
TEACHERS AND TRAINERS IN A CHANGING WORLD

Building up competences for
inclusive, green and digitalised
vocational education and training

AUSTRIA



Teachers and trainers in a changing world

Austria

Building up competences for inclusive, green and digitalised vocational education and training (VET)

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CHAPTER 1. Introduction

Vocational education and training (VET) is of major importance in the Austrian education system: around 76% of young people at upper secondary level are enrolled in a VET pathway ⁽¹⁾.

Accordingly, just around one quarter of the 129 000 teachers are employed in the VET sector (Statistics Austria, 2021). In addition, there are about 50 000 in-company (IVET) trainers (Dornmayr et al., 2019).

The role of teachers and IVET trainers is very ambivalent in the Austrian VET sector. Since the academic year 2016/17, a unified and modernised training for teachers of all school types and school grades (including part-time vocational schools) has been in force. The reform aims to improve the quality of teacher training and the professionalisation of teachers, to introduce the Bologna process and an access management system for training (aptitude test). At the same time, however, there is a lack of specific strategies and initiatives to address further problems in relation to teaching staff.

An ongoing challenge for education is the ageing of the teaching staff, which affects the VET sector in particular. At schools of intermediate vocational education and colleges of higher vocational education (BMHS), 51% of the teaching staff are 50 years or older, at part-time vocational schools this share is 53% (Statistics Austria, 2021). Gender-specific horizontal and vertical segregation in the labour market is also reflected in the structure of the teaching staff. In the VET school system, female teachers dominate in the area of schools and colleges of business administration and schools and colleges of social and services industries, while they are clearly underrepresented in schools and colleges of engineering and crafts. Female teachers are much less likely to be in management positions relative to the proportion of teachers (Lassnigg et al., 2019). Depending on the subject taught, a shortage of teachers is also identified, although this is likely to be somewhat greater in the STEM area in particular as there is also high demand in this area on the general labour market.

The training of IVET trainers traditionally focuses on specialist competence. Even though the great importance of the pedagogical qualifications of IVET trainers is repeatedly emphasised in education policy discussions, the legal requirements for their pedagogical qualifications remain minimal. This also becomes clear in the IVET trainers' own understanding of their role: they see themselves more as

(1) Source: Statistics Austria, Education in Figures 2019/20. Pupils by type of school. In-house calculations.

experts in their specific subjects than as teachers or educators (Dornmayr et al., 2019). At the same time, the lack of pedagogical qualifications is increasingly leading to trainers feeling no longer adequately equipped to deal with current problems (e.g. digitalisation of training, increasing demands on the job, the trainees' lack of language skills, cultural diversity). Any further pedagogical training of trainers is also difficult to address in company practice because the majority of trainers carry out their training activities alongside their full-time work (Dornmayr et al., 2019).

CHAPTER 2. Types of teaching and training professionals

2.1. Main types

VET in Austria is defined by the institutionalised forms at upper secondary level in full-time VET schools (BMHS) and apprenticeship training (in companies and part-time vocational schools). For young people who cannot find a training place in a company, there is also a special form of apprenticeship training called supra-company training ⁽²⁾. In these measures, the company part of the training is substituted by a programme offered by a supra-company training facility.

Of all young people in VET, around 45% choose an apprenticeship and around 55% opt for a BMHS (Statistics Austria, 2021).

In a first categorisation of teachers in initial vocational education and training (IVET) at upper secondary level, a distinction can be made between the following:

- (a) teachers of general education subjects;
- (b) teachers of occupation-related theory;
- (c) teachers of occupation-related practice;
- (d) IVET trainers;
- (e) trainers in supra-company apprenticeship training (ÜBA).

This article focuses on categories (b) to (d). In addition, socio-educational support staff are also employed. Teachers of general education subjects are listed here for the sake of completeness. However, they are not VET teachers. Trainers in supra-company training are comparable to IVET trainers and are therefore not described separately.

Table 1 gives an overview of the forms of VET in which the different types of teachers and trainers are active.

⁽²⁾ 7% of apprentices complete apprenticeship training in the form of supra-company training (WKO, 2021).

Table 1. **Types of teachers by form of training**

Form of training Typology of teachers	BMHS	Company	Apprenticeship	
			Part-time vocational school	ÜBA
Teachers of general education subjects	x		x	
Teachers of occupation- related theory	x		x	
Teachers of occupation- related practice	x		x	
IVET trainers	(x)	X		x
Trainers in supra-company training				x

2.2. VET schools

Vocational education and training in Austria builds on two pillars. As the first pillar, a distinction is made between two forms of full-time vocational schools, depending on the duration and the degree: schools of intermediate vocational education (BMS; EQF 4/ISCED 354) and colleges of higher vocational education (BHS; EQF 5/ISCED 354-554) ⁽³⁾. The BMS is concluded with an initial vocational qualification and usually lasts 3 to 4 years. The BHS offers a sound general education in addition to a higher vocational qualification. The final qualification entitles the holder to unrestricted access to higher education. As a rule, these training programmes last 5 years. Both forms of school comprise a wide variety of school types covering a broad spectrum of occupational areas (e.g. technical, crafts, commercial, social, tourism). In the full-time vocational schools, the company as a place of learning is integrated within the framework of compulsory periods of work placements, most of which have to be completed during the time when there are no classes. These compulsory work placements usually make up only a small proportion of the training period and vary between 4 weeks and 8 months depending on the school type ⁽⁴⁾.

⁽³⁾ In addition, there are some special forms in the field of social and healthcare programmes, which are not discussed in detail here.

⁽⁴⁾ The compulsory work placements at BHS with a technical focus, for example, comprise at least 8 weeks to be completed during the time when there are no classes before entering the (final) fifth year. In schools of business administration their duration is 150 hours of work between the second and third year and in colleges of tourism they last for a total of 8 months before entry to the final year. (BMBWF, 2021a)

The second pillar of the VET sector is apprenticeship training (NQF 4/ISCED 354). Here, a basic distinction can be made between two variants: the traditional form of company-based apprenticeship training and the special form of supra-company training. Depending on the apprenticeship occupation, the training lasts between 3 and 4 years ⁽⁵⁾ and about 80% of it takes place directly in a training company or in a supra-company training centre. The rest of the training takes place at a part-time vocational school, which is attended either on a weekly basis (on one day) or in block form. Supra-company training primarily addresses young people who are unable to find a company-based apprenticeship post (e.g. due to a lack of training places, low prior qualifications, increased need for support). In addition, the apprenticeship training sector also offers programmes for young people with learning difficulties in the form of a partial qualification (only parts of the job profile are offered) or an extension of the apprenticeship period by one or, in exceptional cases, two years.

2.3. Teaching and training professionals by type of VET school

This differentiated system of vocational education and training results in different categories of training professionals (cf. Table 1). For the VET school forms (BMHS and part-time vocational school), the teaching staff can basically be divided into the following:

- (a) teachers of general education subjects;
- (b) teachers of occupation-related theory;
- (c) teachers of occupation-related practice.

Teachers of general education subjects are active equally at all types of schools. Teachers of occupational-related theory are also employed in all types of schools, but they are specialised and qualified in a particular vocational area. Furthermore, the training and employment requirements for teachers of occupation-related theory differ depending on whether they work at part-time vocational schools or BMHS. Teachers of occupation-related practice specialise in engineering and crafts and are therefore mainly employed at schools with a corresponding special focus (technology, trades, tourism, media, IT, etc.) as well as at part-time vocational schools, but not at schools and colleges of business administration.

⁽⁵⁾ Individual exceptions also 2 years (ibw, 2021).

For apprenticeship training, IVET trainers - who act at company or at supra-company (ÜBA) level - constitute the main category. At supra-company level, they are usually simply referred to as trainers.

In addition, socio-educational support structures (vocational training assistance) have been set up in particular for apprenticeship training; these structures aim to accompany and support young people with disabilities, learning difficulties or other disadvantages during the entire training period in the company or in ÜBA and also at part-time vocational school (training in a partial qualification or with an extended apprenticeship period).

CHAPTER 3.

Teaching and training professionals in school-based settings

3.1. Legislation

The 2013 Federal Framework Law concerning the introduction of a new teacher training scheme (BGBl. I no 124/2013) ⁽⁶⁾ restructured the training of school teachers at all levels, including school-based VET. The fundamentally new training structure was implemented for the first time in the 2016/17 academic year. The main goal of this new structuring of the entire training was and is to

- (a) increase the quality of training for teaching staff;
- (b) convert the training structure to the Bologna process;
- (c) introduce access management to the teaching profession; and
- (d) enhance permeability for lateral entrants.

This law introduced a number of new features that harmonise teacher training programmes, which are described in more detail in Chapter 3.2.

3.2. Qualification and competence requirements

Depending on the type of teachers, different studies with different admission requirements have to be completed, which then entitle them to the respective teaching assignment. While § 52 HG 2005 as amended regulates the admission requirements for ordinary studies uniformly throughout Austria ⁽⁷⁾, the concrete aptitude and admission procedures as well as the detailed curricula may differ in their concrete design depending on age and subject area, subject bundle and educational institution ⁽⁸⁾.

⁽⁶⁾ Bundesrahmengesetz zur Einführung einer neuen Ausbildung für Pädagoginnen und Pädagogen. Bundesgesetzblatt I Nr. 124/2013.

https://www.ris.bka.gv.at/Dokumente/BgblAuth/BGBLA_2013_I_124/BGBLA_2013_I_124.pdfsig

⁽⁷⁾ For teacher training studies, the general admission requirements applicable to each age range can be found in § 52 para. 2 HG.

⁽⁸⁾ See § 52e HG, HZV and relevant ordinance of the institutions (rectorate or university council).

Basically, the following prerequisites are to be distinguished for the bachelor's degree programme for the teaching profession at secondary level (vocational education):

- (a) A general suitability divided into personal, performance-related, professional and artistic and pedagogical aptitude, which is checked in multi-part aptitude procedures (including online self-assessments, online psychological tests and/or personal assessments); and
- (b) A special suitability, which must meet different requirements depending on the subject area and the subject bundle
 - (i) successful completion of the secondary school leaving examination and diploma examination of a relevant college of higher vocational education, or
 - (ii) successful completion of a secondary school leaving examination and relevant training, or
 - (iii) for the subject bundle of practical subjects, the successful completion of a relevant master craftsperson's examination or an equivalent relevant qualification.

For all subject areas, completion of at least three years of relevant professional experience is a prerequisite.

The legal regulations on the assessment and admission procedures in the different subject areas and subject bundles of teacher training programmes at secondary level (VET) are regulated in the Higher Education Admissions Ordinance (HZV) as amended and, in principle, in the Higher Education Act 2005 as amended (HG). In addition, the respective implementation regulations of the University colleges of teacher training and responsible education directorates have to be taken into account.

The access requirements for teachers in the field of VET essentially follow two intentions:

- (a) the evidence of professional experience is intended to reinforce the practical relevance of VET; and
- (b) permeability to the teaching profession from the occupation-specific labour market is intended to be made easier, thus counteracting the shortage of teachers especially in engineering and the crafts sector.

The acquisition of a teaching licence for business subjects holds a special position. Due to a historical tradition, the teaching licence is acquired through completion of a specific study of business education at universities (master's degree). The admission requirement for a degree course in business education is proof of the general higher education entrance qualification (matriculation

certificate) or a *Studienberechtigungsprüfung*. This special position will not be discussed further in the following.

The new teacher training scheme based on the 2013 Federal Framework Law allows for a more flexible deployment of teachers that is not limited to one type of school. The largely raising of the level of teacher training to the master's level leads to a general academic upgrading. The only groups of teachers for whom the master's degree is not compulsory are teachers at part-time vocational schools, teachers of occupation-related practice and teachers of occupation-related theory who have already completed a relevant tertiary education programme (BMBWF, 2019b). The training courses for teachers of general education subjects are offered in close cooperation between university colleges of teacher education and universities. VET teachers are currently trained exclusively at University colleges of teacher training.

As a general rule, all teachers at VET schools – with the exception of teachers of general education subjects – must prove that they have relevant work experience in the business world before they start teaching at a school. Students with relevant work experience are employed at a school and complete their studies part-time. Full-time students must acquire their professional practice during their studies.

For lateral entrants there is the possibility of obtaining credits for their previous professional experience and academic, subject-specific theoretical qualifications, which shortens the remaining duration of the study course. This is intended to make the teaching profession more attractive especially for professionals in the labour market. For teachers at part-time vocational schools, relevant professional experience is a recruitment criterion. In this sense, they are always lateral entrants. For this professional experience, a lump-sum credit of 90 ECTS for teachers in occupational-related theory and occupational-related practice and 60 ECTS for teachers of general education subjects and business subjects is provided for the bachelor's degree programme ⁽⁹⁾.

Whether the set goals will be achieved in practice is to be shown by an evaluation of the new teacher training scheme which was commissioned by the BMBWF and launched in May 2021, the results of which will be available in 2022.

⁽⁹⁾ Bachelor's degree programme: 'Teacher Training Secondary Level Vocational Education - Dual VET as well as engineering and crafts'.

3.3. Initial training programmes

All teacher training programmes are organised according to the Bologna process as bachelor's and master's programmes. Those for teachers of general education subjects are carried out in cooperation between universities and university colleges of teacher education. The master's programme is optional for teachers at part-time vocational schools and for teachers of occupation-related practice as well as for teachers of occupation-related theory with a relevant tertiary qualification on master's level.

The basic structure of the training as presented in Table 2 is based on the types of teaching staff presented in Chapter 2.

Table 2. **Type of training by types of teachers**

Typology of teachers	Training	Training institution
Teachers of general education subjects (BMHS)	Teacher training programme, secondary level, general education (bachelor & master)	Universities and/or University colleges of teacher education
Teachers of occupation-related theory (BMHS)	Teacher training programme, secondary level, VET (bachelor & master)	
Teachers of occupation-related practice (BMHS)		Subject area: 'Dual VET as well as engineering and crafts' (bachelor & optional master)
Teachers at part-time vocational schools		

Within the basic training structure shown in Table 2, students can choose between numerous special focuses and packages of subjects:

- (a) Teacher training programme, secondary level, general education: the bachelor's programme (degree: Bachelor of Education, BEd) comprises a total of 240 ECTS. Two subjects (or one subject and one specialisation) have to be chosen within the degree programme. In the subsequent master's programme (120 ECTS, Master of Education, MEd), the contents of the bachelor's programme are further deepened.
- (b) Teacher training programme, secondary level, VET:
 - (i) Teacher training in a subject area: the bachelor's programme comprises a total of 240 ECTS and is offered in different subject areas (e.g. fashion and design, nutrition, social affairs, information and communication (applied digitalisation)). The contents of the degree programmes refer to general educational fundamentals, occupation-specific fundamentals

(professional experience and training can be credited here), subject science, subject didactics and teaching practice.

- (ii) Studies supplementing relevant studies ⁽¹⁰⁾: this bachelor's level course addresses students with a relevant tertiary degree. The in-service teacher training programme comprises 240 ECTS credits. A maximum of 180 ECTS credits for the completed subject-related studies at master's level can be credited; at least another 60 ECTS credits must be completed in order to supplement the already completed subject-related studies with didactic and pedagogical content. A subsequent master's degree course is optional.
- (iii) The teaching licence for occupation-related practice (BMHS) and at part-time vocational schools is essentially acquired through training as a special case of (i). For this group, a separate bachelor's degree programme with three different subject bundles for employment as a teacher in the respective vocational field was established under the name 'Dual VET as well as engineering and crafts'.

All bachelor's degree programmes have an introductory and orientation period with the aim of providing orientation at the beginning of the studies, reflecting on the choice of studies and understanding the requirements to be met in the course of the training and in the teaching profession. All curricula are designed with a focus on competence orientation and enable the acquisition of profession-oriented competences during the training.

In the transition between training and graduates entering the teaching career, there is an additional one-year induction period (except for those who complete their training on a part-time basis). During this period in the first year of professional development with reflection-related courses, the new teachers are supported by mentors.

3.4. Requirements for continuous professional development

A basic distinction is made between in-service training and continuing training of teaching staff. While continuing training aims at the acquisition of new, additional qualifications in longer teaching periods, in-service training refers to the maintenance and further development of existing professional competences.

⁽¹⁰⁾ For lateral entrants in the field of secondary vocational education and training.

In the new service law for the pedagogical service (pd-scheme), which was introduced in 2013, contract teachers have to attend in-service training events up to the extent of 15 hours per school year in the non-teaching time. There is no requirement as to content. This service law applies to all teachers entering the teaching service from the 2018/2019 school year. For all other teachers, the old service law continues to apply. In the old service law, there are general regulations in the School Instruction Act and in the Civil Service Act, from which an in-service and further training obligation for teachers can be derived. However, a quantified obligation for in-service training only exists for teachers at compulsory schools in the old service law ⁽¹¹⁾.

The Education Reform Act 2017 brought about an expansion of the autonomous scope of action in the area of pedagogical, organisational and personnel management of schools. Based on the basic principle of autonomy, the competences of school managements were expanded in the new control of schools. Within the framework of personnel development and systematic competence building at the individual school locations, the school management is required to ensure that teachers take advantage of adequate qualification measures.

There is no data on the extent to which this obligation is actually fulfilled. There has also been little research on the effectiveness of continuing education and training for teachers in Austria.

In-service and continuing training of teachers is mainly provided by the university colleges of teacher education, which are higher education institutions that are specifically set up for teacher training; in continuing education, there are also offers from or in cooperation with other universities, focusing on teacher training in general subjects. Quality control for continuing and further education is carried out by the federal quality framework for continuing and further education and school development counselling at university colleges of teacher education (BMBWF, 2021b). In the quality dimensions of process quality, product quality, personnel quality and result quality, concrete quality criteria are defined as standards and backed up with indicators. The university colleges of teacher education are responsible for clarifying and analysing needs and incorporating new scientific findings into the structure of provision.

Since in-service and continuing training of teachers is generally only regulated as a framework and largely falls under the autonomy of the school locations, there are currently no procedures for validation and recognition of competences acquired on the job or in non-formal settings. In the strategic development plan of

⁽¹¹⁾ They are required to participate in 15 hours of compulsory training per year. However, there are no specifications regarding the content of the additional training.

the university colleges of teacher education, only the further development of the *Studienberechtigungsprüfung* (as one possible way of admission to studies) with regard to the recognition of non-formal and informal achievements is stated as a goal (BMBWF, 2019b). However, this refers to the initial admission to studies and not to the further training of teachers.

In principle, in-service training offers can be tailor-made on the initiative of the school as in-service training within the school at the respective school location as well as in an inter-school form. The BMBWF provides a list of nationwide in-service and further training offers every semester (BMBWF, 2021c). Depending on the scope, the in-service and continuing training offers are held in block form lasting several days. The offer refers to all areas that are considered important in terms of professionalisation, such as subject-specific knowledge, subject didactics and new pedagogical approaches. Participation in in-service and continuing training courses must be approved by the respective school managements.

Teachers with at least five years of teaching experience can be appointed as mentors to introduce new teachers to their work during the induction period. The prerequisite is completion of a higher education programme with the title 'Mentoring, professional support for career entry' (30 ECTS). The further development of the programmes provided by university colleges of teacher education is set out in a strategic development plan for 2021-2026 (BMBWF, 2019b).

3.5. Data on teachers and trainers in school-based settings

The data related to teachers can be fundamentally divided into (a) currently employed teachers (statistics on teaching staff), (b) students in teacher education programmes, and (c) data on in-service and continuing training.

- (a) Statistics on teaching staff are collected periodically by Statistics Austria for each school year and published in an explanatory report ('Bildung in Zahlen' or 'Education in Figures' - at this point there is only a German version available) as well as in a detailed volume of tables ⁽¹²⁾. This report shows the number of teachers in each school year differentiated by school type, gender and age. According to the report, a total of 29 181 teachers were employed at VET schools and colleges (including part-time vocational schools) in the 2019/20 school year, which is 23% of all teachers. Of these, 80% were at

(12) https://www.statistik.at/web_de/statistiken/menschen_und_gesellschaft/bildung/schulen/lehrpersonen/index.html [retrieved on 17.5.2021].

BMHS and 16% at part-time vocational schools. While the share of women among teachers in the entire school sector is 73%, it amounts to 55% in BMHS and only 36% in part-time vocational schools. In a comparison over several years, the number of teachers in the VET school system has remained largely stable (school year 2016/17: 29 752). In addition, it is possible to retrieve further information from the publicly accessible statistical database of Statistics Austria (STATcube), such as with regard to the school provider (public/private), type of employment (full-time/part-time), region and time series (Statistik Austria, n.d.).

- (b) Data on the training of teachers can be retrieved from the unidata database (www.unidata.gv.at) of the BMBWF. This database makes data on the higher education sector publicly accessible. This database generates an annual report (Statistical Yearbook), in which relevant information on teacher training programmes is also published: data on first-year students and degree programme students at university colleges of teacher education, teacher training degree programmes according to teaching networks (regional cooperation ventures between university colleges of teacher education and universities), and degrees awarded at university colleges of teacher education. In the winter semester 2019, a total of 25 689 students in teacher training programmes were counted in the teaching networks, with a 63% share of women. In the 2018/19 academic year, 2 650 students graduated from a teacher training programme, 70% of whom were women. While the proportion of students studying for a teaching degree in VET is around 7%, the proportion among graduates is about 10% (BMBWF, 2021d).
- (c) There are no publicly accessible data sources on in-service and continuing training in Austria. Data on participation in in-service and continuing training is collected individually at the university colleges of teacher education but is not compiled on the basis of a uniform standard. To fill this data gap, a paper in the latest National Report on Education (from 2018) aimed to collect data once from the respective university colleges of teacher education (Müller et al., 2019). According to this paper, there were 46 057 registrations of teachers in the field of BMHS and part-time vocational schools for in-service training courses at university colleges of teacher education in the academic year 2015/16. The top 3 topics of events related to subject-specific education, general educational topics and lesson design. 55% of the events had a duration of half a day.

CHAPTER 4. Training professionals in work-based settings

4.1. Definitions

In accordance with the Vocational Training Act or VTA (*Berufsausbildungsgesetz, BAG*), IVET trainers in apprenticeship training are referred to as trainers, in common parlance also as apprentice trainers. In supra-company training facilities, the term 'trainer' is used most often, but increasingly also 'instructor'. According to the VTA, trainers are persons who possess the knowledge required for the training of apprentices and can apply it in practice (BAG, 2020).

As mentioned in Chapter 2, vocational training assistance is also used in in-company training, in ÜBA and in part-time vocational schools to accompany young people with special needs who are completing their training in a partial qualification or with an extended apprenticeship period throughout the training period and provide them with socio-educational support. In contrast to the trainers, they are not employed by the company, but act as external facilitators and supporters of the apprentices within the framework of the Employment Assistance Network (NEBA), which is commissioned by the Ministry of Social Affairs.

4.2. Legislation

The Vocational Training Act, which regulates the entire company-based training provided within the framework of apprenticeship training, also regulates the IVET trainer qualification and the supervision ratio, i.e. the number of trainers required in relation to the number of apprentices.

Companies that want to train apprentices are obliged to submit an application for determination of suitability for apprenticeship training to the local competent apprenticeship office ⁽¹³⁾ and have a so-called declaration issued. The prerequisites for apprenticeship training are, on the one hand, the fulfilment of legal conditions (i.e. the company needs to be entitled pursuant to the Trade, Commerce and Industry Regulation Act to carry out the activities in which the apprentice is to be trained), on the other hand, fulfilment of corporate conditions (i.e. the company needs to be equipped and managed in a way that it is in a position to impart to the

⁽¹³⁾ The apprenticeship offices located in the regional economic chambers act as vocational training authority of the first instance and, at the same time, first point of contact for training companies in issues related to apprenticeship training.

apprentice all the knowledge and skills included in the job profile - those companies that cannot fully impart this knowledge and skills have the possibility to train apprentices within the framework of a training alliance). In addition, a sufficient number of professionally and pedagogically qualified trainers must be available in the company ('ratio') ⁽¹⁴⁾.

The training company must nominate an IVET trainer. As well as having a minimum age of 18 years, this IVET trainer needs to furnish proof of certain qualifications. This proof can either take the form of the IVET trainer exam, the IVET trainer course, or a substitute for exam or course attendance in the form of passing other exams that include the IVET trainer exam (such as the master craftsperson exam, completion of a part-time industrial master college, the entrepreneurial exam). Most IVET trainers are active as trainers on the side as part of their main professional activity. Particularly in companies with larger numbers of apprentices, there are also full-time IVET trainers.

The IVET trainer exam is an oral exam based on examples from training practice. It needs to take the following areas as regulated in the VTA into consideration:

- (a) determination of the training objectives based on the job profile;
- (b) planning of the training at the company;
- (c) preparation, implementation and supervision of the training;
- (d) behaviour of the IVET trainer towards the apprentice;
- (e) questions related to the legal basis of the apprenticeship training as well as its position/importance in the Austrian education system.

IVET trainer courses are offered by the adult education establishments of the social partners. They aim to impart, in at least 40 periods of instruction (based on the VTA) which are completed with an expert interview, the necessary pedagogical, psychological, training plan-related and methodical/didactic as well as legal knowledge and skills required for the training of apprentices. The course contents are the same as those of the IVET trainer exam.

For quite a few years there have not been any major changes in the way trainers are trained. One indicator of this is that the content and form of the IVET Trainer Examination Ordinance, which governs the contents of the training examination among other things, have not been changed since its introduction in 1995.

⁽¹⁴⁾ More specifically, this means that, for every five apprentices, there should be at least one IVET trainer who is not exclusively entrusted with training tasks or that for every 15 apprentices there should be at least one IVET trainer who is exclusively entrusted with training tasks.

With regard to the qualification of trainers in supra-company training, the VTA stipulates that there must be the required number of persons who have the personal qualifications to train apprentices. This is to be interpreted in such a way that the regulations for IVET trainers must also be applied to trainers in the ÜBA.

The activities of vocational training assistants are also regulated in the VTA, but not their training. These persons are usually social workers with appropriate higher education qualifications.

Finally, it must be pointed out that, in company practice, training is not only carried out by formally designated IVET trainers, but that in everyday work apprentices are also instructed by colleagues who do not have any formal IVET training qualifications (Lachmayr and Mayerl, 2019).

4.3. Provisions for continuous professional development

The mandatory basic qualification described above can be supplemented voluntarily by attendance of continuing training measures. For this purpose, programmes are offered at adult education establishments and in some cases in-house continuing training programmes are also available for IVET trainers. In recent years, additionally so-called IVET trainer colleges and IVET trainer forums have been set up in many Austrian provinces with the aim of organising and providing continuing training in the form of seminars and workshops for IVET trainers. Frequently they are coordinated by the regional economic chambers in cooperation with the respective chamber's continuing training institution or organised in cooperation ventures between different social partners. Most of them offer certification in various stages. Furthermore, they promote experience exchange and networking between IVET trainers. This is also the focus of regional and, in some cases, regular industry-specific meetings of IVET trainers.

There is no formal obligation for trainers to undergo continuing training. However, the VTA stipulates that the authorised apprenticeship trainer must ensure that the IVET trainer has the time necessary to fulfil his/her training duties as well as an appropriate amount of time for continuing vocational training in the interest of improving the training of apprentices (Section 9 (8) of the VTA).

Due to the lack of obligation for IVET trainers to undergo further training, which is exclusively voluntary and based on internal company requirements, there are also no validation and recognition procedures to recognise informally acquired competences.

The Austrian Federal Economic Chamber financially supports measures related to the continuing training of IVET trainers in their contact with apprentices,

such as pedagogy, didactics, personal development, diversity, etc., in the form of subsidies for training companies. A prerequisite for support is a minimum course duration of eight hours. The subsidy amount totals 75% of the course fees, but no more than EUR 2 000 per trainer and calendar year (www.lehre-foerdern.at).

As one essential part of CPD opportunities for apprenticeship trainers, the quality management in apprenticeship training (QML) initiative was launched in 2013. It aims to achieve the objective that a larger share of apprentices complete their training and pass the apprenticeship-leave exam - without reducing the level of the exams. QML builds on annually evaluated indicators of apprenticeship dropouts, the number of apprentices who (do not) sit for the final exam as well as the number of apprentices who (do not) acquire the apprenticeship diploma. In the initial phase of this data-based quality assurance scheme, the focus is on apprenticeships with high numbers of apprentices where the worst indicators are found. More in-depth analyses are conducted for the apprenticeships concerned jointly with the responsible representative bodies to identify the causes as far as possible. On this basis, measures are decided which aim to increase success rates, such as train-the-trainer programmes, materials for training companies, etc.

To support the training, the training companies and the IVET trainers are provided with subject-specific and didactic training aids (training guidelines) commissioned by the Ministry for Digital and Economic Affairs (BMDW) and the Austrian Economic Chamber (WKO) and drawn up in cooperation with sectoral representatives. These guidelines not only explain the training regulations, but also offer opportunities for informal continuing training with numerous tips and examples of good practice. These guidelines, along with much other important information, are made available on a dedicated platform www.qualitaet-lehre.at. Another platform www.ausbilder.at aims to provide IVET trainers with video-supported good practice examples from in-company training practice to give them ideas for their own training and to learn from each other.

The coaching for training companies that was rolled out across the country in 2015 as part of the 'Lehre statt Leere' (apprenticeship rather than emptiness) programme can also be seen as an opportunity for the CPD of trainers. Particularly in the case of difficulties in interactions with apprentices and the risk of a termination of apprenticeship training, this service, commissioned by the BMDW and the WKO, offers important support in the CPD of trainers (www.lehre-statt-leere.at).

4.4. Data on trainers in work-based settings

Data on the number of IVET trainers and instructors in supra-company VET and their qualifications is not available, nor is data on IVET trainer examinations or participation in continuing training. In the course of a trainer survey conducted by ibw in 2019, following a request to the WKO, the number of IVET trainers as of the end of November 2018 was put at 49 138 by the WKO (Dornmayr et al, 2019).

CHAPTER 5. Partnerships between schools and companies

5.1. Examples of practice

In addition to the more formal interfaces between schools and companies described in Chapter 5.2, there are a number of examples of initiatives and programmes that aim to increase the practice orientation of teaching staff through informal cooperation projects between schools and companies. Two initiatives are highlighted here. These initiatives are not exclusively aimed at VET teachers, but they do include them:

- (a) Seitenwechsel (switching sides): in the 'Seitenwechsel' initiative (www.seitenwechsel.at), which is supported by the Ministry of Education, teachers of all school grades (including BMHS and part-time vocational schools) change from the classroom to a company for 12 months and then return to their teaching jobs. The special feature of the programme is its duration of 12 months, which enables the teachers to be fully integrated at the company workplace and thus to gather extremely intensive practical experience.
- (b) the 'work placements for teachers' initiative: in cooperation with the University College of Teacher Education of Christian Churches Vienna, the Vienna Directorate of Education and other project partners, the Vienna Economic Chamber (WKW) organises three-day work placements for active teachers and for students in teacher training programmes as part of in-service teacher training. The goal is, on the one hand, to make the teachers aware of the requirements of the economy and, on the other hand, to enhance their basic understanding of the economy. This initiative often also initiates further cooperation schemes between schools and companies, which lead to a transfer of practice to the schools. The programme is aimed primarily at teachers in general education but is also open to teachers in VET. (WKW, 2021) Similar programmes are also offered regionally in other provinces.

5.2. Cooperation between VET schools and companies

The interface between school and company exists in two formalised ways in Austria:

- (c) Apprenticeship training: in apprenticeship training, the two places of learning are the training company and part-time vocational school. Although cooperation between these two learning venues is regarded as an essential aspect of quality ⁽¹⁵⁾, there are no formal links like training contracts between training company and part-time vocational school. The cooperation is limited to communicative exchanges between the IVET trainers and the teachers at the vocational school. Thus, for example, there are only few projects that are planned and carried out jointly by companies and schools (Lachmayr & Mayerl, 2019).
- (d) In BMHS, school-based education is supplemented by practical phases (compulsory work placements, company-based practice) of varying scope depending on the type of school (cf. Chapter 2). A recent survey on the implementation of company-based practice at schools of engineering and crafts shows that, in the course of this implementation, there is definitely an informal exchange between school teachers and company support staff. Thus, when organising company-based practice, more than half of the schools actively contact companies. Around four tenths of schools state that teachers visit companies or invite companies to schools. Around one third of schools carry out joint projects with companies (Mayerl & Lachmayr, 2020).

In addition, there are numerous informal networks between part-time vocational schools and companies with the goal of exchanging practical experience at regional level.

These examples show that there are formal as well as informal interfaces between the learning locations company and school. In principle, these interfaces also offer the potential to promote institutionalised exchange processes between the schools' teaching staff and companies and to use them for the continuing training of teaching staff in VET. However, a stronger institutionalisation of these exchange processes is currently not intended. It can therefore be expected that the exchange processes will remain at an informal level.

5.3. Hybrid teachers and trainers

As part of the reform of teacher training, opportunities have been created for practitioners to acquire the necessary pedagogical competences in parallel with their teaching work. The concrete implementation of this possibility in the form of part-time study programmes is currently being developed and is planned to be

⁽¹⁵⁾ <https://www.qualitaet-lehre.at/ausbilden-im-betrieb/kooperationen> [retrieved on 17.5.2021].

accessible from 2022. Until then, a draft law is also being worked on at the initiative of the Ministry of Education which is intended to facilitate the equal treatment of lateral entrants under contract law from 2022. However, these developments primarily concern practitioners who want to switch to the teaching profession, not 'hybrid' teachers who want to combine teaching with a career in a company.

The employment of 'hybrid' teachers does occur in practice but is not a formal strategy in VET. As a rule, the initiative rather comes from the teachers themselves, who either switch from their work in the company to the school and continue their work in the company to a certain extent or build up a second mainstay in parallel to their teaching work by pursuing an activity in their area of competence on a self-employed basis.

Particularly in part-time vocational schools and in schools and colleges of engineering and crafts, practitioners with special contracts are employed specifically in order to close the staffing gap on the one hand and, on the other, to bring a stronger practical orientation to the VET schools. No information is available on the extent to which such special contracts are used. At this point in time, the disadvantage of these special contracts is that the teachers earn less than their colleagues in regular employment contracts. This is to be remedied by the legislative initiative described above.

5.4. **Data on cooperation and hybrid teachers**

Since there are no formal structures for cooperation between VET schools and companies, no data is collected in this regard.

CHAPTER 6. National and EU-funded projects and initiatives

6.1 Digital skills for remote and blended teaching

It is not only the Covid-19 situation that has put the development of digital literacy among teachers at the centre of the education policy debate. However, the Covid-19 pandemic has brought about a further acceleration in both the digitalisation of teaching itself and the skills development of teaching staff. In order to support the systematic development of skills among teaching staff, the Ministry of Education, in cooperation with the Virtual University College of Teacher Education, has created a comprehensive range of initial and in-service teacher training courses in its own competence centre.

The NCoC (National Center of Competence) of the Virtual University College of Teacher Education sees itself as an innovation hub for digital education trends and supports and advises university colleges of teacher education in the implementation of digital and innovative teaching and learning concepts. On behalf of the BMBWF, the Virtual University College of Teacher Education develops and tests a variety of online formats and their use in initial and in-service teacher training and ensures the transfer of know-how regarding digital skills in higher learning ⁽¹⁶⁾. The programmes range from MOOCs to e-lectures, online seminars, online tutoring training courses to 'coffee cup learning' (microlearning) and tailor-made programmes specific to school locations. What the programmes have in common is their digital format and the content-related focus on digital didactics/methodology and specialist know-how.

In order to promote digital skills among teachers, a competence model for digital skills for educators (Digi.kompP, as of 2019) was developed in 2016 on the basis of national and international digital competence models (such as the European Digital Competence Framework for Teachers) ⁽¹⁷⁾. It comprehensively defines the digital skills required for teachers along different competence categories and development stages. This competence model applies in principle to teachers of all school grades and types of school and is further developed on an ongoing basis. The model serves both as a self-assessment tool for teachers and

⁽¹⁶⁾ Virtuelle Pädagogische Hochschule: <https://www.virtuelle-ph.at/ueberuns/onlinecampus-virtuelle-ph/>

⁽¹⁷⁾ <https://www.virtuelle-ph.at/digikompl/>

as a stimulus for continuous development, as well as for categorising in-service training events.

While the topic of digitisation in apprenticeship training is high on the agenda of VET policy with regard to training content, the systematic development of digital skills among IVET trainers has not played a role so far. As in other areas of train-the-trainers programmes, skills development offers are limited to regional initiatives within the framework of trainer networks or to in-company measures.

6.2 Green skills for sustainability

In 2014, the Ministry of Education issued the 'Basic Decree on Environmental Education for Sustainable Development', which has been valid since then and which, among other things, defines the goals, principles and methodological/didactic approaches of environmental education and the associated acquisition of competences, but also describes the interaction with other teaching principles. The decree applies to all school grades and stipulates that the contents and objectives of the basic decree are to be implemented in the initial, in-service and continuing training of university colleges of teacher education and other institutions in which teachers receive initial and in-service training (BMBF, 2014). University-based programmes and higher education courses as well as other in-service and continuing training courses open to VET teachers teach content-related and methodological/didactic competences in environmental education. The University of Klagenfurt, for example, offers the four-semester university course 'Education for Sustainable Development - Innovation in Teacher Education Structure and Contents' in cooperation with university colleges of teacher education (BMBWF, 2019c).

In 2020, Greenovet - Skills for a green Europe, a centre of vocational excellence (CoVE) was established, coordinated by the University of Applied Sciences Joanneum Graz and with the participation of 30 partners from four regions in Austria, Finland, Portugal and Northern Macedonia. One cooperation partner - the college of engineering BULME in Graz - is a BHS. Explicit objectives of the CoVE include establishing and strengthening innovative teaching methods and educational trends in VET, and adapting the technical, pedagogical and didactic skills of VET teachers to the changing environmental, social and economic challenges. To this end, the project will train more than 100 teachers to provide excellence in teaching environment-related professional and key competences (for more information see <https://greenovet.eu>).

In apprenticeship training, unlike the area of VET schools and colleges, the topic of green skills has so far played a subordinate role. Although competences

relevant to sustainable development are specifically identified and integrated into the training content, this is not currently reflected in the initial and continuing training of IVET trainers.

6.3 Preventing early leaving from VET

Measures and initiatives to prevent early school leaving currently focus very strongly on supporting young people themselves and primarily at the transition between lower and upper secondary education, with an increasing focus on keeping young people in education. Within the framework of the 'Ausbildung bis 18' initiative, which specifies a training obligation up to the age of 18, various support structures have been created and brought together to bring young people into training and keep them there. However, teachers and trainers in VET are not the focus of the measures ⁽¹⁸⁾.

Specific approaches for promoting the competence development of teachers in VET with regard to inclusion are offered within the framework of the so-called new teacher training in the form of the possibility of completing a master's degree in teaching VET at secondary level with a focus on inclusive VET or integrative VET. The main contents are basics of integrative VET, integration and inclusion, diversity and individualisation as well as conflicts - prevention, intervention and management.

In the area of the skills development of IVET trainers, there are no supra-company initiatives and projects on the topic of inclusion. However, one initiative that contributes to skills development in this area is the 'Lehre statt Leere' (apprenticeship rather than emptiness) programme, which has been implemented throughout Austria since 2015 with a focus on coaching for apprentices (not discussed in more detail here) and coaching for training companies. The initiative was developed in 2013 on behalf of the Ministry of Economic Affairs and rolled out across Austria in 2015 in order to prevent early termination of training in the event of problems during training. In the coaching of training companies, training companies and trainers are also supported in skills development in dealing with difficult situations and challenges in training in order to find solutions and possibilities on the way to the apprenticeship-leave certificate (www.lehre-statt-lehre.at).

⁽¹⁸⁾ Information on the various regulations and measures for the 'training obligation up to the age of 18' is available at www.ausbildungbis18.at, some of which is also in English.

CHAPTER 7. National surveys of teaching and training populations

In general, it can be noted that few studies have been conducted to date that explicitly focus on the situation of teachers and trainers in vocational education and training.

Since May 2021, a comprehensive evaluation of the new teacher training scheme presented in Chapter 3 has been carried out on behalf of the BMBWF, the results of which should be available in 2022. A formal evaluation of the induction period for new teachers which was introduced in the framework of the new teacher training scheme has recently been published. However, the focus here is on the general situation of those entering the profession rather than explicitly looking at teachers in the VET sector (Prenzel, 2021).

Analyses, particularly with regard to structural data on the situation of teachers and trainers in VET, can also be found in the 2018 National Report on Education. Also there, however, VET is not considered explicitly, but in the context of the entire education system (Lassnigg et al., 2019).

IVET trainers have been a neglected group for a long time as well although they do play a key role in VET. In 2019, ibw was therefore commissioned by the BMDW to conduct a comprehensive trainer survey with over 1 000 IVET trainers in order to get a picture of the situation of trainers in apprenticeship training and to identify challenges from the trainers' perspective. The study also analysed structural features and changing competence requirements for IVET trainers (Dornmayr et al., 2019).

CHAPTER 8. Conclusions

As described in this paper, the entire teacher training system in Austria has undergone a comprehensive reform process in recent years. Current discussions very strongly focus on whether this reform fulfils the objectives set and the expectations placed in it (harmonisation of the training, increasing the quality and attractiveness of the teaching profession, opening up to practitioners, etc.). Answers to these questions are expected from the evaluation, which will run until 2022.

In particular, the expectation that the reformed training will attract more people to teacher training does not seem to be fulfilled according to the student figures available so far, which show a clear overall decline in the number of first-semester students. The details and causes, the possible role of the Covid-19 situation and any conclusions drawn from it should be clarified by the ongoing evaluation.

In general, it should be noted that the majority of the debates cover the teaching profession as a whole and not explicitly teachers in VET. In addition to the discussions outlined above, the issue of relieving teachers of administrative and socio-educational tasks through more support staff is also a topic of current debates and, of course, equally affects teachers in VET. However, issues such as ensuring the practical competence of teachers or facilitating access for practitioners to the teaching profession, as well as the employment of 'hybrid' teachers, are particularly relevant to VET; extended insights into European experiences and European practice could provide interesting learning opportunities here.

The Covid-19 situation is not the only reason why the issue of digitalisation in the classroom and thus the question of the teachers' digital skills has also moved sharply into focus. The Covid-19 pandemic has brought about a significant acceleration in both the digitalisation of teaching itself and the skills development of teachers. A multitude of offers coordinated and partly initiated by the Virtual University College of Teacher Education should provide for systematic competence development of teachers here.

The exchanges between the learning venues of company and school have so far only been institutionalised to a very limited extent, although there are close informal ties between schools and companies via compulsory company placements in virtually all full-time VET schools. Not only could a stronger formalisation of this relationship bring more practice into schools, but it could also encourage teachers in company practice to engage in continuing training. In

addition, options would possibly open up for a stronger push towards the employment of hybrid teachers, who have so far played only a very minor role.

With regard to IVET trainers, a very ambivalent situation can be observed. On the one hand, trainers constitute a key factor in ensuring the quality of in-company training, especially in view of the increasing requirements resulting from ever more complex job profiles, digitalisation and diverse pedagogical challenges in dealing with young people. On the other hand, it is difficult to find approaches towards formalised initial and continuing vocational training that go beyond the voluntary commitment of companies, since training is controlled by the company itself and trainers usually provide training on a part-time basis.

List of abbreviations

BAG	<i>Berufsausbildungsgesetz</i> (Vocational Training Act)
BEd	Bachelor of Education
BGBI.	Federal Law Gazette
BMBWF	Federal Ministry of Education, Science and Research
BMBF	Federal Ministry of Education and Women (until 2016; today: BMBWF)
BMDW	Federal Ministry for Digital and Economic Affairs
BHS	College of higher vocational education
BMHS	Schools of intermediate vocational education and colleges of higher vocational education
BMS	School of intermediate vocational education
CoVE	Centre of vocational excellence
CPD	Continuous professional development
ECTS	European Credit Transfer and Accumulation System
EQF	European Qualifications Framework
HG	Higher Education Act (<i>Hochschulgesetz</i>)
HZV	Higher Education Admissions Ordinance
ibw	Institut für Bildungsforschung der Wirtschaft (Research & Development in VET)
ISCED	International Standard Classification of Education
IVET	Initial vocational education and training
MEd	Master of Education
MOOC	Massive open online course
NCoC	National Center of Competence
NEBA	Employment Assistance Network (<i>Netzwerk berufliche Assistenz</i>)
QML	Quality management in apprenticeship training
STEM	Science, technology, engineering and mathematics
ÜBA	Supra-company apprenticeship training
VET	Vocational education and training
VTA	Vocational Training Act (BAG)
WKO	Austrian Federal Economic Chamber
WKW	Vienna Economic Chamber

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