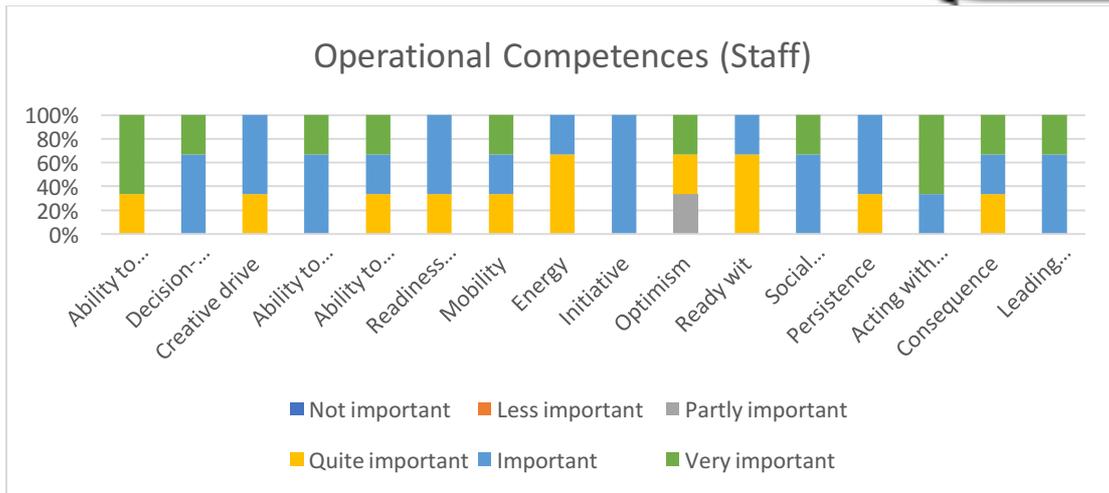


As we can see VET institution staff and teachers have rated credibility, cooperative skills, readiness to learn and discipline as very important skills to have for an entrepreneur.

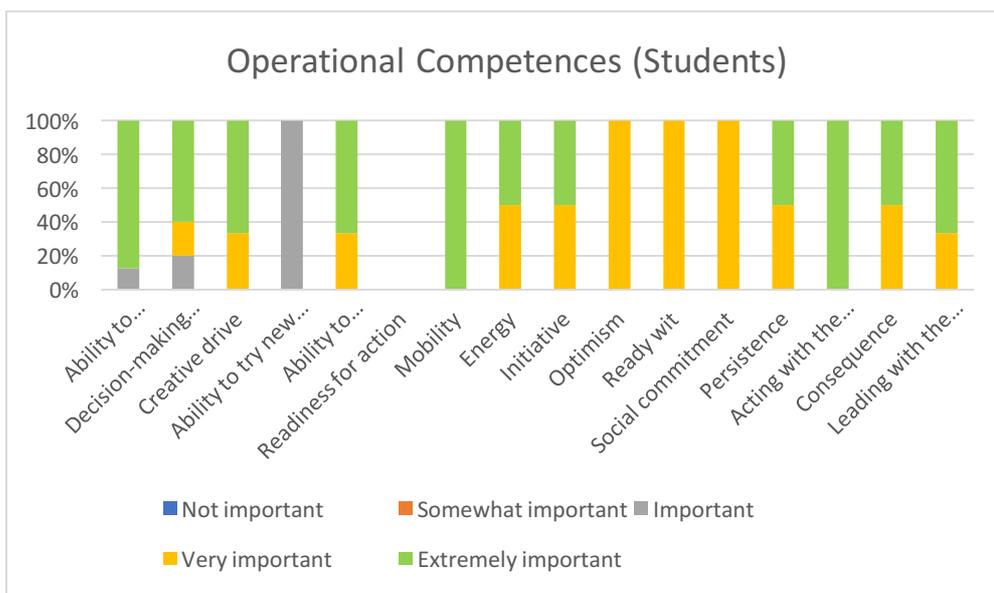


Just like teachers and staff, students presume that credibility, cooperative skills and discipline are extremely important for an entrepreneur to have. However, none of the students thought that humour, delegating or personnel development skills are important enough to be marked. This could be related to the fact that students lack experience in the work environment.

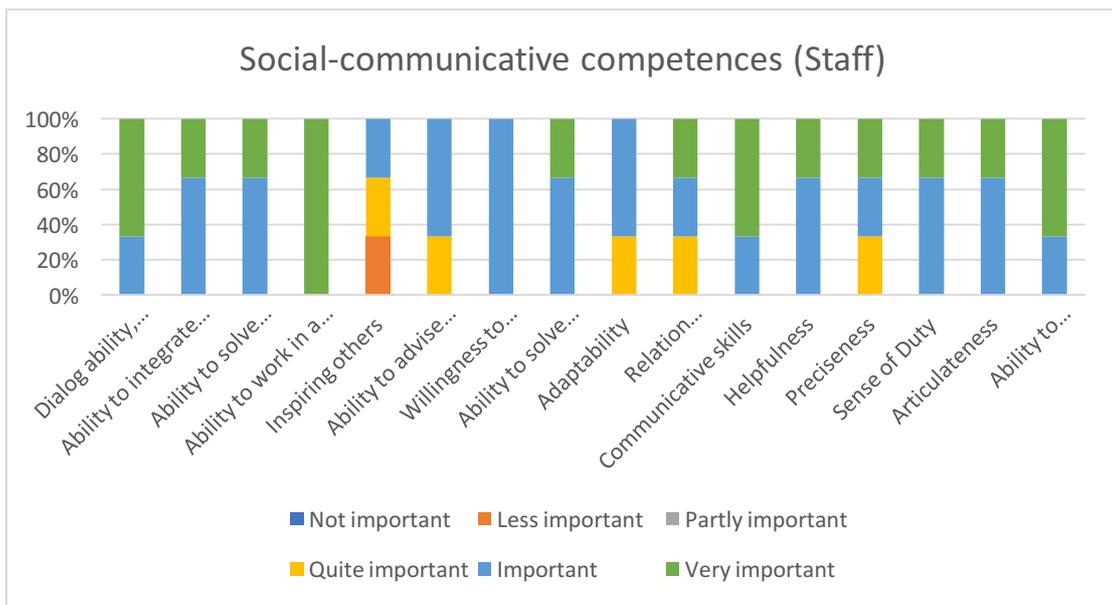
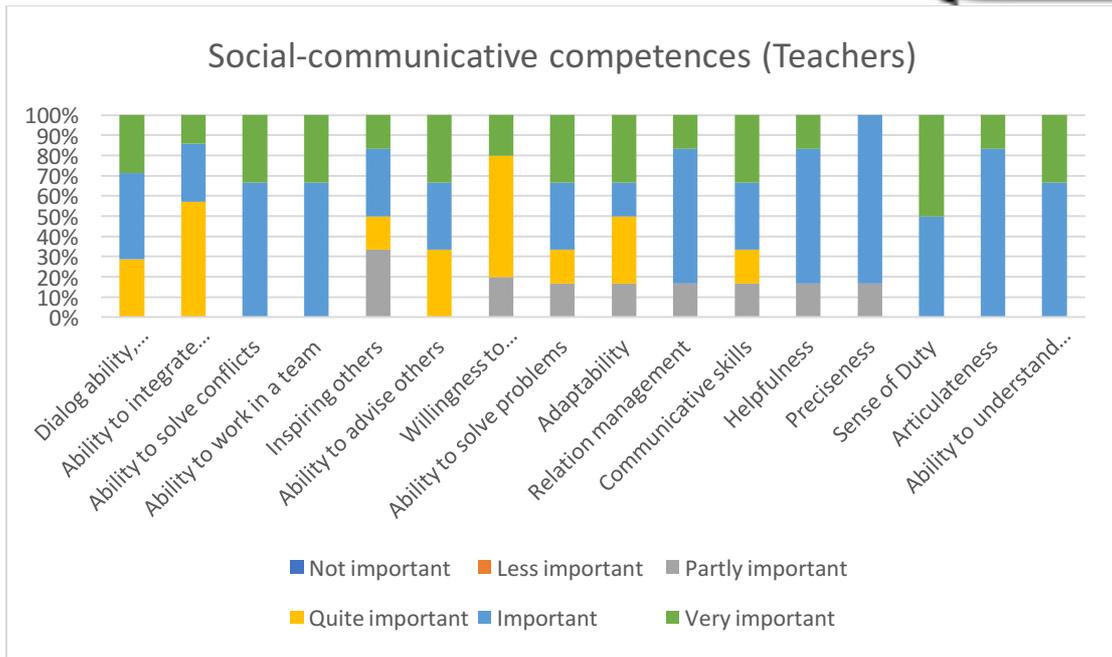




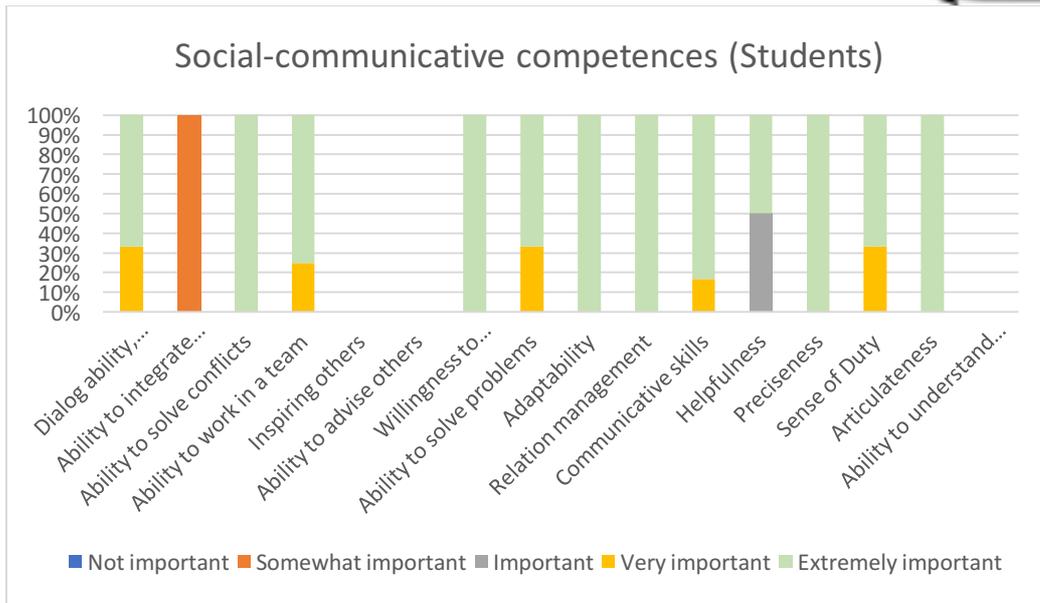
Regarding operational competences, both teachers and staff agree that the ability to withstand stress, creative drive and acting with the result in mind are the most important in operational competence group for entrepreneurs.



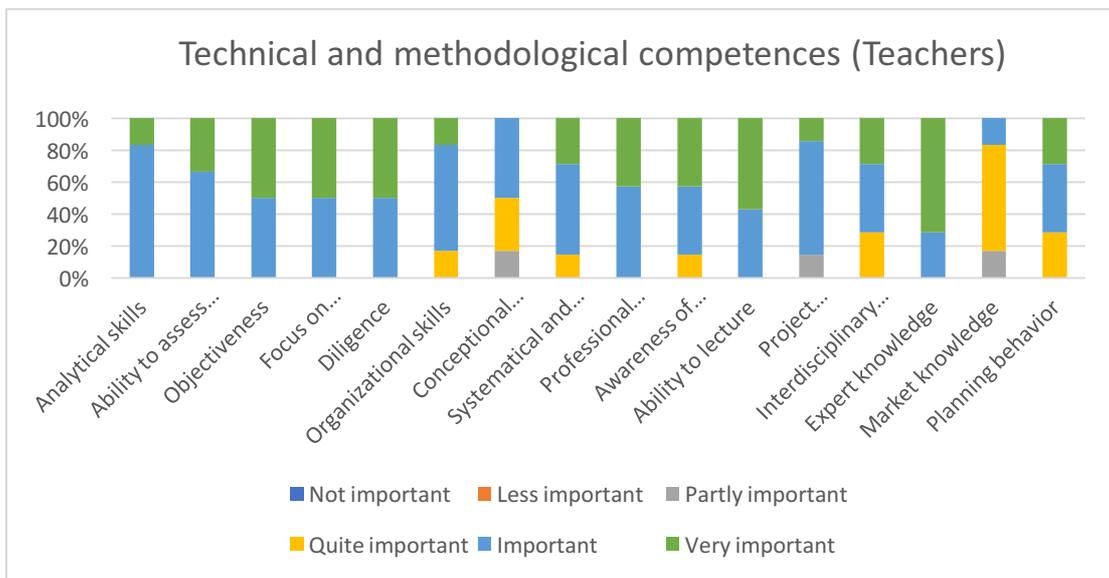
Readiness for action among students was not a very popular skill for an entrepreneur to have, however, acting with the result in mind, mobility and ability to withstand stress were ranked as one of the most important skills for entrepreneurs.

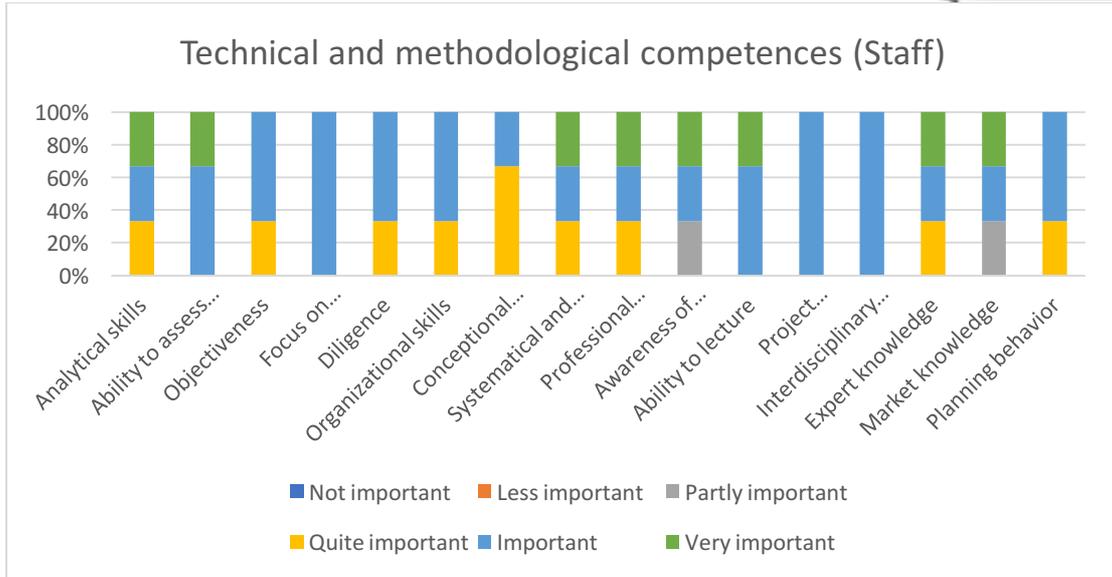


VET institution teachers and staff have rated skills like ability to work in a team, ability to solve conflicts and the ability to understand other’s perspectives as important or very important.

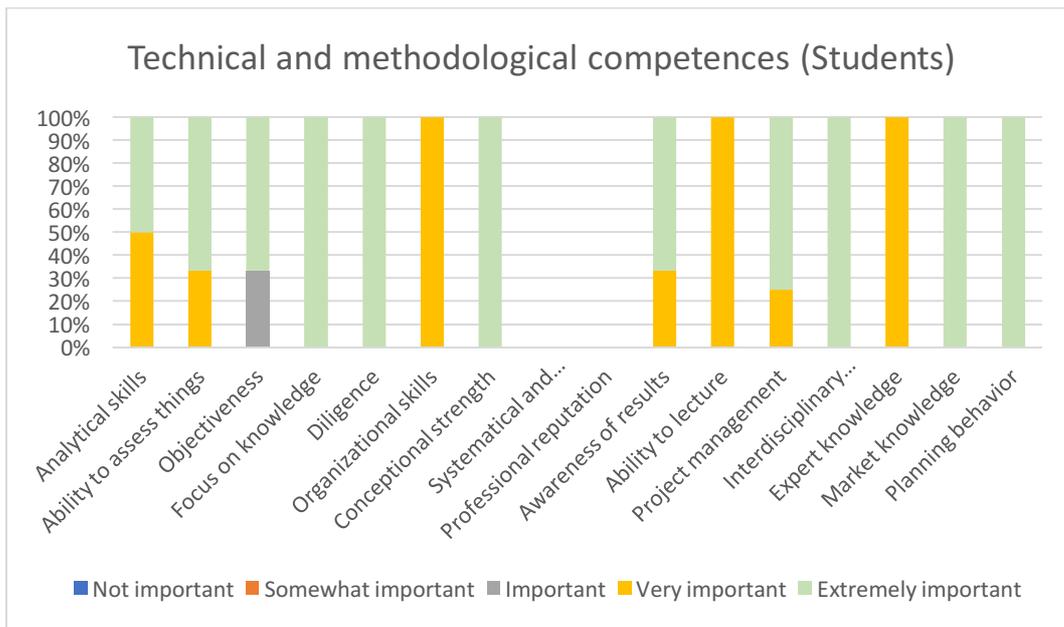


Just like their teachers and advisors' students think that the ability to solve conflicts and ability to work in a team are very important, however ability to understand other's perspectives hasn't been rated at all.





Focus on knowledge, ability to assess things and focus on knowledge is among the highest rated skills by teachers and staff of VET institutions.



In student's point of view, planning behaviour, diligence and market knowledge are extremely important skills for an entrepreneur to have.

Qualitative research (based on written surveys)/ Analysis of results

- comprehension of entrepreneurial skills (what do they understand with entrepreneurial skills?)
- how entrepreneurial skills can be developed in their study subjects?
- profile of successful school graduate (what kind of professional traits should their students obtain after graduation of their educational institutional?);
- obstacles to developing integrated entrepreneurial education;
- the necessary internal or external support to developing integrated entrepreneurial education.
- students' position on the need for entrepreneurial skills and the practical existence and/or the establishment in training program:
- recognition of entrepreneurial skills in already existing teaching program.

Questionnaires produced for this survey were used with three main target groups in the ENTER project, namely:

- (1) Teachers and trainers in VET;
- (2) Students in VET
- (3) Administrative staff, school principle in VET

The number of participants of the target group (1) was 10, of target group (2) was 5 and of target group (3) was 2. The following summary shows the findings concerning the topics foreseen as follows:

Comprehension of entrepreneurial skills (what do the participants understand with entrepreneurial skills?)

There are different approaches of the understanding of entrepreneurial and transversal (soft)-skills but most of the participants of the target groups *teachers* and *staff* agree that entrepreneurial skills are very important and helpful to stay competitive in the labour market and to deal with today's varied and unpredictable career paths. Below are some quotations of participants on this that help underline the message:

“To transversal soft skills, I would count all of the eight key competences – and one of them focuses on entrepreneurial competences, whereas I'd also say that

some of the other are important for entrepreneurial skills as well.”

“Entrepreneurial – to look for business opportunities, work best for company in mind, create chances and added value for company. Transversal soft skills – not sure what you refer to but soft skills are defined e.g. by the EU and guess there is no need to re-evaluate.”

“That were all competencies and attributes to the “assembly line workers” workers should be different. This includes openness for new to develop the company, good assessment administration compared with past and future, making decisions, unpleasant too, structured approach, positive attitude and being ready to “move” something, alone and in collective.”

„Those terms cover all the knowledge, skills and competences that enable you to start and/or run your own business. A lot of those “skills” (or competences) are not exclusive for entrepreneurs but also important for employees working in different fields, that’s what make them transversal. Communication as a competence for example is a classical transversal skill that is important in different branches and fields, for both, entrepreneurs and normal employees.”

„I did not hear this terms before I guess it is about competences employers need to be successful on the market, better and longer. For the term “transversal” I have no suitable translation.”

„For me they are cross-sectional competencies, for a large number of employees in a modern working situation, that are necessary, independent on their starting competencies or their individual profession. “

“In my sense, it is a mix of entrepreneurial and social skills that becomes as a key qualification more and more important on the labour market.”

„Especially in vocational education it is important and absolutely necessary to convey entrepreneurial and transversal skills to our students – that means, that our students should have a wide variety of vocational, professional and business skills as an optimal preparation for their career, their further individual vocational development and even a better understanding, how business, the companies, the competition functions.”

“Transversal skills, such as the ability to learn and initiative-taking, will help

people to deal with today's varied and unpredictable career paths. Entrepreneurial skills will help contribute to employability of young people in particular, as well as supporting new business creation."

"I understand it as entrepreneurial, integrated social skills, not limited to one field that can be used more universal."

„Entrepreneurial skills refer to a mind-set that makes workers outstanding. It includes seeing challenges (not problems) as a chance to improve and be able at the same time to see possible impact and consequences. People would be open to change and should be able to anticipate progress and development. Entrepreneurial skills are not restricted to specific categories of occupations or staff roles. They are a part of transversal soft skills."

"The ability to identify with the aims of a business (that you are working for or running), understand clients' needs, see and analyse clear business opportunities. Be able to deal with your customers and partners, communicate efficiently, solve issues, be able to deal with complaints."

How can entrepreneurial skills be developed in their study subjects?

Teachers and staff gave the following ideas on how entrepreneurial skills could be developed:

- o Individual training and counselling as well as group training
- o Awareness-raising work with best practice models
- o Intense reflection of the own personal situation
- o Knowhow-transfer: specialist expertise should be integrated in the individual situation
- o Concrete deliberation on target achievement (SWOT-Analyses, business planning games, suitability tests)
- o Case discussions from practice
- o Learn from one another
- o Knowledge transfer of the lecturer
- o Lecturer as role model
- o Immediate Feedback
- o Debate culture and democratic processes
- o Vocational internship

- o Integrated workshops
- o Visits and info days with employer's
- o Cross curricula brainstorming

Students also participated and the following ideas were presented:

- o accompaniment by company founding
- o visit companies
- o work and learn in companies
- o interdisciplinary teaching

Profile of successful school graduate (what kind of professional traits should students obtain after graduation of their educational institutional?)

As professional traits after graduation participants mentioned skills that help students to have success on the labour market and to find a suitable job. Examples given were communication skills (conflict management, networking, and business communications, to deal with customers and partners and complaints), initiative-taking, self-organisation, self-knowledge, self-presentation and ability to learn, customer oriented acting and professional business administration.

In the opinion of the participants, it is not enough to have professional skills. In times of globalization and internationalization they think it is important to be able to face competition. This can be reached with a focus on personal and social skills, such as enthusiasm, creativity, team spirit, motivation, sense of responsibility, entrepreneurial thinking and action and openness in dealing with each other. The students should work on their personal career goals and on their realization, to develop a mature personality. They should be educated to live-long learning and to love their jobs.

Obstacles to developing integrated entrepreneurial education

Basically, all teachers, staff and students are very positive concerning integrated entrepreneurial education. They consider it very important to have success on the labour market. Nevertheless, there are some obstacles on the way. At this point, however, their opinions diverge.

In the students' opinion, the education is far too theoretical. There is no focus on learning how to found a company and there are too few lessons to learn management and accounting.

Teachers and staff localize lack of money to be able to implement useful measures for developing integrated entrepreneurial education. Some of the participants would wish more personal training and workshops. It is necessary to reflect own skills and get feedback from bosses, colleagues and students.

Students' position on the need for entrepreneurial skills and the practical existence and/or the establishment in training program

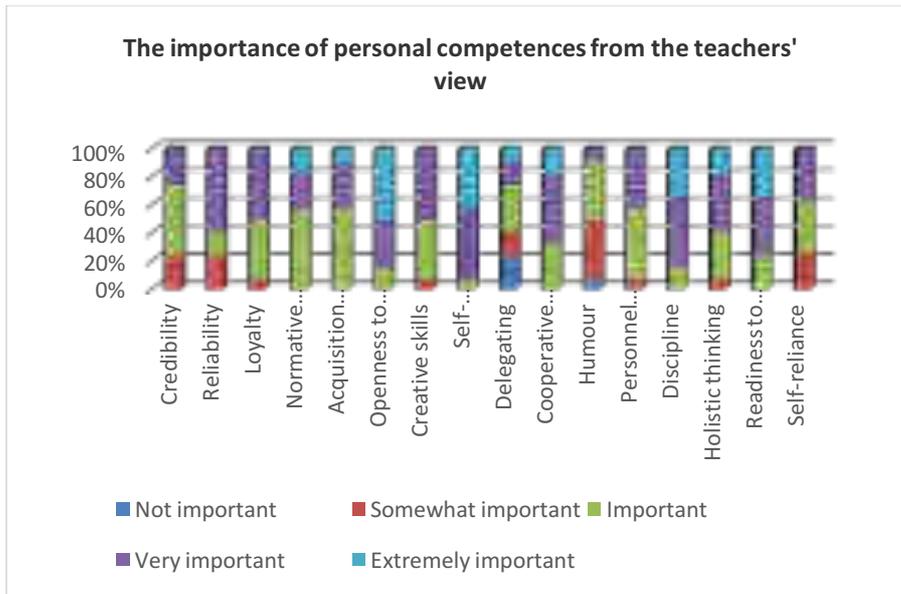
In the opinion of participating students, there are a few things that are important to be successful in starting one's own business. "Being important" have been rated the following: computer skills, networking, having the overview, marketing and sales, getting info. Very important for students was the administration, money managing, extremely important was even considered management and sales, motivation and knowledge of the business itself.

One student skipped the question because s/he does not intend to have an own company.

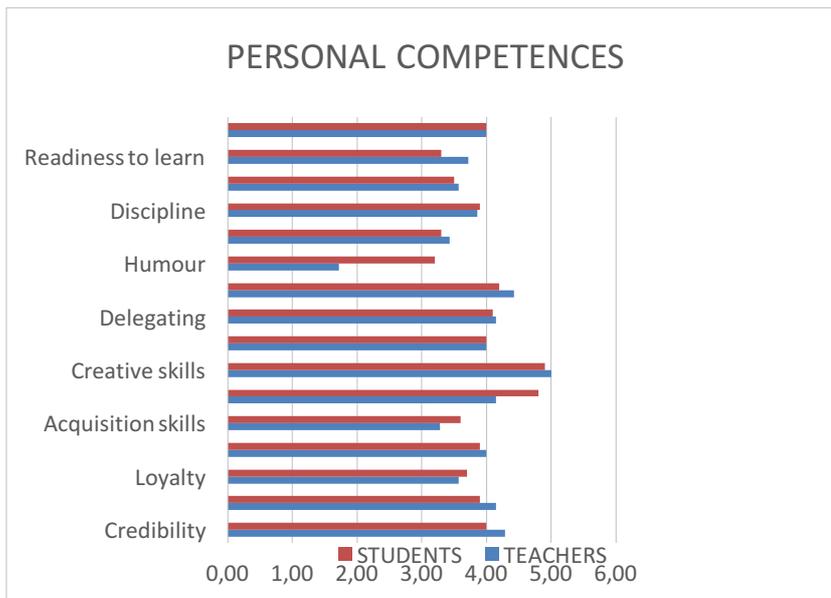
The students meant that they learned from all aspects the latest details. They also visited companies and worked for some time to learn in companies. Some said, the teaching was too theoretical and that they would rather learn more practice-related inputs.

The most positive statement refers to practice-related topics like one of them mentioned: *"I liked project work with my friends in class. We could choose and work on our own magazine. We designed it, wrote texts, organized printing and sales."*

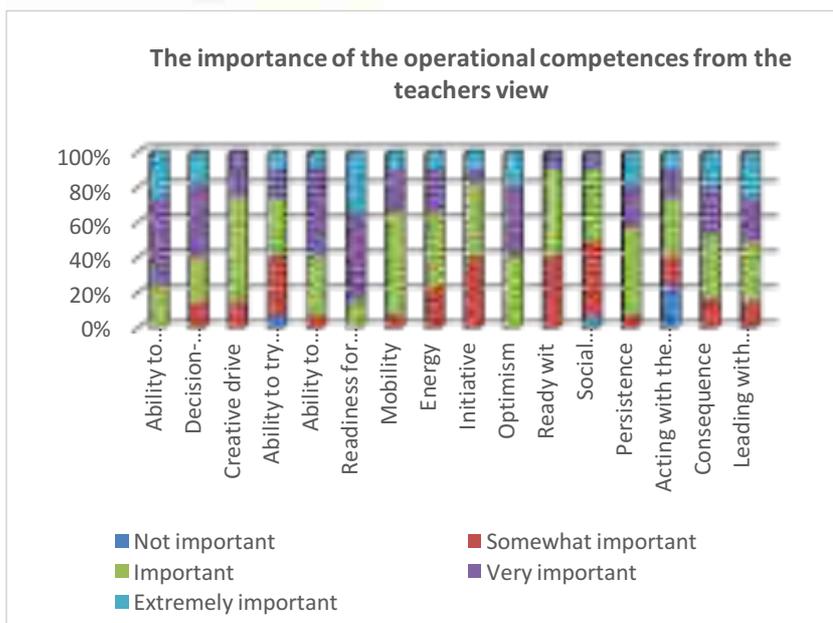
Comparison of teachers'/ trainers' and students' opinion about entrepreneurial competences



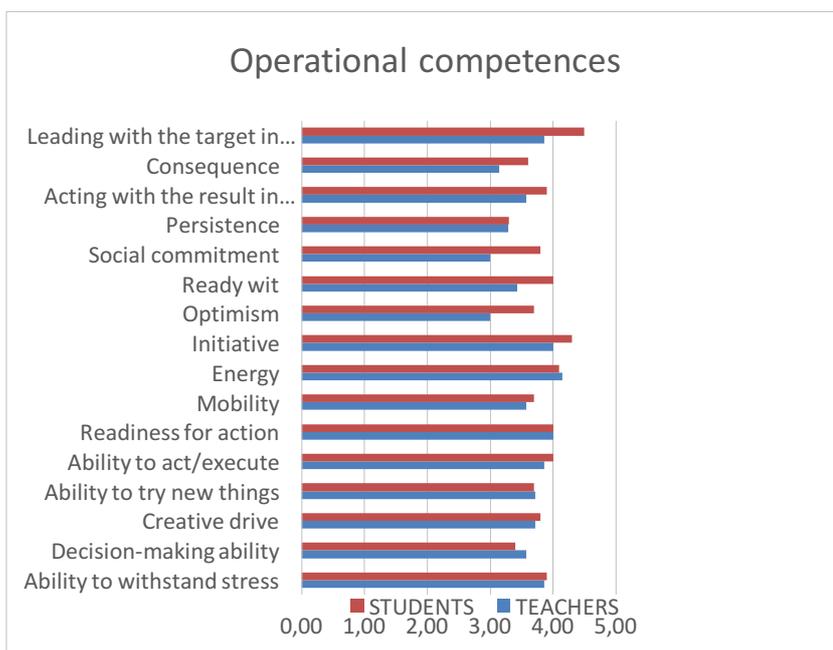
In teachers point of view openness to changes is an extremely important quality to have as an entrepreneur. Discipline, self-management and reliability have been rated as very important and humour and delegating skills have been rated as not important.



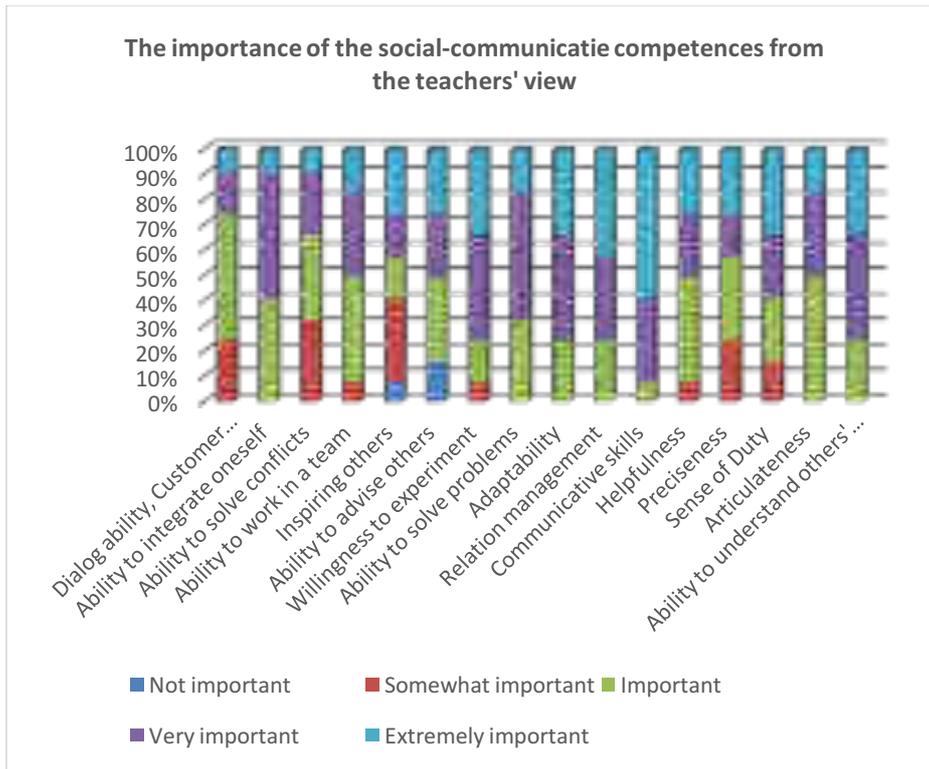
Both teachers and students rate creative skills, readiness to learn and cooperative skills as the most important for an entrepreneur to have. Just like teachers, students also rate humour as the least important skill to have.



Readiness for action, ability to withstand stress and ability to act/execute have been rated as very important by teachers. However, acting with the result in mind, social commitment and ability to try new things has been rated as not important by some teachers.



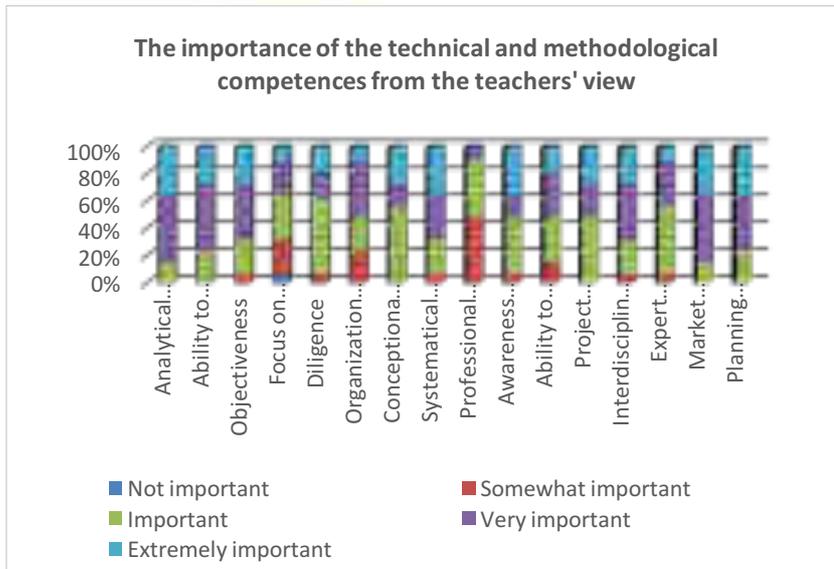
Leading with the target in mind, initiative and energy have been rated the highest by students. The biggest difference in opinions between teachers and students can be seen with the quality of optimism. In students point of view this quality is more important than in teachers point of view.



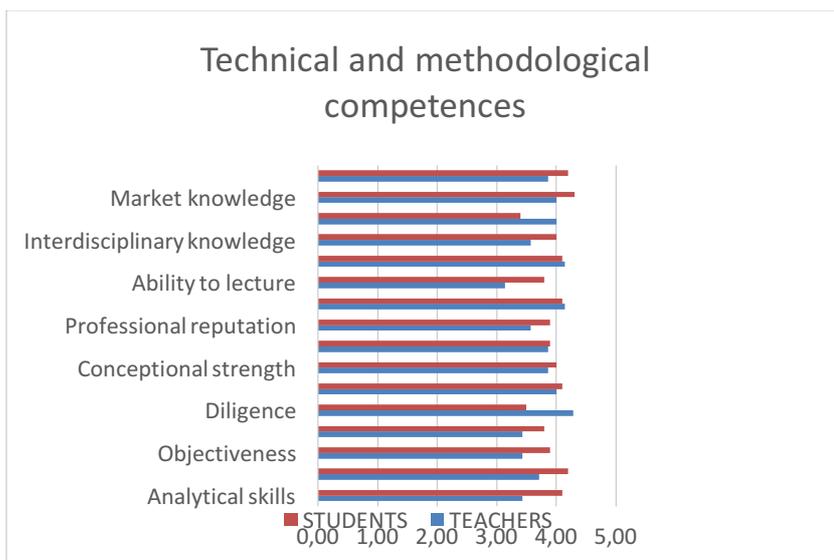
Communicative skills, relation management and adaptability have been rated as extremely important skills to have by teachers. Inspiring others, ability to advise others and preciseness have been rated as somewhat important or not important qualities for an entrepreneur to have.



Unlike teachers, students have rated the ability to advise others and willingness to experiment as more important.



Analytical skills, ability to assess things and market knowledge have been rates as extremely and very important qualities for an entrepreneur to have. Focus on knowledge, professional reputation and organizational skills have been rated as somewhat important or not important at all by some teachers.



Diligence has received a higher rating by teachers than it has by students. However, analytical skills have been rated higher by students. Project management, awareness of results and conceptual strength have been rated approximately equally by students and teachers.

Portugal

TRANSVERSAL AND ENTREPRENEURIAL SKILLS IN VOCATIONAL EDUCATION

The description of the development and training of transversal and entrepreneurial skills in vocational education in Portugal is based on a qualitative research implemented through online survey, with the participation of 20 students and 17 trainers /teachers from various VET institutions.

Comprehension of entrepreneurial skills

The quested teachers and trainers associated entrepreneurship with the followings, in order of importance (frequency): Innovation, initiative, motivation, creating something new, development, soft skills (e.g. communication, psycho-social competences, team work, empathy, leadership), perseverance, hard skills (create, open and manage a business), completing something (from the beginning to the end), creativity, personal competences (attitude towards work and development), adding value, self-motivation. It is important to remark that according to several participant innovations goes beyond work environment, it is present in the private life and in the personality (trait) as well. 100% of the respondents opted that the development of entrepreneurial competences is important, because it capacitates students to create and strengthen their position on the job market (competitive advantage), generates motivation and pull to proceed, opens their horizon to be proactive and innovative (e.g. identify new opportunities, create new products).

Profile of successful school graduate

When asking teachers and trainers about the necessary skills and competences for future success, most of them highlighted the following new aspects compared to the above: punctuality, proactivity, work ethics (e.g. honesty, integrity) and responsibility, autonomy as well teamwork, social relations (assertiveness, empathy, communication (oral and written language skills in Portuguese and English), knowledge (technical). Besides, entrepreneurial skills innovation, learning and development, leadership and motivation, assessment and evaluation, resilience were also stressed.

Development of entrepreneurial skills relating to specific subjects

According to the perception of the quested, the education of entrepreneurial in less focused nor specific, it rather happens embedded to the general education, through transversal, interdisciplinary projects when students need to integrate their knowledge,

come up with new ideas, apply their skills to solve problems and tasks.

Besides, the teacher's own professional experiences are shared through his/her teaching. Most respondents think that the development of entrepreneurial competences hasn't been explored and elaborated enough yet in VET education.

Internal or external support to develop integrated entrepreneurial education

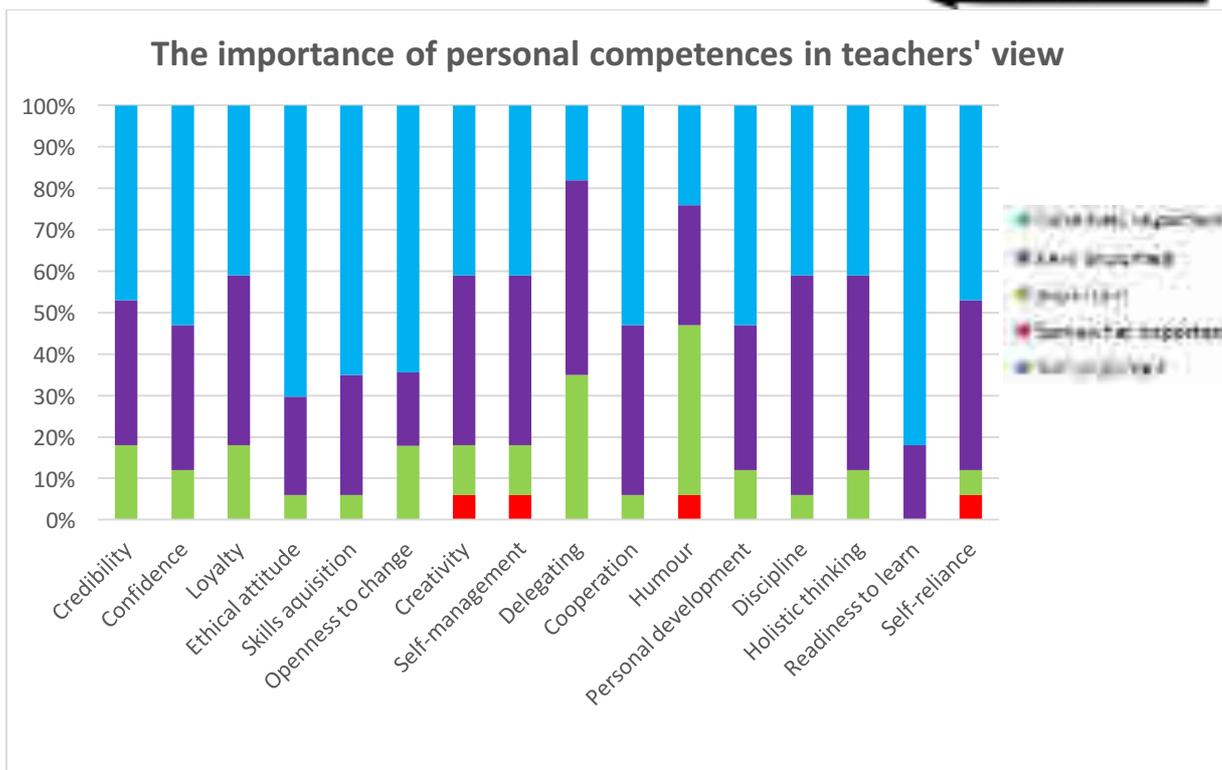
The queried teachers' answers showed variety regarding the perceived need of additional materials and trainings for entrepreneurial competence development. According to some, entrepreneurial skills are 'innate' skills, therefore there are students who have them without any specific training; while others, who were not born with them will need to learn those. Most respondents think that the upgrading of specific topic related knowledge elements, coaching methods, toolkit on group dynamics, case studies, self-knowledge and mindfulness techniques would be useful and necessary.

Comparison of teachers'/ trainers' and students' opinion about entrepreneurial competences

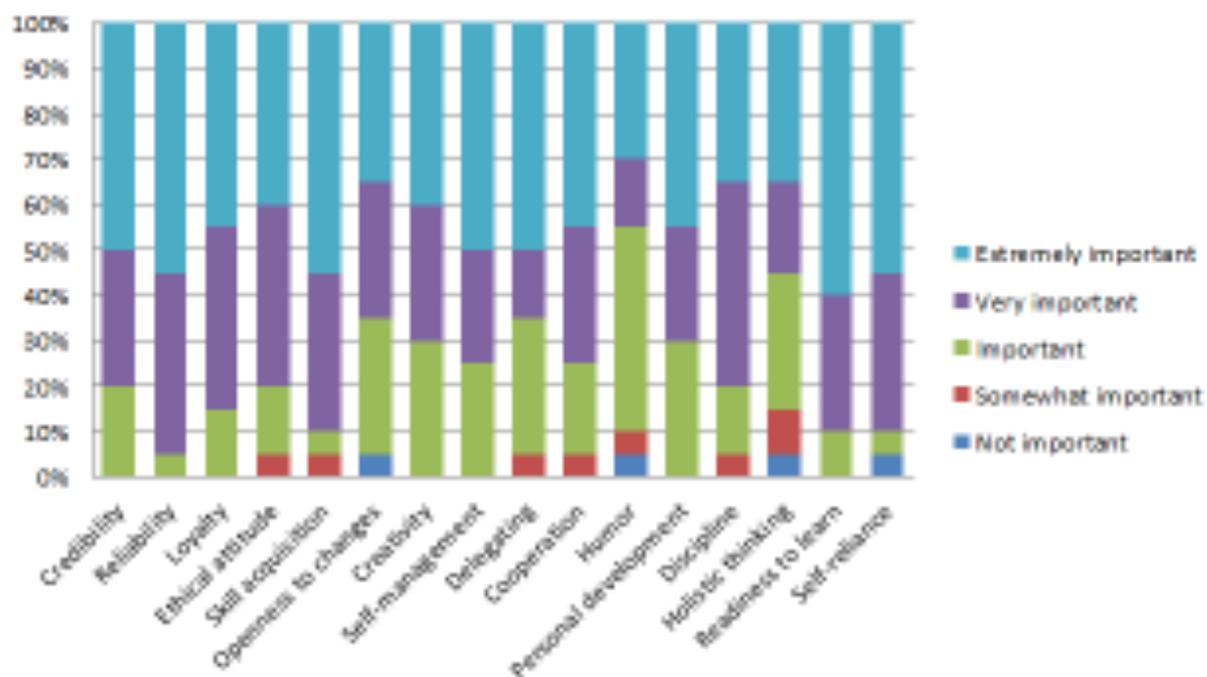
Teachers rated the importance of 4 types of competence groups relating to entrepreneurial skills: personal; operational; social-communicative; and technical and methodological competences.

Based on the weighted average of their answers we found that the most important **personal skills** according to teachers, in descending order were *readiness to learn* (4.82 / 5), *normative ethical attitude* (3.71 / 5), *skills acquisition/dedication* (4.65 / 5), *openness to change* and *cooperative skills* (4.59 / 5). Sense of humour and delegation received the lowest scores (3.71 and 3.82 respectively).

The online survey questionnaire was also filled out by 20 students currently in the VET studies. We asked them about the same four competence group as the teachers and trainers, what importance does they have in an entrepreneur's life.



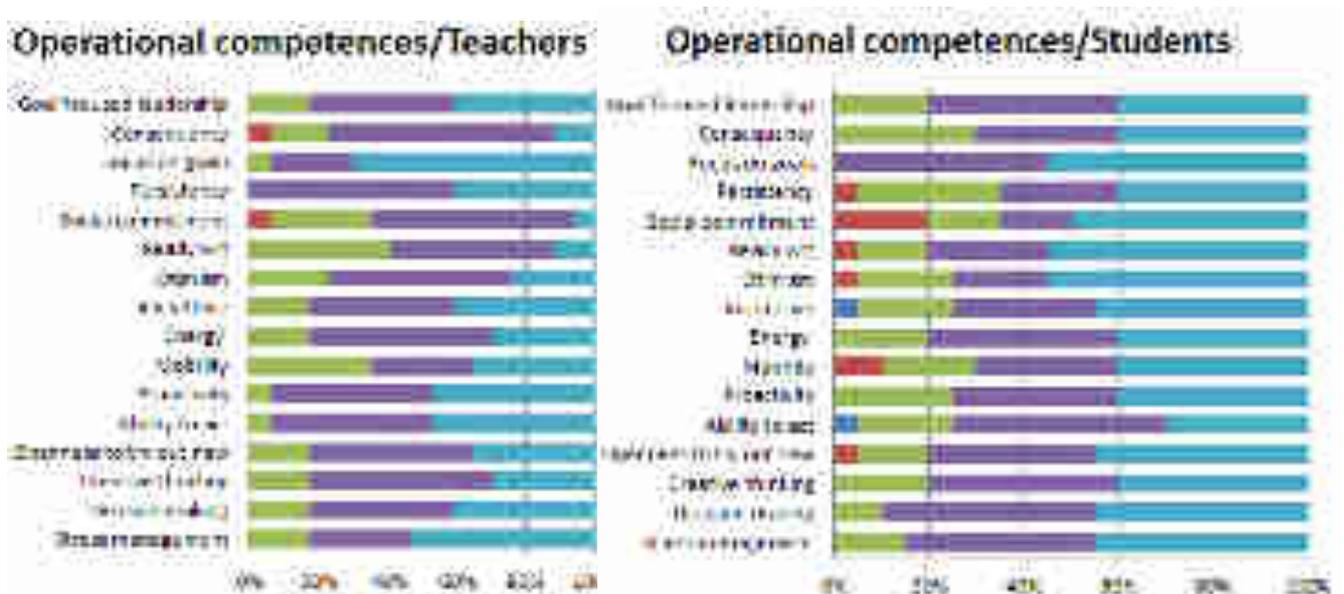
Importance of personal competences in student's view



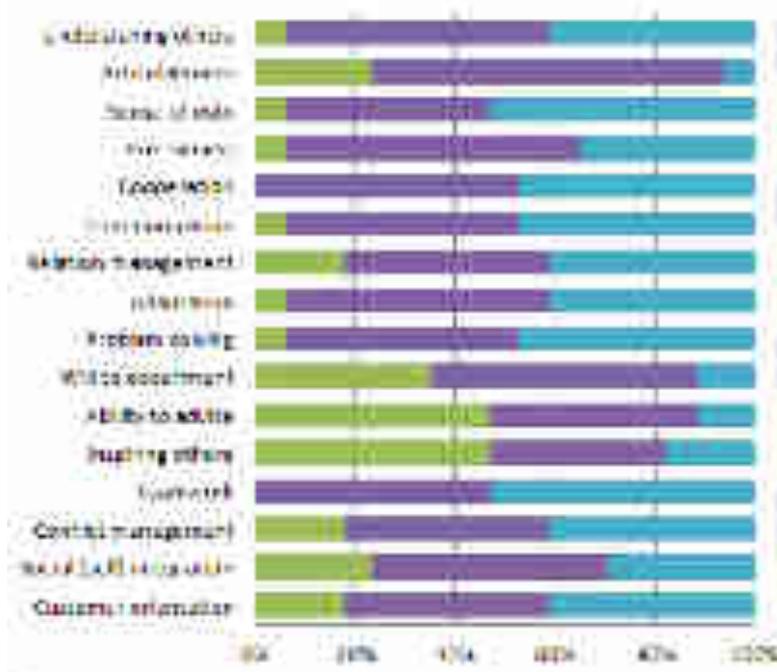
Based on the weighted average of their students' answers we found that the most important personal skills, in descending order were *readiness to learn* (4.5 / 5), *skill acquisition* (4.4 / 5), *credibility*, and *loyalty* (4.3 / 5 each) and *humour* was the least

important (3.6 / 5), just as in case of the teachers. This is only partly matching with teachers' opinion. **Both students and teachers rated *readiness to learn* and *skill acquisition* with the highest scores and *humour* with the less.**

Teachers ranked as the most important **operational competences** the *focus on goals* (4.65 / 5), *proactivity* (4.41 / 5), *mobility* (4.41 / 5), *persistence* (4.41 / 5) and *stress management* (4.35 / 5); while the least important were social commitment (3.65 / 5) and *ready wit* (3.71 / 5). Students put on the first place the *focus on goals* (4.55 / 5), *decision-making* (4.35 / 5) and *stress management* (4.3 / 5). *Social commitment* and *ability of act* were the weakest based on the weighted averages (3.95 / 5). As it is seen, here again we have matching ideas, **both teachers and students put 'focus on goals' to the first place.**



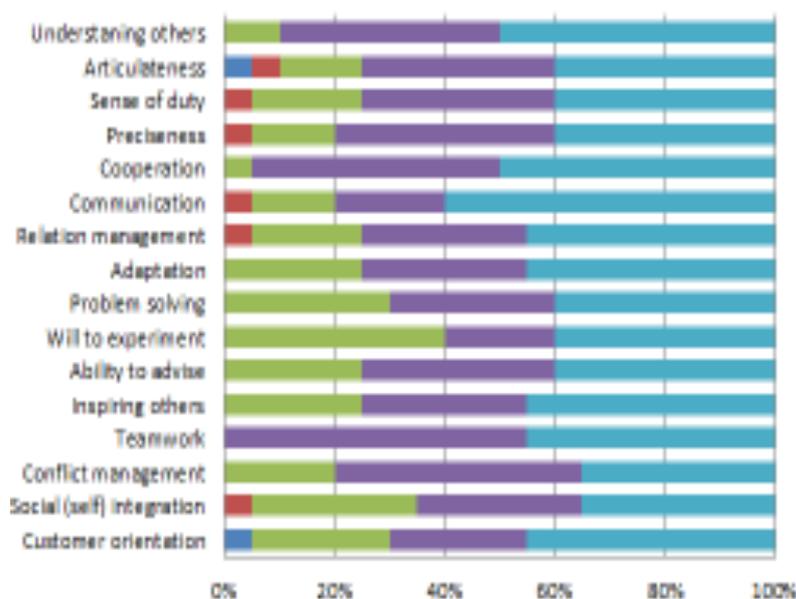
Social-communicative competences/Teachers



Among social-communicative competences, the highest weighted averages appeared to be *teamwork* (4.53 / 5), *cooperation* (4.47 / 5), *sense of duty* (4.47 / 5), *problem solving* (4.41 / 5) and *communication* (4.41 / 5). The ‘weakest’ competences were the

ability to give advice (3.65 / 5) and *to inspire others* (3.71 / 5).

Socio-communicative competences/ Students

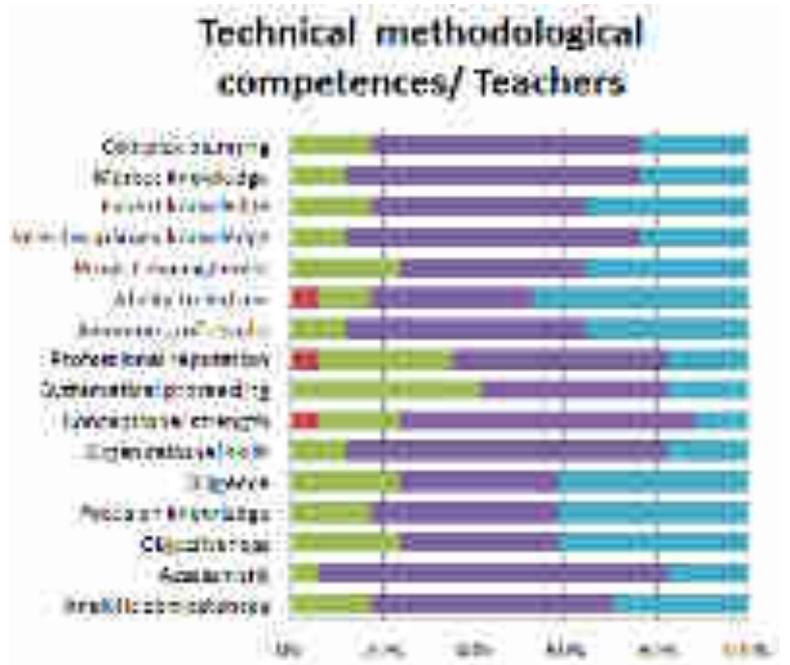


Students gave the highest importance to *teamwork* and *cooperation* (4.45 / 5) and to the capacity of *understanding each other* (4.4 / 5). Compared with the other competences, *social integration* (3.95 / 5) and *customer orientation* are

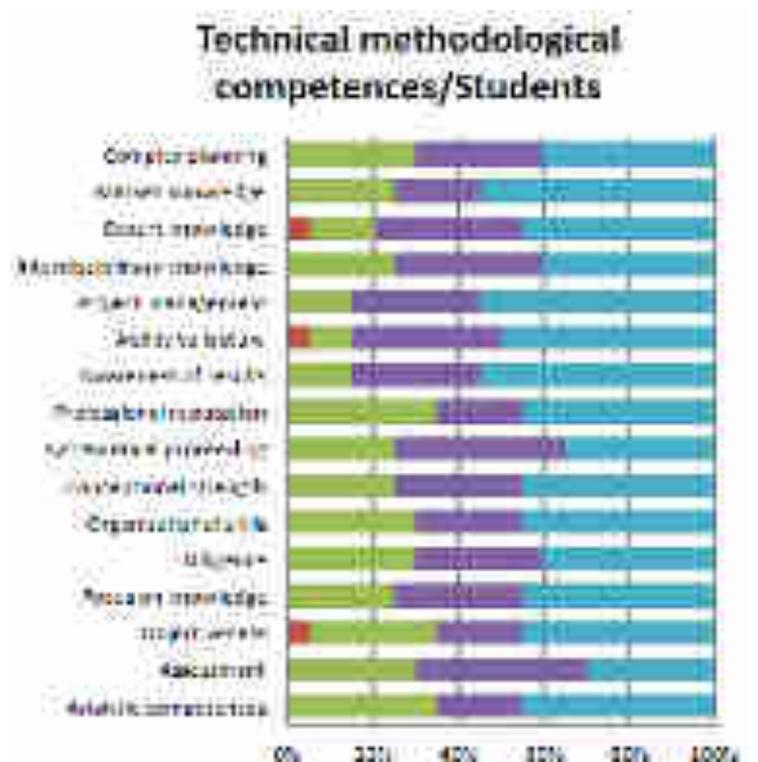
less important according to them.

Students' and teachers' opinion matched only in case of teamwork, the most highly rated competence mutually.

In the last competence group, **technical and methodological competences**, the results we got took an interesting shape as the first three highest weighted averages scored exactly the same (4.24 / 5); *focus on knowledge, ability to lecture, awareness of results*. The same thing happened in case of two lowest scores given to *professional reputation* and *systematically proceeding* (3.76 / 5).



Students put to first place *the awareness of results* and *project management* (4.4 / 5 each), but *market knowledge* and *ability to lecture* were between the first five competences (4.3 / 5 each). *Assessment* showed the lowest weighted average (4.05 / 5) followed by *analytic competences* and *complex planning* of behaviour (4.1 / 5 each).



We found matching between the two research samples in case of ability of lecture and awareness of results; however, the positioning of these competences was slightly different in the teachers' and the students' quests.

CONCLUSIONS

Czech Republic

The description of the education system has shown that transversal/ entrepreneurial skills are part of (both formal and non-formal) the school education.

Most of the participants in the teacher and staff target groups agree that entrepreneurial skills are very important and helpful to stay competitive on the labour market and to deal with today's varied and unpredictable career paths.

As it can be seen from the table below, in teacher's and trainers' opinion, from the four competence groups the group of socio-communicative competences was valued as most important, followed by the personal competence and soon after the technical/methodological competences, while operational competences were seen as least important in a comparison. Yet, the differences were not very large.

In the view of the fact, that the differences of average weighted importance of the most and the less highly rated competences within the same competence groups were relatively small, we assume that **all competences within the groups have their fair role in entrepreneurship according to the quested teachers**. The largest intra-group difference was found in the personal competences' group (3.29) while the smallest in the operational competences' group (1.14). This shows, that the importance of the latter groups' competences is uniform on teachers' opinion, while in the first case the importance assigned to each competence shows more variety within the group.

As it can be seen from the table below, in students' opinion, from the four competence groups the group of socio-communicative competences was valued as most important, followed by the technical/methodological competence and soon after the personal competences, while operational competences were seen as least important in a comparison. Yet, the differences were not very large.

In the view of the fact, that the differences of average weighted importance of the most and the less highly rated competences within the same competence groups were relatively small, we assume that **all competences within the groups have their fair role in entrepreneurship according to the quested students**. The largest intra-group

difference was found in the personal competences' group (1.7) while the smallest in the technical/methodological competences' group (0.9). This shows, that the importance of the latter groups' competences is uniform on students' opinion, while in the first case the importance assigned to each competence shows more variety within the group.

Difference of weighted average between the strongest and weakest competences	Weighted average of the competence group	
TEACHERS AND TRAINERS		
Personal competence	3,29	3,83
Operational competence	1,14	3,61
Socio-communicative competences	1,29	3,85
Technical methodological competences	1,15	3,78
STUDENTS		
Personal competence	1,7	3,89
Operational competence	1,2	3,86
Socio-communicative competences	1,5	4,03
Technical methodological competences	0,9	3,96

Latvia

Based on the description of the educational system it can be concluded that the VET institutions shall be more in touch with the business environment in the country, after the reforms that currently are being implemented will take place. By launching work-based learning programmes in VET institutions it will become easier for students to acquire transversal/ entrepreneurial skills during their studies. Since 77% of employers want their staff with prior work experience then this shall be a wonderful opportunity for students to acquire experience and different transversal/ entrepreneurial skills to fit the requirements of their future employers.

Although, most of the teachers were confused by the term transversal, they all agreed that entrepreneurial skills are important. These skills should be acquired so students could develop their careers, find better job opportunities and integrate more easily in a new work environment. These skills could be developed with the help of a specific

course or by integrating this knowledge into other study courses. In student's opinion, these skills are developed not only in schools, but also in every-day life and work which takes place outside of school. Students think that it is important to develop these skills and that their schools are helping them to do so. However, they also would like to see their schools to take part in more projects which would comply with the specific profession that they are currently acquiring.

Austria

The description on the education system has shown that transversal/ entrepreneurial skills are part of (both in formal and non-formal) the school education. Due to the long experience based on the so-called Dual System, all relevant stakeholders from education and business sectors can contribute to the education system. Even if nowadays, the percentage of people selecting a VET pathway from the beginning is low compared to former days when 'crafts' had a different standing and made a much larger part of the labour market, more and more later change during their career to/ from general education to VET (or vice versa) which has been made possible thanks to changes in the education system some years ago.

During a small qualitative research amidst educational experts, business representatives and students/ learners in VET organized for this project by BEST Institute, differences in the understanding of entrepreneurial and transversal (soft)skills became clear. Most of the participants of the *teachers and staff* target groups agree that entrepreneurial skills are very important and helpful to stay competitive on the labour market and to deal with today's varied and unpredictable career paths. In the opinion of the participants it is not enough to have professional skills but it is also important to be able to face competition. Students participating in the survey highlighted to have more practice-related education and company internships to become prepared for the labour market and related challenges.

Portugal

As it can be seen from the below table, on teacher's and trainers' opinion, from the four competence groups the group of personal competences was valued as most important, followed by the socio-communicational and soon after the organizational competences, while technical/methodological competences were seen as least important in a comparison. Yet, the differences were not very articulated. In the view of the fact, that

the differences of average weighted importance of the most and the less highly rated competences within the same competence groups were relatively small, we assume that all competences within the groups has their fair role in entrepreneurship according to the quested teachers. The largest intra-group difference was found in the organizational competences' group (1.0) while the smallest in the technical methodological competences' group (0.48). This shows, that the importance of the latter groups' competences is uniform on teachers' opinion, while in the first case the importance assigned to each competence shows more variety within the group.

TEACHERS AND TRAINERS		
Difference of weighted average between the strongest and weakest competences		Weighted average of the competence group
Personal competence	0.94	4.32
Organizational competence	1.0	4.16
Socio-communicational competences	0.88	4.19
Technical methodological competences	0.48	4.08
STUDENTS		
Personal competence	0.9	4.16
Organizational competence	0.7	4.18
Socio-communicational competences	0.5	4.18
Technical methodological competences	0.35	4.18

Students gave less differentiated rates to specific competences within the competence groups, compared to teachers, as it can be understood from the above data (on difference of weighted average between the strongest and weakest competences). This might come from a more cautious opinion shaping about entrepreneurship, given to the lack of professional and life experience.

It might also be the case that they see entrepreneurship as a very complex issue, which requires all the stated competences without much differentiation. Teachers and trainers

have more practical experience behind, therefore it can be easier to form an opinion and to set up an order of priorities. In their case, it is probable that the stronger differentiation between the competences is based on their past lessons learned and experiences.

MAIN CONCLUSIONS

1. Project participants in each partner country agree that entrepreneurial skills are very important. In **Czech Republic** respondents agree that these skills are very important and helpful to stay competitive in the labour market. In **Latvia** respondents feel like these skills should be acquired so students could develop their careers, find better job opportunities and integrate more easily in a new work environment. In **Austria** target groups agree that entrepreneurial skills are very important and helpful to stay competitive in the labour market and to deal with today's varied and unpredictable career paths. In **Portugal** 100% of the respondents opted that the development of entrepreneurial competences is important, because it capacitates students to create and strengthen their position on the job market (competitive advantage), generates motivation and pull to proceed, opens their horizon to be proactive and innovative (e.g. identify new opportunities, create new products);
2. Most of the teachers and staff in Latvia were confused by the term "Transversal" skills. Some of the requested teachers and staff in Austria were confused by the term as well. We can conclude that the term "Transversal" skills should be spread more and explained to teachers, staff, students and stakeholders;
3. In **Czech Republic** teachers and staff think that entrepreneurial skills could be developed with the help of practical sessions like fictive firms, mini-businesses, Junior achievement programmes, meetings with successful entrepreneurs and practical training in firms. In **Latvia** teachers and staff think that entrepreneurial skills could be developed with the help of new technologies, special computer programmes to be used in each subject or teachers giving students examples of successful entrepreneurs who have started their own business. In **Austria** teachers and staff proposed that individual training and counselling as well as group training could be implemented in their study subjects. Similarly, to Latvia

in Austria teachers also could raise awareness with best practise models, transfer knowhow and integrate specialist expertise in each individual situation;

4. Teachers and staff who participated in the questionnaire from **Czech Republic** consider that communication, cooperation, initiative and creative thinking skills are those which are a part of a successful school graduate profile. In **Latvia** teachers and staff think that their students should be ambitious, good communicators, they should be motivated for further education and they should have organizational skills. **Austrian** teachers and staff consider that a successful school graduate should have were communication skills (conflict management, networking, and business communications, to deal with customers and partners and complaints), initiative-taking, self-organisation, self-knowledge, customer oriented acting and professional business administration. Teachers and staff from **Portugal** consider that these skills should be the ones which characterize their school graduates: punctuality, proactivity, work ethics (e.g. honesty, integrity) and responsibility, autonomy as well teamwork, social relations;
5. Questioned teachers and staff in all partner countries identified obstacles to developing integrated entrepreneurship education. In **Czech Republic** teachers and staff elaborate that some theoretical teaching methods are ineffective. They feel lack of money and time to be able to integrate the practical element of entrepreneurship to subjects. In **Latvia** VET staff (deputy directors) think that the biggest obstacle might be the Professional Study Standard. The main reason for that would be the fact, that if entrepreneurship education themes or courses would be included in the curriculum, then other courses for professional education would need to be cut from the curricula. In **Austria** teachers and staff localize lack of money to be able to implement useful measures for developing integrated entrepreneurial education. Some of the participants would wish more personal training and workshops. It is necessary to reflect own skills and get feedback from bosses, colleagues and students;
6. Regarding internal or external support to developing integrated entrepreneurial education, in **Czech Republic** teachers feel lack of support. They would like to use more innovative ways of teaching and learning. They would like to implement entrepreneurial education as an integrated approach that is

embedded naturally throughout the learning programme.

Teachers in **Latvia** emphasize that students should have the desire to learn the basics of entrepreneurship, the aim and application of the course should be made clear. Changes in the Educational Standard and correct, appropriate study course proportion should be implemented. In **Portugal**, the questioned teachers' answers showed variety regarding the perceived need of additional materials and trainings for entrepreneurial competence development. Most respondents think that the upgrading of specific topic related knowledge elements, coaching methods, toolkit on group dynamics, case studies, self-knowledge and mindfulness techniques would be useful and necessary;

7. Questioned students in **Latvia** mostly, mention communication as the skill that school helps them develop, as well as readiness to learn. Some students would like for their school to participate in more projects that are related to the profession they are acquiring. Students questioned in **Austria** mention these skills as the most important to have: computer skills, networking, having the overview, marketing and sales, getting info. Very important for students was the administration, money managing, extremely important was even considered management and sales, motivation and knowledge of the business itself.

Questionnaire for teachers and trainers**Need of entrepreneurial education in vocational education and training**

- 1) Please, describe what do you understand with term “entrepreneurial and transversal (soft) skills”?

- 2) Please, describe “future graduate” of your school – what kind of traits, skills, and characteristics your students should acquire to be successful professional after graduation?

- 3) Do you think it is important for students of this program to develop entrepreneurial skills? Why?

- 4) Please, describe the way how entrepreneurial and transversal (soft) skills are or could be developed in your study subject and class?

- 5) Do you feel competent to teach transversal and entrepreneurial skills to your students? What kind of support (mentors, training etc.) do you need to gain more competence and confidence?

Appendix II

Questionnaire for administrative staff, school principle

Need of entrepreneurial education in vocational education and training

- 1) Please, describe what do you understand with term “entrepreneurial and transversal (soft) skills”?

- 2) Please, describe “future graduate” of your school – what kind of traits, skills, and characteristics your students should acquire to be successful professional after graduation?

- 3) Do you think it is important for students of this program to develop entrepreneurial skills? Why?

- 4) Please, describe how entrepreneurial and transversal (soft) skills are currently developed in study subjects?

- 5) Please, describe your vision of how entrepreneurial and transversal (soft) skills could be more developed in this study program?

- 6) Please, describe any obstacles for teaching and developing entrepreneurial and transversal skills in this study program.

- 7) What kind of support (internal, external) could help to overcome those obstacles?



Appendix III
Questionnaire for students

Need of entrepreneurial education in vocational education and training

Imagine that after graduation of this program you want to start your own small business.

1) Which entrepreneurial skills are most important to be successful in starting your own business?

Rate the giving skills and traits from 1 to 5.

- 1 – not important
- 2 – somewhat important
- 3 – important
- 4 – very important
- 5 – extremely important

Kodex questionnaire

No.	Competences	Not important	Somewhat important	Important	Very important	Extremely important		Description
		1	2	3	4	5		
Personal competences								
1	Credibility							Statements and behaviour developed without distortion by someone's personal processing of the underlying facts and circumstances. This requires great consistency in personal acts of experiencing, perception, intelligence, and recollection.
2	Reliability							Awareness and carefulness, based on a high level of subject and method knowledge, that is required to precisely follow obligations, guidelines, safety regulations, deadlines.
3	Loyalty							Loyalty is respect of other people and interests and comes from a factual and emotional foundation.
4	Normative ethical attitude							The readiness to autonomously act based on norms, ethical, and other values, which are valid on a general level or established in the company.
5	Acquisition skills							The ability to devote themselves to work and professional goals. Expects the same from colleagues.
6	Openness to changes							Every new action situation comes with stress, insecurity and uncertainty. Only with appropriate openness can this be endured and positively used, to act successfully and accomplish creative efforts.
7	Creative skills							Ability to solve factual or situational problems and tasks by means of new circumstances, structures, products, etc.

8	Self-management								The ability to perform one's actions in an active way, in accordance with the given situation, and largely independent of supporting or disturbing factors. It is reliant on the independence and autonomy of the acting person.
9	Delegating								To transfer personal responsibilities to others in a defined and targeted way, with the aim of improving shared work.
10	Cooperative skills								The ability to interact well with people with opposing views and collaborate even with business competitors.
11	Humour								An important tool to facilitate a forward-looking readiness for taking action, which often cannot be reached by purely rational means.
12	Personnel development								Contribute to their employees' professional development. Personal interest in the development of another.
13	Discipline								Operates independently, taking into account the pre-defined values.
14	Holistic thinking								Ability to integrate wider aspects — ethical, political, aesthetic, economic, legal, ... — into one's own goals and decision-making, on a solid knowledge foundation.
15	Readiness to learn								Willingness to learn denotes the readiness to acquire missing subject and method knowledge, qualifications, or experience relevant to one's functions, in appropriate professional training or by other means.
16	Self-reliance								Has a high sense of duty and reliability.
Operational competences									
17	Ability to withstand stress								Personal capability of avoiding erroneous reactions and acting in a goal-oriented and rational way even under severe mental,

								social and physical strain.
18	Decision-making ability							The ability to take decisions carefully and thoughtfully, assessing their compliance with the future objectives.
19	Creative drive							Personal desire and passion to develop and invent new solutions and products.
20	Ability to try new things							Looking for innovative ways of problem-solving in their professional and personal lives.
21	Ability to act/execute							The ability to adapt quickly to the rapidly changing market environment.
22	Readiness for action							Actively involved in various activities, showing initiative; very motivated in their work.
23	Mobility							The individual readiness to change one's workplace, work assignments, and circle of co-workers, and to the ensuing voluntary acquisition of the necessary subject, method, and social experience by way of professional training and informal learning.
24	Energy							Approaches all work and learning activities with strong initiative and determination.
25	Initiative							Using their knowledge and experience, are able to contribute to the emergence of collective thinking.
26	Optimism							Has positive, often cheerful expectations of the future, and is usually convinced that her ideas and concepts can be realized.
27	Ready wit							Capacity at the right time to find the right words. Talent for public speaking.
28	Social commitment							Actively participates in social life outside of work. Collaborates with colleagues, partners and customers.

29	Persistence							Analyses conflicts profoundly in order to explore options for personal action. Conquers emerging resistances, strains, and obstacles with perseverance and toughness
30	Acting with the result in mind							Dutifully strives to goals.
31	Consequence							Analysing the situation, considers important facts and determination, not emotions or personal attitude.
32	Leading with the target in mind							The ability to persuade of the objectives of goals not only yourself, but as well others. Set goals based on facts and knowledge.
Social-communicative competences								
33	Dialog ability, Customer orientation							The ability to get a new customer affection and trust, understanding their needs and wishes.
34	Ability to integrate oneself							Understands contradictory psychological conditions and perspectives in the group that is to be integrated, and stimulates collective action, primarily through her role model status.
35	Ability to solve conflicts							Does not resolve conflicts to the conflicting parties' disadvantage, but in a way that increases their personal responsibility, creativity and social communication; is therefore sought as a mediator in cases of conflict
36	Ability to work in a team							Has the ability to work well in a team, encourages others to express their views.
37	Inspiring others							The ability to inspire others for activities by leading an example.

								and extends contacts quickly; communicates appreciation to conversation partners.
44	Helpfulness							Giving aid or assistance for colleagues.
45	Preciseness							Work diligently to respect the agenda. The ability to critically evaluate both their own and other work.
46	Sense of Duty							Knows and acknowledges the basic social norms and values that relate to her own work or leadership
47	Articulateness							The ability to clearly express and justify your opinion using the widest possible vocabulary.
48	Ability to understand others' perspectives							Has a desire to understand the unfamiliar systems and information. Person is patient and openly talks about his experiences and listen to others. Respects cultural, ethnic, religious, etc. differences.
Technical and methodological competences								
49	Analytical skills							Has quick comprehension, demonstrates abstract thinking and expresses thoughts clearly. Is able to tell the essential from the irrelevant, filter the flood of information, break down facts and get to the point quickly, recognize trends and connections, and find the right conclusions and strategies.
50	Ability to assess things							Commands broad subject and method knowledge to assess facts and difficult situations. Has a solid background of experience and values, enabling her to make convincing assessments even in situations of uncertainty or missing information.
51	Objectiveness							A personality that derives its judgements and actions from deliberation on facts and methods, and strives for the highest possible neutrality. This

								applies particularly to stressful situations, where finding truly fact-based judgements is impeded by prejudice of an emotional-motivational nature.
52	Focus on knowledge							The ability to continuously update and extend previously acquired knowledge about circumstances relevant for one's functions in the group, the enterprise, the market (factual knowledge), and about necessary procedures, approaches, strategies, skills
53	Diligence							Works with ambition and tirelessness, to deal with issues in a sincere, concentrated and perseverant way.
54	Organizational skills							Possess knowledge and understanding of the company's products and goals, able to organize company's developmental and promotional measures. The greater the freedom, the better organizational skills.
55	Conceptual strength							Able to invent new products or find new organizational schemes and product distribution channels.
56	Systematical and methodological proceeding							Problems are addressed through the development of his own approach and methods. Tries to optimize the company's structure and work.
57	Professional reputation							The one is assessed as the proficient in her professional field.
58	Awareness of results							Aware of their actions and the consequences of the results.
59	Ability to lecture							Able to pass their knowledge on.
60	Project management							The ability to plan, coordinate and monitor various projects for the company, while maintaining the ability to work independently.
61	Interdisciplinary knowledge							Possess the ability and interest increasingly broaden their horizons.

62	Expert knowledge							Comprehensive knowledge of their fields.
63	Market knowledge							Detailed knowledge of the markets in which operates, including competitors.
64	Planning behavior							Able to analyze product development in advance, taking into account not only economic, but also political, etc. factors. However, remembers that not everything can be planned and structured.



Enter

2) In your opinion how school and your training program could help you to develop these skills?

3) Try to remember some particular task in class and practice during this or previous school year where you used some of these skills. Which skills did you use and how it happened?

4) Describe one situation from your life where you had to use your skill and that helped you to reach some goal or solve some problem.

/choose whichever one skill you like/