TRACK-VET:

"Developing, assessing and validating transversal key competences in the formal initial and continuing VET"

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1 Introduction

1.1 Foreword

SGH will provide input / proposal for this part, for voluntary use.

1.2 Abbreviations and acronyms

ACT: Austrian Centre for practice firms

AHS: Academic Secondary School which comprise a four-year lower level and a four-year upper level (no NQF/EQF level so far)

BHS: Colleges for Higher Vocational Education which offer five-year IVET courses/programmes at upper secondary level (Berufsbildende höhere Schule), i.e. NQF/EQF level 5

BHS-HAK: IVET College for Business Administration (NQF/EQF level 5)

BIST: education standards (Bildungsstandards)

BMBWF: Austrian Federal Ministry of Education, Science and Research (former: BMUKK, BMBF, BMB)

BMS: Schools for Intermediate Vocational Education which offer three/four-year IVET courses/ programmes at intermediate level (Berufsbildende mittlere Schule), i.e. NQF/EQF level 4

BMDW: Ministry of Digitalisation and Economy

BMS-HAS: IVET School for Business Administration (NQF/EQF level 4)

GD VET: General Directorate for Vocational Education and Training of the Austrian Federal Ministry of Education, Science and Research (BMBWF)

LBVO: performance appraisal regulation (Leistungsbeurteilungsverordnung)

LSI: regional school supervison (Landesschulinspektor)

Kolleg: post-secondary course, subject-specific initial vocational training or further education for high school graduates

QIBB: The Austrian VET Quality Initiative (QualitätsInitiative BerufsBildung)

QIS: Quality in Schools

SchOG: School Organisation Act (Schulorganisationsgesetz)

1.3 Preparation of the report

The desk research was started with two current and fundamental Cedefop / ReferNet reports (Tritscher-Archan, 2016, Tritscher-Archan & Petanovitsch, 2016). Not only have such reports been validated by the Austria ReferNet Representative, but also the international scope of these publications represents a common starting point in the overall project for a comprehensive presentation of the topic. All Internet sources were retrieved on 22/11/2018.

The resulting presentation in the Austrian Country Report is also based on the project definition of transversal competences (for the best possible international comparability): the TRACK-VET project defines transversal key competences as a subgroup of the 8 key competences defined in the Council Recommendation from 2018, namely: learning to learn, social and civic competences, initiative-taking and entrepreneurship, and cultural awareness and expression.

In addition to internal reflection, the results were also discussed with external stakeholders within the group discussions carried out within the survey phase. 14 experts and stakeholders reflected the topic in interviews or the group discussion. Also special thanks to the BMBWF as a strategic partner.

1.4 Basic terms

- Add-on course: BMS-graduates leading to the maturity and diploma exam (Aufbaulehrgang)

- Cedefop report: reports from the European Centre for the Development of Vocational Training

- Competence: based on Weinert (2001, p. 27 f.) competency is understood as 'that individuals can use their cognitive skills and abilities in order to solve certain problems…"[1]

- CVET: continuous vocational education and training: Education or training after initial education and training – or after entry into working life[2]

- Dual system: education or training combining periods in an educational institution or training centre and in the workplace[3]

- NQF/EQF: reference tool for describing and comparing qualification levels in qualifications systems developed at national, international or sectoral levels[4]

- Formal education: education that occurs in an organised and structured environment (in an education or training institution or on the job) and is explicitly designated as learning

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[1] Eder, Hofmann, Überfachliche Kompetenzen in der österreichischen Schule, 2012, p. 71.
[2] https://www.eqavet.eu/eu-quality-assurance/glossary/continuing-education-and-training-(cvet)
[3] Cedefop, 2014, p. 24
[4] Cedefop, 2014, p. 91. In Austria, there is also a nationwide framework (NQR or NQF)

(in terms of objectives, time or resources). Formal learning is intentional from the learner's point of view. It typically leads to certification.[5]

- Higher vocational education: 5-year-programmes of BHS

- Intermediate education: three to 4-year-programmes of BMS

- ISCED: ISCED stands for International Standard Classification of Education and is an internationally standardized classification of education[6]

- IVET: Initial vocational education and training: general or vocational education and training carried out in the initial education system, usually before entering working life[7]

- Level descriptors: They show the level of qualification in the qualifications framework[8]

- Non-formal learning: learning embedded in planned activities not explicitly designated as learning (in terms of learning objectives, learning time or learning support). Non-formal learning is intentional from the learner's point of view.[9]

- Transversal key competences: when competences are universal (in contrast to specific competences which are mainly required in a special field)[10] The TRACK-VET project defines transversal key competences as a subgroup of the 8 key competences defined in the Council Recommendation from 2018, namely: learning to learn, social and civic competences, initiative-taking and entrepreneurship, and cultural awareness and expression.

- Validation: confirmation by a competent body that learning outcomes (knowledge, skills and/or competences) acquired by an individual in a formal, non-formal or informal setting have been assessed against predefined criteria and are compliant with the requirements of a validation standard. Validation typically leads to certification.[11]

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[5] Cedefop, Terminology of European education and training policy (2014), p. 99.
[6] https://www.bic.at/downloads/de/archiv/bildungs_abc/isced.pdf
[7] https://www.eqavet.eu/eu-quality-assurance/glossary/initial-educuation-and-training-(ivet)
[8] Cedefop, Terminology of European education and training policy (2014), p. 168.
[9] Cedefop, Terminology of European education and training policy (2014), p. 183 f.
[10] http://competendo.net/en/Transversal_or_Key_Competences.
[11] Cedefop, Terminology of European education and training policy (2014), p. 127.

2 Chapter 1. Overview of the formal initial and continuous VET in Austria

2.1 Formal initial and continuous VET in Austria

Austria has three main types of initial VET programmes at upper secondary level, which are publicly funded and free of charge:[12]

(a) Higher level programmes that grant university/higher education access and professional qualifications at diploma level (BHS, five-year programmes spanning ISCED levels 354 and 554 or NQF/EQF level 5): they are offered at Colleges for Higher Vocational Education and include work-based learning at school and mandatory internships in enterprises;

(b) Medium level programmes that lead to skilled workers' level (BMS, three to four-year-programmes at ISCED level 354 or NQF/EQF level 4): they are offered at Schools for Intermediate Vocational Education and 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 or NQF/EQF level 4), offered in vocational schools.

More than 75% of young people in the tenth grade (i.e. one year after the end of compulsory schooling) attend a VET pathway, roughly one quarter decide for a general education pathway leading to university. A total of 27% of young people in the tenth grade opt for a VET school at diploma level (a), 12% for a VET school at skilled workers level (b), and 37% for an apprenticeship programme (c)[13].

In Austria, VET programmes at post-secondary level are provided within the framework of add - on courses (i.e. for medium level graduates leading to maturity test and diploma exam), post-secondary VET courses (subject-specific initial vocational training/further education for high school graduates) and master craftsperson, industrial master as well as building craftsperson programmes (for a graphical presentation see next page). § 75 of SchOG foresees also the possibility for employed people to complete a higher level VET programme (a) within 8 semesters in evening classes.

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[12] For more details about the programmes see Tritscher-Archan & Petanovitsch, Key competences in vocational education and training – Austria (2016).

[13] Figures refer to the school year 2016/17, see: Konrad Oberwimmer, Stefan Vogtenhuber, Lorenz Lassnigg und Claudia Schreiner (Hrsg.): Nationaler Bildungsbericht Österreich 2018, Band 1, Das Schulsystem im Spiegel von Daten und Indikatoren, p. 129

Figure 1: VET in the Austrian education and training system
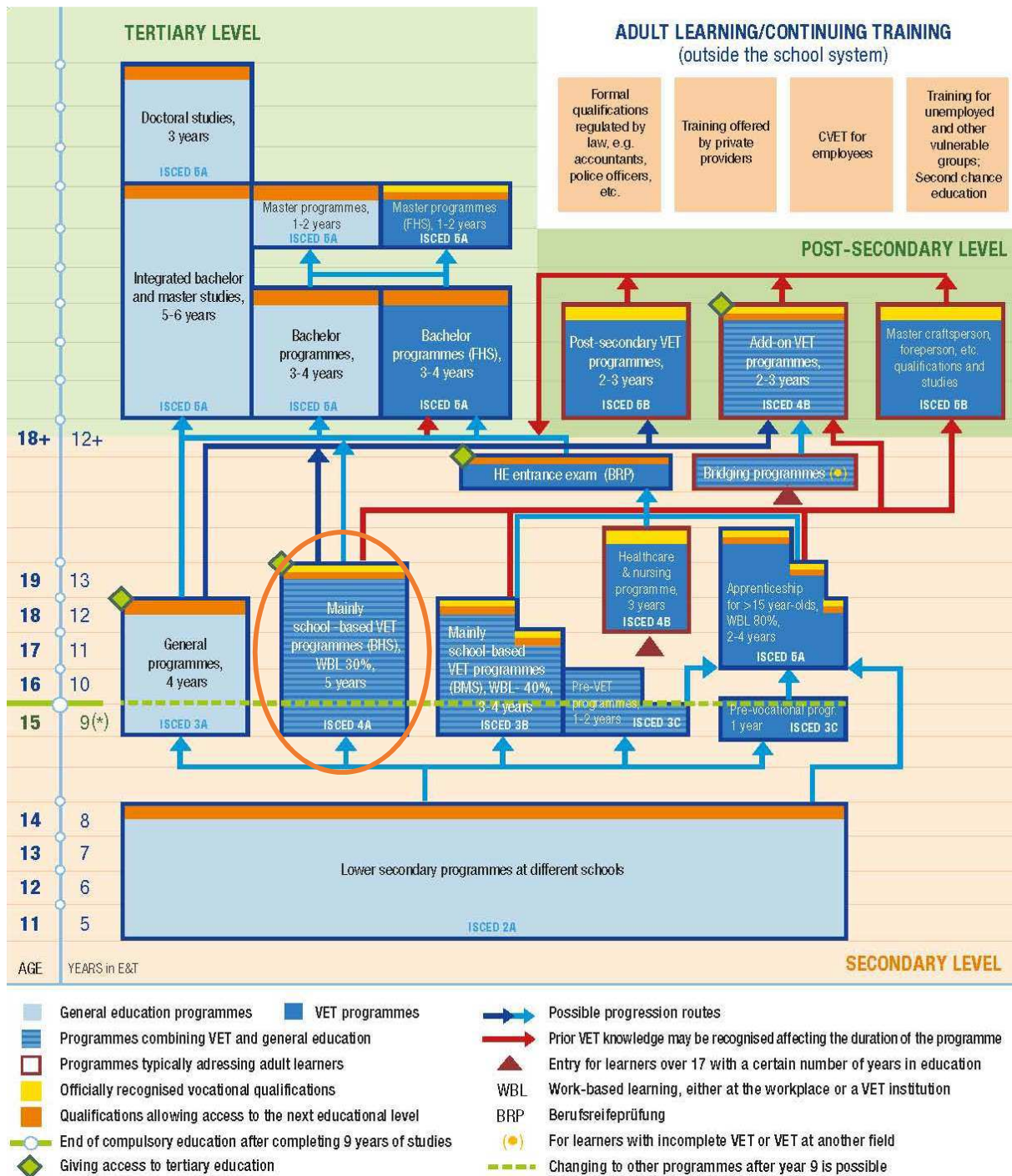
Source: Tritscher-Archan, 2016, p. 4ff.

VET programmes for formal IVET and CVET in Austria

Programmes for formal IVET in Austria:

- School based upper secondary medium level VET programmes (BMS, three to four-year): They include general education and VET at medium qualification level
- School based upper secondary higher level VET programme (BHS, five-year): These programmes aim to deepen general education and VET at higher qualification level

There are different area specializations of BMS and BHS (see table 1):

Engineering, Arts and Crafts
Business Administration
Management and Services Industries
Tourism
Fashion, Art and Design
Social Occupations
Agriculture and Forestry
Nursery
Social Pedagogy

Table 1. Overview of the upper secondary VET Programmes

- Apprenticeship / dual VET: one to two days per week or around eight weeks per year at a 'part-time vocational school for apprentices"
- Advanced level healthcare and nursing programme

There are two parallel provider institutions until the end of 2023: The healthcare and nursing schools will be abolished in 2020 and from then be replaced by the programmes of Universities of Applied Sciences[14]

- Nursing assistance programmes (level 1 and 2): programmes at general health and nursing schools[15]

The programmes at **post-secondary level** are offered at selected schools or colleges which offer the secondary level programmes (BMS/BHS). Master craftsperson, industrial master as well as building craftsperson programmes can be completed at specific schools like master craftsperson schools.[16]

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[14] Cedefop, Vocational Education and Training in Europe – Austria (2016), p. 14 f., 19. Tritscher-Archan & Petanovitsch, Key competences in vocational education and training – Austria (2016).

[15] See for example: https://www.land-oberoesterreich.gv.at/29135.htm, https://pflegeschulen-noe.at/standorte/uebersicht.html

[16] Cedefop, Vocational Education and Training in Europe – Austria (2016), p. 23 f.

Programmes for formal CVET in Austria:

- Foremen Courses (Werkmeisterschulen): They offer further job-related theoretical education for people who have completed initial training in the industrial and trade sector. Foremen courses are mainly offered by private institutions, training institutions of employers (Institutes for Economic Development) and employees' organisations (Vocational Training Institutes)
- Master Craftsmen Courses: Just as foremen courses, courses for master craftsmen aim at enhancing technical knowledge and at preparing students for their Master Craftsman Examination.
- Courses for Building Workers: The aim of further education and training of courses for building workers (Bauhandwerkerschulen) is to secure employment and to raise qualification standards of employees in small and medium-sized enterprises. They are held at colleges for engineering.
- Schools and Colleges for people in employment - Second Educational Pathway: they provide adults with the opportunity to take school-leaving certificates of a secondary academic school or a technical and vocational school or college at a later point in their lives. Furthermore, they give people with completed initial vocational training (obtained at a secondary technical and vocational school or through apprenticeship training) the opportunity to acquire higher qualifications.
- Universities of Applied Sciences: the Universities of Applied Sciences aim to expand tertiary education in more occupationally-oriented forms than universities. For the most part, they are oriented towards conventional-age full-time students preparing for employment. However, several of them have developed programs for part-time working students, who attend them in the evenings while they work full-time during the day, mainly aimed to retrain adult workers.[17]

2.2 Focus of the analysis in this country report

Due to the broad variety of VET programmes and differences between them, the country report focuses on one specific IVET programme (type is indicated in the graphical illustration of Austrian VET above): the programme for Business Administration (NQF/EQF level 5), which is offered at Colleges for business administration (BHS-HAK). Schools and colleges for professions in the business sector are run at a total of 118 locations throughout Austria, are attended by overall 46.120 pupils (57% female/ 43% male), and the programme is completed by 8.560 graduates per year.[18]

The colleges for Business Administration are characterised by relatively equal standards of education and training in the core area of the programmes. With business administration, foreign languages, general education, information and communication technologies, and key qualifications as the pillars of their programmes, they see themselves as competence centres of the business sphere. They include practice-oriented forms of learning and teaching of values

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[17] EAEA, 2011, p. 7
[18] BMBWF, Abteilung I/12, Die kaufmännischen Schulen Österreichs –Facts, 2019

and a sense of responsibility[19]. They grant university/higher education access and professional qualifications at diploma level. The curriculum of the IVET programme for Business Administration contains TKC in the general educational objectives, the didactic principles, the educational principles, also organised as own subject. Another special feature of the IVET programme for Business Administration is the compulsory internship in order to gain practical experience.

There will be specific comments on the 'Secondary vocational school at medium-Level" (BMS) and the school-based part of apprenticeships. The latter requires the completion of nine years of compulsory education first, the final year is provided by the one-year polytechnic school. During this year, young people should be put in the position to choose a proper apprenticeship according to their interest, talent and knowledge.[20]

2.3 Curricula and school autonomy regarding the content of the delivered programme

The SchOG lays down the general objectives for all school types in Austria, including the VET sector and the school-based part of the apprenticeship training.

The Austrian Federal Ministry of Education, Science and Research (BMBWF) issues the educational objectives and the curricula for all schools, including for intermediate and higher vocational education. In addition, it has a legal obligation to authorise the individual school to issue curriculum regulations in accordance with local requirements within a specified framework. This is also laid down in the Education Reform Act 2017, which created more pedagogical, organisational and personal freedoms and expanded the scope for action at the school locations, to enable the schools to tailor the education offer to the specific needs of a region and the educational concept of the individual school location (school profile).

Curricula autonomy facilitates both the selection of special focuses as foreseen by the curriculum and the development of training focuses which are chosen autonomously by the school. In addition, schools can develop alternative compulsory subject areas which enable the students to design their school career in line with individual talents and interests. Furthermore, optional educational programmes, such as optional subjects, may be specified within the scope of the school's autonomy to provide important additional qualifications for practice.[21] There are different scopes of autonomy for different school types.

The training content for each apprenticeship is laid down in training regulations (for the company-based part) and curricula (for the school-based part). The Ministry of Digital and Economic Affairs (BMDW) issues the job profile (i.e. an in-company curriculum) and the competence profile (i.e. the competences which apprentices should have acquired by the end of their training at the company and at part-time vocational school) as part of the training

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[19] BMBF, VET schools and colleges in Austria, 2015, p. 26

[20] BMBWF, Polytechnische Schule, https://bildung.bmbwf.gv.at/schulen/bw/abs/pts.html also laid down in § 28 SchOG

[21] BMBF, VET schools and colleges in Austria, 2015, p. 23.

regulation. Initiatives to adjust existing or to introduce new apprenticeships are frequently taken by companies or social partners. The procedure for the design of framework curricula for part-time vocational schools is similar to the one for full-time VET schools and colleges (see above). Framework curricula are laid down in analogy to company-based training.[22]

2.4 Final examination and relation between general education and VET

The General Directorate for General Education and Vocational Education and Training of the Ministry of Education, Science and Research (BMBWF) fulfils the tasks of school administration for the VET school sector. GD VET is responsible for the following areas of school-based education and training (at the upper secondary level): pedagogical matters and subject- and occupation-specific issues (e.g. curriculum development); in-service and continuing education and training of teachers; location and facility management; school development and education research; international cooperation; etc.[23]

Vocational Education and Training curricula foresee a well-founded general education paired with VET. Both, the general education secondary schools (AHS) and the colleges for higher vocational education and training grant university/higher education access, while the latter also grants professional qualifications at diploma level.

General Education Secondary School (AHS) conclude with the upper secondary diploma (Matura) after a four-year upper secondary level, while the **Colleges for Higher Vocational Education and Training (BHS) conclude with a matriculation and diploma examination** after five years. Both certify general higher education and in the BHS also a professional qualification with immediate job entitlement is certified. It is a summative assessment, which has – since the school year 2015/16 – a centralised external part which is standardised for all schools ("Zentralmatura"), carried out by the Ministry of Education. The non-standardised part of the final exams is in the responsibility of the teacher.

The standardised, competency-based matriculation examination (AHS) or matriculation and diploma examination provides uniform basic skills and a level playing field for all pupils. This uniform school leaving certificate degree makes the final examination certificates nationally and internationally comparable. Due to the occupation-related contents of the curriculum, there are different tasks for pupils of academic secondary schools (AHS) and colleges for higher vocational education (BHS) in mathematics and foreign languages.[24]

In the new matriculation and diploma examination at BHS the pupils decide wether they complete three written and three oral exams, or four written and two oral exams. The general education subjects are standardised. In the written exam, pupils throughout Austria are

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[22] Tritscher-Archan, 2016, p. 29
[23] BMBF, VET schools and colleges in Austria, 2015, p. 13.
[24] BMB, Education in Austria 2016/17, 2016, p. 24

examined in the standardised subjects on the same date; texts in the foreign language are profession-specific. Mathematics is examined in an application-oriented manner.

The focus of oral examinations can be adapted to the focal points of the schools. The assignments remain the responsibility of the teachers at the school. All pupils write a thesis on a professional or occupation issue of practical relevance, mostly on behalf of or in cooperation with a company. The thesis is presented and discussed in public before the examination board. [25]

The BHS-HAK matriculation and diploma certificate can also be obtained via add-on courses (for graduates of business schools) in six semesters or post-secondary VET courses (for graduates of a matriculation and diploma exam of a non-business-related VET school) in four semesters. [26]

The programmes at BMS are passed with a final examination, which is not centralised.[27]

In the school-based part of apprenticeships, exams are not carried out centrally. The respective teachers carry out regular performance appraisals.[28] By contrast, the final apprenticeship examination is done by a committee of employer and employee representatives and consists of a practical and theoretical examination with a written and an oral section. After finishing the apprenticeship-leave exam successfully, graduates have the option to take the master craftsperson exam for a craft or to take the Berufsreifeprüfung exam.[29]

The Berufsreifeprüfung[30] provides the general higher education entrance qualification and can be taken by graduates of the initial vocational training system (apprenticeship, BMS) via specific examinations externally in order to gain general higher education entrance. It is also possible to prepare for the Berufsreifeprüfung parallel to the apprenticeship training which is "apprenticeship with the matriculation certificate". Adult education institutions, recognised by the BMBWF, offer preparatory courses for the Berufsreifeprüfung, where also three of four partial exams can be completed. At least one partial exam must be passed in front of a school-specific examination committee. Since April 2017 the Berufsreifeprüfung also imparts the centralised parts of the standardised matriculation and diploma examination of the BHS (see above).[31]

2.5 Quality assurance in Austrian VET

In 2004, the quality assurance initiative 'QIBB' has been established, which provides for systematic quality management in the Austrian vocational education system. The aim of QIBB is to permanently anchor quality development as an actively designed, continuous process. The goal-orientation is realised according to the model of the four-phase quality cycle according to

[25] BMB, Education in Austria 2016/17, 2016, p. 25

[26] BMBF, VET schools and colleges in Austria, 2015, p. 15, 26, 58.

[27] BMBF, VET schools and colleges in Austria, 2015, p. 56. Tritscher-Archan & Petanovitsch. Key competences in vocational education and training – Austria (2016), p. 12.

[28] Tritscher-Archan & Petanovitsch, Key competences in vocational education and training – Austria (2016), p. 16.

[29] BMBF, VET schools and colleges in Austria, 2015, pp. 20 55.

[30] examination providing general access to higher education for skilled workers and graduates of three-to four-year full-time VET schools

[31] BMBF, VET schools and colleges in Austria, 2015, p. 18, 40, 56.

Deming (Plan-Do-Check-Act). The implementation of quality management (QM) is carried out at the levels of schools, state and federal government, in order to secure and further develop the quality of school and teaching and the quality of administrative services. The QM instruments offered in QIBB should help to systematically observe, evaluate and reflect on the quality of the process and the results so that measures can be justified.[32] These are the following:

- Mission statement (PLAN): The QIBB mission statement contains statements on four fields of action: Teaching and learning, quality, economy and society, internationality. The mission statements of the school types are based on the QIBB mission statement, which in turn can be modified and supplemented by the schools on a type-specific basis.

- Quality objectives matrix (PLAN): This matrix is the concretization of the mission statement. Regarding the the four above mentioned fields of action, this matrix contains long and medium term objectives and subgoals, implementation measures that lead to the achievement of the objectives, indicators regarding the achievement of goals, as well as evaluation methods.

- Work / school programme including development and implementation plan (PLAN): Result of a determination of location: review and current status, medium and short-term development goals, medium and short-term measures, projects (concerning routine operations and specific projects), success criteria, indicators and evaluation strategy, action plan: Detailed planning for implementation - What? Who? By when?

- Quality and evaluation focus (DO): Quality focuses are defined in QIBB for content-related work: federal, state and school focuses. They serve to set programmatic development impulses and to clarify goals. In line with the quality priorities, evaluation focuses can be set by agreeing on the use of the relevant instruments on the QIBB platform.

- Definition of key processes (DO): The activities are understood as processes that are to be managed and controlled in the sense of the quality goals (Quality objectives matrix). There is a differentiation between key processes, core processes and management and support processes.

- Evaluation: There is a comprehensive evaluation concept which is based on different pillars: Individual feedback from pupils, system feedback to evaluate the quality of processes and outputs, and an external evaluation feedback through peer review.

- Quality report (ACT): The quality report summarizes the objectives and activities implemented during the reporting period, taking into account the evaluation results. The planning of the strategic and operational goals and measures for the coming working period is derived from this and also presented in the Q-report.

- Balance sheet and target agreement discussion (BZG) (ACT): BZGs are conducted between the leaders of all levels of the school system: headmaster and regional school

inspector, regional school inspector and head of the pedagogical department in the Ministry, heads of pedagogical departments and section leaders in the Ministry. The goal of the conversation is the planning of the next working period. The BZG has so far proven to be an effective instrument for controlling the quality process.

- Personnel development: Continuing education for executives, teachers and employees (eg QUALI-QIBB).

- Follow-Up Tool (ACT): It helps schools to use the results of an internal or external evaluation for school development[33]

QIBB comprises all vocational school types and the QM systems of these types of schools.[34]

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[33] https://bildung.bmbwf.gv.at/schulen/bw/bbs/qibb.html.
https://www.qibb.at/ueber_qibb/qibb_auf_einen_blick.html.
[34] https://bildung.bmbwf.gv.at/schulen/bw/bbs/qibb.html.

3 Chapter 2. Overview of the transversal key competences in formal VET in Austria

3.1 Competences in the formal VET system on the public agenda

Over the past 15 years there have been many fundamental developments and reforms in the Austrian education system. Set in motion by the European recommendations, a competence-oriented approach began to gradually replace the input-oriented management that had previously been the norm. This required a wide range of innovations and developments in practically all areas of education—from legal regulations and teaching methods to evaluation and validation tools as well as teacher training. The visualisation of key competences in the VET school system—in terms of teaching, acquisition and assessment—are therefore central themes of recent years.

To strengthen competence-orientation, a series of key policy measures have been introduced in Austrian VET, which address the development and acquisition of key competences[35]. For example:

- development of educational standards starting in 2004,

- revision of curricula of upper secondary level programmes (secondary level II) starting in 2008,

- School Development Concept for Entrepreneurship Schools since 2013,

- mandatory internships also in the VET school since 2014/2015,

- competence-orientated assessment of the diploma of VET-colleges since 2015,

- centralised competence-based final examination carried out in standardised form in all schools in Austria since 2015/16,

- new curricula for training of secondary level teachers entered into force in 2016/17,

- comprehensive pedagogical reform ("pedagogy package") adopted in 2018 to intensify competence-oriented teaching throughout Austria in the overall school system (primary schools, secondary schools, lower secondary levels, and upper secondary levels) [36]

From this list of activities it can be seen that the implementation of competence-orientation in the Austrian school system is well advanced and competences in general are in the spotlight for some time now.

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[35] Tritscher-Archan & Petanovitsch, Key competences in vocational education and training – Austria (2016), p. 4.
[36] BMBWF: Das Pädagogik-Paket. Zeitgemäß. Transparent. Fair, 2019

3.2 Establishment of transversal key competences in the vocational training system

Though the focus of the developments and reforms in the recent years has particularly been on competences which are most familiar to assessment (i.e. language and mathematical as well as professional competences), transversal key competences have long been legally enshrined in the Austrian school system at various levels[37]:

School Organisation Act (SchOG 1962, *Schulorganisationsgesetz*): This law designates education for "autonomous educational acquisition", for "independent judgement" and "social understanding" as a task for all Austrian schools. Young people should be "open to the political and ideological thinking of others" and "enabled to take part in the economic and cultural life of Austria, Europe and the world, and to participate in the shared tasks of humanity in love of liberty and peace" (Section 2 SchOG 1962). This shows parallels to the transversal key competences mentioned above.

The general objectives of school-based VET are to enable learners/graduates to 'acquire learning autonomously', 'make decisions autonomously' and develop 'social understanding' [38].

Teaching principles and educational concerns of the Ministry of Education: These define general and interdisciplinary tasks of the school which are to be taken into account in the teaching of all subjects in all types of schools. The following cross-curricular themes, which can be linked to transversal key competences, are currently being addressed: intercultural learning, civic education, economic education and consumer education, development policy education, European policy education, global learning, project teaching, social learning, and behaviour agreements.

In the course of competence orientation, a number of coordinated instruments were also implemented which integrate transversal key competences into the education system in different ways.

Educational standards (BIST, *Bildungsstandards*): The development of educational standards since 2004 can be understood as the initial impulse for making competences systematically visible within the education system. Educational standards were defined for all educational transitions from one school type to another: for the 4th and 8th school levels (primary and lower secondary level), for general upper secondary education (12th school level) and for vocational upper secondary education (11th school level) as well as higher secondary education (13th school level, upper secondary level). In the field of VET, both general (for all types of schools) and occupation-specific (for certain types of schools) core competences and interdisciplinary (personal and social) core competences were defined in the form of "can-do statements" as learning outcomes. Formulated at an average level, not at a threshold standard, the Austrian educational standards do not claim to be verifiable but do claim to create transparency concerning the indispensable goals and results of the respective educational

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[37] Eder, Hofmann: Überfachliche Kompetenzen in der österreichischen Schule, 2012
[38] Tritscher-Archan & Petanovitsch, 2016, p. 4

programme. They 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.[39] Transversal key competences are integrated into the educational standards in the area of personal and social competences (e.g. lifelong learning, social participation, orientation on values). The area of entrepreneurial competence can be found in the cross-school educational standard "Entrepreneur examination" for secondary schools.

The main reasons for the development of BISTs were the international performance studies (in particular PISA) and their results, which in many cases were regarded as insufficient. The school system had traditionally been controlled or quality-assured almost exclusively by input specifications and process monitoring, a stronger reference to outcomes seemed an urgent requirement.[40]

Curricula: As of 2008, the curricula of vocational schools have been revised and are now available in competence-oriented form for all school types. The educational objectives of the curricula and the didactic principles formulated therein include intercultural learning, integration and strengthening of self-actualization and personal responsibility as guidelines. The curricula also include learning outcomes at the programme level and at the subject level. References to transversal key competences can be found at both levels. In the curriculum of the secondary college for business administration, the compulsory subjects are divided into clusters in which subjects that complement each other in terms of content and subject matter are grouped together. The learning outcomes are formulated for each cluster, promoting an interdisciplinary approach. In addition, there is a specific cluster for "social competence and personality development" which focuses specifically on transversal key competences. Entrepreneurial competence is represented in a wide variety of ways in the curricula of vocational schools, e.g. in the competence areas of "business", "accounting" or as a separate cluster "entrepreneurship" in secondary colleges for business administration.

3.3 Promotion, recognition and awarding of innovative teaching methods in schools including teaching of TKC by national authorities

The role of teachers in the VET sector is increasingly developing from transmitting knowledge to facilitating learning. The focus shifts to self-organised learning and working. In order to help teachers meet the requirements of competence-oriented teaching and examining, initial and in-service teacher training programmes have been adapted. VET teachers are trained at universities or university colleges of teacher education depending on the subjects they teach (bm:ukk; bmwf, 2010). Teachers for VET specific subject areas had to have business/industry experience. 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,

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[39] Tritscher-Archan & Petanovitsch, 2016, p. 5
[40] Specht & Lucyshyn, 2008

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 professionalization requirements[41].

Teachers of business-oriented subjects are trained in the university programme 'economics teaching' and have to complete several years of business practice before being employed as a teacher. In the field of entrepreneurship there are also many continuing training programmes for teachers[42].

An example of an innovative teaching method is the 'cooperative open learning' (COOL) initiative. Originally it was used at BMS, but has in the meantime become a pedagogical concept and concept for school improvement at 150 schools (BMS and BHS) in Austria. It is an approach that is developed further at the schools themselves. Teachers take over the role as supporters and activators of the pupils' learning processes and in the next step, they give them regular and individual feedback on the progresses. This promotes an appreciative feedback culture.[43]

Another example is the School Development Concept for Entrepreneurship Schools (see appendix 4), an ÖNORM certification for the Entrepreneurship School. In an Entrepreneurship School measures to foster entrepreneurial thinking, personality development and the education to be a responsible citizen are integrative parts of teaching and of everyday school life. Promoting the students' personal competences and achievement potentials with regard to entrepreneurial, independent and autonomous acting, intensifying communicative competences as well as creating suitable communication structures between school administration, teachers, students and parents must not be neglected when planning a coherent Entrepreneurship school programme.

Almost 50% of all Austrian Secondary Colleges of Business Administration and Secondary Business Schools have already been either certified, are in the process of being certified, have applied for re-certification or have already been certified twice – and that since 2013! This also means that half of our students go to entrepreneurship certified colleges and schools. As 70% of the teachers, principals and stakeholders of a school must directly or indirectly be involved in the certification process entrepreneurship educations spreads rapidly.

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[41] Tritscher-Archan & Petanovitsch, 2016, p. 7
[42] Tritscher-Archan & Petanovitsch, 2016, p. 23f
[43] Tritscher-Archan & Petanovitsch, 2016, p. 21.

4 Chapter 3. Formulation of TKC and their location in curricula

4.1 Formulation of TKC in national and school curricula and in other documents - including examples

TKC are established on four levels in the Austrian school system[44]: in the SchOG, in the general educational objectives of the curricula and in the didactic principles formulated therein, in the teaching principles and in the educational concerns of the BMBWF:

(1) The SchOG designates an education 'for the acquisition of self-education', 'for independent judgment' and 'for social understanding' as general objectives for all Austrian schools. The pupils should be educated 'to healthy', 'the political and ideological thinking of other open-minded' citizens and 'enabled to take part in the economic and cultural life of Austria, Europe and the world' (§ 2 SchOG 1962). These provisions make it easy to find parallels to commonly used TKCs such as 'lifelong learning', 'social skills', 'civic education' or 'intercultural competence'.

(2) In the didactic principles of all syllabi, 'Intercultural learning', 'Integration', 'Strengthening of self-activity and self-responsibility' and 'Conscious coeducation' are among the main principles.

(3) In the teaching principles general and interdisciplinary tasks of the school are defined and concretized by special enactments. The following 12 teaching principles are currently being conducted: reading education, media education, political education, intercultural learning, education for equality between women and men, development education, European policy education, business education and training, environmental education, traffic education and health education.

(4) Among the educational concerns of the BMBWF, also vocational orientation, social learning, education for sustainable development, health education, and entrepreneurship education has to be mentioned.

The multifaceted legistic anchoring shows that the importance of the interdisciplinary tasks of the school or the corresponding TKC of the pupils is recognized as an important factor for the quality of a school system. However, their implementation is very different. Individual schools have used the freedom resulting from school autonomy to introduce their own subjects for the promotion of specific TKC (personality development and social learning, learning to learn, method training, etc.) or to make them a focus of school. Overall, the implementation depends heavily on the individual school or on the teachers themselves.

However, the good legal basis does not reflect a commitment that is comparable to other objectives of the school: neither are these objectives currently integrated into the system of performance evaluation, nor is there any other type of accountability for their implementation. So

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[44] Eder, Hofmann, Überfachliche Kompetenzen in der österreichischen Schule, 2012, p. 72f.

far as TKC is not explicitly associated with a school subject (such as political education), there is no evidence of learning outcome. The system monitoring currently in practice in Austria is also largely limited to the assessment of 'hard skills'. This applies both to the international comparative studies (PISA, TIMSS, PIRLS) and the measurement of educational standards that has since begun.

The curricula of BHS-HAK and BMS-HAS are divided into clusters, in the case of BHS-HAK the clusters are:

Personality and Educational Career
Languages and Communication
Entrepreneurship – Economy and Management
Society and Culture
Mathematics and Natural Sciences

Table 2. Overview of clusters in the curriculum of the BHS-HAK

Professional learning outcomes have been formulated for each cluster. There are also didactic principles of the curriculum and the educational and teaching tasks for each cluster subject.[45] Some of these learning outcomes are addressing TKC, e.g. in the cluster "personality and educational career"[46]:

"In the Cluster 'Personality and Educational Career' the students acquire the competence to design their individual professional career and to act appropriately in society and in public."

"The students can always assess their starting situation for planning their career as well as for dealing with social challenges and can arrange educational activities and further steps for development based on this knowledge. Moreover, they have the competence to organise themselves."

"The students can describe the characteristics of businesses and industries also in different cultures, can accept and help shape typical behaviour, forms of communication and features of appearance. They can behave appropriately in different situations of professional life at home and abroad and use their multilingualism."

The curriculum for BHS-HAK is in its approach is designed as a spiral curriculum in which core contents are repeatedly covered in an increasing level of detail and rising complexity during the five years. This happens within a specific subject on the one hand and in a cross-curricular approach on the other hand. [47]

For example, the cluster "personality and educational career" comprises subjects which develop personality and social competence as well as a behavioural repertoire and attitudes which contribute to a successful participation in public and professional life. It includes the subjects

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[45] Aunzinger & Luomi-Messerer, 2017, p. 18
[46] https://www.hak.cc/files/syllabus/bmb%20Translation%20Lehrplan%20HAK%202014.pdf p. 2
[47] BMBF, VET schools and colleges in Austria, 2015, p. 27.

'Religious Instructions', 'Personality Development and Social Competence', 'Business Behaviour' as well as Physical Education'.[48] Learning outcomes are formulated for each semester in consecutive competence modules, which can be located in different subjects within the cluster, e.g.

The students can

- communicate with others personally or in digital networks in a solution-oriented and appreciative way (1st and 2nd semester - Personality Development and Social Competence),
- evaluate and shape the behavior patterns, forms of communication and distinguishing features typical for a company (3rd semester - Business Behaviour),
- manage specific situations when dealing with customers (5th semester – Business Behaviour),
- analyze their attitude concerning the differences of people and take that into account when dealing with them (6th semester – Business Behaviour),
- observe differences in the values and codes of conduct of important international business partners and implement them in their behavioral repertoire (7th semester – Business Behaviour),

Some school types have included specific subjects with a focus on interdisciplinary/transversal competences into the new curricula: The schools and colleges of business administration have included the compulsory subject 'personal development and social competences' into their curriculum, whereas colleges of engineering opted for an optional subject 'social and personal competence'. This aims to underline both the importance and obligation to include these competences in the teaching process.

In the following, the location of TKC in the curriculum of BHS-HAK is described for each TKC[49].

Learning to learn

Curricula of VET schools/programmes foresee 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. One of the *general educational objectives* at BMS-HAS and BHS-HAK is that learners are able to use lifelong learning for their life and career planning[50]. *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-HAS and BHS-HAK can opt to offer an *optional subject* on 'competence-oriented, responsible learning'.

Interpersonal, intercultural and social competences, civic competence

Social and personal competences are mentioned as a separate item in the new learning outcome-oriented curricula of all school-based VET programmes. They are taught in BHS-HAK in an integrative form across the whole spectrum of subjects as well as in specific subjects.

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[48] https://www.hak.cc/files/syllabus/bmb%20Translation%20Lehrplan%20HAK%202014.pdf, p. 13
[49] The following contents of this chapter are largely based on Tritscher-Archan & Petanovitsch, 2016, p. 23f
[50] in a way to be in a position to explain changes as part of development, selecting education programmes and reflecting on one's own educational plans

In the programme of BHS-HAK[51], the following *educational principles* are enshrined:

- political education – to think in a democratic, pan-European as well as cosmopolitan way
- educational work on European policies – thematisation of current European developments and initiatives in the educational field (educational programmes, qualification framework, recognition directives, assurance framework, transparency instruments)
- gender mainstreaming – education for equality of men and women
- media education – sensibilisation in dealing with and critically analysing media
- health education - to act in a health-conscious, autonomous way.[52]

In addition, there are *specific subjects* related to these principles and assigned to the above-mentioned clusters. In the BHS-HAK programme, 'Personality Development and Social Competence' and 'Political Education and History' are core subjects within the cluster 'Society and Culture'. The acquisition of 'intercultural competences' is covered through the English courses as well as courses in another foreign language.

Entrepreneurship

Entrepreneurship education is a *key principle of all VET school programmes*, including the dual system. This can also be derived from the note in the SchOG about the ability to take part in the economic life (as outlined in chapter 2).

In the programmes of BHS-HAK and BMS-HAS, 'Entrepreneurship' is *a cluster* of its own, with its subjects Business Administration; Corporate Accounting; Business Training, Project Management, Training Firm and Case Studies; Business Informatics; Office Management and Applied Informatics; Law; Political Economics. In addition, there is also an *education principle* pointing out to Entrepreneurship.[53]

One major approach towards promoting entrepreneurial spirit is the setting up of a *practice firm*. As a compulsory part of the curriculum in BMS-HAS and BHS-HAK, it 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. ACT, an institution of BMBWF, supports practice firms by providing them 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)[54].

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[51] There are also similar principles laid down in the programme of BHS-HAS: https://www.hak.cc/files/syllabus/Lehrplan_HAS_2014.pdf.

[52] See also: https://www.hak.cc/files/syllabus/bmb%20Translation%20Lehrplan%20HAK%202014.pdf, p. 6f

[53] See also: https://www.hak.cc/files/syllabus/bmb%20Translation%20Lehrplan%20HAK%202014.pdf, p. 2f

[54] https://www.act.at/

Since the school year 2014/15 there are compulsory *work placements (internships)* for learners in BMS-HAS and BHS-HAK 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 (e.g. during school holidays or on weekends).

Cultural expression

Cultural education is often included in VET programmes in an integrative manner. The objective of all VET programmes is, at any rate, to motivate their learners to take part in cultural life and enhance their creativity. Furthermore, in the Austrian school system, various *subjects* can be directly linked to cultural competence: visual education, music education, instrumental education, work education and textile design and works. But also, subjects like German, History, Social Studies and Political Education, Religion, Geography, International Economic and Cultural Areas make essential contributions to this key competence.[55] In BHS-HAK the cluster 'Society and Culture' can indirectly be linked to it.

The SchOG refers to this competence by aiming to enable the pupils to take part 'in the cultural life of Austria, Europe and the world' (also see chapter 2).

According to the framework curriculum of BHS-HAK, graduates must have acquired the following learning outcomes: to be able to deal with religions, cultures and ideologies, to take part in cultural life and to show understanding and respect for others. The programme for BMS-HAS includes similar competences which graduates must have acquired.[56]

There are also initiatives within the school sector, targeted at the TKC 'cultural expression': The initiative 'Culture Connected' 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.[57] There is another initiative, called 'Cultural Budget for Federal Schools' (addressing also BMS and BHS). 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 BMBWF. The initiative is implemented by KulturKontakt Austria.

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[55] Eder, Hofmann, Überfachliche Kompetenzen in der österreichischen Schule, 2012, p. 87.
[56] Curriculum of BHS-HAK, '"General Educational Objective"
[57] https://bildung.bmbwf.gv.at/schulen/pwi/pa/cultureconnected.html

4.2 Involvement of central agencies/institutions/experts responsible for the formulation of TKC in national and school curricula

The starting point for curriculum development is either an already existing curriculum, which is being revised or a completely new curriculum is developed. The following departments/institutions are in general involved when there are changes to or completely new curricula[58]:

- Department of Vocational Education, Adult Education and School Sports (all pedagogical departments)

- Curriculum steering group of the respective pedagogical department within the Ministry of Education:
  Employees of the pedagogic department, representatives of the school supervision, representatives of the school management, representatives of the board members / department heads, possibly for subareas: representatives of the economy

- Curriculum working groups are formed based on the professions:
  Faculty Teachers; possibly supplemented by external experts: interdisciplinary composition of working groups (for example, business and law, language and communication); potential customers (institutions, industry, tertiary sector) will be selectively involved, depending on the needs and type of the curriculum.

The **respective pedagogical department** of the BMBWF[59] carries out an evaluation of existing curricula as well as analyses / studies on the relevant occupational fields and labour market requirements.

There are working groups installed who deal with the development of TKC. The **curriculum steering group** of the respective pedagogical department, for example, is responsible for the strategic control of the overall process, the definition of the general educational objective, the didactic principles and the timetable based on the results of the previous evaluation/analysis/study, the feedback of the represented groups of persons (profession, regional school inspector, school locations, department of the BMBWF) and the establishment of the curriculum working groups for the individual subjects / clusters.

When there are changes in a curriculum or a new curriculum being made, there is **regular feedback given from regional inspectorate**[60] to the pedagogical department, if necessary, also from other representatives, the professional body as well as from responsible departments of the BMBWF.

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[58] BMUKK, Leitfaden zur Erstellung und Gestaltung von kompetenz- und lernergebnisorientierten Lehrplänen für Berufsbildende Höhere Schulen (BHS) und Bildungsanstalten (BA) (2012), p. 8.

[59] https://bildung.bmbwf.gv.at/schulen/bw/bbs/index.html

[60] From 1.1.2019 on, the LSI will be replaced by the so called *"Bildungsdirektion"*: https://bildung.bmbwf.gv.at/schulen/autonomie/bd/index.html

The responsibility of the **curriculum work groups** is the concrete development of educational and teaching tasks as well as the curriculum and any additions.[61]

Additional transversal competences formulated in the national curricula

There is one transversal competence laid down in all syllabi, which does not seem to be covered by the TKC defined in the Council Recommendation (2006): 'strengthening of self-activity and self-responsibility". Another teaching principle from the BMBWF, which cannot be directly – but maybe indirectly – linked to one of the 4 transversal key competences, is 'reading and literacy education'.

4.3 References to NQF level descriptors in the development of TKC in national curricula

To integrate and support the work on the educational standards in VET as well as the approach of the learning outcome orientation, which is followed by the EQF/NQF and ECVET, the curricula in Austrian VET have been developed competence-oriented. Of course, the level descriptors of the NQF were taken into account.

The Austrian National Qualifications Framework was set up when the Federal Act on the National Qualifications Framework (NQF Act, Federal Law Gazette No. 14/2016) entered into force in March 2016. The NQF does not refer to the full range of interdisciplinary competences (for example, ability to work in a team, ability to solve conflicts, flexibility, etc.), but only to the degree of responsibility and independence associated with a qualification. The reason for this limitation lies in the fact that these two interdisciplinary competences are describable by descriptors and therefore 'measurable' (e.g., working under direct guidance, working with a degree of independence, etc).[62]

In the register of NQF-Qualifications[63], the main learning outcomes of the BHS-HAK are published. The BHS-HAK is finally associated to NQF-level 5. Regarding to the curriculum of BHS-HAK, references to different NQF level descriptors can be seen e.g.:

- Professional Learning Outcome in the Cluster **'Personality and Educational Career'**:
  o *‚They can… act according to their role as … in leading positions'*
  o *'They can behave appropriately in different situations of professional life at home and abroad and use their multilingualism'*
- Professional Learning Outcome in the Cluster **'Languages and Communication'**:
  o *'They show intercultural competence by being aware of the essential similarities and differences of their own and a foreign culture, by reflecting culture-specific similarities and differences and by using them in professional situations.'*

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[61] BMUKK, Leitfaden zur Erstellung und Gestaltung von kompetenz- und lernergebnisorientierten Lehrplänen für Berufsbildende Höhere Schulen (BHS) und Bildungsanstalten (BA) (2012), p. 8f.
[62] Mayr, Tritscher-Archan, Der österreichische Qualifikationsrahmen: Umsetzungsstand, Ziele und Erwartungen, 2016, p. 2.
[63] https://www.qualifikationsregister.at/public/qualification/17

- Professional Learning Outcomes in the Cluster '**Entrepreneurship – Economy and Management':**
    - *,The students have personal and social competence like solution and goal orientation, flexibility, assertiveness, communication skills, critical faculties, self-reflection, self-motivation, decision-making, ability to work in a team, customer orientation, perseverance, resilience, hands-on mentality, conflict resolution competence, motivation and commitment'*
- Professional Learning Outcomes in the Cluster '**Society and Culture'**:
    - *'The students can critically reflect current topics from the economy, politics, society and culture, analyse controversial positions and attribute ideological positions, understand foreign cultures and lifestyles and check whether they are in accordance with democratic-humanistic values as well as reflect their individual life situations in relation to society and politics.'*
- Professional Learning Outcomes in the Cluster '**Mathematics and Natural Sciences':**
    - *'They can describe and analyse mathematical and scientific models as well as communicate, argue and interpret them in the respective technical language'*

5 Chapter 4. Assessment and validation of TKC

5.1 Assessment in the Austrian VET system

Legislation on performance appraisal and performance appraisal (or assessment) is mandatory for teachers and students. In Austria, they are enshrined in the school education law SCHUG §18ff and in the **performance appraisal ordinance (LBVO)**. Most paragraphs specify what (curriculum), how (oral and written exams, exercises, collaboration) and to what extent is examined and how the results should be stated in grades. Some are rather non-binding target provisions (e.g. equal distribution over the entire semester, introduction to self-assessment, "in-depth" examination only "on subject areas that were taken in a reasonable period before") (LBVO §5 para 6), equivalence of "participation" with other types of examinations such as tests or schoolwork.[64]

Formative performance assessment in the course of the school year can be realized by both written and oral exams, less formalised procedures like objective-oriented assessments, self-evaluations, etc. Summative performance assessment is based on a five grade scale.[65]

Despite the overall competence orientation in VET, it is to be assumed that summative assessment still is the dominant form of assessment in Austrian schools when it comes to the determination of grades, not only from the teacher's view, but also from the pupil's and parent's view. Their allocation (i.e. the repetition of class, the change from primary to secondary school) and selection function implies assessment based upon social reference standard.[66]

Currently, a pedagogical reform is being implemented, which was started in 2018 and is a consistent next step towards the competence orientation within the school system. It contains the implementation of competence grids for primary school and lower secondary school as well as a new performance appraisal ordinance to ensure, that curricula, educational standards (in the subjects for which they have been formulated), teaching materials and performance assessments are coordinated and reflected in the teaching practice. The LBVO, which currently applies to all types of schools, was introduced in 1974 and has only been slightly amended since then. The aim is to "cast the LBVO into a new form" and to orient it towards the concern of competence orientation. In this context, competency grids will play an important role, as they make competencies relevant to assessment and their degrees of development clear and define requirement levels. The new LBVO is to enter into force for secondary school level II in the school year 2021/22.[67]

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[64] https://bildung.bmbwf.gv.at/schulen/unterricht/ba/leistungsbewertung_stern_17212.pdf

[65] BMUKK, OECD Review on Evaluation and Assessment Frameworks for Improving School Outcomes, 2012, p. 8.

[66] Schmidinger, Hofmann und Stern, Leistungsbeurteilung unter Berücksichtigung ihrer formative Funktion (2015), p. 71f.

[67] BMBWF: Das Pädagogik-Paket. Zeitgemäß. Transparent. Fair, 2019, p. 19f

Regarding the **final examination**, Austria has recently introduced centralised competence-oriented matriculation and diploma examination which are carried out standardised at all VET schools at the end of upper secondary education. Thus, standardised basic competences, the same framework conditions for all students as well as more objectivity have been created. This new examination aims to make exam requirements more transparent and comparable, to guarantee fairness and objectivity, and to ensure that the competences learners acquire have a lasting effect.[68]

The matriculation and diploma examination comprises three cornerstones with seven exam sections: [69]

1. a diploma work including its presentation and discussion

2. standardised and non-standardised written exams with options (depending on the school type)

3. oral (non-standardised) exams with various options (depending on the school type)

In general, students can decide if they want to take three written and three oral or four written and two oral partial exams.

- All students write a diploma work either alone or in a team (of 2-5 people) which covers a topic that corresponds to the educational objective of the respective school type. The diploma work covers a problem which requires comprehensive theoretical and practical knowledge coming up to the state of the art in the subject disciplines or in business and technology and also requires creative and innovative approaches to solutions.

- Written exams such as German, English, French, Italian, Spanish and Applied Mathematics are standardised and laid down centrally. In addition, there are subject-specific examinations which aim to test key qualifications specific for the school type. In the BHS-HAK this refers to a specialist examination in business administration. This is not laid down centrally.

- The oral exams are also standardised by specifying topic areas in the individual examination areas. Although these exams are prepared and checked by the teachers at the school location, comparability is ensured by specifications, such as the development of a competence-oriented assignment, which not only requires reproduction but also transfer and problem-solving competence. The reorganisation of the exam committee – the examiner (usually a teacher of the school) and the expert assessor (usually someone from the educational board who jointly make a proposal on the mark – also contributes to a certain degree of standardisation of the exam procedure. [70]

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[68] Tritscher-Archan & Petanovitsch, 2016, p. 6
[69] BMBF, VET schools and colleges in Austria, 2015, p. 15
[70] BMBF, VET schools and colleges in Austria, 2015, p. 15

5.2 Educational Standards in Austrian VET

The development of educational standards (BIST) for VET schools was aimed to build a stronger outcome orientation in class, sustainable competences and a well-targeted individual promotion of pupils. The educational standards set up the framework for a stronger competence-orientated education and show how to organise assessments based on a criterial reference standard.[71]

Since 2004 the Ministry of Education (GD VET) has been working together with working groups of teachers both on educational standards for all school types and also for specific school types. The educational standards in VET are used for quality assurance and improvement, have an orientation function for teaching and enable comparisons between different educational institutions.[72] They are integrated into practical teaching as examples for classroom use in order to define the objectives for pedagogical and didactic work and intensify requirements for the problem-solving capacities of students. [73]

Educational standards in VET focus on the final qualifications of schools for intermediate vocational education (year 11) and of colleges for higher vocational education (year 13), on the core process of "teaching" and describe, based on competence models, cross-curricular and multi-disciplinary core competences which students (are to) achieve by the end of the training. They are, therefore, a proof of qualifications for the graduates' portfolio at the interface to the world of work or a further (tertiary) educational institution. They enable learning outcomes to be represented and compared optimally at national and European level. The overall project aims to develop and implement competence-oriented teaching in the entire area of school-based VET.[74]

A distinction should be made between the competence models for cross-school (or interdisciplinary), school-specific and social/personal competences. The educational standards "consist of a competence model for the respective subjects or departments. These are illustrated by two dimensions - the action and content dimensions".[75]

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[71] Schmidinger, Hofmann und Stern, Leistungsbeurteilung unter Berücksichtigung ihrer formativen Funktion (2015), p. 73.
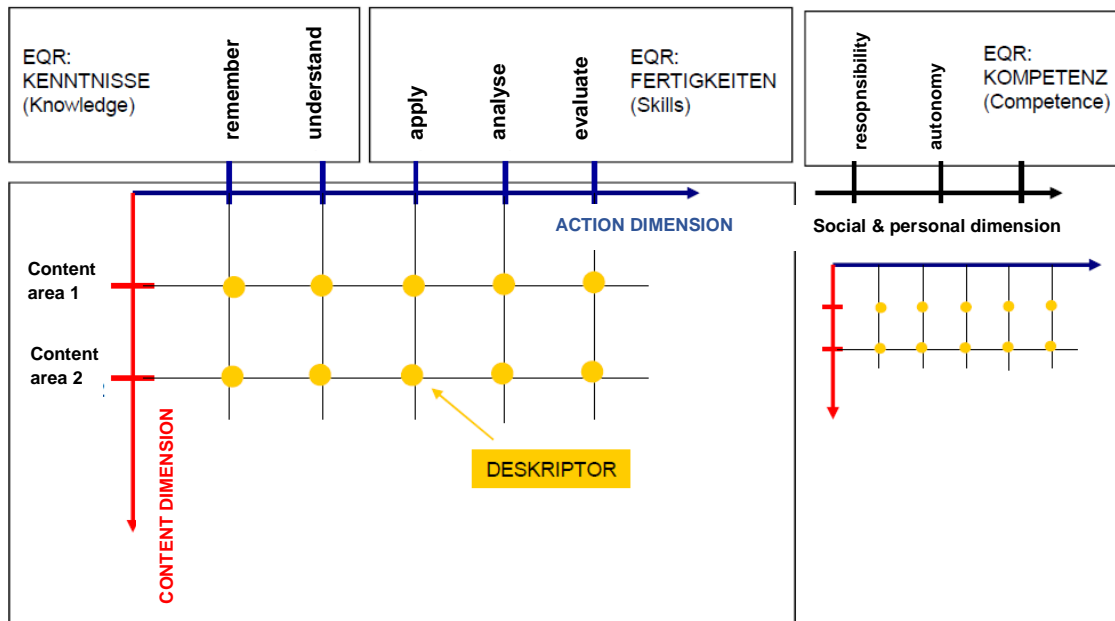[72] BMUKK, 2012, p. 3
[73] BMBF, VET schools and colleges in Austria, 2015, p. 17
[74] BMBF, VET schools and colleges in Austria, 2015, p. 17
[75] BMUKK, 2013b, p. 17

Figure 2: Schematic illustration of Educational Standards (BIST)

Source: Fritz (2011, S. 5), translation öibf

The action dimension itself consists of several levels (knowledge: reproducing, understanding, skills: applying, analysing, developing) and should be an orientation to the European Qualifications Framework (EQF) or National Qualifications Framework (NQF). The BISTs have a special feature compared to other EQF Descriptor Descriptions (such as NKS, 2016): The dimension, which is described in the EQF sense as the assumption of responsibility and independence, appears in the BISTs detached from the dimensions of 'knowledge' and 'skills' and is apparently not pursued with the same priority as the action and content dimensions. In any case, the description does not clearly show the reference of the descriptors to all three EQF dimensions. Thus, the current BISTs do not provide any potential for crediting social and personal competences.[76]

The second dimension of the BISTs is the content dimension. In Austria, a distinction is made between school-specific and cross-school content. Since technical, economic and human-professional VET schools by definition have differentiated occupation-specific priorities, this must be taken into account in the BIST description. In this way, the core that is common to all vocational schools, i.e. cross-school types, has been worked out. In addition, school-specific characteristics are defined from specific job-related contexts.[77]

The BISTs are now understood as a matrix: An axis represents the action dimensions with the five levels (from reproducing to developing), which involve an increasing complexity. The second axis shows the content dimension, where subject-related (cross-school-level) and job-related (school-specific) contents are presented in a freely chosen order. Each content was assigned to

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[76] Lachmayr, 2016
[77] BMUKK, 2009, p.9

an action dimension by numerous school work groups[78]. This results in intersections of content and action dimensions, which are referred to as descriptors and described using lesson examples.

For more information, examples and details see Appendix 1 (in English) or .[79]

It should be noted that the development of BISTs has some conceptual blurring: Neuweg[80] criticizes them as 'more or less information-rich indicative or coarse targets in sometimes arbitrary choice and arrangement'.[81] Also there are further qualitative shortages in the creation of school descriptors. On the one hand, there are concrete descriptors (such as 'take responsibility for tasks in an operational process' or 'analyse conflict situations and help to find solution strategies'), on the other hand there also are very openly formulated descriptors (e.g. 'creatively implement topics' or 'formulate ideas, argue and develop'). Schlögl[82] argues additionally that BISTs, unlike those proposed by the Future Commission[83], are not anchored as minimum standards but as average standards: they describe a medium level of competences that students can both underachieve and overachieve. The content dimension corresponds to a minimum programme, the action dimension to an 'average' learner[84]. At that point, hurdles can be seen in terms of credit potential: If the study ability was educational and competence goal with the development of the BISTs for the BHS[85], it is not clarified how to deal with underruns of the 'middle level' just in the credit area.[86] Schlögl represents also the opinion that Austria's educational standard is ultimately lacking the declaration that BISTs are normative, that the goals mentioned are precise goals of the school and that models of competence serve to visualize development processes. A basic effectiveness with regard to competence-oriented teaching cannot be derived from learning outcomes and educational standards[87]. Rather, it requires a 'combination or meaningful coordination of the curriculum, the educational standards, the performance appraisal ordinance, where the central element is always the concrete teaching design,' the authors summarized[88].

With the pedagogical reform currently being implemented, this criticism might be overcome with the introduction of competency grids on all school levels (pilot competence grids have been developed for all primary school subjects as well as for German, English and mathematics subjects at lower secondary level on the basis of the current curriculum and the currently valid LBVO and they will undergo a 2-year pilot phase). The pilot competence grids available at the

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[78] BMUKK, 2013b, p. 12f

[79] Social and personal competences can be found here:
https://bildungsstandards.qibb.at/show_km_v2?achse_senkrecht_id=101441&achse_waagrecht_id=101442

[80] Neuweg, 2008, p. 7

[81] Lachmayr & Mayerl, 2014, p. 30

[82] Schlögl, 2012, p. 326f

[83] Haider, Eder, Specht, Spiel, & Wimmer, 2005

[84] BMUKK, 2013b, p. 20

[85] Fritz, Paechter, Slepcevic-Zach, & Stock, 2012, p. 295

[86] Lachmayr & Mayerl, 2014, p. 29f

[87] Schlögl, 2012, p. 328

[88] Lachmayr & Mayerl, 2014, p. 29f

moment include minimum requirements, standard requirements, and additional requirements for all competencies indicated in the relevant areas of competencies und thus make competencies relevant to assessment and their degrees of development clearly visible as well as they define requirement levels. It is not yet clear, whether transversal key competences will be part of competency grids in VET (for primary school and lower secondary level it seem not to be the case).

5.3 Assessment of TKC – Which competences are assessed and how?

When measuring and evaluating TKC, a distinction has to be made between the level of competence that individual pupils have achieved (individual diagnostics within the framework of teaching), and the level of competence that is achieved on average in different organisational units (system monitoring). In Austria, TKC are so far usually not explicitly part neither of the regular performance assessment nor of the system monitoring, although there have been sporadically approaches in both areas, e.g.: for individual assessment, in the context of the "Vienna educational standards" lists of behaviours for the observation of "dynamic competences" and learning and work behaviour were drawn up, which are used by pupils as self-descriptions and by teachers as observation grids; approaches to system monitoring related to TKC were made in particular in PISA 2000 (Survey of pupils' ability to self-regulate) and PISA 2003 and PISA 2012 (Problem solving).[89]

Instruments for the implementation and assessment of individual transversal key competences:

Compulsory internships at vocational secondary schools and colleges: Since 2014/15, internships are a central and compulsory element of training in the BHAK and serve to supplement and deepen knowledge and skills acquired in class. They must be completed within a defined period at a company outside of school education. Among the objectives are the acquisition of work values such as punctuality, reliability and responsibility, as well as the strengthening of social and communicative competence by dealing with superiors, colleagues, customers, learning to work in a team, and so on These are clearly related to transversal key competences, above all to social, personal and entrepreneurial competence. By means of mandatory work records, e.g. in the form of practice diaries or portfolios, learning processes are visualised and reflected upon, and learning outcomes are documented.

The new approach to **final examination** at BHS gives more weight to the so-called **diploma projects** that learners carry out in their last year. These projects are a standard part of the exams besides written and oral exams. This includes a 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

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[89] Cf. Eder, Hofmann, Überfachliche Kompetenzen in der österreichischen Schule, 2012, p. 82.

partners in business and industry. 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.[90] These all refer to TKC.

Clear references to the identification and assessment of transversal key competences, in particular in the area of "social and personal competences", can be found in the "**competence-oriented assessment of diploma theses in the secondary college for business administration**". The competence requirements and their assessment with regard to professional and transversal competences are transparently documented therein by means of an assessment grid (called "Rubrics", available at https://www.hak.cc/service/rubrics or appendix 2). Five fields of competence are assessed, in particular competences from the areas of communication, self-responsibility and learning and work behaviour, which are assigned to social and personal competences. Each of these five fields of competence is operationalized more concretely by several dimensions, and each of the dimensions is in turn graduated in content. Using the digital form (developed in cooperation with the University of Mannheim) the grades are calculated automatically. A simplified version is also applicable to HAS theses (See appendix 3).

As for the BHS-HAK, the key competence 'Entrepreneurship' is centrally assessed during the matriculation and diploma certification. The interpersonal, intercultural and social competences, civic competence with the subjects 'Personality Development and Social Competence', 'Political Education and History', and 'English' as well as the courses in another foreign language are separate subjects and, therefore, separately assessed. To the key competence 'cultural expression', an indirect connection can be established (subjects from the cluster 'Society and Culture'). 'Learning to learn' can be taught in an optional subject 'Competence-oriented, Responsible Learning' (when the school has opted for this within the school autonomy).[91] Whenever there is no direct linkage to the competences, the coverage of the competences depends largely on the willingness of the teachers. The focus is still rather on the subject-specific knowledge, than on the TKC.[92]

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[90] Tritscher-Archan & Petanovitsch, 2016, p. 6
[91] Tritscher-Archan & Petanovitsch. Key competences in vocational education and training – Austria (2016), p. 32.
[92] Eder, Hofmann, Überfachliche Kompetenzen in der österreichischen Schule, 2012, p. 74.

In the following, assessment in the BHS is described for each TKC [93].

Learning to learn

There is a *BIST* regarding 'social and personal competences' for all VET programmes including the school-based part of apprenticeships.[94] There are descriptors for 'lifelong learning' 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.

Interpersonal, intercultural and social competences, civic competence

There are BISTs 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 competences, such as 'social responsibility', 'cooperation', 'conflicts', 'leadership', 'autonomy', 'lifestyle', etc. There are also various descriptors for each competence defined. These competences are taught in different ways. The decision which method is used is largely left to the respective teachers. The following approaches are frequently chosen:

(a) projects: 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 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: they aim to encourage both subject-specific competitions but also and mainly interdisciplinary competitions. Examples include the nationwide school competition on innovative ideas 'Jugend Innovativ', idea competition NEXT GENERATION, state championship 'Students Debate', national championships for the participation in EuroSkills competitions, student competition on citizenship education[95] and foreign language competitions[96].

(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.

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[93] The following contents of this chapter are largely based on Tritscher-Archan & Petanovitsch,. Key competences in vocational education and training – Austria (2016), p. 22 ff.

[94] https://www.bildungsstandards.berufsbildendeschulen.at/sites/default/files/broschuere/BBS-Bildungsstandards-Broschuere-Soziale-und-Personale-Kompetenzen.pdf.

[95] http://www.politik-lernen.at/site/projekte/wettbewerbe

[96] https://www.cebs.at/index.php?id=112

(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: civic competence, intercultural learning, citizenship education.

Entrepreneurship

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. The final business examination is a case study with a processing time of 5-6 hours. As part of the oral matriculation and diploma examination, a business management colloquium is held on problem-solving situations. In BMS programmes and apprenticeship training, exams are not centralised. In all school/programme types, the respective teachers carry out regular performance appraisals.[97]

Cultural expression

Overall, the cultural competence cannot be measured easily. One example, how the cultural competence can be taken into account for assessment is the KULTUR portfolio in the subject German. The KULTUR portfolio includes reports and descriptions of cultural experiences (reading, concert, theatre or museum visits ...) and thus participation in cultural life as well as a selection of their own creative work (photographs, texts, music ...). In BHS-HAKs, the cultural topics are treated mainly with regard to training for a job in the international economy.[98]

Table 3: Overview of assessment forms for TKC

	Assessment forms		
Transversal key competences	External standardised assessment (summative)	Continuous assessment by teacher (formative)	Other forms of assessment (e.g. portfolio, assessment center)
Learning to learn	-	-	-
Social and civic competences	•Tests as provided in the respective curriculum	• assignments in class, homework assignments, etc.	

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[97] Tritscher-Archan & Petanovitsch, 2016, p. 33; BMBF, VET schools and colleges in Austria, 2015, p. 49
[98] Educult, Kulturelle Bildung und Arbeitswelt (2010), p. 24, 26 and 40.

Initiative-taking and entrepreneurship	• BHS-HAK subjects focusing on business administration are examined in a uniform manner across Austria. BMS-HAS and apprenticeship training: exams are not centralised. At all school/programme types: regular performance appraisals.		• Austrian national entrepreneurship Championships • Idea competition NEXT GENERATION • JUNIOR programme • state championship 'Students Debate' • Changemaker program connected with the SDGs • national championships for the participation in EuroSkills competitions
Cultural awareness and expression			• KulturKontakt Austria: projects and activities related to cultural education jointly with schools,
Other competences related to TKC important in the national context (digital competence)	• If computer literacy forms a central part of the curriculum or training: these competences are assessed as part of the final exam		• 'Digital Day', an initiative held every year nationwide; learners in the 3rd year of business administration programmes can prove their abilities in informatics and office management

5.4 Relation between summative and formative assessment

When it comes to assessment, summative assessment is still the dominant form of assessement in schools. Studies have shown that for the teachers - despite numerous seminars, workshops and school-related training events - still summative aspects of performance evaluation are dominant and approaches for the systematic use of more formative performance diagnoses can only be recognised as in the beginning. There is also no separation between assessment and assessment-free phases, as the teachers often assess the contributions of the pupils (whether non-verbal or verbal) in class, which reinforces a pupil's behaviour towards avoiding mistakes.[99]

Although, there was a stronger competence-orientated education initiated through the development of the BISTs, their weakness is that they do not have a normative character (see chapter 2).

5.5 Are the TKC assessed explicitly in formative and summative assessment?

Regarding the teaching methods, the general didactic principles of the BHS-HAK curriculum outline that 'Learning arrangements have to be designed in a way so that the students can show their individual strengths, further develop their ability for self-assessment and learn from their mistakes. The possibilities for individual support have to be exploited'. Furthermore it is laid down that 'the comprehensible description of the teaching objectives and transparent criteria of performance assessment contribute substantially to motivation and to a good school climate. A culture of constructive feedback is to be aimed at.'

The optional subject 'Competence-oriented, Independent Learning' of the curriculum explicitly foresees the following content: 'Drafting individual agreements on objectives, exercises for self-assessment, feedback culture, learner training, learning guidance, learning techniques and learning strategies, time management, working with competence grids'. Regarding the practical implementation, we refer to the last chapter as well as to chapter 2.

5.6 Are assessment criteria related to TKC?

There are no assessment criteria for TKC explicitly laid down in curricula. But in the (non-binding) BIST's linkages can be found: Transversal key competences are integrated into the educational standards in the area of personal and social competences (e.g. lifelong learning, social participation, orientation on values). The area of entrepreneurial competence can be found in the cross-school educational standard "Entrepreneur examination" for secondary schools.

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[99] Schmidinger, Hofmann und Stern, Leistungsbeurteilung unter Berücksichtigung ihrer formativen Funktion (2015), p. 71 f.

5.7 How are TKC operationalised for assessment?

For example, the BIST *'social and personal competences'* mentions the following methods for assessment: case studies, feedback, group work, reflexion, role play, problem-based learning.

5.8 Validation of non-formal and informal learning

Learners do have the possibility to obtain a qualification without prior completion of the respective school through an external examination ('Externistenprüfung'). External exams can either be taken for single subject exams, final examination or a Higher Education Entrance Examination. To take a final examination or matriculation and diploma examination, the required subject exams have to be taken first.

6 Chapter 5. Opinions of key stakeholders regarding development, assessment and validation of TKC

The results presented above were discussed with external stakeholders in interviews or group discussions carried out within the survey phase. 14 experts and stakeholders reflected on the topic.

6.1 Importance of the TKC confirmed

Experts confirm the importance of processing and developing TKC in VET. In fact, transversal learning should be perceived more important than subject-specific learning: TKC cannot become obsolete like professional knowledge, and are at the same time the prerequisite for professional learning.

Experts emphasize that TKC activities are generally more advanced in VET than in general education and compulsory education (due to other responsibilities). In the curricula of VET schools, transversal key competences relevant to the project (and others) have a high priority. It should be noted that especially in the field of HAK "entrepreneurial thinking" is a key competence (also comparable to the greater weight of the social component in the social professions) and accordingly has a higher weight in the standardized competency-related maturity and diploma examinations.

6.2 Difficulties with the term "TKC"

Experts recognize some difficulties with the term "TKC", which sounds thrilling on the one hand but on the other hand, there is no spontaneous interpretation of what is included within this term and either the content is blurry, or one has to read up what is actually meant. Since the use of the shorter and more tangible term "social competence" on the other hand would exclude essential components of the transversal competences, in schools the term "life competences" is in use. It expresses in a more understandable way that these competences are essential not only in the workplace or in school but also in private life.

Currently, mainly the concept of "personal social competence" is used: here, personal competence is understood as competence tied to one's own person, while social competence is aimed at the social others, at blurred boundaries.

6.3 No normative implementation strategies for TKC

Experts recommend tackling the topic of TKC in learning and teaching in a rather sensitive way: Awareness raising should not be too extensive for all TKC areas at the same time. This would equate to an overstimulation and probably to a defensive attitude. Accordingly, it was noted that there are no normative implementation strategies for TKC on the school level in Austria. Rather, it is possible to recognize basic commitments: instead of restrictive measures, more success is expected through snowball effects. Due to the stronger anchoring in legislative, it is assumed that corresponding interest and implementation will increase as well. Consequently, successes

cannot be evaluated immediately but it might be more effective in the field of TKC. Additional support (such as newsletters, meetings, information on the Ministry's website) further raises awareness about TKC in learning and teaching. In addition, after the first years of introduction, standardized competency-related maturity and diploma examinations have arrived in everyday life. Also in the new teacher education, the TKC are more in focus.

The comparison of benchmarks (e.g. dropout rate, retention rate, graduates), which is becoming more and more prevalent in education, in combination with a demographically reduced number of students, can lead to a motivation of the school locations (due to the competition between schools and students) to increase the learning competence arises.

A possible risk is seen in a separate TKC teaching unit that is not accepted by students as an "important subject" (as for example, mathematics) and thus not taken seriously. All the more the motivation of the pupils depends on the relevant experiences of the teachers.

6.4 Currently particularly requiring competences

According to the expert, pupils or apprentices are mainly supported in terms of "attitude and values" as well as "social interaction". But also features such as "to show good manners" and "independent work" must be developed, as well as self-confidence, or "to show enthusiasm" and "can handle pressure". The same applies to the development of "thinking ability", as well as "making decisions", "processing information" and "developing problem-solving strategies"; as well as the transversal "application of knowledge".

At vocational schools, TKC are mainly supported by means of action-oriented, project-oriented and interdisciplinary teaching. Here, the pupils would have to "make decisions, think creatively, solve problems, divide time, work in a team, deal with IT, show perseverance, prove efficient work and present the result well in terms of language". On the other hand, attitudes and values such as "obeying ethical code of conduct", "showing good manners", "showing willingness to learn", "keeping to commitments" and willingness to compromise were hard to promote.

After having asked what factors would hinder the acquisition of transversal competences, the family background in combination with puberty was mainly mentioned. On the part of the student cohorts, an expert also perceives a change: for example, a new generation of students is being talked about, whose behaviour would be equated with a meaninglessness of the school. The omnipresent mobile phone is not the problem, but the lack of interest and the no longer existing strive for knowledge.

Furthermore, the importance of the respective school culture is emphasized. There is a responsibility at the teacher-pupil level, but not just in the classroom but in the school location (school climate, classroom community), which can also be certified in terms of TKC.

Austria has a low start-up rate, it is rather a "consumer attitude" apparent. It requires more personal independence, which can then enable to work independently. In relative terms, it is meant that not every person must be an entrepreneur, even for employees the ability to work independently is essential. Currently, there is a focus on entrepreneurship, an expert formulated it as exaggerated, even as a "hype", which actually pushes a TKC in the foreground.

From the point of view of migration and refugee movements as well as the often heterogeneous composition of school classes in conurbations, an even greater importance is attached to the intercultural understanding as well as the acceptance of the other.

6.5 Recommended examples for assessment

Assessing the TKC in school life is proving difficult, reminded an expert of previous practice classes in teacher education where aspiring teachers and their class were observed through disposable mirrors ("Venetian mirror").

Critics note that the BISTs are "beautifully written words" on paper but in practice they are not easy to fulfill, let alone easy to verify. The reason given for such a statement is that there is no external examination (apart from examinations in the 4th and 8th grade). 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.

In addition, it should be noted that an evaluation in the context of examinations, while asking for key competences (e.g. civic competence), often remains based on the examination of pure knowledge. By contrast, the transparent and **competence-oriented assessment of the diploma** theses of the BHS (see appendix 2) is highlighted as an example of success.[100]

One expert reported on school organizational work outsourced to students (for example, organization of parental leave days and celebrations, including sponsoring and marketing activities), which enabled the young people to develop their transversal skills, such as "punctuality, courtesy, well-groomed appearance, communicative skills and teamwork" prove successful.

The compulsory internship provided in the BMHS must also be mentioned here, as a portfolio and a confirmation from the employer are required.

At the same time it is put into perspective that (for example in the context of the final apprenticeship examination) the focus is primarily on pure technical knowledge. It would be possible to focus even more on those phases of the training process in which transversal skills are expected to be particularly visible: the selection procedures for apprenticeship applicants, the probationary period, entry to the vocational school or the beginning of apprenticeship - i.e. time prior to the acquisition of occupation-specific expertise. In addition, the final apprenticeship examination and career entry were brought into focus - a time when the ability to communicate, professional appearance and the like make the difference between "come through" and "show potential for more". It was already noted in 2013 that the quality of the final apprenticeship exam could benefit from an increased focus on competence-oriented assessment methods (Dornmayr,

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[100] In the TWG competence orientation and examinations has described the diploma project (diploma thesis) as a best practice example. The diploma project requires the students to cooperate and work on a problem over a longer period of time, all existing competences are brought in and presented and discussed at the final presentation.

Proinger, Schlögl, Wallner, & Wieser, 2013). If some of the proposed measures were implemented, transversal competences would be more visible during the assessment and could subsequently be included in the evaluation.

The rating by a grade is problematic especially with TKC and would lead to a "behavioral grade". Therefore, currently "binding exercises without assessment" are the solution to the grading problem.

6.6 New teachers' education

In addition to the new teachers' education, it is positively noted that in the many years of training and further education for teachers the competence orientation / TKC has been given more consideration. This seems particularly important from the point of view of the fact that the activation, support and promotion of TKC among young people is a considerable extra effort for teachers, which also requires a more differentiated pedagogical didactic report.

To be able to teach ,entrepreneurially' a series of books and teaching materials focusing on the Austrian approach to entrepreneurship have been published. The latest success story in this field is Youth Start where 40 challenges on different levels are freely available for teachers.

New curricula are in use in the upper secondary level, including a legally defined teaching guidance for students by a learning coach. So far, around 3,500 learning coaches have been trained throughout Austria.

Furthermore, a competence pass (profile for entrepreneurship teachers) has been developed that is available to schools and teachers and can be used as a self-test as well as a control element. https://bildung.bmbwf.gv.at/schulen/bw/bbs/entrepreneurship.html

Nevertheless, in continuing education teachers "prefer" relevant subject didactics. Therefore, the title regarding TKC event had to be as concrete and user-oriented as possible, otherwise the demand would remain low.

6.7 Role of the EU and NQR

Knowledge of or implementation of EU policies is primarily within the remit of the Ministry, but teachers participate in relevant national working groups.

It is confirmed that in the curriculum and qualification development the topic of the TKC is much more prominent than the NQF: with regard to the project-relevant transversal competencies, the NQF is only occasionally superficially relevant: in Austria it is limited to the expression of self-employment and the assumption of responsibility, other key competences are not explicitly mentioned. BUT: at the same time, the NQF is generally open to "something" like the TKC, so it is seen as more supportive than preventive: ultimately any qualification is generally attributable to the NQF if the allocation conditions are met.[101] Therefore, it is positive to see that the TKC is

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[101] see corresponding "Checklist for determining the NQR allocation suitability"
(https://www.qualifikationsregister.at/res/file/Checkliste_Grafiken_HandbuchNQR.pdf)

explicitly required in the curriculum, so that the learning outcomes in the descriptors should be reproducible and assignable.

On the other hand, many skills have so far been very much trapped in small subject learning outcomes, therefore, a more abstract level would be useful and welcome for allocation to the NQF[102]. Currently, in Austria there is still a strong specialist area in the formal area: each subject would like to have a maximum of hours in the curriculum, so the TKC would rather be mentioned in each individual subject. As a current focus in Austria, the assignment of qualifications is currently being implemented.

However, the focus on the EQF and international coordination is not yet in focus, but there is a report on a functioning exchange in the EQF Advisory group (http://ec.europa.eu/transparency/regexpert/index.cfm?do=groupDetail.groupDetail&groupID=2107). Furthermore, bilateral and international networking work very well at the expert level, with examples from meetings in Brussels and projects. The Youth Start Entrepreneurial Challenges Project (http://www.youthstart.eu/en/) is, for example, a European pilot project and represents a collaboration between the ministries of education of Austria, Luxembourg, Portugal and Slovenia. They use a practice-oriented, student-centred approach to entrepreneurship education to foster core competences in young people with the aim of improving their chances in the labour market and expanding their outlook on life.

It should be noted that the NQF cannot dictate the extent to which TKC appear in curricula. The formulation of the individual competency levels by means of suitable acts can be understood as guidance for the formulation of key competences. Thus, the appropriate descriptors of the 5th NQF level for the BIST descriptions were used as orientation or demarcation. However, a formulation of qualifications (be it technical or TKC) is not trivial (Schlögl u. a., 2012), there is certainly a need for a harmonized formulation guide. However, this is seen as a topic for the following years in Austria, and should not be seen as a task for TRACK VET.

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[102] https://www.qualifikationsregister.at/res/file/Ersuchen_Grafiken_HandbuchNQR.pdf

7 Chapter 6. Recommendations

Conclusions for the current state of development

The report so far shows, that transversal key competences are firmly established in the Austrian vocational education and training system in many ways. Although not equally comprehensive for all competences, clear references to transversal key competences can be identified in the general educational goals and concrete objectives in the curricula and in the educational standards, in the teaching design and in assessment.

Ultimately, the weakest point so far might be the assessment of transversal key competences, especially when they cannot be attributed to a specific school subject. Determining whether learners have acquired transversal key competences through teaching is based on regular performance assessments by teachers. There are no statistical data that allow statements about the (non-)existence of transversal key competences among upper secondary learners[103]. Eder/Hofmann attribute this in particular to the lack of obligation. Consequently, there is a need for explicit integration of the objectives into the performance assessment and appraisal system or some other form of accountability for their implementation. Otherwise there is no systematic assessment of the learning outcome[104] for transversal key competences, unless they are explicitly associated with a school subject (e.g. Political Education). The assessment of performance is generally regulated in the School Teaching Act (SCHUG Sections 20ff). It specifies what (curriculum), how (oral and written examinations, exercises, cooperation) and to what extent the examination must be carried out and how the results must be expressed in grades. The point of reference here is the teaching subject, thus it does not provide for interdisciplinary assessment and grading.

At the same time, it should be noted that while many important steps have been taken, competence-oriented teaching and assessment in the required systematic form are still relatively new. The system must not be overburdened here either. The long-term development process in practice has so far proven to be beneficial and promising, especially with regard to acceptance, in small but multifarious steps.

Based on the current state of development in Austria and the experiences of the experts with the implementation of competence-orientiation, the following recommendations can be derived.

Competence-orientation as long-term development project

The competence-orientation is anchored in the Austrian legistic on different levels, the actual implementation process started in 2004 with the development of competence oriented educational standards, then led to continuous revision of curricula since 2008, competence-orientated assessment of the diploma of VET-collages since 2015, partly-centralised/standardised competence-based final exams since 2015/16, new curricula for training of secondary level teachers in 2016/17, and a pedagogical reform on the way (to name

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[103] Tritscher-Archan/Petanovitsch 2016, p. 36
[104] Eder/Hofmann 2012, p. 74

only the most important steps here). Thus, the development of appropriate instruments meanwhile has affected all main parts of the VET system, nevertheless, the transition is still in process and developments are under evaluation.

> The comprehensive implementation of competence-orientation in a VET system should be understood as a long-term project.

> Establishing a coordinating structure with the stakeholders (steering group) to ensure a harmonised approach is considered particularly useful.

> Sustainability can be strengthened through a broad consultation process.

Development of appropriate instruments to accompany and assure a step-by-step implementation of competence-orientation

The importance of interdisciplinary competences is reflected in the many laws and curriculum regulation that lay down their inclusion in VET programmes. 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. This regulations not only aims to create more awareness of their significance but also underlines the binding nature of teaching them.

> Though, it contains no normative implementation strategy for TKC on the school level. This appears as a success-relevant procedure: Especially in the area of TKC, a conscious, situation-specific individual confrontation or implementation (within a framework agreed in the consultation process) is needed.

Only through the development of concrete instruments is the process of change (concretized in the best case by a consultation process) set in motion, otherwise it remains at the theoretical or abstract level. Accordingly, numerous instruments (or their strengths / weaknesses) in relation to TKC are described to give suggestions to interested countries: If instruments are adapted to the respective country specifics, process-critical details can be given special consideration in order to improve the instrument even more.

The **educational standards (BIST)** are principally a good model, which should be emphasized above all by their lesson examples for the development of competence. However, the implementation of these transversal competences in everyday school life is far-reaching and in the long term as well requires considerable organizational effort.

> In the case of a competence-oriented design of the lessons, attention should be paid to a coordinated and harmonized approach across all types of schools to be set up in the beginning (to avoid differences in the realization and use synergy effects), as well as a scientific accompaniment.

> At the same time, this is where the challenge is to "arrive" in school practice. Quite essential are always up-to-date examples. This ongoing maintenance proves to be an underestimated effort, which will presumably only be manageable through the development of a manual for the decentralized creation of the examples.

> Therefore, basic "instructions", tools or agreements are needed to translate the individual subject-specific elements of different school types and schools according to common "game rules" (eg in the form of BISTS, using Bloom active verbs) as well as the intensive maintenance of lesson examples decentrally to support.

The incorporation of key competences in teaching and training plans was accompanied by a revision of the VET curricula to provide **competence-oriented curricula.**

> Again, attention should be paid to the coordinated approach across the types of schools. This is important if the common teacher training (see next point) is also done independently of individual types of schools to allow a wide use of teachers.

Competence-oriented curricula entailed new ways of learning and teaching (or cooperation by teacher teams in interdisciplinary teaching) which is supported by a **new teacher education**. It is based on common core competencies for all educational professions. The decisive factor was to harmonize the education model with the entire educational and professional career: from access to basic pedagogical training via a vocational entrance phase which is especially geared towards aptitudes and inclinations, continuing vocational training up to qualification for special technical and managerial functions.

> Apart from content-related aspects of the curriculum, additional structural changes could be reflected. Beside the Educational offers for educational professions have so far existed in Austria at a variety of institutions. In the course of the renewal, a "cluster structure" was identified by the group of experts for an essential basic stereotype. The "cluster approach" for pedagogy education is based on the idea that binding, co-ordinated regional alliances require a binding coordination, cooperation and joint development of offers for education, training and further education for educational professions. According to defined guidelines (curriculum architecture, competency model, etc.), a coordinated focus is set within the clusters: joint development of teaching offers, adjustment of duplication, etc.

> Again, a multi-year preparation time is observed. For example, one year has been scheduled for the discussion process involving the stakeholders, once the expert report has been submitted. Another 18 months were scheduled for work on the curriculum.

> Also a high number of **learning coaches** is supportive. The guiding principle for the learning coaching concept is the paradigm shift from teaching to learning. Courses aim to empower teachers to advise and assist learners in self-organizing ability and setting goals. They learn to analyze learning strategies and to reflect learning processes and learning outcomes and learning progress with the learners: Learning coaching has the goal of building successful learning attitudes.

After the first years of introduction, **standardized competency-related maturity and diploma examinations** have now arrived in everyday life. The following experiences are apparent from today's point of view:

- ➢ During the development, particular attention must be paid to the practicality of the examination tasks. In doing so, the peculiarities of the different types of school have to be considered.

- ➢ Particular attention should be paid to the assessment criteria to be applied by the examiners as well as to the avoidance of gender-based biases in mathematics.

- ➢ The introduction of a standardized competency- oriented maturity and diploma examinations requires that the competency-based approach has fully arrived in the classroom and students are well familiar with competence-oriented assessment.

- ➢ A compensation testing is also a useful way to improve bad grades.

The use of a **uniform assessment** for the competence-oriented diploma theses can be seen as a good practice example (i.e. the assessment grid "Rubrics" used BHAK, see appendix 2).

- ➢ The easy handling on the part of the teacher as well as the automatic result calculation are important success criteria for a fast dissemination in the everyday school life.

- ➢ In the development of such assessment tools, an identical use is encouraged for as many types of schools as possible. Accordingly, it must be ensured that coordinated development takes place with the involvement of stakeholders.

- ➢ If simplified or less elaborate instruments are required for individual types of schools (e.g. for lower EQF level), it is recommended to record as many TKCs as possible.

Support structures for awareness rising and to include all relevant stakeholders

Additional support (such as newsletters, meetings, information on the Ministry's website) further raises awareness among TKC.

- ➢ But - awareness raising should not be too extensive for all TKC areas at the same time. This would equate to an overstimulation and comprehensible defensive attitude.

The "**School Development Concept** for Entrepreneurship Schools" ensures the appropriate involvement of relevant actors and confirms that TKC are an integral part of everyday school life.

- ➢ There are numerous approaches in Austria to promote TKC through action-oriented, project-oriented and interdisciplinary teaching. Also participating in competitions, the planning of school activities by the young people themselves (eg parents' day, school festival) and practice companies, the preparation of a diploma thesis and the compulsory internship and their documentation on the e-portfolio contribute to the development of TKC.

After all, the importance of **international networking** is stressed. By way of example, knowledge transfer can take place through peer-review, but also through participation in international project offers.

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9 Appendix

9.1 Interview partners and experts in alphabetic order

1. Dr. Fritz Ursula (Austrian Federal Ministry of Education, Science and Research)

2. Mag. Horak Bernhard (Federal Chamber of Labour AK)

3. Mag. Kiss Katharina (Austrian Federal Ministry of Education, Science and Research)

4. Kremzar Kurt (Federal Chamber of Labour AK)

5. Mag. Karin Luomi-Messerer (3s research laboratory)

6. MMag. Evelyn Meyer (BIST - working group entrepreneurship; BHAK 10)

7. Karl-Andrew Müllner (Austrian Agency for International Cooperation in Education and Research OeAD-GmbH)

8. Mag. Orth Gerhard (Austrian Federal Ministry of Education, Science and Research)

9. Claudia Plaimauer (3s research laboratory)

10. Ing. Alex Prischl (Austrian Trade Union Federation ÖGB)

11. Mag. Staudecker Eduard (Austrian Federal Ministry of Education, Science and Research)

12. Mag. Sabine Tritscher-Archan (ibw Austria - Research & Development in VET)

13. Mag. Zauner Christina (Austrian Federal Ministry of Education, Science and Research)

14. Mag. Zug Ulrike (Austrian Federal Ministry of Education, Science and Research)

9.2 Appendix 1: BIST Entrepreneurship and application examples

9.3 Appendix 1a: BIST personal/social competences

9.4 Appendix 2: Rubics: competence-oriented evaluation of diploma BHS-thesis

9.5 Appendix 3: Simplified rubics for BMS-thesis

9.6 Appendix 4: School Development Concept for Entrepreneurship Schools