

Case study Austria

The future of vocational education and training in Europe Volume 3

Facilitating vocational learning: the influence of
assessments

By Julia Fellingner, June 2022

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Introduction

0.1. Context

This case study is part of the 'Future of VET' project and explores how the assessment of transversal competences in the school-based sub-system of IVET in Austria has changed over time. The first chapter describes general changes in the assessment approach in the school-based VET system over time (such as changes in assessment forms, the balance between general subjects and transversal skills and competences, the main drivers, specific challenges and changing priorities). The second chapter will then focus specifically on the assessment of transversal skills and competences in Colleges for Higher Vocational Education. Finally, the third chapter will give a short outlook on further expected changes in assessment, including adjustments during the Covid-19 pandemic.

0.2. Colleges for Higher Vocational Education (BHS)

The case study is centred around a specific type of school-based VET programmes: those offered at Colleges for Higher Vocational Education (*BHS*). These represent a central part of the Austrian VET provision in the school-based sub-system. *BHS* offer 5-year school-based courses with mandatory work-based learning through internships. The final examination is the centralised and standardised *Matura* (i.e. higher education entrance examination) and diploma examination. It grants access to legally regulated professions in accordance with the Trade and Industry Code as well as access to study at institutions of higher education. The qualification is allocated to NQF/EQF level 5 and the 4th and 5th year of the *BHS* are classified as ISCED 5.

The most important *BHS* types are:

- (a) Secondary college of engineering, arts and crafts (*Höhere technische und gewerbliche Lehranstalt – HTL*);
- (b) Secondary College of Business Administration (*Handelsakademie – HAK*);
- (c) Secondary College of Fashion (*Höhere Lehranstalt für Mode*);
- (d) Secondary College of Art and Design (*Höhere Lehranstalt für künstlerische Gestaltung*);
- (e) Secondary College of Tourism (*Höhere Lehranstalt für Tourismus – HLT*);
- (f) Secondary College of management and services industries (*Höhere Lehranstalt für wirtschaftliche Berufe – HLW*);

- (g) Secondary College of Agriculture and Forestry (*Höhere Lehranstalt für Land- und Forstwirtschaft*).
- (h) Secondary College of product management and presentation
- (i) Teacher training colleges for early childhood education

CHAPTER 1.

Changes in the assessment approach in Austrian IVET - school-based sub-system

1.1. Curricular changes

In order to understand possible influences on assessment in Austria's school-based sub-system of IVET, we first take a look at changes in curricula, which hint to changes in assessment:

An important change in curricula of school-based IVET took place in **1994**. It **shifted the focus towards so-called 'key competences' and introduced new subjects**. For Secondary Colleges of Business Administration, this change included, for example, the introduction of the subject 'Practical Training in Business Administration and Project Management'. This subject was allocated up to five weekly teaching hours, and included project-oriented work, case studies and 'practice enterprise' (Übungsfirma). The practical training takes place in a special office-designed classroom, introducing a different kind of teaching and assessment. Students work as in a real company; all business processes are carried out. This gives students the opportunity to experience the reality of a company, they would develop entrepreneurial skills as well as gain work experience in a safe environment. (I2¹). Bearing this major shift in mind, in the first nine years of the actual analysis period, only modest changes were carried out, with variations between individual qualifications (see WA1 report). The next important change took place in **2004**, when the Ministry of Education's initiative '**Educational Standards in VET**', which symbolised an important step towards increased learning-outcomes and competence orientation. Educational standards are specifically formulated learning outcomes that focus on final qualifications and describe the desired increase in competence of the students at the end of their respective educational pathway. They form the basis for the implementation of competence-oriented teaching. Their attainment should be assured, irrespective of the school location. Educational standards thus contribute to quality assurance and serve as orientation for teachers and learners, but are not designed for direct use in students' assessment (Auzinger and Luomi-Messerer, 2017). However, school-based VET in Austria continues to use a 'mixed' approach: while curricula are essentially written to reflect the competence-based approach, more input-focused elements remain in parallel (WA1 report).

¹ I2 – Interview 2 (internal note only)

Within the framework of educational standards, both subject-related (across school types) and occupation-related (school type-specific) educational standards were formulated, as well as an educational standard for personal and social competences (transversal competences). This approach led to the continuous revision of curricula from 2008 onwards.

Another important curricular change was the **introduction of 'clusters'**, which further strengthened the possibility to focus on transversal competences such as entrepreneurship competence or social skills (e.g. team work) (I2). Curricula of Secondary Colleges of Business Administration (*HAK*), for instance, now included a subject cluster on 'social competence and personality development' which focuses specifically on transversal skills and competences (BMBF, 2017; Lachmayr and Proinger, 2019b).

All clusters however, can be linked to several transversal and key competences, for example: personality and educational career, languages and communication, entrepreneurship - business and management, society and culture, mathematics and science. There are educational objectives, didactic principles and teaching principles for each cluster. Additionally, the curricula for *HAKs* are now designed as 'competence-oriented spiral curriculum': Key contents are covered repeatedly with an increasing level of detail and level of complexity. (Lachmayr & Proinger, 2019a, p. 17)

The increased emphasis on transversal skills and competences can, however, rather be derived from various policy decrees than from curricula information. In parallel, also the development towards learning outcome orientation played a major part (Cedefop, 2020a, AT, pp. 3-4).

Based on WA 1 of this project, (WA1 report, p. 66-67) overall findings for school-based VET in Austria suggest both an increase in workplace learning and in practical learning in workshops across time. Workplace learning in Colleges for Business Administration mainly refer to the introduction of a compulsory work placement for this school type. A detailed description and comparisons between school types can be found in the respective report (WA1 report).

Following the timeline up to 2021, in **2017**, in the '**education reform law**' **school autonomy was strengthened**, while at the same time a **new quality framework** was presented (coming into force in 2021) in order to ensure high quality standards within the scope of schools' autonomy (BMBWF, 2022; QMS, 2022; I2).

1.2. Changes in assessment

Assessment in Austrian schools is regulated by the **assessment regulation of 1974** (*LBVO - Leistungsbeurteilungsverordnung* ⁽²⁾), which has changed little over time. It defines so called 'written exam subjects', in which a certain type of written exam has to take place at certain times of the school year and thus shows a strong focus on summative written assessment. Apart from these restrictions, teachers are, up to today, very autonomous in the way they assess competences in their classes. (I2)

The introduction of new curricula for school-based IVET following the years after 1994 – through the introduction of subjects focusing more on social and personal competences – made it easier for teachers to separately assess transversal competences, such as 'team work', as part of their 'observation of students behaviour in the newly introduced practice firms.

Summative assessment is, however, still the **dominant form** of assessment in schools. Studies have shown that for the teachers, despite numerous related training offers, summative aspects of performance evaluation still remain the dominant approach, while more formative performance diagnoses seem to be a minority (Lachmayer & Proinger, 2019a, p. 33). An increase in **formative assessment** was triggered by the introduction of the **compulsory work practice** for all school-based IVET types. With this development, the assessment of work practice was also made compulsory: it is assessed through portfolios, which are otherwise used only sporadically (I2, Lachmayer & Proinger, 2019a, p. 30).

In relation to the **final assessment** ('assessment for certification'), the introduction of the partially **standardised competence-oriented Matura examination** in **2015/2016** certainly marks the most impactful change in assessment. It was triggered by a growing demand for increased transparency and comparability among schools across the country, not least due to the disappointing results achieved in international tests such as PISA (I1, I2; Eder & Hoffmann, 2012).

The new approach to final exams at Colleges for Higher Vocational Education also gives more weight to the so-called diploma projects that learners carry out in their last year.

It was first introduced in the school year 2015/16 and consists of three parts (BBWF, 2022a):

² Ordinance of the Federal Minister for Education and Art of June 24, 1974 on performance assessment in compulsory schools and Secondary Schools (Performance Assessment Ordinance) Federal Law Gazette No. 371/1974

- (a) Diploma thesis, including its presentation and discussion;
- (b) Written examination;
- (c) Oral examination.

The written final assignments for the subjects German, Mathematics and 'Living Foreign Languages' are standardised and are the same for each school type. Examination assignments for the other subjects of each school type are not standardised, and the diploma thesis and the oral examinations with competence-oriented tasks are also the responsibility of the teachers at the individual school.

In the early 2000s, a written 'project assignment' was introduced for students in their final year (Lachmayer & Proinger, 2019a, p. 29). This project work was later developed into a 'diploma thesis' with a 'pre-scientific' character, as part of the final examination. It was introduced in 2012, slightly before the standardised format came into practice, and was adapted in 2015 (BMBF, 2015).

This diploma thesis specifically aims to assess a wide range of transversal competences. For example, it can be set up as group work, with each member being responsible for a clearly distinguishable part or chapter(s). The assessment includes the achievement of each individual candidate (thus either the individual diploma thesis or the individual part thereof), but also its presentation and discussion (§ 34 SchUG). While the work submitted makes up the main part of the assessment (conclusiveness of the technical arguments, linguistic expression, documentation of practical work, formulation of the summaries, etc.), also the development of the diploma thesis (e.g. need for support) as well as the presentation and discussion of the diploma thesis must be included in the assessment (BMBWF, 2022c). In order to correctly and transparently assess this work, standardised rubrics were introduced in most of the school types. These will be discussed in the following chapter.

1.3. Quality assurance related to assessment

Regarding quality assurance, a **network for quality assurance in VET** was founded in Austria in **1995**. It has since undergone several changes. The education laws of **2017** laid the **foundations for a new Quality Management System (QMS)** for all Austrian schools (general education and VET), which was **introduced in 2021** and will be **rolled out completely by 2024**. Schools had to introduce the new system in the school year 2021/22 and will have to implement it by school year 2023/24. The QMS, contrary to the former QIBB, which in its quality matrix included an item for 'transparency [traceability] of assessment' (Grazer Schulschwestern 2014), now includes more elaborate details for (formative and

summative) assessment, which are described in the box below. It remains to be seen how these principles will translate into teaching and assessment practice.

Box 1. Quality guidelines for assessment

The Quality Management System (QMS) for Austrian schools lay out the following principles regarding 'determining and assessing performance': 'performance assessment and criteria for performance assessment are known, comprehensible and correspond to the legal basis.'

Teachers:

- agree on criteria for assessment of performance based on the curricula and the *Leistungsbeurteilungsverordnung (LBVO, assessment regulation)*;
- use various methods of learning-accompanying performance assessment and thus record the acquisition of competences and the learning progress of the learners;
- regularly communicate the expected performance and the criteria for performance assessment to the learners, legal guardians and, in the case of vocational schools, also to the authorized teachers, thus ensuring transparency;
- use the assessment criteria as a basis for a transparent and competence-oriented assessment of learners' performance;
- continuously document the level of performance and learning progress of the learners and thus enable systematic, individual learning development advice in cooperation with the learners;
- regularly inform the learners and their legal guardians authorized trainers about the level of performance and the learning progress;
- justify their performance assessments to the learners and legal guardians;
- use the results of the internal performance assessment and external performance measurements as an opportunity to review and further develop the teaching design.

School administrations:

- ensure suitable framework conditions and structures so that the teachers can agree on criteria for the performance assessment based on the curricula and the LBVO (assessment regulation);
- ask teachers based on the results of the internal performance assessment and external performance measurements to review and further develop their teaching design;
- demand transparent and comprehensible performance assessment from the teachers;
- support inquiries from legal guardians regarding the performance assessment and help to clarify;
- Clearly communicate performance expectations and continuous feedback on the learning process are essential for a beneficial learning culture.

Source: QMS, 2022

CHAPTER 2.

Assessing transversal skills and competences in Colleges for Higher Vocational Education

2.1. Transversal Skills and Competences in school based IVET

In Austrian IVET, key competences have become a central theme with the **introduction of new curricula in 1994**. Lachmayr and Proinger (2019b) examined the extent to which the eight key competences for lifelong learning are integrated and assessed in school-based IVET. They identify two blocks: three of the eight key competences (literacy, multilingual competence, and mathematical competence) can directly be linked to a single teaching subject, with clearly defined assessment criteria, whereas the other block of key competences, dealing with the more cross-curricular competences, is less visible in curricula and is usually not assessed individually.

The visualisation of 'transversal skills and competences' (TSC), which partially overlap with the former (in the field of social and personal competences) gained momentum with the gradual shift from an input-focused to a competence-based approach, as explained in the previous chapter. Their importance has been highlighted in several documents, most centrally in the National Education Report 2012 (Eder & Hoffmann, 2012).

Transversal skills are legally anchored at four different levels: the School Organisation Act (*SchOG, Schulorganisationsgesetz*), the teaching principles of the Ministry of Education, the educational standards and in the general educational objectives of the curricula and in the didactic principles therein (Lachmayer & Poinger, 2019, pp. 47-48). The multi-layered legal anchoring in theory, however, is not equally legally binding in practice: the objectives regarding the integration of TSC in teaching practice depend very much on individual schools and teachers (Eder & Hoffmann, 2012, p.74; I2).

2.2. Assessing TSC

The two blocks of TSC are assessed differently:

- (a) Those linked to one clearly defined teaching subject (literacy competence, multilingual competence, and mathematical competence, and in some cases also digital competences), have clearly defined assessment criteria for each school year and standardised assessment procedures within the framework of the final examination (*Matura*).
- (b) The other block of transversal competences – learning to learn, interpersonal, intercultural and social competences, civic competence, entrepreneurship and cultural expression, are usually not assessed individually, but are either part of a compulsory subject, such as ‘citizenship education’, or can be attributed to more than one subject (Tritscher-Archan & Petanovitsch, 2016, p. 24).

The initiative ‘competence-oriented teaching at VET schools’, tried to link educational standards to curricula, e.g. by providing teaching examples to demonstrate how specific educational standards can be addressed, and how the acquisition of competences can be assessed. For ‘social and personal competences’, suggested assessment forms include case studies, feedback loops, group work, reflexion, role play and problem-based learning (Lachmayer & Poinger, 2019, p. 34). Instruments for documenting competences and to monitor them in teaching were developed, e.g. a teacher logbook and a group assessment. This should enable a transparent and systematic assessment of various competences using indicators such as social competence, learning competence, moral and ethical competence, and communication skills.

To ensure the achievement of transversal skills and competences which are not explicitly addressed in summative assessment, the assessment rubrics for the final written assignment ‘diploma thesis’ were developed in such a way as to mirror all relevant TSC and to guarantee a certain degree of transparency and standardisation.

Some TSC are not assessed summatively on an individual student basis, but initiatives try to ensure that these competences are developed and strengthened throughout the school. This is happening, for example, through the ‘Entrepreneurship School’ initiative, whereby the whole school is certified (Lachmayr & Proinger, 2019a, p. 30).

Regarding the facilitation of the assessment of digital competences, a competence framework was developed for Austria, which described in the box below.

Box 2. **Assessing Digital Competences: DigComp 2.2 AT**

In 2019, the Ministry of Economy and Digital Affairs published the Digital Competence Model for Austria ('DigComp 2.2 AT'). The tool is intended for supporting the assessment and description of personal digital competencies and the identification of possibilities for further development. It is based on the 'DigComp' reference framework of the European Commission. With DigComp 2.2 AT, the link between VET and the teaching of IT and media skills is further developed, for instance through the (demanded) enhancement of programming skills or the designing of a digital identity. Against this backdrop, digital literacy aims to combine education and training for all citizens.

The field of digital competences is divided into six areas and described through 25 individual competences. The six areas with examples of their respective competences are:

- Basic knowledge and access
 - Understanding concepts of digitalisation
 - Use of digital equipment
 - Inclusive ways to access, use and provide digital content
- Using information and data
 - Research and filter digital content and data
 - Critically assess and interpret digital content and data
 - Manage digital content and data
- Communication and Cooperation
 - Communicate using digital technology
 - Buying and selling
- Creation of digital content
 - Developing digital content
 - Programming and automatization of processes
- Security
 - Safeguard personalised data and privacy
- Problem-solving and further learning
 - Solving technical problems
 - Identifying gaps in digital competence

There are eight development stages, defined by degree of autonomy and complexity of the tasks:

- Basic (Stages 1 and 2)
- Independent (Stages 3 and 4)
- Advanced (Stages 5 and 6)
- Highly specialised (Stages 7 and 8)

Source: Löffler & Mayerl, 2020, fit4internet.at

In order to holistically assess those transversal competences which are less 'tangible' within single subjects, project assignments were introduced in the final years of each school type. These were usually dedicated to a specialisation subject chosen by the students (e.g. International Business Cooperation, Marketing, ... in

HAKs; Network Administration, Media informatics, ... in HTLs) and often elaborated as group assignments with an individual emphasis. These lay the foundations for the later introduced diploma theses, but were not yet part of the final examination.

In the years leading up to the introduction of the new *Matura* examination, the Ministry of Education identified the need to streamline the assessment of these written project assignments, the predecessors of the later developed diploma thesis. In many cases, it was not clear to students how their grades for the written project assignments were assigned. Quality checks on assessment were carried out through random sampling of assignments, which were handed to teachers in different schools to objectively grade them. In the course of this process, inconsistencies in grading became evident. The grading process was not transparent. There was thus a need to develop tools to facilitate a thorough, transparent and fair assessment. The tool most suitable to reach this goal was the so-called 'rubric' – an assessment grid developed for the different types of upper secondary vocational schools. These will be described in more detail in the following chapter (I1).

Another major change trend influencing curricula and teaching methods mentioned in the chapter above was the focus on entrepreneurship from the beginning of the new millennium onwards. This is also being reflected in assessment, as these transversal competences are most frequently not only assessed within the scope of the school subject, but also through contests across schools, cities, regions and even countries. Almost all Secondary Colleges of Business Administration are involved in one of these contests (I2). One example of such a contest are the 'EuroSkills', described in the box below.

**Box 3. Assessing Entrepreneurship Competences:
Business Development at the EuroSkills Competition**

In 2012, entrepreneurship was included in the AustrianSkills championships ('Entrepreneurship Team Challenge'). The competition structure is based on school competitions, followed by regional competitions. Entrepreneurship competitions are held regularly at various school locations. These can be individually designed and are used to select the future contestants of the regional competitions.

The AustrianSkills championships take place every two years in the form of a two-day competition based on the tasks of EuroSkills, where the winning team may represent Austria.

EuroSkills, is the bi-annual European championship for skills. It showcases top performances of around 600 young (up to 25 years) specialists in around 45 professions. The "Entrepreneurship/Business Development Team Challenge" was

introduced as a professional competition in order to promote young professionals and thus strengthen Europe as a business location.

The technical requirements for contestants of the 3-day competition include:

- Creation and management of a company for the time of the competition. This requires a wide variety of knowledge about the business plan: e.g. development of a business idea, determination of the target group, organizational structure (organizational chart), process organization (operational process), marketing planning, financing, internationalization, etc.
- Management of the company in competition with other countries/teams. Different tasks created by practitioners have to be completed each day. The tasks are based on the "Life Long Learning Skills", the business ideas to be developed are based on the Sustainable Development Goals of the United Nations, and criteria such as innovation and feasibility are used for the evaluation.
- Presentation of the company and the most important parts of the business plan to a specialist audience in English.
- Problem-solving skills are determined by simulating unforeseeable situations that require a spontaneous or appropriate reaction. This could be a quick survey of the audience or a market survey among the EuroSkills participants, or selling something to the audience, etc.

The participation of an Austrian team in the field of entrepreneurship/business development is made possible by the cooperation of SkillsAustria, the Ministry of Education and the Ministry of Economy.

Source: I1; ifte.at, 2022.

2.3. TSC in the final examination

As laid out in the chapters before, transversal competences play an important role in Colleges for Higher Vocational Education. Through the introduction of the diploma thesis, transversal competences were included in the final assessment³ clear references to the identification and assessment of transversal competences, in particular in the areas of 'social and personal competences' as well as project management, can be found. For the assessment of the diploma thesis part of the final examination, teachers are advised to use an assessment grid – rubric – as stipulated by the *LBVO*, the performance assessment regulation. The grid takes into account the development of the diploma thesis, the work submitted, its presentation and the discussion of the diploma thesis. The requirements for both professional and transversal competences are transparently documented by means of these rubrics. (Lachmayr and Poinger, 2019b). They were developed, piloted, evaluated and implemented in five phases from 2014 to 2016 and aim to

³ Some transversal competences had been included before, through the earlier 'diploma thesis' which included competences such as process-oriented thinking

ensure a transparent assessment of performance, competence orientation, and a maximum of comparability of grades. Furthermore, they seek to improve the quality of diploma theses by clearly defining the requirements for assessment (I1).

For Secondary Colleges of Business Administration, five fields of competence are assessed, including competences related to:

- (a) Communication (graphically and orally describe results; language);
- (b) Self-responsibility (project management);
- (c) Learning;
- (d) Work behaviour (problem-solving, work technique);
- (e) Social and personal competences.

Secondary Colleges for Management and Services Industries (*HUM*) also use a standardised rubric. The figure below gives an example of the assessment of project management competences within this rubric. The competence is broken down into four learning outcomes, which are assessed on a scale of 1 to 5 (according to the Austrian grading scheme ⁽⁴⁾).

Table 1. **Example of an assessment grid (rubric) for the diploma thesis**

Project implementation							
		The candidate...	1	2	3	4	5
project management competence	1	coordinates with team members					
	2	communicates in a goal-oriented manner with the supervisor or the client					
	3	correctly implements the planned project pathway with the relevant tools					
	4	fulfils the project objectives according to the project assignment or coherently justifies failure to do so					

Source: BMBWF, 2022c

For *HUM*, the assessment grid is based on four areas with a total of nine competences, explained in the box below.

Box 4. Assessing the diploma thesis in HUM schools

The main part relates to the 'final product' – the written diploma thesis, which makes up 70 per cent of the grade and covers five competences:

- (a) Self-competence;

⁽⁴⁾ 1: very good, 2: good, 3: satisfactory, 4: sufficient, 5: not sufficient / fail

- (b) Content-related competence;
- (c) Information-related competence;
- (d) Linguistic competence;
- (e) Design-related competence.

The second area covers the project implementation, assessing the candidate's project management competence. For this area, competences include:
The candidate...

- (a) coordinates with team members;
- (b) communicates in a goal-oriented way with their assessor / client;
- (c) implements the planned project trajectory into the relevant tools correctly;
- (d) fulfils the project objectives according to the assignment or coherently justifies the non-achievement of the objectives.

The third part relates to presenting the thesis, assessing structural and contextual competence, ability to express oneself and media competence.

The fourth area assesses the candidate's ability to discuss the work's outcomes, an example is given in the table below.

Source: BMBWF, 2022c

Table 2. **Performance record: Presentation (rubric for Secondary College of Management and Services industries)**

#	Field of competence	#	Dimension
	Display of results	1	The candidate is able to present results in a focussed and correct manner.
		2	The candidate is able to use language as a tool for the display of results.
		3	The candidate is able to support the reception of results through the use of media.
		4	Time management

Source: BMBWF, 2022c

Assessors are asked to assess the work handed in based on each individual descriptor, which are bundled according to one of the nine competences. Individual areas are weighed as follows: written work 70 per cent, project implementation 10 per cent, presentation 10 per cent, and discussion 10 per cent. Every candidate has to personally present 'their' part of the thesis and answer questions concerning the thesis as a whole. No partial grades can be awarded (BMBWF, 2022c).

The rubric for Secondary College of Business Administration follows a slightly different pattern, as described in the tables below. An overview of the rubric can be found in the Annex.

Table 3. **Performance record: Diploma Thesis (rubric for Secondary College of Business Administration)**

#	Field of competence	#	Dimension
1	Problem-solving (subject-oriented)	1.1	The candidate is able to define the (self-chosen) task together with their team
		1.2	The candidate demonstrates subject-specific knowledge and a respective network of knowledge
		1.3	The candidate is able to identify, gather and use data necessary to fulfil the task
		1.4	The candidate is able to choose and make use of the relevant subject-specific tools or methods to fulfil the task in a target-oriented manner
		1.5	The candidate is able to display the achieved targets in a comprehensible and informative manner
		1.6	The candidate demonstrates the ability to critically appraise (evaluate) the chosen course of action, the methods, tools and procedures used and the results achieved. Indicators such as appropriateness, usability, transferability and efficiency are being considered.
2	Project management (process oriented)	2.1	The candidate is able to appropriately apply project management tools
		2.2	The candidate is able to set up a project documentation
3	Work technique and language (written)	3.1	The candidate is able to implement and transfer formal requirements
		3.2	The candidate is able to competently apply language as a tool for the written display of subject specific work results

Source: BMBF, 2015

Each competence field has a variety of options (usually two to four, labelled A to B, C or D) for the assessor to choose from, as displayed in the table below. The first option (A) implies that the candidate has followed certain standards throughout the whole diploma thesis / presentation / discussion, whereas the following options apply to candidates who have done so 'most of the time' or 'in many aspects', whereas the last option is chosen in cases where most relevant aspects were not implemented thoroughly or, for example, not adapted to the thesis (BMBF 2015).

Table 4 **Example of dimensions 4 in the competence field 'Oral description of the work results', with the respective allocation of points**

Dimension 4	Time management		
A	The candidate keeps the allocated time frame	1	☐
B	The candidate does not keep the allocated time frame	0	☐

Source: BMBF 2015, p. 71

Accordingly, a certain number of points is assigned to each competence, and finally a sum is calculated. The sums for 'diploma thesis', 'presentation', and 'discussion' are then weighted, by doubling the points for the thesis and

quadrupling the points given for the 'discussion' part. A maximum of 71 points can be reached in this way. The grading (1-5) then looks as follows:

Table 5 **Grading scheme HAK rubric**

Points	0-35	36-44	45-53	54-62	63-71
	□	□	□	□	□
Grade	5	4	3	2	1

Source: BMBF 2015, p. 71

'Teaching to the test' does not pose a problem in the case of rubrics, as the topics are widespread and the criteria for assessment are transparently available to all learners beforehand (I1).

2.4. Challenges related to the assessment of transversal competences

The main challenge remains how to transparently and holistically assess all relevant and complex transversal competences. There is still ongoing discussion on how to define these competences and how to adequately assess them at a higher, more complex level. Further still, even if competence-based teaching and assessment exist in writing, the individual freedom of teachers in the classroom does still not guarantee that this reaches all students. (I 3)

In the case of rubrics, for example, a critical paper mentions the vagueness of assessment criteria: 'only vague guidelines are given for determining grades' for the diploma thesis, 'which put the interpretation of the legal basis and performance requirements for each grade back into the hands of the teachers' (Beier 2019, p. 41). The author argues that the performance descriptions for each level are vague, and the point system of the rubric does not coherently mirror the differences in content between 'basic' and 'additional' requirements, which are – in view of the author – generally not specified sufficiently to guarantee transparent assessment and subsequently grading. She refers to an example in which differentiating between competence levels is solely based on adding or leaving out an adjective, which leaves ample room for subjective interpretation. Performance displayed by students is thus assigned to a level according to the subjective judgment of the teacher (Beier 2019, p. 37). Another shortcoming is described as the lack of clarification of the thesis' 'pre-scientific' character: it would be essential to clarify in which scientific methods are a prerequisite, in which areas the teacher can or should intervene, or which working methods could generally be left out in a 'pre-scientific' work (Beier 2019, p. 41).

Teachers, on the other hand, see a major challenge in the trend of standardisation, which should lead to objectivity and transparency, but often at the cost of quality of content and loss of individuality: for example, in the case of those 'key competences' which are assessed through the standardised centralised examination, the importance of the final examination does lead to a certain 'teaching to the test' and limits the options for individualised teaching, especially in the final year. (1 2)

Another challenge remains in the field of digitalisation: while it seems to solve the problem of objectivity, the major issue here is how to digitally provide and assess complex questions and problems. (1 2)

CHAPTER 3.

Outlook

3.1. Repercussions of Covid-19

The Covid-19 pandemic had a profound impact on teaching and learning in Colleges for Higher Vocational Education, and as a result also on assessment.

In the first two years of the pandemic, i.e. 2020 and 2021, for many months of the school year, schools were closed and students were sent to 'distance learning'. The time available for observing students' competences was thus limited. The standardised 'central' final examination was amended both in 2020 and 2021, by postponing it to a later date – thus allowing for additional non-compulsory lessons – and by making the oral part of the examination non-compulsory (BMBWF, 2021a; orf.at, 2020). This was specified in the so called 'Covid-assessment regulation' which also affected the diploma theses: 'Contrary to the provisions in the laws and examination regulations regarding diploma theses, presentations and discussions of the diploma theses will not take place for the main examination date of the school year 2020/21 ⁽⁵⁾, unless a candidate submits an application for the presentation and discussion of the diploma thesis, at least one week before the foreseen presentation date. The assessment of the written work must be announced no later than two weeks before the presentation date. If no presentation or discussion has taken place, the final work will be assessed based on the written work. Presentations and discussions can also take place via electronic communication' (BMBWF, 2021c).

For the school year 2021/22, some Covid-related amendments regarding the duration of the examinations are still in place (matura.gv.at). However, presentations and discussions of diploma thesis are scheduled to take place again in the regular form (I 1).

In general, the Covid-19 pandemic has, in some parts, led to a faster digitalisation. This however, did not necessarily imply a change in the content of the assessment or in the requirements, but rather simply in the form of delivery and storage. (I2, I3)

⁽⁵⁾ As in 2019/20

3.2. Future: Curricula and assessment revision

Assessment is regulated in the 'assessment law' of 1974, which has continuously been amended, with the most recent minor changes in September 2021. The most relevant change regards the grading of the standardised final examination: the *LBVO* now contains a statement that a student must reach at least 30 % of the total points in order for the teacher to be able to grade them. Throughout all the years before, there was never any reference to a percentage or points, but rather the reference to 'essential/relevant competences' which need to be shown in order to receive a positive grade. Some teachers see this as a step backwards, as it 'clings' to points and doesn't look at the full picture ('essential competences') which might not be linked to a specific amount of points. The reason behind this change can be found in a stronger need for 'security', and a certain understanding of standardisation and comparability. (I 2)

Currently, work is being done on updating the curricula of Colleges for Higher Vocational Education. A new generation of curricula will likely come into effect in the school year of 2024/25. As the Ministry of Education has recently undergone changes in leadership, many projects must undergo further internal assessment before being finalised. Furthermore, work has been commissioned on developing competence grids for other areas than diploma theses, but this project is currently also on hold. In general, the trend towards transparency and competence-orientation is expected to continue. (I1, I2).

List of abbreviations

BHS	Berufsbildende Höhere Schule – Secondary Colleges for Higher Vocational Education
BGBL	Bundesgesetzblatt – Federal Law Gazette
BMBWF	Bundesministerium für Bildung, Wissenschaft und Forschung – Federal Ministry of Education, Science and Research
BMB	Bundesministerium für Bildung – Federal Ministry of Education
HAK	Handelsakademie – Upper Secondary College for Business Administration
HUM	Humanberufliche Schulen – Upper Secondary College for Management and Services Industries
LBVO	Leistungsbeurteilungsverordnung – Assessment regulation
SchOG	Schulorganisationsgesetz – School Organisation Law
SchUG	Schulunterrichtsgesetz – School Education Law
VET	Vocational education and training
TSC	Transversal Skills and Competences

Annex: HAK Rubric (in German)

Beurteilungsraster (Rubric) für die Diplomarbeit

Schule (Bezeichnung, Adresse)		
Schulbezeichnung und -adresse ...		
Ausbildungsschwerpunkt / Unterrichtsgegenstand bzw. -gegenstände		
Ausbildungsschwerpunkt / Unterrichtsgegenstand bzw. -gegenstände ...		
Titel der Diplomarbeit mit Schwerpunktsetzung der Kandidatin/des Kandidaten		
Titel der Diplomarbeit ein ...		
Name der (1. bzw. 2.) Betreuerin / Name des (1. bzw. 2.) Betreuers		
(1) Prof.		
(2) Prof.		
Name der Kandidatin / des Kandidaten		
Nachname: Nachname der Kandidatin / des Kandidaten ... Vorname: Vorname der Kandidatin / des Kandidaten ...		
Beurteilung	Schuljahr	Jahrgang
Note: ...	2021/22	Jahrgang ...
Unterschrift 1. und ggf. 2. Prüferin bzw. Prüfer		
Unterschrift Vorsitzende / Vorsitzender		
Ort und Datum der Präsentation und Diskussion		
Ort: Ort ...	Datum: Datum ...	

Leistungsnachweis: Diplomarbeit

Kompetenzfeld (1) Fachspezifischer Teil der Aufgabenbearbeitung (Problemlösung)	
Dimension (1.1)	Die Kandidatin / der Kandidat ist in der Lage, die (selbst gewählte) Aufgabe gemeinsam in ihrem / seinem Team zu definieren.
A	Die Kandidatin / der Kandidat definiert die berufsbezogene Aufgabenstellung der Diplomarbeit unter <u>durchgängig</u> korrekter Verwendung der Fachtermini verständlich und prägnant, definiert den angestrebten Zielzustand präzise (Überprüfbarkeit des Zielerreichungsgrads) und stellt die aufgabenrelevanten Aspekte der Ausgangssituation (Startlinie) in <u>allen</u> Punkten nachvollziehbar dar. 3 ☒
B	Die Kandidatin / der Kandidat definiert den Gegenstand der Diplomarbeit unter <u>durchgängig</u> korrekter Verwendung der Fachtermini <u>überwiegend</u> verständlich und prägnant, bestimmt den angestrebten Zielzustand <u>hinreichend</u> präzise (Überprüfbarkeit des Zielerreichungsgrads) <u>oder</u> stellt die aufgabenrelevanten Aspekte der Ausgangssituation (Startlinie) in den <u>meisten</u> Punkten nachvollziehbar dar. 2 ☐
C	Die Kandidatin / der Kandidat definiert den Gegenstand der Diplomarbeit unter <u>zum Teil</u> korrekter Verwendung der Fachtermini <u>überwiegend</u> verständlich, bestimmt den angestrebten Zielzustand <u>unzureichend</u> (eingeschränkte Überprüfbarkeit des Zielerreichungsgrads) <u>oder</u> stellt die aufgabenrelevanten Aspekte der Ausgangssituation (Startlinie) in den meisten Punkten <u>nicht</u> nachvollziehbar dar. 1 ☐
D	Die Definition des Gegenstands der Diplomarbeit ist insgesamt <u>nicht</u> hinreichend nachvollziehbar. 0 ☒
Dimension (1.2)	Die Kandidatin / der Kandidat demonstriert, dass sie / er über das fachspezifische Wissen und das den Aufgabenkontext erfassende Wissensnetz verfügt.
A	Die Ausführungen lassen erkennen, dass die Kandidatin / der Kandidat über das aufgabenrelevante Wissen verfügt, fähig ist, die erforderlichen Transfers zu leisten und Zusammenhänge mit fachübergreifenden und / oder praktischen Problemstellungen aufzuzeigen vermag. 3 ☐
B	Die Ausführungen lassen erkennen, dass die Kandidatin / der Kandidat über das aufgabenrelevante Wissen verfügt, fähig ist, die erforderlichen Transfers zu leisten. <u>Hinweise auf Zusammenhänge</u> mit fachübergreifenden und / oder praktischen Problemstellungen <u>finden sich nicht</u> . 2 ☐
C	Die Ausführungen lassen erkennen, dass die Kandidatin / der Kandidat auf elementarem Niveau über das aufgabenrelevante Wissen verfügt; die erforderlichen <u>Transfers gelangen nur teilweise</u> . 1 ☐
D	Die Ausführungen lassen <u>nicht</u> erkennen, dass die Kandidatin / der Kandidat über das aufgabenrelevante Wissen in hinreichendem Ausmaß verfügt. 0 ☒
Dimension (1.3)	Die Kandidatin / der Kandidat ist fähig, die zur Bearbeitung der Aufgabe benötigten Informationen bzw. Daten zu identifizieren, zu beschaffen und zu verarbeiten.
A	Die Bearbeitung der Aufgabe erfolgt auf Basis relevanter Informationen bzw. Daten. Die verarbeitete Fachliteratur ist aktuell, und die weiteren genutzten Quellen sind sachgerecht. Die Verarbeitung der recherchierten Informationen erfolgt inhaltlich korrekt bzw. plausibel. 3 ☐
B	Die Bearbeitung der Aufgabe erfolgt auf Basis relevanter Informationen bzw. Daten. Die verarbeitete Fachliteratur ist <u>überwiegend aktuell</u> , und die weiteren genutzten Quellen sind <u>zum größten Teil sachgerecht</u> . Die Verarbeitung der recherchierten Informationen erfolgt inhaltlich korrekt bzw. plausibel. 2 ☐
C	Die verarbeiteten Informationen bzw. Daten sind nur <u>zum Teil relevant</u> . Die Verarbeitung der recherchierten Informationen erfolgt inhaltlich korrekt bzw. plausibel. 1 ☐
D	Die Verarbeitung der recherchierten Informationen erfolgt inhaltlich <u>nicht korrekt</u> oder plausibel. 0 ☒
Kompetenzfeld (2) Prozessbezogener Teil der Aufgabenbearbeitung (Projektmanagement)	
Dimension (2.1)	Die Kandidatin / der Kandidat ist in der Lage, Instrumente des Projektmanagements sachgerecht einzusetzen.
A	Sämtliche Arbeitsschritte des Projektmanagements (Projektplanung, -organisation, -steuerung, -kontrolle/-überwachung und -bewertung) sind berücksichtigt und werden <u>durchgängig</u> konzeptgemäß sowie der Aufgabe entsprechend ausgeführt. 2 ☐
B	Sämtliche Arbeitsschritte des Projektmanagements (Projektplanung, -organisation, -steuerung, -kontrolle/-überwachung und -bewertung) sind berücksichtigt. Der Einsatz der Instrumente erfolgt an den <u>meisten</u> Punkten konzeptgemäß und angepasst an die spezifischen Bedingungen der Aufgabe. 1 ☐
C	Der Einsatz der Instrumente erfolgt in den <u>meisten</u> Punkten <u>nicht</u> sachgerecht <u>oder</u> die Auswahl der PMT ist den spezifischen Bedingungen des Projekts <u>nicht</u> angepasst. 0 ☒
Dimension (2.2)	Die Kandidatin / der Kandidat ist in der Lage, eine Projektdokumentation zu erstellen.
A	Die Projektrealisation ist <u>umfassend</u> über die Kernbestandteile Projektauftrag, Projektstrukturplan, Terminplanung <u>hinweg</u> , präzise und nachvollziehbar dokumentiert. 2 ☐
B	Die Dokumentation umfasst die Kernbestandteile Projektauftrag, Projektstrukturplan sowie Terminplanung und ist in den meisten Punkten präzise sowie nachvollziehbar dokumentiert. 1 ☐
C	Die Projektrealisation ist <u>unvollständig</u> (einer oder mehrere der Kernbestandteile fehlt bzw. fehlen) <u>oder</u> in den meisten Punkten ungenau <u>oder</u> nicht nachvollziehbar dokumentiert. 0 ☒
Kompetenzfeld (3) Arbeitstechnik und Sprache (schriftlich)	
Dimension (3.1)	Die Kandidatin / der Kandidat ist in der Lage, formale Vorgaben umzusetzen und – soweit angebracht – zu transferieren.
A	Sämtliche Vorgaben bezüglich der Diplomarbeit (Aufbau der Gliederung, Angabe der verwendeten Quellen [Text, Literaturverzeichnis], Bereitstellung der geforderten Bestandteile bzw. Anlagen) sind <u>nahezu vollständig</u> erfüllt (Quellenangaben ≤ 10 Prozent fehlerhaft), Abweichungen bzw. vorgenommene Adaptierungen sind zweckmäßig und begründet. 2 ☐
B	Die Vorgaben bezüglich der Diplomarbeit (Aufbau der Gliederung, Angabe der verwendeten Quellen [Text, Literaturverzeichnis], Bereitstellung der geforderten Bestandteile bzw. Anlagen) sind jeweils <u>den wesentlichen Teilen</u> erfüllt. Einige wenige – die Qualität des Arbeitsergebnisses nicht beeinträchtigende – Vorgaben sind jedoch <u>verletzt</u> (Gliederung ≤ 5 Fehler, Quellenangaben ≤ 10 Prozent fehlerhaft, Bestandteile bzw. Anlagen ≤ 2 fehlen oder fehlerhaft) <u>oder</u> Abweichungen bzw. vorgenommene Adaptierungen sind <u>nicht durchgängig</u> zweckmäßig oder begründet. 1 ☐
C	Die Vorgaben bezüglich der Diplomarbeit (Aufbau der Gliederung, Angabe der verwendeten Quellen [Text, Literaturverzeichnis], Bereitstellung der geforderten Bestandteile bzw. Anlagen) sind <u>major verletzt</u> (Gliederung > 5 Fehler, Quellenangaben > 10 Prozent fehlerhaft, Bestandteile bzw. Anlagen > 2 fehlen oder fehlerhaft) <u>oder</u> Abweichungen sind <u>überwiegend nicht</u> begründet. 0 ☒
Dimension (3.2)	Die Kandidatin / der Kandidat ist in der Lage, Sprache als Instrument zur schriftlichen Darstellung fachlicher Arbeitsergebnisse kompetent einzusetzen.
A	Die Fachsprache wird <u>durchgängig</u> verwendet; die Formulierungen sind präzise und die Aussagen verständlich; die Arbeit ist <u>weitgehend</u> frei (≤ 2 Fehler/Seite) von sprachlichen Fehlern (Grammatik, Orthografie). 2 ☐
B	Die Fachsprache wird an den betreffenden Stellen <u>überwiegend</u> verwendet; die Formulierungen sind <u>zum Teil</u> präzise (keine sinnentstellenden Ungenauigkeiten); die sprachliche Qualität der Arbeit (Grammatik, Orthografie) ist <u>hinreichend</u> (≤ 3 Fehler/Seite). 1 ☐
C	Die Fachsprache wird nur <u>vereinzelt</u> oder <u>gar nicht</u> eingesetzt oder die <u>meisten</u> Formulierungen sind ungenau oder unverständlich oder die Arbeit weist <u>zahlreiche</u> sprachliche Mängel auf (> 3 Fehler/Seite). 0 ☒
Diplomarbeit Punkte Σ 3	

Leistungsnachweis: Präsentation

Kompetenzfeld	Darstellen von Arbeitsergebnissen (mündlich)	
Dimension (1)	Die Kandidatin / der Kandidat ist in der Lage, Arbeitsergebnisse fokussiert und fachlich korrekt zu präsentieren.	
A	Die Präsentation ist <u>durchgängig</u> klar und nachvollziehbar aufgebaut und auf die wichtigsten Eckpunkte und Ergebnisse der Diplomarbeit fokussiert; <u>ämtliche</u> Aussagen sind fachlich korrekt.	2 ☐
B	Die Präsentation ist <u>überwiegend</u> klar und nachvollziehbar aufgebaut; der Fokus auf die wichtigsten Eckpunkte und Ergebnisse der Diplomarbeit ist <u>zumelst</u> erkennbar; die Aussagen sind <u>im Wesentlichen</u> fachlich korrekt.	1 ☐
C	Die Präsentation enthält erhebliche fachliche Mängel.	0 ☒
Dimension (2)	Die Kandidatin / der Kandidat ist in der Lage, Sprache als Instrument zur mündlichen Darstellung fachlicher Arbeitsergebnisse einzusetzen.	
A	Die Fachsprache wird <u>durchgängig</u> eingesetzt; die Formulierungen sind präzise und die Aussagen verständlich.	2 ☐
B	Die Fachsprache wird an den betreffenden Stellen <u>überwiegend eingesetzt</u> ; die Formulierungen sind überwiegend präzise (keine sinnentstellenden Ungenauigkeiten).	1 ☐
C	Die Fachsprache wird nur <u>vereinzelt</u> oder <u>gar nicht</u> eingesetzt oder die meisten Formulierungen sind ungenau oder unverständlich.	0 ☒
Dimension (3)	Die Kandidatin / der Kandidat ist in der Lage, die Rezeption der Arbeitsergebnisse durch den Einsatz von Medien zu unterstützen.	
A	Die zur Unterstützung der Rezeption ausgewählten Medien (z.B. Präsentationssoftware, Poster, Bild, Demonstrationsobjekt) sind <u>ausnahmslos</u> geeignet und werden durchgängig adäquat eingesetzt.	2 ☐
B	Die zur Unterstützung der Rezeption ausgewählten Medien (z.B. Präsentationssoftware, Poster, Bild, Demonstrationsobjekt) sind <u>überwiegend</u> geeignet und werden in den meisten Fällen adäquat eingesetzt.	1 ☐
C	Medienwahl oder –einsatz sind <u>überwiegend nicht</u> geeignet, um die Rezeption zu unterstützen.	0 ☒
Dimension (4)	Zeitmanagement	
A	Die Kandidatin / der Kandidat hält die vorgegebene Zeit ein.	1 ☐
B	Die Kandidatin / der Kandidat hält die vorgegebene Zeit nicht ein.	0 ☒
Präsentation Punkte Σ		0

Leistungsnachweis: Diskussion

Kompetenzfeld	Vertreten von Arbeitsergebnissen (mündlich)	
Dimension	Die Kandidatin / der Kandidat ist in der Lage, Arbeitsergebnisse fokussiert und korrekt zu vertreten sowie in das fachliche Umfeld einzubetten.	
A	Die Stellungnahmen / Antworten lassen erkennen, dass die Kandidatin / der Kandidat den Inhalt der Fragen verstanden hat; die Antworten sind prägnant und <u>inhaltlich korrekt</u> ; die entsprechenden Fachtermini werden benutzt; Erklärungen und Begründungen sind präzise formuliert, für Behauptungen werden Belege angeführt.	3 ☐
B	Die Stellungnahmen / Antworten lassen erkennen, dass die Kandidatin / der Kandidat den Inhalt der Fragen verstanden hat; die Antworten sind <u>inhaltlich korrekt</u> ; sie sind jedoch <u>nicht prägnant</u> formuliert oder die entsprechenden Fachtermini werden nur <u>teilweise benutzt</u> ; oder Erklärungen und Begründungen sind <u>ungenau formuliert</u> oder für Behauptungen werden <u>keine Belege</u> angeführt.	2 ☐
C	Die Stellungnahmen / Antworten lassen erkennen, dass die Kandidatin / der Kandidat den Inhalt der Fragen verstanden hat; die Antworten enthalten jedoch <u>z.T. inhaltlich inkorrekte</u> Aussagen.	1 ☐
D	Die Stellungnahmen / Antworten lassen erkennen, dass die Kandidatin / der Kandidat den Inhalt der Fragen nicht verstanden hat.	0 ☒

Diskussion Punkte 0

Kommentar

	Diplomarbeit	Präsentation	Diskussion	Gesamt
max. erreichbare Punkte	26 P x 2 = 52 P	7 P	3 P x 4 = 12 P	71 P
erreichte Punkte (ungewichtet)	3	0	0	--
Gewicht (Faktor)	2	1	4	--
erreichte Punkte (gewichtet)	6	0	0	6

Punkte	0-35	36-44	45-53	54-62	63-71
Schlüssel	☒	☐	☐	☐	☐
Note	5	4	3	2	1

LBVO – Beurteilungsstufen

- Die Kandidatin/der Kandidat hat die Anforderungen der Diplomarbeit inklusive Präsentation und Diskussion in weit über das Wesentliche hinausgehendem Ausmaß erfüllt und, wo dies möglich war, deutliche Eigenständigkeit beziehungsweise die Fähigkeit zur selbständigen Anwendung ihres/seines Wissens und Könnens auf für sie/ihn neuartige Aufgaben gezeigt. Es ist die Note **"Sehr gut"** zu geben.
- Die Kandidatin/der Kandidat hat die Anforderungen der Diplomarbeit inklusive Präsentation und Diskussion in über das Wesentliche hinausgehendem Ausmaß erfüllt und, wo dies möglich war, merkmale Ansätze zur Eigenständigkeit beziehungsweise bei entsprechender Anleitung die Fähigkeit zur Anwendung ihres/seines Wissens und Könnens auf für sie/ihn neuartige Aufgaben gezeigt. Es ist die Note **"Gut"** zu geben.
- Die Kandidatin/der Kandidat hat die Anforderungen der Diplomarbeit inklusive Präsentation und Diskussion in den wesentlichen Bereichen zur Gänze erfüllt; dabei werden Mängel in der Durchführung durch merkmale Ansätze zur Eigenständigkeit ausgeglichen. Es ist die Note **"Befriedigend"** zu geben.
- Die Kandidatin/der Kandidat hat die Anforderungen der Diplomarbeit inklusive Präsentation und Diskussion in den wesentlichen Bereichen überwiegend erfüllt. Es ist die Note **"Genügend"** zu geben.
- Die Kandidatin/der Kandidat hat die Anforderungen der Diplomarbeit inklusive Präsentation und Diskussion in den wesentlichen Bereichen nicht überwiegend erfüllt. Es ist die Note **"Nicht genügend"** zu geben.

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