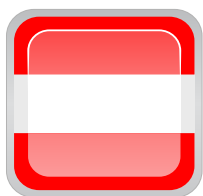

KEY COMPETENCES
IN VOCATIONAL
EDUCATION AND TRAINING

AUSTRIA



Please cite this publication as:

Tritscher-Archan, S., Petanovitsch, A. (2016). *Key competences in vocational education and training – Austria*. Cedefop ReferNet thematic perspectives series.

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

Authors: Sabine Tritscher-Archan and Alexander Petanovitsch (both ibw)

Reviewed by Cedefop

© ibw (Cedefop ReferNet Austria), 2016

Reproduction is authorised, provided the source is acknowledged.

The thematic perspectives series complements the general information on vocational education and training (VET) systems provided in '[VET in Europe](#)' reports. The themes presented in the series feature high on the European agenda.

Thematic perspectives provide national overviews of specific themes in a common format and offer comparative dimension across the EU Member States, Iceland and Norway.

They are available at:

<http://www.cedefop.europa.eu/en/events-and-projects/networks/refernet/thematic-perspectives>

This thematic perspective was prepared based on data/information from 2015.

The opinions expressed here do not necessarily reflect those of Cedefop.

Thematic perspectives are co-financed by the European Union and ReferNet national partners.

ReferNet is a network of institutions across Europe representing the 28 Member States, plus Iceland and Norway. The network provides Cedefop with information and analysis on national vocational education and training (VET). ReferNet also disseminates information on European VET and Cedefop's work to stakeholders in the EU Member States, Iceland and Norway.

<http://www.cedefop.europa.eu/en/events-and-projects/networks/refernet>



/Cedefop



@cedefop

#refernet

Table of contents

Introduction	3
1. Key competence: communication in the mother tongue.....	7
2. Key competence: communication in foreign languages	10
3. Key competence: competences in maths, science and technology.....	15
4. Key competence: digital competence	17
5. Key competence: learning to learn	20
6. Key competence: interpersonal, intercultural and social competences, civic competence	23
7. Key competence: entrepreneurship	28
8. Key competence: cultural expression	34
Conclusions.....	37

Introduction

Key competences (or interdisciplinary competences) are vital to maintain employability in a changing world of work but also indispensable to actively take part in social life. Therefore the Council and the European Parliament adopted a European framework with key competences for lifelong learning at the end of 2006 ⁽¹⁾. This framework defines eight key competences for citizens' personal development, social integration, active citizenship and employability in a knowledge-based society. Education and training systems of the EU Member States should aim to promote the acquisition of key competences of the entire population.

The Lifelong learning strategy ⁽²⁾ (LLL strategy), which was adopted by the Austrian federal government in July 2011, directly refers to the key competences mentioned in the European framework. In all of the 10 objectives to be reached by 2020 as defined by the LLL strategy, the goal is to promote the acquisition, deepen and further develop the eight key competences so that learners can acquire them in line with their individual needs. The LLL strategy takes account of all learning areas: it addresses early childhood education, general education, vocational education and training (VET), tertiary programmes, adult education and company-based continuing vocational education and training (CVET).

The promotion of key competences is also enshrined in the Austrian education system ⁽³⁾. The school organisation act (*Schulorganisationsgesetz*, SchOG 1962 as amended) lays down the general objectives for all school forms in Austria – therefore also for the VET school sector and the school-based part of apprenticeship training. Austria has three main types of school-based VET programmes at upper secondary level:

- (a) programmes that grant university/higher education access and professional qualifications at diploma level (BHS; five-year programmes spanning ISCED levels 354 and 554): they include work-based learning at school and mandatory internships in enterprises;

⁽¹⁾ <http://eur-lex.europa.eu/legal-content/EN/TXT/?uri=celex:32006H0962>
[accessed 10.12.2015].

⁽²⁾ https://www.bmbf.gv.at/ministerium/vp/2011/lll-arbeitspapier_ebook_gross_20916.pdf
[accessed 10.12.2015].

⁽³⁾ cf. Eder und Hofmann, 2012, p. 72ff, cf.
https://www.bifie.at/system/files/buch/pdf/NBB2012_Band2_Kapitel02_0.pdf
[accessed 09.12.2015].

- (b) programmes that lead to skilled workers' level (BMS; three to four year programmes at ISCED level 354): they include work-based learning at school and mandatory internships in enterprises);
- (c) the school-based part of apprenticeships (on average three years, ISCED level 354): one to two days per week or around eight weeks per year at school.

The general objectives of school-based VET, thus, is to enable learners/graduates to 'acquire learning autonomously', 'make decisions autonomously' and develop 'social understanding'. The goal is for learners/graduates to become 'healthy' citizens who are 'open to the political and ideological views of others' and 'able to participate in the economic and cultural life of Austria, Europe and the world'. Even though the SchOG does not explicitly mention key competences, it clearly shows parallels to those interdisciplinary competences defined by the European framework. From the outset, the law has explicitly outlined:

- (a) the aim to widen learners' general education in the different types of VET (i.e. implicitly includes key competences);
- (b) the (type of) mandatory subject areas and options curricula have to include (see below); curricula also outline general goals and underlying principles which explicitly or implicitly include key competences.

In addition, the acquisition of key competences is also in focus of the curricula (for school-based programmes) and of the training regulations (for the company-based part of apprenticeship training), which apply nationally and are issued as ordinances by the education and the economics ministries respectively. Triggered by the developments of the European transparency instruments EQF and ECVET, curricula and training regulations have gradually been oriented further towards competences in recent years. Key competences are also included in the NQF level descriptors with a focus on problem solving.

To strengthen the competence orientation a series of key policy measures have been introduced (educational standards in 2004, continuous revision of curricula since 2008, partly-centralised/standardised competence-based final exams in 2015/16, etc.) in VET. The objective is to enable learners to appropriately apply knowledge and skills in different situations. To be able to act competently, subject-related as well as interdisciplinary competences are required. Therefore, measures aiming at competence orientation are also promoting key competences.

With the start of the development of educational standards in VET in 2004 ⁽⁴⁾ the education ministry emphasised the competence orientation. The educational standards which, since then, have been gradually drawn up cover general and vocational as well as social and personal core competences which learners must have acquired by the end of the respective programme ⁽⁵⁾. The definition of educational standards for interdisciplinary competences underlines their importance for the world of work, but also for lifelong learning. The standards are described as learning outcomes; some have been defined for all VET schools combined, others for specific school types or training programmes. The educational standards are not process-oriented and do not specify any particular learning methods to be applied either. They rather serve as guidance for teachers (particularly for the design of teaching and the creation of exam assignments), learners and parents.

Competence-oriented curricula of VET schools ⁽⁶⁾ take the educational standards into account: general objectives (general intended learning outcomes), 'didactic principles' and learning outcomes for specific subject areas (clusters), modules, etc. include interdisciplinary competences. For the five-year VET programmes referred to above these general intended learning outcomes may include, for instance: graduates are able to acquire (new) information necessary to analyse specific processes and solve problems by applying commonly used or creating new methods and procedures; graduates are able to steer their own learning and work processes in situations that could not be anticipated and to take on responsibility for assessing and developing their own performance and that of others. Some school types have included specific subjects with a focus on interdisciplinary competences into new curricula (colleges of engineering: elective 'social and personal competence'; schools and colleges of business administration: compulsory subject 'personal development and social competences'). This aims to underline both importance and obligation to include these competences in the teaching process. Also in the training regulations, which contain a type of curriculum for the company-based part of apprenticeship training, great importance is attached to the teaching of key competences: autonomy, individual responsibility, the ability to work in teams, etc. are very much encouraged by company-based training. Environment-friendly and quality-

⁽⁴⁾ <http://www.bildungsstandards.berufsbildendeschulen.at> [accessed 08.12.2015].

⁽⁵⁾ http://www.bildungsstandards.berufsbildendeschulen.at/fileadmin/content/bbs/AGBroschueren/SozialePersonaleKompetenzen_Broschuere_Oktober2011.pdf [accessed 08.12.2015].

⁽⁶⁾ The curricula of all schools in the VET sector can be downloaded from the following website: <https://www.abc.berufsbildendeschulen.at/> [accessed 23.2.2017].

oriented work forms an integral part of every modern training regulation. When creating training regulations, European integration is also taken into account. This aims to increase the Austrian skilled workforce's willingness to be mobile and at the same time strengthen the companies' competitiveness.

However, competence orientation does not only influence planning and teaching but also extends to assessing performance. Following a pilot phase, Austria has recently introduced partly centralised/standardised competence-oriented final exams at the end of upper secondary education. Mainstreaming of this approach started in general education in 2014/15. In 2015/16, the new approach was also applied to *Reife- and Diplomprüfung* exams at the five-year school-based VET programmes (BHS, ISCED levels 354 to 554, see above). This new exam aims to make exam requirements more transparent and comparable, guarantee fairness and objectivity, and, above all, ensure that the competences learners acquire have a lasting effect. Learning success is not so much assessed by the extent of how much knowledge the learners can acquire but rather by their ability to apply this knowledge in a given situation. Interdisciplinary competences are indispensable for this ability. Therefore competence-oriented exam processes presuppose the teaching, promotion and further development of key competences.

The new approach to final exams at BHS also gives more weight to the so-called diploma projects that learners carry out in their last year. These projects – introduced in the early 2000s – are a standard part of the exams besides written and oral exams. This includes project work, a diploma thesis at pre-scientific level (20-25 pages by each team members, including abstracts in German and in English/another foreign language they have acquired at school) and its presentation and discussion. Teams of learners work on comprehensive projects relevant to their sector and in line with the objectives of their programmes, ideally in cooperation with/commissioned by partners in business and industry. Project themes need to be approved by the education authorities. Complex project assignments require learners to do research and apply and combine their knowledge, skills and competence and use state-of-the art methods and tools/equipment. They also require learners to work independently and in teams, develop their entrepreneurial spirit and critical thinking and use creative and innovative approaches to solve problems. They also need to demonstrate project management, drafting and presentation. Experienced teaching staff supervises the projects.

The approach also applies to learners at BMS in their last year and final exams. Assignments are adjusted to the respective qualifications levels ⁽⁷⁾.

In order to help teachers meet the requirements of competence-oriented teaching and examining, initial and in-service teacher training programmes have also been adapted. VET teachers are trained at universities or university colleges of teacher education depending on the subjects they will teach. Teachers for VET specific subject areas had to have business/industry experience. In 2013, the legal basis for reforming teacher training was created. The new curricula for training secondary level teachers entered into force in 2016/17. Competence orientation is a key issue in the new scheme. Curricula are designed to acquire profession-specific competences (general, special pedagogical, subject-related, didactic, inclusive, intercultural, social and advisory competences) and to apply them in the classroom. A continued process of competence development in continuing education and training aims to ensure that teachers are able to meet the constantly changing professionalisation requirements.

1. Key competence: communication in the mother tongue

The acquisition of this key competence is promoted in the upper secondary VET school sector at national/regional level		Yes
How is acquisition promoted?		
<ul style="list-style-type: none"> national/regional laws, ordinances and regulations 	<ul style="list-style-type: none"> School organisation act (see Introduction). The curricula which contain the general learning outcomes for specific programmes and subject areas are issued by the Ministry of Education and are valid across Austria. Examination regulations issued by the Ministry of Education. Framework conditions of apprenticeship training, issued by the Ministry of Economics. 	
<ul style="list-style-type: none"> national/regional curricula, standards and qualifications 	<p>'German' or 'German and communication' (in the apprenticeship training system) are compulsory subjects in the curricula of all VET programmes at upper secondary level. The</p>	

- ⁽⁷⁾ See also information related to programmes preparing for occupations in the:
- (a) engineering sector: <http://www.htl.at/htlat/diplom-und-abschlussarbeiten/diplomarbeiten.html> [accessed 23.2.2017]; <http://www.htl.at/htlat/diplom-und-abschlussarbeiten/abschlussarbeiten.html> [accessed 23.2.2017]; <http://www.htl-innovativ.at/> (project database) [accessed 23.2.2017];
 - (b) business sector: https://www.hak.cc/pruefungen_abschluss/diplomarbeit [accessed 23.2.2017];
 - (c) services sector: <http://www.hum.at/index.php/lernen-und-lehren/unterrichtsentwicklung/abschliessende-pruefungen> [accessed 23.2.2017].

	<p>number of lessons and expected learning outcomes vary depending on school type, year of training and the training area. Both at the five-year and at the three- to four-year VET schools, the learners attend an average of two to three periods of instruction (of around 36 altogether) a week. The schools enjoy a certain scope within which they can adjust the number and contents of periods of instruction to the regional/local needs (school autonomy).</p> <p>In apprenticeships, a total of 80 periods of instruction have been envisaged for 'German and communication' since the new regulation of the curricula (the overall number of lessons varies depending on the training area). The provinces are responsible for the distribution of lessons over the entire training period.</p> <p>The knowledge of the learners at the beginning of the training is taken into account; the length of instruction also differs for apprentices who prepare for exams which give access to the tertiary sector (<i>Berufsreifeprüfung</i>). 'German' is also one of the possible elective subjects which is offered in addition to the compulsory subjects:</p> <ul style="list-style-type: none"> • curricula for school-based VET programmes (BMS and BHS); • curriculum for general education subjects in part-time vocational school during apprenticeship training; • curricula for mother tongue classes (for learners with a first language other than German); • educational standards 'German' for schools for intermediate vocational education (BMS) and colleges for higher vocational education (BHS). These standards apply to all subject areas and relate to understanding, oral and written language abilities, linguistic awareness, reflective abilities (including the ability to reflect on and discuss political, economic, social and cultural topics). The standards are based on the common European reference framework for languages. <p>German is one of the three or four compulsory subject areas of the written part of the matriculation exam at five-year colleges for higher vocational education. In addition, it is also one of the compulsory subjects of the written part of the final exam at three- to four-year schools for intermediate vocational education.</p> <p>Although 'German and communication' is not explicitly foreseen as a part of the apprenticeship-leave examination after apprenticeship training, it is a compulsory subject at part-time vocational schools and is also graded.</p>
<ul style="list-style-type: none"> • training of teachers in VET 	<p>Cf. introduction. Teachers who teach German at VET schools have to prove completion of the 'the relevant study programme for general education at secondary level'. These teacher education programmes are offered in cooperation between university colleges of teacher education and universities and</p>

	comprise a bachelor's and a master's programme.	
<ul style="list-style-type: none"> centralised assessment of the key competence in VET 	<ul style="list-style-type: none"> An assessment of mother tongue competence – this assessment is uniform throughout Austria – is only carried out at five-year colleges for higher vocational education as part of the competence-oriented matriculation and diploma exam (cf. introduction). No centralised examinations are held at BMS and in apprenticeship training. As part of the PISA study, the reading literacy of 15/16-year-old learners is also surveyed, including at VET schools. 	
<ul style="list-style-type: none"> other instruments (e.g. access pathways, teaching/learning methods) 	<p>The textbooks are approved by the Ministry of Education and are oriented towards the curriculum and educational standards.</p> <p>At colleges of business administration (five-year schools focusing on business subjects), for example, a 'culture portfolio' is part of the German classes. Learners can use this portfolio to introduce the personal interests, inclinations and focuses they have in the cultural field (literature, music, film, etc.). This is done in the form of documenting contributions (such as a description of books they have read, concerts they have attended) and their own creative works (texts, photos, music, etc.) and is recognised as part of their school performance and acknowledged by the teachers in the overall assessment of their performance in the German class ⁽⁸⁾.</p> <p>At the Vienna SPAR academy (a private VET school for apprentices in food retailing), apprentices performed 'Romeo and Juliet' as part of their German classes in 2010. As it was not possible to integrate a performance in the curriculum every year, the major aspects (appearance, perception, language, speech technique and improvisation) were converted to modules which could also be used in the future. Since 2013, these modules have been integrated into the teaching process in the form of theatre workshops; they aim to teach basic competences related to oral expression ⁽⁹⁾.</p>	
The acquisition of the key competence of learners in upper secondary VET is monitored/checked		Yes
How is acquisition monitored?		
<ul style="list-style-type: none"> through international and national statistical data 	<ul style="list-style-type: none"> The evaluation of results of the partly standardised competence-oriented final exams that grant university access and award professional qualifications (see above) comprises the subject area German since 2015/16. 	

⁽⁸⁾ http://www.eco-landeck.at/images/stories/downloads/pdf/kultur_portfolio.pdf [accessed 23.2.2017].

⁽⁹⁾ http://www.forschungsnetzwerk.at/downloadpub/Grundkompetenzen%20in%20der%20Lehre_Projektbericht%2031072015_WIAB.pdf [accessed 23.2.2017].

	<ul style="list-style-type: none"> PISA surveys on learners' reading skills include school-based VET indicating performance ⁽¹⁰⁾.
• surveys/studies	---
• benchmarks	<ul style="list-style-type: none"> There are no benchmarks related to the mother tongue competence of learners in the VET sector at upper secondary level. A strategic objective of the LLL strategy (cf. introduction) is to reduce the share of learners at risk due to their poor reading skills by half, from 28% (according to PISA 2009) to 14% by 2020.
• other instruments	<ul style="list-style-type: none"> Continuous assessment (assignments in class, homework assignments, etc.). Tests as foreseen in the respective syllabus.
Improvements of learners in upper secondary VET since (+/-) 2010	There are no figures which relate exclusively to learners in VET at upper secondary level.

2. Key competence: communication in foreign languages

The acquisition of this key competence is promoted in the upper secondary VET school sector at national/regional level	Yes
How is acquisition promoted?	
<ul style="list-style-type: none"> national/regional policy documents 	<p>The LLL strategy highlights the importance of all key competences (and therefore also foreign language competence) (cf. introduction). There is no separate strategy paper which focuses on promoting foreign language competence. However, there are two important institutions focussing on language learning:</p> <ul style="list-style-type: none"> founded in 1992 as an institution affiliated to the VET section of the Ministry of Education, CEBS (Center für berufsbezogene Sprachen, https://www.cebs.at/index.php?id=52 [accessed 23.2.2017]) operates as a national in-service teacher training centre specialising in vocationally-oriented language education; the Austrian Language Competence Centre (ÖSZ, www.oesz.at) is a national specialist establishment dedicated to the further development of language learning and teaching. Working on behalf of the Ministry of

⁽¹⁰⁾ School-based VET starts in year nine; apprenticeship usually starts in year 10, as learners need to be at least 15 years old. Hence PISA takes place at the beginning of VET.

	<p>Education, the centre develops instruments to expand linguistic, metalinguistic and intercultural competences, organises networking projects to strengthen cooperation of practitioners, disseminators and political decision-makers, and takes initiatives to promote innovative language work.</p> <p>The brochures on educational standards for English and the second foreign language at school-based VET programmes point out that: they relate to the common European reference framework for languages, the European language portfolio and the EQF; consider the standards devised for the last year of lower secondary education; and the demand of business and industry (cf. https://www.cebs.at/index.php?id=22 [accessed 23.2.2017]).</p> <p>Legislation allows using a foreign language as working language in case there is a large share of learners with another mother tongue or to improve foreign language skills. Upon application by the school head or private education provider, the authorities can grant this right either for specific groups of learners or for specific subject areas.</p>
<ul style="list-style-type: none"> • national/regional laws, ordinances and regulations 	<ul style="list-style-type: none"> • School organisation act as outlined in the introduction. • The act that provides the general regulatory framework for education and training at school (Schulunterrichtsgesetz) https://www.jusline.at/Schulunterrichtsgesetz_(SchUG).html [accessed 23.2.2017]. • The curricula indicating the general intended learning outcomes for the specific programmes and subject areas (see above) are decreed by the Ministry of Education and apply across Austria. • Exam regulations for BMS and BHS. • Apprenticeship training regulations decreed by the Ministry of Economics.
<ul style="list-style-type: none"> • national/regional curricula, standards and qualifications 	<p>One modern foreign language (English) is compulsory at all schools in the VET sector. Depending on the subject area, one to three additional modern foreign languages can be compulsory. In the 'International business with foreign languages and culture' programme at colleges of business administration (five-year programmes), for example, Spanish is also compulsory from the third year onwards alongside English and Italian or French.</p> <p>The number of periods of instruction and the intended learning outcomes depend on the respective training area, the type of programme and school year as well as on school foci laid down as part of school autonomy. Here the schools enjoy a certain leeway.</p> <p>The learning outcomes to be achieved in the respective school type are:</p> <ul style="list-style-type: none"> • for five-year higher vocational education programmes (BHS, ISCED P 354-554): Level B2 (English) and Level B1 (second foreign language);

	<ul style="list-style-type: none"> • for three- to four-year intermediate vocational education programmes (BMS, ISCED-P 354): Level B1 (English). <p>For both, interdisciplinary as well as subject-specific core competences and thematic areas have been specified.</p> <p>In apprenticeship training, the importance of foreign language teaching depends on the respective apprenticeship occupation: in the occupation 'restaurant specialist', for example, the framework curriculum lays down two occupation-specific foreign languages as compulsory.</p> <p>The curricula of the school-based part of apprenticeship training in their revised form from 2015 lay down a total of 100 periods of instruction in an occupation-specific foreign language (here the total number of lessons varies depending on the occupation). The provinces are responsible for the allocation of lessons:</p> <ul style="list-style-type: none"> • curricula for BMS and BHS; • curricula for the school-based part of apprenticeship training; • educational standards for 'English' and 'second modern foreign language' at BMS and BHS.
• training of teachers in VET	Cf. introduction.
• centralised assessment of the key competence in VET	<ul style="list-style-type: none"> • An Austria-wide uniform assessment of foreign language competence is only carried out at BHS in the partly standardised competence-oriented final exams (cf. introduction). • At BMS and in the school-based part of apprenticeships, exams are not centralised.
• other instruments (e.g. access pathways, teaching/learning methods)	<ul style="list-style-type: none"> • Content and language integrated learning (CLIL): As part of CLIL, a foreign language is used to teach other subjects so that learners acquire linguistic competences outside language classes in an integrative manner (by including elements of foreign language didactics). For instance, in five-year engineering programmes 72 CLIL hours per age group and school year are compulsory. The respective school management is responsible for assigning them to specific subject areas ⁽¹¹⁾. Examples from schools: <ul style="list-style-type: none"> – 'Bilingual International business studies' at Hetzendorf College of Business Administration (Vienna): as part of this programme, one German-language teacher works together with an English teacher (English native speaker) in every subject. Formal and informal tests as well as homework assignments and presentations have to be 50% in English and 50% in German; – Retz Bilingual College of Business Administration

⁽¹¹⁾ <http://www.htl.at/htlat/schwerpunktportale/clil-content-and-language-integrated-learning/wie-ist-clil-rechtlich-verankert.html> [accessed 23.2.2017].

(Lower Austria): Czech and Austrian learners are taught together.

- Possibility for learners to acquire international language certificates (such as European language certificates, the test of English for international communication, etc.)
- As part of apprenticeship training, companies also have various approaches to provide training and continuing training to improve young people's foreign language skills (such as additional English classes during working hours; English as the language of instruction once a week in the training workshop; apprentice exchange with locations abroad, etc.) ⁽¹²⁾.

The school textbooks, which are approved by the Ministry of Education, are oriented towards the respective curriculum and educational standards and therefore contribute to standardisation.

Language competitions – examples:

- CEBS organises an annual language contest which is open to learners of all VET programmes (also apprentices). There is a monolingual (English, French, Spanish, Italian or Russian) and a bilingual contest (English and a second foreign language: French, Spanish, Italian or Russian);
- every year, the Business for Integration Association (VWFI), which is committed to the field of integration, and EDUCULT, an NGO with a focus on cultural policy and management, hold the national multilingual speech contest 'Sag's Multi' (say it in several languages), in which learners of all school types from the seventh year onwards can take part. The task is to give a bilingual speech on one of a series of previously specified topics (German and another language or – for young people with a migration background – German and their mother tongue).
<http://www.lsr-sbg.gv.at/nc/quicklinks/aktuelle-schulnews/news-einzelansicht/article/einladung-zum-redewettbewerb-sags-multi-201516/> [accessed 23.2.2017];
- regional events: e.g. the Vienna English Vocational Award (VEVA), in which apprentices of all occupations can take part and which is supported by the Economic Chamber.
<https://www.wko.at/Content.Node/Interessenvertretung/Aus--und-Weiterbildung/w/VEVA-Award-2016-fuer-Website.pdf> [accessed 23.2.2017];
- language visits abroad ('language weeks') or stays abroad, as foreseen in the curricula, in order to acquire language skills as well as professional practice (such as work placements abroad for apprentices organised by the International Young Workers Exchange association – IFA).

⁽¹²⁾ https://www.iv-net.at/media/filer_public/13/38/1338be6f-01ad-40a9-847d-34ecad591e52/file_612.pdf [accessed 23.2.2017].

The acquisition of the key competence of learners in upper secondary VET is monitored/checked		Yes
How is acquisition monitored?		
• through international and national statistical data	Evaluation of results of the partly standardised competence-oriented matriculation and diploma exam comprises English and other foreign languages since 2015/16.	
• surveys/studies	-	
• benchmarks	-	
• other instruments	<ul style="list-style-type: none"> • Continuous assessment (assignments in class, homework assignments, etc.). • Tests as foreseen in the respective syllabus. 	
Improvements of learners in upper secondary VET since (+/-) 2010		There are no figures which relate exclusively to learners in VET at upper secondary level.

Example 1: English at five-year higher vocational education programmes (BHS, ISCED-P 354-554)

English is compulsory as the first modern foreign language in all five-year programmes. It is a separate subject for which there are curricula for every sector (engineering, business administration, services sector, etc.). In addition, educational standards have been defined that apply to all BHS programmes.

Languages are taught most of the time in the school/classroom by the respective class teacher. Schools have the option to apply at the regional education board for being assigned a foreign language assistant. He/she has the task of telling about his/her country and motivating the learners to communicate in the foreign language. In addition, many other options of language acquisition are used (cf. <https://www.bmb.gv.at/schulen/euint/lla/index.html> [accessed 23.2.2017]), such as:

- international school partnerships and school networks (such as through eTwinning projects);
- project weeks and class exchanges;
- intensive language weeks.

Many learners also take advantage of the option of going abroad to complete their compulsory work placement, which is foreseen for all BHS specialist areas. Here they are financially assisted by the Erasmus Plus education programme of the European Union.

But English is not only used in actual language classes. It is also used at many BHS as a working language (for content and language integrated learning) in other subjects. This aims to promote subject-related competence in combination with language competence.

The decision of which method is used in language classes is largely left to the respective teachers. They are supported by textbooks and accompanying media, which are approved by the Ministry of Education. The educational objectives are laid down in curricula and educational standards.

3. Key competence: competences in maths, science and technology

The acquisition of this key competence is promoted in the upper secondary VET school sector at national/regional level		Yes
How is acquisition promoted?		
<ul style="list-style-type: none"> national/regional policy documents 	The LLL strategy highlights the importance of all key competences (and therefore also mathematics and science competence) (cf. introduction). There exists no separate strategy paper for this competence area.	
<ul style="list-style-type: none"> national/regional laws, ordinances and regulations 	<ul style="list-style-type: none"> 'Applied mathematics' and 'sciences' are compulsory subjects at BHS programmes. At BMS, 'applied mathematics' is only included as a compulsory subject in the curricula for the engineering and agricultural sectors. In the other sectors, maths or applied maths is an optional subject area. In the school-based part of apprenticeships, 'mathematics' is not a legally prescribed compulsory subject but mathematical content is taught in the occupationally relevant subjects 'accounting', 'subject mathematics' or 'applied mathematics'. 	
<ul style="list-style-type: none"> national/regional curricula, standards and qualifications 	<ul style="list-style-type: none"> Curricula for 'mathematics' at BMHSs. Curriculum 'applied mathematics' at part-time vocational schools (as part of the dual system). BMS and BHS: educational standards which apply to several types of programmes exist for 'applied mathematics', 'sciences' (for BMS and BHS); 'applied sciences and commodities' (schools of business administration); 'sciences, technology, ecology and commodities' (colleges of business administration); in the technological field, for engineering programmes (BMS and BHS), a large number of different educational standards can be found, such as 'electrical engineering', 'mechanical engineering', etc. BHS cover almost the entire spectrum of occupational fields, which is reflected in the large number of different curricula 	

	and specific sector-related objectives. As these do not allow for defining a standard for mathematics that applies to all types/sectors, a 'common core' has been developed which is complemented by a specific focus adjusted to the respective programmes.
• training of teachers in VET	Cf. introduction
• centralised assessment of the key competence in VET	<ul style="list-style-type: none"> • An Austria-wide uniform assessment of mathematical competence is only carried out at BHSs in the partly standardised competence-oriented final exam that grants university access and professional qualifications (cf. introduction). At BMSs and in the school-based part of apprenticeship there are no centralised exams. At all types of programmes, the respective teachers carry out regular performance appraisals. • As part of the PISA study, literacy in mathematics and science is also surveyed among 15-/16-year-old learners, including at VET schools ⁽¹³⁾.
• other instruments (e.g. access pathways, teaching/learning methods)	<ul style="list-style-type: none"> • 'Sparkling science' is a research programme of the science ministry aiming to promote scientific talents. Scientists work together with young people in specific projects on current research issues (so-called 'citizen science'). https://www.sparklingscience.at/ [accessed 23.2.2017]. • The 'Young science'-scheme provides topical information and links to all Austrian programmes at the interface of science and school and serves as a network and service unit. http://www.youngscience.at/ [accessed 23.2.2017]. • The 'Innovations make schools top!' (IMST) initiative of the Ministry of Education aims to support teachers in implementing innovation in the so-called MINDT subjects (mathematics, informatics, natural sciences, German, technology) at Austrian schools. One of the projects conducted as part of IMST focuses on the exam procedures and structures in science subjects. The examination culture scheme is based on the assumption that the type of performance appraisal is a key determinant of how and which contents are remembered by the learners. In seminars lasting for several days, interested teachers are motivated to reflect on the existing exam culture. They work on the educational objectives, discuss competence models and try out new and alternative exam forms. The target group of this scheme is teachers of science subjects and 'mathematics'. (https://www.imst.ac.at [accessed 23.2.2017]). • Also in this competence field it is possible for enterprises to

⁽¹³⁾ School-based VET starts in year nine; apprenticeship usually starts in year 10, as learners need to be at least 15 years old. Hence PISA takes place at the beginning of VET.

	<p>apply different teaching aids when training apprentices: relevant literature refers to an online tool of a training company which enables practically gifted young people who lack basic numeric skills to work on improving their own competences already before taking up the apprenticeship. In addition, apprentices who are weak in 'mathematics' are supported also during their training by additional remedial measures (topic-related workshops, remedial courses, inclusion of external remedial measures where necessary). In this example, parents and vocational school teachers are also involved where necessary to support an apprentice who has problems ⁽¹⁴⁾.</p>
The acquisition of the key competence of learners in upper secondary VET is monitored	Yes
How is acquisition monitored?	
<ul style="list-style-type: none"> through international and national statistical data 	<ul style="list-style-type: none"> Evaluation of results of the partly standardised competence-oriented matriculation and diploma exam, which has been in force since 2015/16 and comprises, among other subjects, also 'applied mathematics'. The results of the PISA surveys on the mathematics literacy of students, including those at VET schools.
<ul style="list-style-type: none"> surveys/studies 	-
<ul style="list-style-type: none"> benchmarks 	-
<ul style="list-style-type: none"> other instruments 	<ul style="list-style-type: none"> Continuous assessment (assignments in class, homework assignments, etc.). Tests as foreseen in the respective syllabus.
Improvements of learners in upper secondary VET since (+/-) 2010	There are no figures which relate exclusively to learners in VET at upper secondary level.

4. Key competence: digital competence

The acquisition of this key competence is promoted in the upper secondary VET school sector at national/regional level	Yes
How is acquisition promoted?	
<ul style="list-style-type: none"> national/regional policy documents 	<p>In Austria there are several VET programmes preparing for either the IT or electronics sector where digital competences are a major element in the occupation-specific parts of curricula. In such programmes learners can also acquire industry qualifications, such as CISCO or SAP. In</p>

⁽¹⁴⁾ http://www.forschungsnetzwerk.at/downloadpub/Grundkompetenzen%20in%20der%20Lehre_Projektbericht%2031072015_WIAB.pdf [accessed 23.2.2017].

	<p>programmes that prepare for the business and tourism sectors, for instance, the provision of specific ICT skills also plays an important role. General digital competences are, however, promoted in all VET programmes, irrespective of the occupational area they prepare for.</p> <p>In the 1990's and early 2000s a range of initiatives on ICT skills and e-learning were launched in Austria. All these initiatives were bundled in the IT-strategy 'efit-21 – Digital agenda for education, art and culture' (http://www.efit21.at [accessed 23.2.2017]), which was presented by the Ministry of Education in 2010. This strategy focusses on the integration and use of new information and communication technologies in all Austrian education facilities. Likewise in 2010, the decree 'Digital skills at Austrian schools' was issued by the Ministry of Education as part of the 'efit-21'-strategy. It highlights the importance of new technologies in modern school life and teaching.</p> <p>As part of the 'digi.compP' (digital competences for pedagogues) initiative, many documents were drawn up, mainly by the e-learning strategy group of the university colleges of teacher education and the digi.comp working groups, focusing on developing the digital literacy of students in teacher education programmes and subsequent continuing professional training programmes.</p> <p>http://onlinecampus.virtuelle-ph.at/course/?categoryid=126 [accessed 23.2.2017].</p>
<ul style="list-style-type: none"> • national/regional laws, ordinances and regulations 	<p>'Informatics' is a compulsory subject at BMS and BHS and at many vocational schools for apprentices (school-based part of apprenticeships).</p>
<ul style="list-style-type: none"> • national/regional curricula, standards and qualifications 	<ul style="list-style-type: none"> • For BMS (http://www.bildungsstandards.berufsbildendeschulen.at/fileadmin/content/bbs/AGBroschueren/AngewInformatik_FS_v04-2.pdf [accessed 23.2.2017]) and BHS (http://www.bildungsstandards.berufsbildendeschulen.at/fileadmin/content/bbs/AGBroschueren/AngewInformatikBHS_V18_1_.pdf [accessed 23.2.2017]) there are joint educational standards for 'applied informatics'. These standards understand 'informatics' as a tool, visualisation instrument, means of communication and a carrier of information to tackle occupation-related and general tasks. • In addition, school type-specific and subject area-specific educational standards have been issued ('electronics and technical informatics', 'information technology' (engineering colleges), 'digital business' (business-oriented colleges), 'office management and applied informatics' (business-oriented schools), etc.). • For the majority of apprenticeships, the subject 'applied informatics' is part of the curriculum at vocational school. The importance of ICT and IT skills in individual apprenticeships differs depending on the occupational

	<p>area/sector. For apprenticeships in engineering/technology, basic computer literacy represents a prerequisite for the recording and evaluation of technical data, the computer-aided work with sketches and plans, and the simple programming of computer-controlled machinery and equipment. Also in tourism, basic computer literacy can be found very frequently in training regulations and curricula, such as knowledge of reservation and hotel systems, basic word processing and spreadsheet skills, and the evaluation of simple company-specific statistics and reports.</p>
<ul style="list-style-type: none"> • training of teachers in VET 	<p>Cf. introduction:</p> <ul style="list-style-type: none"> • additionally, a 'white book' deals with the question of which competences a graduate of a teacher education establishment needs to use digital media; • with the support of the Ministry of Education, the Austrian Institute of Applied Telecommunications has published the manual 'No child without digital skills' for teachers and school supervisor. https://www.saferinternet.at/uploads/tx_simaterials/digitale-kompetenzen-handbuch-web-einzelseiten.pdf [accessed 23.2.2017]; • Austria makes available a wealth of programmes for systematically developing competences of all teachers. http://www.virtuelle-ph.at/course/index.php?categoryid=126 [accessed 23.2.2017].
<ul style="list-style-type: none"> • centralised assessment of the key competence in VET 	<p>There are no general centralised assessment procedures for this competence area unless computer literacy forms a central part of the curriculum or training, in which case these competences are assessed as part of the final examination.</p>
<ul style="list-style-type: none"> • other instruments (e.g. access pathways, teaching/learning methods) 	<ul style="list-style-type: none"> • The 'efit21'-initiative focuses on application and use of ICT in Austrian educational establishments. This initiative pursues goals such as enhancing the quality of teaching and learning by using ICT, teaching digital competences to young people and therefore promoting graduates' labour market success and increasing efficiency in educational administration. As well as the teaching principles 'application of new technologies' and 'media education' for all school/programme types, the already existing e-learning networks 'eLSA' (e-Learning in school life) and 'eLC' (e-learning cluster) need to be mentioned. http://www.efit21.at/ [accessed 23.2.2017]. • One part of efit is the 'mobile learning' project, a cooperation of the Ministry of Education with the Ministry of Transport, Innovation and Technology. The project aims to promote and expand the use of new technologies in teaching as well as guarantee the lasting integration of e-learning at school locations. https://www.bmbf.gv.at/ministerium/vp/2015/20150924.html [accessed 23.2.2017].

	<ul style="list-style-type: none"> • Since 2010 learners in business administration programmes (BHS) have had the chance to take part in the testing instrument 'digital day', an initiative of the Ministry of Education. This day is held every year on a nationwide basis and offers learners in the third year of business administration programmes the possibility to prove their abilities in 'business informatics' and 'information and office management' based on educational standards. Successful participants are awarded a certificate by the Ministry of Education. (http://www.digital-day.at/ [accessed 23.2.2017]). • In the school year 2005/06 the Ministry of Education initiated the 'edumoodle' project which, since then, it has supported financially. The ongoing project aims to provide free-of-charge technical and administrative support for teachers at all Austrian schools and educational establishments which want to use the open-source learning management system Moodle in and outside the classroom.
The acquisition of the key competence of learners in upper secondary VET is monitored	No
How is acquisition monitored?	
<ul style="list-style-type: none"> • through international and national statistical data 	Competence measurement in digital competence exists for learners in year eight (cf. Digicheck8: http://digikomp8.digicheck.at [accessed 23.2.2017]), but not for learners in upper secondary VET.
<ul style="list-style-type: none"> • surveys/studies 	-
<ul style="list-style-type: none"> • benchmarks 	-
<ul style="list-style-type: none"> • other instruments 	<ul style="list-style-type: none"> • Continuous assessment (assignments in class, homework assignments etc.). • Tests as foreseen in the respective syllabus.
Improvements of learners in upper secondary VET since (+/-) 2010	There are no figures which relate exclusively to learners in VET at upper secondary level.

5. Key competence: learning to learn

The acquisition of the key competence at upper secondary VET is promoted at national/regional level	Yes
How is it promoted?	
<ul style="list-style-type: none"> • national/regional policy document(s) 	The LLL strategy highlights the importance of all key competences (and therefore also the key competence 'learning to learn') (cf. introduction).
<ul style="list-style-type: none"> • national/regional law(s), regulation(s) 	VET school curricula which specify social and personal competences are decreed by the Ministry of Education.

<ul style="list-style-type: none"> • national/regional curricula, standards and qualifications 	<ul style="list-style-type: none"> • Curricula of VET schools/programmes: promoting learning to learn (acquisition of learning techniques to be able to develop learning activities independently) and making young people aware that lifelong learning is indispensable for personal and professional further development is enshrined in them. One of the general educational objectives at BMS and BHS is that learners are able to use lifelong learning for their life and career planning. Forms of teaching and learning, such as cooperative open learning in particular, aim to help equip learners with problem-solving skills and lead them towards an independent and responsible working style. In addition, BMS and BHS curricula may offer an elective on 'competence-oriented, responsible learning'. https://www.abc.berufsbildendeschulen.at/downloads/ [accessed 23.2.2017]. • Educational standards for 'social and personal competences' for all VET programmes including the school-based part of apprenticeships: http://www.bildungsstandards.berufsbildendeschulen.at/fileadmin/content/bbs/AGBroschueren/SozialePersonaleKompetenzen_Broschuere_Oktober2011.pdf [accessed 23.2.2017]. As part of these educational standards, descriptors for 'lifelong learning' have been included in the competence area 'lifestyle'. This is about recognising the importance of LLL for personal and professional development, selecting education programmes and reflecting on one's own educational plans.
<ul style="list-style-type: none"> • training VET teachers and trainers 	<p>Cf. introduction.</p> <p>In-service training events are held for VET school teachers at university colleges of teacher education; their goal is for participants to learn and use creative learning techniques.</p>
<ul style="list-style-type: none"> • centralised assessment of the key competence in VET 	<p>-</p>
<ul style="list-style-type: none"> • other instruments (e.g. ways of working, teaching/learning methods) 	<ul style="list-style-type: none"> • The 'cooperative open learning' (COOL) initiative (with e-learning) was originally developed at a BMS and based on reforms of teaching. It has meanwhile become a pedagogical concept for the development of schools and teaching that is used at 150 locations (BMS and BHS) across Austria. It is promoted by the Ministry of Education and is not a ready-made scheme but rather an approach that is developed further at the respective schools. Here teachers see themselves as supporters and activators of their learners' learning processes. One element of this concept is that teachers give learners regular and individual feedback on the learning process (coaching on learning), in this way supporting the learners in developing an appreciative feedback culture. E-learning methods complement and support the differentiated teaching work http://www.cooltrainers.at/index.php?id=150 [accessed

		<p>23.2.2017].</p> <ul style="list-style-type: none"> Individualised learning support (ILB) is an innovative measure introduced as part of the new upper cycle (i.e. at the upper secondary level) to support and monitor learners with learning deficits and/or learning difficulties. The focus is on learners and their learning processes. Learning biography, learning strategies and learning environment are analysed and reflected on, for example by using competence/learning profiles, documentation of the learning progress, feedback talks and professional monitoring discussions. Individual learning facilitators focus on the differences between the learners in their individual learning situations and put particular emphasis on individualised support. They aim to support the learners in the development of successful learning strategies. For this purpose, the Ministry of Education has developed a three-part training programme, which is offered by university colleges of teacher education and can be completed by interested teachers. As opposed to remedial instruction, ILB is independent of school subjects. https://www.bmb.gv.at/schulen/unterricht/ba/nost/lernbegleitung.pdf?51539h [accessed 23.2.2017]. The role of teachers in the VET sector is increasingly developing from transmitting knowledge to facilitating learning: thus, for example, there are professional development programmes to raise awareness among teachers of taking on the role of coach, advisor, moderator and role model for self-directed learning. The focus should be on self-organised learning and working. This is important in connection with encouraging competence-oriented teaching. In apprenticeship training, for example, the KUS Network for Education, Social affairs, Sports and Culture, which is active throughout Austria, offers courses and seminars for apprentices with learning difficulties (such as 'learning to learn'). http://www.kusonline.at/de [accessed 23.2.2017].
The progress of improving key competence levels/learning outcomes among upper secondary VET students is monitored		No
How is it monitored?		
• through international and national statistical data	-	
• survey(s)	-	
• benchmark(s)	-	
• pther instrument(s)	-	

Key competence level improved among upper secondary VET students since (+/-) 2010

There are no figures which relate exclusively to learners in VET at upper secondary level.

6. Key competence: interpersonal, intercultural and social competences, civic competence

The acquisition of the key competence at upper secondary VET is promoted at national/regional level	Yes
How is acquisition promoted?	
<ul style="list-style-type: none"> national/regional policy document(s) 	<ul style="list-style-type: none"> The LLL strategy highlights the importance of all key competences (and therefore also on promoting interpersonal, intercultural and social competences as well as civic competence) (cf. introduction). In December 2009, the 'Global learning strategy in the Austrian education system' was published, which had been commissioned by the Ministry of Education (http://www.globales-lernen.at/fileadmin/user_upload/PDF/Strategie/StrategieGlobalesLernen_final.pdf [accessed 23.2.2017]). Global learning aims to enable young people to understand complex development processes and identify their own responsibility as well as their possibilities to take part in social life and help shape the global society. Therefore global learning is closely associated with political and civic education, environmental education and intercultural learning.
<ul style="list-style-type: none"> national/regional law(s), regulation(s) 	<ul style="list-style-type: none"> The tasks of the Austrian schools (and therefore also of all schools in the VET sector) which are laid down as obligatory in the school organisation act (SchOG) include promoting social understanding, open-mindedness about the political and ideological views of others, as well as the ability to take part in the economic and cultural life of Austria, Europe and the world. Also according to SchOG, young people should learn to act independently and cooperate in the community as part of their education/training. Upper secondary VET curricula frequently refer to interpersonal, intercultural, social and civic competences (this applies especially to the principles which define major educational and teaching objectives for all subjects): thus social and personal competences are mentioned as a separate item in the new learning outcome-oriented curricula of all VET programmes. The following are among the principles that relate to this key competence: 'intercultural learning', 'citizenship education' (complemented by 'development policy education' and 'European policy education'), 'education on gender equality',

	<p>'health education' and 'sexual education'. All of these principles are defined in more detail in fundamental decrees of the Ministry of Education. (cf. https://www.bmbf.gv.at/schulen/unterricht/index.html [accessed 23.2.2017]).</p> <ul style="list-style-type: none"> • In addition, there are specific subjects related to these principles. In some VET programmes, 'citizenship education' is a separate subject, often combined with 'economics', 'law' or 'history and social studies'. 'Intercultural competences' are taught as part of foreign language classes. 'Sexual education' is part of 'biology' classes. The subject 'citizenship education' is also laid down as compulsory in the curricula of the school-based part of apprenticeships to the extent of 80 weekly lessons overall. • Educational standards have been defined for 'social and personal competences' for all VET programmes (including the school-based part of apprenticeships: they are organised on the basis of different competence areas, such as 'social responsibility', 'cooperation', 'conflicts', 'autonomy', 'lifestyle', etc.
<ul style="list-style-type: none"> • national/regional curricula, standards and qualifications 	<ul style="list-style-type: none"> • Teaching principles and related decrees: https://www.bmbf.gv.at/schulen/unterricht/index.html [accessed 23.2.2017]. • VET curricula: http://www.abc.berufsbildendeschulen.at/de/dlcollection.asp [accessed 23.2.2017]. • Educational standards 'social and personal competences' for all VET programmes (including the school-based part of apprenticeships). • Promoting young people's personal development and social values in class is explicitly included in the mission statement of Austrian VET schools (apprenticeship training). General objectives of the school-based part of apprenticeships is to help learners develop humane behaviour and promote willingness to cooperate responsibly in the company, society and the state to encourage critical understanding of society and the economy.
<ul style="list-style-type: none"> • training VET teachers and trainers 	Cf. introduction
<ul style="list-style-type: none"> • centralised assessment of the key competence in VET 	There are no centralised assessment procedures for this competence area.
<ul style="list-style-type: none"> • other instruments (e.g. ways of working, teaching/learning methods) 	<ul style="list-style-type: none"> • Teaching materials available to help implement some of the above principles: <ul style="list-style-type: none"> – for 'citizenship education', a specific service unit has been set up: <i>Zentrum polis</i> supports teachers in citizenship education, human rights education, business education and consumer education, acts as an

- information platform and advice centre and prepares teaching/learning material. <http://www.politik-lernen.at/site/home> [accessed 23.2.2017];
- the service unit for health education offers materials for teachers, including about health promotion, sexual education, etc. <http://www.give.or.at/index.php> [accessed 23.2.2017].
 - Special support is provided for project-oriented teaching aiming to impart, encourage and deepen the above-mentioned key competences. In 2001 the Ministry of Education published a relevant decree on project-oriented teaching, which underlines the importance of this method to develop and promote 'dynamic skills'. https://www.bmbf.gv.at/ministerium/rs/2001_44.html [accessed 23.2.2017].
 - The key institution in this field is the Austrian centre for personal development and social learning (ÖZEPS), an establishment of the Ministry of Education which has carried out its activities nationwide for all school types since 2005. Its task is to encourage the promotion of self-competence and social competence in all educational establishments/programmes; it focuses on personal development and increasing awareness that it is essential to include these competences in the individual schools and programmes. ÖZEPS services include relevant handouts (e.g. about 'promoting individual learning'), organisation of meetings and awarding research assignments. It supports sustainable integration of methods, models and implementation options not only in schools but also in in-service and continuing teachers training establishments.
 - For quite some time, 'peer mediation' has been applied at VET schools: this procedure is based on the experience that conflict resolution is often more successful if conducted by (older) peers than if adults intervene. Mediation is a voluntary talk based on rules and a certain structure. Peers mediate between two or more learners, are accepted by all parties. Training for peer mediators builds on three pillars: theory, practice and personal experience. Training duration depends on the respective training scheme. In principle, at least 40 to 60 hours should be attended. https://www.bmb.gv.at/schulen/unterricht/ba/peermed06_13866.pdf?5i81v2 [accessed 23.2.2017].
 - Some initial and continuing training institutions provide seminars, workshops and similar events for apprentices to promote their social competences.
 - Caritas Austria, a social charity organisation of the Roman Catholic Church, offers 'youngCaritas', a social certificate for apprentices, as part of its youth training programme. This scheme offers apprentices a learning and experience environment which enables them to develop their social competences by means of dialogue, reflection and by

	<p>becoming acquainted with other living environments. This scheme is open to apprentices of all occupational areas. They usually start in the first year; the scheme runs for the entire three to four years of apprenticeships.</p> <p>http://wien.youngcaritas.at/sites/default/files/lehrlingskonzept_web.pdf [accessed 23.2.2017].</p>
The progress of improving key competence levels/learning outcomes among upper secondary VET students is monitored	Yes
How is it promoted?	
<ul style="list-style-type: none"> • through international and national statistical data 	International comparative data were surveyed as part of PISA 2000 (a survey of self-regulated learning among students by collecting information about their learning strategies), PISA 2003 and PISA 2012 (problem solving).
<ul style="list-style-type: none"> • survey(s) 	-
<ul style="list-style-type: none"> • benchmark(s) 	-
<ul style="list-style-type: none"> • other instrument(s) 	<ul style="list-style-type: none"> • Continuous assessment (assignments in class, homework assignments, etc.). • Tests as foreseen in the respective syllabus.
Key competence level improved among upper secondary VET students since (+/-) 2010	There are no figures which relate exclusively to learners in VET at upper secondary level.

Example 2: Teaching 'interpersonal, intercultural and social competences as well as civic competence' in business administration programmes (BHS – ISCED Level 354 -554)

Interpersonal, intercultural, social and civic competences are taught in business administration programmes (*Handelsakademien*, HAK) both in an integrative form across the entire spectrum of subjects and in specific subjects. The curriculum for the first year lays down the subject 'personal development and social competence' with two hours per week. 'Citizenship education and history' is taught in years two, three and four in one hour (year two) and two hours per week each, respectively. Intercultural competences are taught as part of foreign language classes (in English and a second modern foreign language) in each of the five years. The following principles are specified, among others, in the HAK curriculum (https://www.hak.cc/files/syllabus/Lehrplan_HAK_2014.pdf [accessed 23.2.2017]):

- (a) citizenship education – education for democratic thinking, overall European thinking, and cosmopolitan approach;

- (b) education work on European policies – focus on current European developments and initiatives in the education sector (education programmes, qualifications frameworks, recognition directives, quality assurance frameworks, transparency instruments);
- (c) gender mainstreaming – education on gender equality;
- (d) media education – awareness-raising for a conscious use of and a critical approach to media;
- (e) health education – education for acting in a health-conscious, responsible, independent manner.

In addition, educational standards for ‘social and personal competences’ have also been defined for colleges of business administration.

These competences are taught in different ways. The decision of which method is used is largely left to the respective teachers. The following approaches are frequently chosen:

- (a) projects: projects are frequently chosen to teach, encourage and deepen the above-mentioned key competences. The theme, activity (such as producing a film, organising an event, performing a theatre play, organising a charity concert, etc.) and objectives are chosen jointly by teachers and learners. With the support of their teachers, learners obtain the necessary information, from which they derive relevant planning. Project-oriented teaching aims to enhance learning of networked thinking and holistic approaches. Acquisition of these skills is promoted by an interdisciplinary approach to the topic. The joint work on a topic and the plan to reach a certain objective together creates the necessity to cooperate and communicate, resolve conflict where it arises, coordinate work, deal with conflict, etc. Therefore interpersonal and social learning are synonymous with the acquisition of subject-specific competences within the framework of projects;
- (b) contests: colleges of business administration also regularly take part in various contests which aim to encourage both subject-specific competitions but also and mainly interdisciplinary competitions. Examples include:
 - (i) ‘innovative youth’ (‘Jugend Innovativ’): ‘Jugend Innovativ’ is a nationwide school competition on innovative ideas. It is possible to submit project ideas in the categories of design, engineering, science, young entrepreneurs, and sustainability. ‘Jugend Innovativ’ gives learners and apprentices aged 15 to 20 years the possibility to work out and implement their innovative ideas in the form of projects;
 - (ii) student competition on citizenship education: here learners can submit contributions (articles, wall newspapers, information brochures, recipe books, comic strips, etc.) on the political topics specified by the

organisers. <http://www.politik-lernen.at/site/projekte/wettbewerbe> [accessed 23.2.2017];

- (iii) foreign language competition: every year, foreign language competitions are held at regional level. The winners of these competitions then take part in the language contest which is organised by CEBS, the Centre for professionally-oriented languages. <https://www.cebs.at/index.php?id=112> [accessed 23.2.2017].
- (c) excursions and company visits: visits to establishments – such as companies, public institutions (such as Parliament, Vienna International Centre), social institutions (such as institutions for the care of people with disabilities), trade fairs (such as the job information fair) – also count among the teaching methods to promote key competences.
- (d) teaching materials: the Ministry of Education or associations offer a wealth of teaching aids which can be used directly in class or include examples for school projects and teaching units. Examples include:
 - (i) civic competence: 'Key competences for active citizenship. Manual for the secondary level';
 - (ii) intercultural learning: 'Intercultural dialogue. Intercultural learning. A practice-oriented handout for teachers';
 - (iii) citizenship education: many publications by *Zentrum polis*, *Arbeitsgemeinschaft Wirtschaft und Schule* (school-business platform, <http://aws.ibw.at> [accessed 23.2.2017]), the Austrian Museum for Social and Economic Affairs (<http://www.wirtschaftsmuseum.at> [accessed 23.2.2017]) and the website polipedia.at (<http://www.polipedia.at> [accessed 23.2.2017]) focus on (European) policy topics.

7. Key competence: entrepreneurship

The acquisition of this key competence is promoted in the upper secondary VET school sector at national/regional level.	Yes
How is acquisition promoted?	
<ul style="list-style-type: none"> national/regional policy documents 	<p>The LLL strategy highlights the importance of all key competences (and therefore also entrepreneurial competences) (cf. introduction).</p> <p>Entrepreneurship education in a wider sense comprises all educational measures to encourage entrepreneurial attitudes and skills, it therefore refers to the development of specific values, attitudes and personal qualifications that can lead to graduates founding their own business and are also essential for employment. In a narrower sense, entrepreneurship education means teaching specialist knowledge, abilities and</p>

	<p>skills required for successful business start-ups and management. https://www.bmbf.gv.at/schulen/bw/bbs/entrepreneurship.html [accessed 23.2.2017].</p> <p>Entrepreneurship education is therefore a key principle of all VET school programmes.</p> <p>Another principle which aims to encourage economic education is 'economic and consumer education'. The relevant decree underlines one of the core tasks of all Austrian schools – providing young people with the knowledge and skills required for life and their future career, developing their ability to form judgements independently and enabling them to take part in the economic and cultural life of Austria, Europe and the world. https://www.bmbf.gv.at/ministerium/rs/2015_15.html [accessed 23.2.2017].</p> <p>Educational standards for entrepreneurship have been defined for BMS and BHS preparing for the business sector.</p>
<ul style="list-style-type: none"> • national/regional laws, ordinances and regulations 	<ul style="list-style-type: none"> • Curricula indicating the general intended learning outcomes for the specific programmes and subject areas (see above) are decreed by the Ministry of Education and apply across Austria. • The training regulations which cover the company-based part of apprenticeship training are published by the Ministry of Education. • Those who intend to exercise a craft or regulated trade on a self-employed basis need to furnish proof of having successfully acquired business administration and legal knowledge. This proof can be furnished by successfully completing the entrepreneurial exam. Some VET schools teach the relevant knowledge for the entrepreneurial exam to the required extent of 160 periods of instruction. These include all BHS and the majority of BMS. Completion of the entrepreneurial exam is waived for these graduates.
<ul style="list-style-type: none"> • national/regional curricula, standards and qualifications 	<p>The encouragement, promotion and deepening of entrepreneurial competences is central in the curricula of all VET programmes (school-based and dual system).</p> <ul style="list-style-type: none"> • Curricula of VET schools: https://www.abc.berufsbildendeschulen.at/downloads/ [accessed 23.2.2017]; the educational objectives of the framework curriculum for business programmes (BMS) includes 'wide basic knowledge in general education and business administration as well as an understanding of national economic processes, particularly principles of entrepreneurship education'. The framework curriculum for business administration programmes (BHS) includes the general didactic principle 'entrepreneurship education'; it aims to develop a special attitude of entrepreneurial thinking and acting in all subject areas and takes generally applicable values into account'. The competence area of entrepreneurship has meanwhile also become part of the intended learning outcomes and curricula for engineering

programmes (BHS), for example (see example 3).

- Curriculum for the school-based part of apprenticeships and training regulations:
<https://www.abc.berufsbildendeschulen.at/downloads/?kategorie=7>;
<http://www.bmwf.gv.at/Berufsausbildung/LehrberufeInOsterreich/ListeDerLehrberufe/Seiten/liste.aspx> [accessed 23.2.2017]; one of the principles in the schools-based part of apprenticeships aims to foster entrepreneurial thinking and acting ('entrepreneurship education'). The emphasis on this competence area in the individual curricula depends on the occupational area: thus the framework curriculum for 'office assistant' states that teaching must be oriented in particular towards achieving the following learning outcomes: 'understanding economic connections, entrepreneurship and intrapreneurship-oriented thinking as well as reflected consumer behaviour'.
- Educational standards for BMS and BHS.
- One major approach towards promoting entrepreneurial spirit is the setting up of a practice firm. The practice firm as a place and method of learning has been a compulsory part of the curriculum in business (BMS) and business administration programmes (BHS) since 1993 and recommended to be integrated into the business training at all other VET programmes. The practice firm is the model of a real business which enables the operational procedures of an actual company to be reproduced to varying degrees of complexity, with the aim of making them transparent for learning processes. To support practice firms, the Ministry of Education has set up the Austrian centre for practice firms ACT. ACT provides practice firms with online services which the practice firm market does not offer but which are necessary for realistic business activities by simulating public authorities and supports national and international transactions through a variety of services (bank, company register, tax office, social insurance, foreign trade office, court, the authority in charge of trades and businesses, customs, parcel service, foreign language services, tenders). ACT is also the link between national and international networks of practice firms and represents the Austrian practice firms in the international umbrella organisation European/PEN international. <https://www.act.at/> [accessed 23.2.2017].
- Currently there are also two vocational schools for apprentices which use this method as a supplement to their work in the companies and run some 15 practice firms. Here the practice firm is a supplementary element within the school-based part of the apprenticeships which does not replace the company-based training.
<https://www.act.at/page.asp?id=887> [accessed 23.2.2017].
- Traditionally school-based VET has included mandatory

	<p>work-placements. Only in programmes preparing for the business sector they used to be optional. Since the school year 2014/15 work placements (internships) have been made compulsory for learners in business (BMS) and business administration programmes (BHS) to be able to take the final exams. In total, 150 (BMS) and 300 working hours (BHS). This compulsory work placement is designed as an employment relationship in a company or an organisation in Austria or abroad and needs to be completed in the period when there are no lessons (during school holidays):</p> <ul style="list-style-type: none"> • for some years, many colleges of business administration (BHS) have offered the training focus 'Start-ups and business management'. Subject-related specialisation mainly takes place in years four and five; • graduates of VET programmes have the possibility to become self-employed master crafts persons and exercise a craft or trade independently after completing a master craftsman examination. This is a career pathway frequently chosen by apprenticeship graduates in particular.
<ul style="list-style-type: none"> • training of teachers in VET 	<p>Cf. introduction.</p> <p>Teachers of business-oriented subjects (such as business administration, accounting) are trained in the university programme 'economics teaching' and have to complete several years of business practice before being employed. In the field of entrepreneurship there are also many continuing training programmes for teachers.</p>
<ul style="list-style-type: none"> • centralised assessment of the key competence in VET 	<p>In the competence-oriented final exams that grant university access and award professional qualifications (cf. introduction), subjects focusing on business administration are examined in a uniform manner across Austria. In BMS programmes and apprenticeship training, exams are not centralised. At all school/programme types, the respective teachers carry out regular performance appraisals.</p>
<ul style="list-style-type: none"> • other instruments (e.g. access pathways, teaching/learning methods) 	<ul style="list-style-type: none"> • The EESI centre (Entrepreneurship education for school-based innovation, http://www.eesi-impulszentrum.at/ [accessed 23.2.2017]), promotes a positive attitude towards entrepreneurial activities among learners and teachers. It organises symposia and days for entrepreneurs, further training events and expert conferences, as well as an annual business plan competition. Since 2011 EESI has also been offering Austrian schools/colleges of business administration (BHS and BMS) the possibility to be certified as entrepreneurship schools based on specific criteria (teaching contents, competences of teachers and school managers, characteristics of the school as an organisation). • A possibility of founding companies that is comparable to the practice firm is provided by the JUNIOR programme. Learners between the ages of 15 and 19 set up real businesses for the duration of one school year and offer

	<p>products and services they have developed themselves on the real market. The young people develop their own business idea independently and go through all the phases of a real business project from the initial idea and forming teams, planning, production, marketing and sales, to business transaction. They work independently in teams and fulfil all their entrepreneurial tasks themselves. The JUNIOR companies' offer ranges from simple services onto patented products. http://junior.cc/ [accessed 23.2.2017]:</p> <ul style="list-style-type: none"> – some of the larger training companies also run their own practice firms for their apprenticeship training to supplement school-based and company-based training: – the annual Austrian national entrepreneurship championships are oriented, in terms of contents, towards the global goals signed in late 2015 by all 193 UN Member States. Teams of 14 VET schools, including colleges of business administration, colleges of engineering, schools and colleges of social and services industries, and schools and colleges of tourism from across Austria took part in these championships in 2016. The goal was to find an innovative business idea on the topic 'The city worth living in' from the entire range of 17 global goals, create a relevant business plan and present it in English in front of an expert jury. https://www.bmb.gv.at/ministerium/vp/2016/20160229.html [accessed 23.2.2017].
The acquisition of the key competence of learners in upper secondary VET is monitored	Yes
How is acquisition monitored?	
<ul style="list-style-type: none"> • based on international and national statistical data 	<p>Evaluation of results of the partly standardised competence-oriented matriculation and diploma exam, which has been in force since 2015/16 and comprises, among other subjects, also those in which entrepreneurial competences are taught. https://www.bifie.at/node/135 [accessed 23.2.2017].</p>
<ul style="list-style-type: none"> • surveys/studies 	-
<ul style="list-style-type: none"> • benchmarks 	-
<ul style="list-style-type: none"> • other instruments 	<ul style="list-style-type: none"> • Continuous assessment (assignments in class, homework assignments, etc.). • Tests as foreseen in the respective syllabus.
Improvements of learners in upper secondary VET since (+/-) 2010	<p>There are no figures which relate exclusively to learners in VET at upper secondary level.</p>

Example 3: Entrepreneurship education in five-year engineering programmes (BHS – ISCED Level 354-554)

Entrepreneurship is not only important in relevant business-oriented training programmes. The European Union's recommendation on 'Key competences for LLL' and the Europe 2020 growth strategy have led to a stronger focus on entrepreneurship education in the five-year VET programmes including those in engineering (HTL).

To encourage activities in this field, the federal working group 'entrepreneurship HTL' was set up in 2012. One of the main tasks of this working group was to create a training concept (see below). In 2012 the paper 'Entrepreneurship for engineers' (the 'EfE-guide') was presented (cf. the updated version 2 dated March 2015).

Based on this concept, 'entrepreneurial competence' comprises a bundle of competences which should be encouraged. Entrepreneurship education in engineering programmes therefore consists of the following tasks:

- (a) strengthening of subject-specific competences: combining the learners' technical and technological know-how, i.e. their ability to create, design and build products and deepening their basic business know-how, i.e. basic business understanding, positive attitude towards entrepreneurship;
- (b) development and enhancement of methodical competences: the focus should be on innovation and creativity, strategy development, and the implementation of projects;
- (c) expansion of social and personal competences: the focus should be on supporting promising attitudes and thoughts such as orientation towards opportunities, customers, solutions, benefits and service provision.

A competence grid has been created. It provides three levels to promote entrepreneurial competence:

- (a) basic: the fundamentals which are relevant for all schools;
- (b) advanced: promotion of entrepreneurship through broader competences and participation in specific competitions;
- (c) master: school/programme has a specific focus on entrepreneurship; teaching of methodical competence, provision of optional subjects, in-depth support in diploma theses, and increased participation in competitions.

Subject-related, methodical, social and personal competences are allocated to each level (to basic, for example: cost-benefit ratio, project planning, the ability to deal with conflict, enthusiasm), which are explained in more detail in the 'EfE-guide'.

Every individual school is entitled to decide independently which level they want to achieve/focus on and which measures will be taken in which subject areas. As well as integrating entrepreneurial competences in different subject areas, also specific subjects are laid down in the curriculum to encourage entrepreneurial spirit: depending on the specialist area within the engineering disciplines, these are e.g., 'economy and law', 'business administration and project management' or 'technical design and project management'. In addition, the national working group – in agreement with the Ministry of Education – has prepared a curriculum for the optional subject 'entrepreneurship and innovation' with the objective, among others, to enable learners to draw up a business plan.

Method-wise, the project approach is frequently used to impart entrepreneurial competences. Many HTLs take part in the JUNIOR programme or set up practice firms, for example (cf. the text above). They also use competitions (such as Innovative youth, <http://www.jugendinnovativ.at/> [accessed 23.2.2017]), the European business competence licence champions league (<http://www.ebcl.at/> [accessed 23.2.2017]), Young Austrian engineers CAD contest (<http://www.3d-cad.at/index.php?id=31> [accessed 23.2.2017]), where learners need to prove subject-related competences, innovation, creativity, etc. to strengthen their entrepreneurial spirit. In the work on the diploma thesis which has since 2015 been a compulsory part of the final exam, the focus is also on individual initiative (entrepreneurship), independent work, cooperation in teams and the implementation of own ideas.

Many in-service training programmes for teachers have also been developed to support the implementation of the entrepreneurship for engineer's initiative.

8. Key competence: cultural expression

The acquisition of this key competence is promoted in the upper secondary VET school sector at national/regional level		Yes
How is acquisition promoted?		
<ul style="list-style-type: none"> national/regional policy documents 	The LLL strategy highlights the importance of all key competences (and therefore also cultural competence) (cf. introduction). There is no separate strategic paper which focuses on promoting cultural competence.	
<ul style="list-style-type: none"> national/regional laws, ordinances and regulations 	<ul style="list-style-type: none"> Based on the school organisation act, learners at all Austrian schools 'shall be led to independent judgement, social understanding and active sporty living, be open to the political and ideological thinking of others and become capable of participating in the economic and cultural life of Austria, Europe and the world'. This objective also refers to school-based VET programmes (including apprenticeships). 	

	<ul style="list-style-type: none"> • On school events, the school education act specifies the following: 'It is the task of school events to complement teaching according to the curriculum by bringing learners into direct and vivid contact with economic, social and cultural life by promoting their artistic talents and providing physical exercise'. • In 2016, the Ministry of Education issued a specific decree on the annual 'culture connected' initiative; this initiative aims to support cooperation projects between schools and cultural partners on topics from all fields of arts and culture. Participation in 'culture connected' promotes creativity and encourages learners to become involved in cultural life. The initiative's topic for the school year 2016/17 is 'shaping democracy and society with cultural education!' Eligible for participation are schools of all school types from the first school year onwards, jointly with cultural institutions, initiatives and associations. https://www.bmb.gv.at/schulen/pwi/pa/cultureconnected_erss2016.pdf?5l57c7 [accessed 23.2.2017]. • In another decree, the Ministry of Education announced that the 'cultural budget for federal schools' initiative (addressing also BMS and BHS) will be continued in the school year 2016/17. This budget is earmarked to provide access to different art forms for children and young people. The focus is on artistic and cultural projects and work approaches aiming to raise the awareness of children and young people for social and societal topics in the school context and support their personal development and reflective abilities. The methodical focus of this initiative is participatory art education: here professional artists work with learners and teachers in a process-oriented way as part of teaching projects. All federal schools which have submitted an application and whose projects comply with the subject-related criteria are granted a special budget for their artistic teaching projects by the Ministry of Education. The initiative is implemented by KulturKontakt Austria (see further below).
<ul style="list-style-type: none"> • national/regional curricula, standards and qualifications 	<p>Cultural education is often included in VET programmes in an integrative manner, such as in German classes. The objective of all VET programmes is, at any rate, to motivate their learners to take part in cultural life and enhance their creativity.</p> <ul style="list-style-type: none"> • BMS: based on the framework curriculum for business programmes, for example, general educational objectives include: 'Graduating from the business programme, learners first and foremost have acquired intercultural competence, are able to show understanding and respect for others and deal with religions, cultures and world views'. Regarding occupation-specific learning outcomes in the curriculum segment 'society and environment' it also states: 'learners can tackle cultural diversity as a challenge and perceive it as enriching society'. Cultural activities are also laid down in the framework curriculum as part of the teaching methods: 'the

	<p>organisation of cultural activities and visits to cultural events and institutions aim to motivate learners to deal with art and culture’.</p> <ul style="list-style-type: none"> • BHS: according to the framework curriculum, the graduates of five-year engineering programmes, for example, must also be able to actively participate in public life, especially in cultural life. In addition, their curricula mention the following learning objectives: ‘graduating from these programmes, learners are able to recognise and use intercultural and diversity approaches as an opportunity in a globalised world; they are aware of their own cultural identity and can relate it to other cultures as well as identify joint features and differences between them and reflect on these; they are able to perceive other people and their views, their value systems and behaviour in a gender-sensitive manner’. • In the school-based part of apprenticeships the importance of cultural competence depends on the subject area: many apprenticeships have a direct connection to crafts and therefore teach specific cultural and/or creative professional practices (such as goldsmith, book and media trade specialist, ceramist). In addition, accompanying measures and programmes have been implemented to integrate cultural values and competences to a greater extent also in apprenticeship training.
• training of teachers in VET	Cf. introduction.
• centralised assessment of the key competence in VET	-
• other instruments (e.g. access pathways, teaching/learning methods)	<p>KulturKontakt Austria (KKA, www.kulturkontakt.or.at/ [accessed 23.2.2017]) is a non-profit association which has been commissioned by the Ministry of Education to encourage the ‘teaching of arts and culture at all schools’ (i.e. also in VET). KKA works at the interface between school, arts and culture. The focus of the association’s work is on designing projects and activities related to cultural education jointly with schools, supporting them in their organisation, and promoting them. This is to motivate learners to actively take part in artistic and cultural processes. These projects are carried out in cooperation with creative artists and practitioners in the field of culture as well as arts and culture institutions. The personal encounter with artists opens up new ways of how to deal with arts and culture to the learners and it is therefore a major prerequisite for taking part in societal processes.</p> <p>The projects and activities related to cultural education essentially comprise three areas: programmes aiming to:</p> <ul style="list-style-type: none"> • involve artists in teaching processes (so-called ‘dialogue events’, http://www.kulturkontakt.or.at/html/D/wp.asp?pass=x&p_title

		<p>=5291&rn=242218 [accessed 23.2.2017]);</p> <ul style="list-style-type: none"> involve apprentices in arts and cultural activities ('Programme K3', http://www.kulturkontakt.or.at/html/D/wp.asp?pass=x&p_title=5055&rn=242319 [accessed 23.2.2017]); foster long-term cooperation between schools and cultural institutions ('p[ART]', http://www.kulturkontakt.or.at/html/D/wp.asp?pass=x&p_title=8010&rn=242457 [accessed 23.2.2017]). <p>Aspects of participation are included in these three programmes with specific guidelines. Dialogue events, for example, meet the following criteria: They involve artists and their working methods in the teaching process; learners are motivated to take part in an active and process-oriented way in the project (traditional direct events such as concerts, performances, readings, etc. are not supported); the goal is that teachers, pupils and artists plan the project jointly, carry it out in teams and reflect on it afterwards. At the centre of these programmes there is the approach to encourage pupils to perform their own cultural activities based on their own everyday working life and living reality in a communicative exchange with creative artists.</p> <p>KKA also offers schools many publications and best-practice guidelines for cultural education: http://www.kulturkontakt.or.at/html/D/wp.asp?pass=x&p_title=5171&rn=240943 [accessed 23.2.2017].</p>
The acquisition of the key competence of learners in upper secondary VET is monitored		No
How is acquisition monitored?		
• based on international and national statistical data	-	
• surveys/studies	-	
• benchmarks	-	
• other instruments	-	
Improvements of learners in upper secondary VET since (+/-) 2010	There are no figures which relate exclusively to learners in VET at upper secondary level.	

Conclusions

Acquisition of key competences is of major importance in upper secondary VET. The programmes offered in school-based VET and in apprenticeships (dual system) aim to qualify learners for immediate entry to the labour market. Employability does not only require comprehensive subject-specific and methodical competences. Interdisciplinary competences such as creativity, the ability to work in teams, social competence, the ability to deal with conflict, etc. are increasingly gaining in importance in view of the rapidly changing conditions in the world of work. All VET programmes at upper secondary level therefore have for many years encouraged the teaching of key competences.

The importance of interdisciplinary competences is also reflected in the many laws and curriculum regulations that lay down their inclusion in VET programmes. This not only aims to create more awareness of their significance but also underlines the binding nature of teaching them. Key competences are either enshrined in the general learning outcomes/principles that apply to all subject areas across a curriculum, or prescribed as explicit educational objectives of specific subjects. In its capacity as the responsible public authority, the Ministry of Education has issued decrees concerning key competences which are teaching principles at the same time. These decrees define the teaching of these interdisciplinary competences in greater detail. In addition, educational standards for VET have been defined for social and personal competences.

As competence orientation has in recent years been intensified in the teaching process (competence-oriented curricula, competence-oriented teaching) and performance assessments (competence-oriented final exams), key competences have come even more into focus. By the end of their training, learners not only need to be able to reproduce knowledge but apply it in given situations. This requires a high level of subject-related and methodical competence but also a number of social and personal competences. The promotion of competence orientation in the VET sector at upper secondary level has therefore always been synonymous with the promotion of key competences.

Project-oriented teaching is one of the main methods used to help learners develop key competences. The key objective of this method is to encourage independent and goal-oriented work among learners. They are encouraged to develop their own ideas, are responsible for carrying out projects, and appraise/reflect on results. This way of working also aims to encourage and develop major social and personal competences. Other methods and approaches, such as participation in competitions, compulsory periods of work

placement in industry and the actual work done in company-based apprenticeship training, the preparation of a diploma thesis, etc., also contribute to the development of key competences.

The assessment whether learners have acquired key competences in the course of their VET programme is carried out by the teachers as part of continuous assessment. Some key competences are assessed centrally in the partly standardised final exams of programmes that grant university/higher education access/lead to diploma level (ISCED 354-554). With one exception (reading literacy), no benchmarks have been defined at national level which are to be reached in connection with key competences. There are also no statistical data which allow statements about the achievement of interdisciplinary competences among learners at upper secondary level. Therefore it is also not possible to state whether there have been improvements in a five-year comparison (2010-15). But the large number of activities taken in connection with the teaching of key competences suggests that the development is positive.