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Initial Vocational Education and Training in Austria

CEE-Report on commission of CEDEFOP

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CEE - Center for Education and Economy

mit Unterstützung durch

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Theme 4:

Initial Vocational Education and Training in Austria

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Graz, September 2003

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Abstract

The presented CEDEFOP-report offers a detailed survey of Austria`s initial vocational education. It focuses on academic and operational pathways within secondary educational level II as well as on training opportunities within post-secondary and tertiary level.

The report places further more emphasis on the topicality of used data, international comparability and the clarity of integrated tables and charts. The paper also comprises central processes of change such as the general trend towards educational expansion, vocational education on a higher level, increasing quota of women within higher levels of education, and focuses also on its consequences concerning the structure of trainees.

The Austrian system of vocational education is a highly sophisticated and differentiated one. This publication helps to understand its complex structure and gives a hand for comparisons with other systems within the European Union.

Preliminary Note

This paper about Austria`s system of initial vocational education is composed on behalf of the CEDEFOP - European Centre for the Development of Vocational Training - and was worked out by the CEE – Centre for Education and Economy – in summer 2003 in Graz. The report provides a detailed and international comparable survey of the system of vocational education in Austria. In particular it places emphasis on the documentation of developments concerning the vocational education, which have occurred within recent years, whereby attention was paid to actual and current data and analysis.

The amount of available statistic information concerning Austria`s educational system is not complete. CEDEFOP sometimes also requires specific information that is missing in the statistics. Even though the authors of this paper made every effort, certain data have not been available, in particular in the field of career paths and the transfer into the job market. If this report differs in some respects from the usual structure of a CEDEFOP-scheme for structural reports concerning topic 4 it will be explicitly mentioned.

Since there was a population census in 2001 providing a useful and good basis concerning statistic data, most statistics refer to the same year.

The CEE considers the principles of gender mainstreaming as compulsory. Because of that the authors pay attention to specific needs and interests of both sexes and provide extra information to meet the requirements within gender mainstreaming throughout maintaining an appropriate illustration of statistic data.

Thanks to all who have given their support and advice during the evaluation, especially to representatives of the Federal Ministry of Education, Science and Culture (BMBWK), the Federal Ministry of Economic Affairs and Labour (BMWA), the Austrian Federal Economic Chamber, the Public Employment Service (PES) and to Statistics Austria. Their endeavour and cooperation have contributed enormously to the successful completion of this report.

Graz, September 2003

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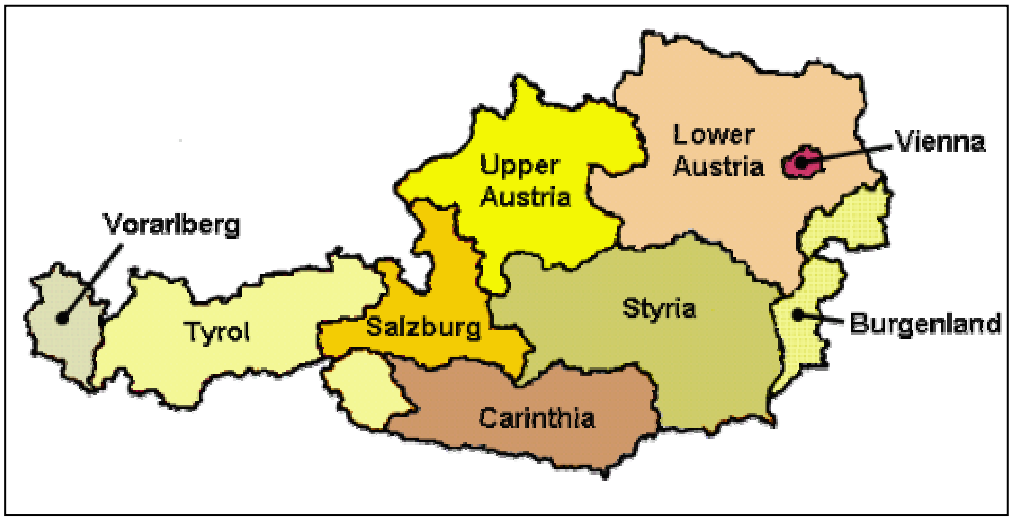
1 General information about Austria

This chapter gives brief information about Austria´s political system, its demographic structure, data concerning economy and employment as well as its educational system. This information provides a basic knowledge in order to follow the complexity of Austria´s system of initial vocational education (IVET) as well as its problems and current developments which are illustrated in the main chapters of this report. This knowledge is particularly important as far as classification of national phenomenons into an overall European and international context is concerned.

1.1 The Austrian Republic

The republic of Austria is a federal state consisting of nine provinces with a total area([1]) of 83.870,95 km² and, referring to the last population census in 2001, with an overall population of 8.032.926 inhabitants. The population density is 95 inhabitants per square kilometer. Vienna is the capital with 1.550.123 inhabitants. Overall the proportion of the urban population is 66,8%. Austria`s landscape is characterised by mountains which cover two thirds of the federal territory.

Chart 1: The Austrian Republic.



Source: CEE-graphic.

Since 1920 respectively 1928 Austria is a democratic and parliamentary state. The constitution implies democratic and federal principles as well as principles of federalism, the rule of law, and the separation of powers. Another important content of the Austrian constitution is the perpetual neutrality which was enacted after the World War II. Since 01.01.1995 Austria is a member of the European Union. According to the results of the respective referendum 66% have voted for a membership.

([1]) All data refer to the current statistic yearbook of Statistik Austria (Statistik Austria, 2003a).

Head of state is the president who is elected by the nation for six years. The president mainly acts in a representative manner whereas the national council and the federal council operate as legislative organs. The members of the national council are elected every four years, also by the people. The members of the federal council are instructed by the parliaments of the nine provinces and are obliged to ensure that the regional interests and needs on a federal level are met. When it comes to the decision whether to pass a bill or not the federal council has the power of veto. Legislation in the provinces is carried out by its parliaments whose members are again elected by the nation. As soon as federal interests are involved within provincial matters the federal council has the power of veto.
The government consists of the chancellor as well as a vice chancellor and federal ministers. After the election of a national council one of the four parties or rather one of the four heads of the respective party is entitled by the president to form a new government. To safeguard a quorum majority in parliament a coalition is usually preferred to a minority consisting of only one party. Especially in terms of provincial matters a proportional representation is usually implemented. The provincial government ("Landesregierung") consists of the "Landeshauptmann" and the "Landesräte".

Politics in Austria are carried out by its four most important parties which are the Freedom Party of Austria (Freiheitliche Partei Österreichs, FPÖ), The Greens (Die Grünen), the Austrian Peoples Party (Österreichische Volkspartei, ÖVP), and the Social Democratic Party of Austria (Sozialdemokratische Partei Österreichs, SPÖ). After World War II Austria was ruled by a coalition of SPÖ and ÖVP for many years. This traditional cooperation is essential for the general comprehension concerning Austria`s history in political terms. Today a coalition of ÖVP and FPÖ runs the country.
The so-called "social partnership" is a significant characteristic of Austria`s political system. This partnership can be considered to be a system of cooperation in terms of economy and socio-politics as well as a system of conflict management as far as conflicts between employers and employees respectively conflicts with the government are concerned. This co-operation is voluntary and has got an informal character. Following organisations which act as representatives of various interests are members of the social partnership: Federation of Austrian Industry (Industriellenvereinigung, IV), the Austrian Chambers of Labour (Kammern für Arbeiter und Angestellte, AK), the Austrian Chambers of Agriculture (Landwirtschaftskammern, LWK), the Austrian Trade Union Federation (Österreichischer Gewerkschaftsbund, ÖGB) and finally the Austrian Federal Economic Chamber (Wirtschaftskammer Österreich, WK).

1.2 Demographic information

Evidence of a number of 8.032.926 inhabitants is shown in the outcome of Austria´s population census([2]) of 2001, which shows a growth of 3% since 1991([3]). The population´s gender ratio was 48,4% men and 51,6% women. As in most countries of Europe an overaging within the Austrian population can be observed. In 2001 the quota of those who are older than 60 years was 21,4%. Since life expectancy nowadays is increasing whereas the birth rate is declining this percentage keeps increasing. Table 1 illustrates Austria´s age distribution in 2001. Since there is a positive migration balance especially out of south-east European and Eastern European countries Austria´s overall number of inhabitants is slightly increasing despite a declining birth rate([4]). This growth particularly concerns conurbation.

Table 1: Age distribution of the Austrian population in the year 2001.

	Year 2001			
Age group	**Male**	**Female**	**Overall**	**Percentage (Overall)**
Below 15 years	693.464	660.018	1.353.482	17%
15 to 29 years	755.802	739.963	1.495.765	19%
30 to 44 years	1.012.149	986.787	1.998.936	25%
45 to 59 years	738.636	753.371	1.492.007	19%
60 to 74 years	510.228	600.746	1.110.974	14%
75 years and above	178.910	402.852	581.762	7%
Total	3.889.189	4.143.737	8.032.926	100%

Source: Statistics Austria, Census 2001 (Statistik Austria, 2003a, p.49).

Austria is one of those countries boasting a widespread participation within educational matters. More than 90% of adolescents are involved in some kind of continuing education and training after the successful completion of compulsory schooling([5]), even though the quota of those holding a diploma achieved during tertiary education is low compared to other countries of the OECD (cf. OECD, 2003, p. 43f). The majority of the population has achieved a diploma at secondary level II. According to current investigations, there is a slight increasing rate of early drop-outs concerning training and education after compulsory education. Nevertheless a growing tendency towards educational

([2]) All data refer to the current statistic yearbook of Statistics Austria, unless another source is pointed out (Statistik Austria, 2003a) respectively to the results of the population census 2001 (Statistik Austria, 2002b).).
([3]) For the period between 1990-2003 the increase is 5,6%.
([4]) Because of current restrictive politics concerning migration the quota of migrants has declined since the 1990s.
([5]) The estimated percentage concerning the quota of adolscentes who quit their education after compulsory schooling varies between 2% and 9%; both referring to statistics from 1997 (cf. Lassnigg, 1997, p. 45f or BMBWA, 2001b, p. 9). An actual evaluation of the OECD even says that 11% of adolescents, aged between 15 and 19, neither attend any continuing education nor work (cf. OECD, 2003, p. 152f). According to Statistics Austria this percentage is not higher than 6% (which is because of the high amount of adolescents who do their military respectively civil service at this age).

participation in general can be observed (cf. IHS, 2000, p. 2)([6]). Table 2 illustrates the distribution of education levels within the resident population during the last 15 years whereas table 3 demonstrates the levels of education of Austria´s labour force. Both follow a national graduation. In the brackets matching ISCED classifications are provided. As there is an extraordinary amount of data a mixing will occur at some point which makes an explicit coding after ISCED lines impossible.

Table 2: Educational background of the population (15 years and above) 1981-2001.

	Year		
	1981	**1991**	**2001**
Population 15 years and above (in 1000's of people)	6.044	6.439	6.679
Percent by educational background			
Lower secondary school and lower level of secondary academic school (ISCED 2 bzw. 3)	51,8%	41,5%	32,0%
Apprenticeship Training (ISCED 3)	27,1%	32,1%	35,2%
TV School (z.B.: BMS) (ISCED 3)	10,4%	11,4%	10,4%
Academic schools (upper level) and TV colleges (z.B.: AHS, BHS) (ISCED 3 bzw. 4)	7,2%	9,8%	15,4%
Tertiary education (ISCED 5 bzw. 6)	3,4%	5,2%	7,0%
Total	100%	100%	100%

Source: Statistics Austria, Online-Statistics (Statistik Austria, http://www.statistik.at, last access am 24.08.03).

This refers to the fact that national education levels are not in accordance with international ones (e.g compulsory schools at ISCED level 1,2 and 3; academic schools at ISCED level 3 and 4) which causes a certain unbalance. Table 4 refers to ISCED97 and is based on OECD statistics. The question of international comparability is discussed in a more detailed manner once the Austrian school system is illustrated.

([6]) The number of adolescents in each age group who haven´t successfully completed their compulsory education is estimated to be 5%.

Table 3: Labour force participation by educational background in the year 2001.

	Year 2001		
	Male	**Female**	**Overall**
Number of working people	2.219.600	1.722.600	3.942.200
Percent by educational background			
Lower secondary school and lower level of secondary academic school (ISCED 2 bzw. 3)	18,8%	22,4%	20,3%
Apprenticeship Training (ISCED 3)	48,8%	32,1%	41,5%
TV School (z.B.: BMS) (ISCED 3)	8,2%	16,2%	11,7%
Academic schools (upper level) and TV colleges (z.B.: AHS, BHS) (ISCED 3 bzw. 4)	15,0%	19,2%	16,8%
Tertiary education (ISCED 5 bzw. 6)	9,3%	10,0%	9,6%
Total	100%	100%	100%

Source: Statistics Austria, Volkszählungsergebnisse 2001 (Statistik Austria, 2003a, p.161).

Table 4: Educational background of the population in the year 2000 (25-64 years) according to ISCED97.

ISCED-Level	**Year 2000**
0/1/2	24%
3	55%
4	7%
5b	7%
5a/6	7%
Total	100%

Source: OECD (OECD, 2002, p.53).

1.3 Economy and employment

Compared to other European countries Austria is quite wealthy and boasts good economical data (e.g. Austrian Federal Economic Chamber, 2003). In 2001 Austria´s gross domestic product (GDP) was 212 billions €, the GDP per inhabitant was 26.300 € which is high above the European average of 23.200 €. The literal economical growth in 2001 came up to +0,7%, in 2002 to +1,0%. The inflation rate was lower than the EU average. Table 5 illustrates a number of important economical indicators in Austria.

Table 5: Main economic indicators 2001 and 2002.

	Year	
	2001	**2002**
Gross domestic product	207,0 Mill. €	211,9 Mill. €
GDP per inhabitant	25.700 €	26.300 €
Growth	0,7 %	1,0 %
Inflation rate	2,3 %	1,7 %
National dept as % of the GDP	67,3%	67,9 %

Source: Austrian Federal Economic Chamber (Wirtschaftskammer Österreich, 2003, p.7ff).

Since Europe faces an increasing international competition as well as a continuing tense economical situation Austria´s politicians agree on the importance of a qualified vocational education to safeguard a stable business location Austria. Table 6 illustrates the public expenditure in education and training expenses. For more details concerning public share in vocational education refer to another CEDEFP-report which exclusively discusses this (CEDEFOP, 1999).

Table 6: Federal expenditure for the educational system according to educational levels (ISCED) for the year 2000.

	ISCED	**Year 2000**	
		Mio. €	**%**
Elemtary and primary level	0/1	3299,3	27,6%
Lower secondary level	2	3.039,8	25,5%
Upper secondary level	3	2.357,8	19,8%
Post-secondary level	4	96,4	0,8%
Tertiary level (non-university)	5B	504,8	4,2%
Tertiary level	5A/6	2.467,5	20,7%
Not classified	9	171,4	1,4%
Total	-	11.937,2	100%

Source: Statistics Austria, Online-Statistics (Statistik Austria, http://www.statistik.at, last access 24.08.2003).

According to Statistik Austria 3.942.200 people have been in labour force in 2001, 1.722.600 of them are women (rate of women: 43,7%). This is an overall rate of 48.5%, 56,1% men and 41.2% women (cf. Statistik Austria, 2003, p.161f). In 2001, there have been 203.883 unemployed persons (88.560 women) who were reported to the Public Employment Service (PES). Therefore, the rate of

unemployment in 2001 has been 6,1%([7]). Referring to the EU´s general Labour-Force-Concept the rate of unemployment was 4,0%([8]). Compared to other members of the EU and OECD, Austria has a low rate of unemployment. Nevertheless Austria faces a tense job situation at present. Table 7 illustrates the amount of those who have been unemployed in 2001 in terms of national educational levels([9]). In addition there is an analogue ISCED97 level of each national group of education. Once again it is necessary to mention the problem of comparability and straight adaptability which is discussed in a chapter later on.

Table 7: Unemployed people by educational background as percentage of the unemployed people overall for the year 2001.

	Year 2001 (average)			
	Male	**Female**	**Overall**	**Percentage (Overall)**
No education completed	4.132	4.140	8.272	4,1%
Compulsory education	45.441	39.312	84.753	41,6%
Apprenticeship (ISCED 3)	52.403	25.894	78.297	38,4%
Lower secondary schools (ISCED 3)	3.403	8.857	12.260	6,0%
Upper secondary schools (ISCED 4)	7.108	7.396	14.504	7,1%
Tertiary programmes (ISCED 5/6)	2.696	2.813	5.509	2,7%
Other programmes/schools	140	148	288	0,1%
Total	115.323	8.856	203.883	100%

Source: Public Employment Service, special analysis.

Trends and certain developments in terms of labour force which have been pointed out in a former CEDEFOP-report (cf. CEDEFOP, 1998, p.17f) are still up to date:

(a) higher entrance age into labour force concerning both, males and females,

(b) a declining rate of older employees at the same time,

(c) an increasing rate of women in labour-force([10]),

([7]) PES calculation method (proportion of registered unemployed within the total potential of manpower).
([8]) An elaborated illustration of the different calculation methods concerning unemployment quota needs to be left out here.
([9]) A categorisation of unemployed people referring to ISCED is according to PES not available.
([10]) Cf. to an investigation carried out by the Institute for Advanced Studies which deals with that manner (Prenner, 2000).

(d) an increasing education-level and formal qualification level of labour force people as well as a growing quota of adolescents who attend continuing education and training after their successful completion of compulsory education, particularly within higher vocational education and as far as an increase in the participation of women is concerned (cf. Schneeberger, 1999, p.5f).

1.4 The education system

1.4.1 Administrative control

The Federal Ministry of Education, Science and Culture (BMBWK) is the supreme authority of schooling and education in Austria. Its responsibility comprises compulsory schooling as well as schooling at secondary, post-secondary and tertiary level. Secondary technical and vocational schools and secondary technical and vocational colleges as well as part time vocational schools are also included.
The Federal Ministry of Economic Affairs and Labour is in charge of a special type of initial vocational education, namely apprenticeship training([11]). The only exceptions occur in terms of schools and training for agriculture and forestry which are not always part of the BMBWK´s responsibility.

In terms of public administration the responsibilities concerning legislation within the school system are, as usual, divided between the federal authority and the provinces. Legislation is incumbent upon to the federal authorities whereas execution is incumbent upon the power of provinces. Occasionally general laws are passed which are then adopted by the provinces according to their needs. While the federal authorities are responsible for advanced secondary education and universities, provinces are in charge of pre-primary education such as kindergarten, and compulsory schooling. Those who carry out federal orders are the federal minister as well as the regional education division and other school staff. Changes within legislation referring to educational matters are passed if a majority of 2/3 in parliament agrees on them.

Financial matters are incumbent to the responsibilities of the federal body, provinces, and communal authorities. Provinces and communal authorities are responsible for the maintenance of schools at compulsory educational level whereas it is the federation that is responsible for financing the maintenance of schools at secondary and advanced level. Maintenance costs for vocational schools for apprentices are provided by the provinces. The federation provides a total refund concerning payments

([11]) Apprenticeship training is defined as part of a dual training system within vocational education, which refers to both, the operational elements and the schooling elements within the training. Apart from that, the responsibility for this type of education is incumbent upon several authorities.

for the school staff at compulsory educational level. Concerning compulsory schools for apprentices the federation pays half of the expenses([12]).

Teaching is based on a core curriculum, which is set up by the federal authorities and guarantees the conveyance of certain basic knowledge nation-wide. Private schools are entitled to operate with modified curricula. Within the framework of school autonomy([13]), schools may modify their curricula in terms of further specialisation in certain areas depending on their special focus. This includes a self-determined setting of days off as well as certain rights in financial matters (e.g. purchasing all kinds of teaching material).

The Austrian school system is based on various laws. The most important and prevailing ones are:

(a) constitutional law ("Bundesverfassungsgesetz"); allocation of rights and duties concerning federal authorities and provinces,
(b) Law concerning school organisation ("Schulorganisationsgesetz"); duties and organisation of schools,
(c) Law concerning university organisation ("Universitätsorganisationsgesetz"); duties and organisation of universities,
(d) Law concerning teaching ("Schulunterrichtsgesetz"); lessons and contents,
(e) Law concerning course of university studies ("Universitätsstudiengesetz"); course of studies,
(f) Law concerning vocational education ("Berufsausbildungsgesetz"); operational education and training for apprentices,
(g) Trade, commerce and industry regulation ("Gewerbeordnung"); qualification requirements for access,
(h) Law to safeguard education and training for adolescents ("Jugendausbildungssicherungsgesetz); additional measures, e.g. NAP,
(i) Law for balanced expenses in families ("Familienlastenausgleichsgesetz"); public support etc.

1.4.2 School attendance

In 1774, Maria Theresia established general compulsory schooling. After various reforms the duration of nine years compulsory schooling was introduced in 1962. In Austria general compulsory education applies to all children permanently resident in this country, irrespective of their nationality, sex, religion, and social background. Compulsory education usually starts on the first of September

([12]) For a more elaborated illustration of financial matters concerning vocational education, refer to the profile of: CEDEFOP, 1999. There is another brief survey in Eurydice, 2000.
([13]) 14th amendment in the law of school organization 1994/1995.

following a child´s sixth birthday. After the completion of nine years of compulsory schooling adolescents are usually 15 years old. By approval of the head of school a child is allowed to attend school after his or her fifth birthday as long as he or she is in a suitable physical and mental condition and able to follow the lessons. There is no diploma after the completion of the compulsory schooling; there only is an annotation in the certificate pupils obtain after their ninth school year which proofs a fully achieved compulsory education. Approximately 99% of pupils are integrated in the regular educational system during their compulsory education. In Austria 100% of pupils complete their compulsory education. (cf. CEDEFOP, 1998, p. 13).

In public (state) schools no tuition fees are charged. Federal authorities provide public transport for the distance between place of residence and school. They also provide school books – parents have to pay a share of 10%. Those who are in charge of a child by legislation have to make sure that he or she is enrolled at school and that lessons are attended regularly.

Compulsory education (nine years) is usually ([14])([15]) completed after having attended one of the following schools (cf. BMBWK, 2002a, p.3):

(a) primary school or special needs school – first to fourth level,
(b) secondary school or lower level of an academic secondary school, upper level of primary school or upper level of special needs school – fourth to eighth level,
(c) pre-vocational school or one year at a secondary TVE school or secondary TVE college, one year at a school for the training of kindergarten teachers and of non-teaching education staff or at another educational institution – ninth level.

Unless pupils fail class they are upgraded after each school year. The assessment of their performances at school is based on a system which consists of five different grades([16]). Usually vocational education and training starts after the successful completion of compulsory education. In some cases the completion of compulsory schooling is done by successfully completing the initial year of a TVE school, since it is considered the ninth school year. In order to be able to start an apprenticeship training the completion of compulsory education is required. Special cases and other exceptions are explained in the appropriate chapters.

German is the usual language in class. If there are many students in a classroom whose native language is not German, bilingual teaching and additional teaching in their respective mother tongues is provided. Some schools set up their individual focus on an international level, so pupils are taught in English. Particularly within the field of compulsory education, Austria´s school system is state run.

([14]) There are not many special needs schools, upper levels of special needs schools, and upper levels of primary schools in Austria.
([15]) If pupils have to repeat class since they´ve failed, the year of repitition is considered an achieved school year as well, so compulsory schooling won´t be extended. Compulsory education comprises nine years of schooling, not the successfully completion of the ninth class/level. Nevertheless, there are certain restrictions as far as continuing repition is concerned.
([16]) 1 = A, 2 = B, 3 = C, 4 = D, 5 = E.

The right to set up a private school is legislated. In 2001/02 153 private schools have been attended by pupils. This results in a private school rate of 3,1% (cf. BMBWK, 2002b, p. 9f).

1.4.3 Levels of education

It is quite difficult for the Austrian school and educational system to be in line with an international system such as ISCED, especially concerning educational levels and diploma. This results from the fact that there is hardly any possibility to classify and define national distinctions and characteristics. In particular this comes up in terms of educational levels, qualification levels, and the duration of education – criteria which are usually defined by ISCED but are differently handled in Austria. Even certain terms and formal definitions sometimes have a meaning different from ISCED definitions. Table 8 shows the differences between national types of education in Austria and ISCED97 matters. This table provides an overview and makes a better understanding of the following chapters possible. Some points demand extra information:

(a) Secondary level II (ISCED 3) is an own field within the general educational system and comprises colleges offering technical and vocational education and training (TVE). As far as the international classification is concerned a diploma of a secondary TVE college is regarded as a more sophisticated one (ISCED 4a), taking into account the quality of education and the double qualification "Reifeprüfung and TVE diploma examination";

(b) Pre-vocational schools are per definition non TVE schools but focus on general contents and impart specific knowledge and skills with regard to the student´s future transfer into the job market. Nevertheless they are in line with ISCED-level 3c in terms of those vocational schools that require one year;

(c) The terminus "post-secondary level" is not always defined clearly or properly used within educational literature resulting from a lack of standardised definitions within ISCED and within the national context. So training in terms of post-secondary education is often said to be education following secondary level II (including the tertiary sector as well). This report refers to the terminology of ISCED classifications and considers post-secondary education a specific type of education in general. It has to be seen separately from special types of secondary level II as well as from options within continuing education and training for adults or other options within non-university tertiary education. In order to be allowed to access post-secondary educational institutions students are required to hold A-Level certificates and have to be of a minimum age;

(d) Part-time industrial master colleges, master craftsmen courses and courses for building workers are sometimes assigned to ISCED level 5b, even though they differ from institutions which have the characteristics of a university. The unclarity in definition goes with the fact that the terms secondary level, post-secondary level, and tertiary level are often used ambiguously. The

institutions mentioned in this report are assigned to ISCED 4b, in order to illustrate the reality of training and education as well as to meet the ISCED criteria more precisely;

(e) Finally it shall be pointed out that because of the national assignments statistic data concerning educational levels are widespread as well. According to school statistics, colleges and special training courses partly belong to secondary TVE colleges. Academies and master craftsmen courses are part of school statistics as well whereas data on regular universities and universities of applied sciences ("Fachhochschule") is found in academic statistics. Therefore, an illustration and separation that is in line with the ISCED levels is mostly very difficult and in some cases even totally impossible.

Table 8: Educational institutions and educational levels according to ISCED97.

Grade	Age	Level of education	Educational institutions	ISCED -Level
-	<6	Elementary Level	0) Kindergarten, Nursery school	0
1-4	6-9	Primary level	1) Primary school, Special needs school	1
5-9	10-13	Lower secondary level	2a,b) Lower level of academic secondary schools, Lower secondary school, Upper level of primary schools, Special needs school	2a,b
9-12	14-19	Upper secondary level(*)	3a) Upper level of academic secondary schools, Academic secondary school for adults, Academic secondary school with TVE, Not completed secondary TVE colleges (***), Schools for the training of nursery/kindergarten teachers and non-teaching education staff 3b) Apprenticeship Training/Part-time vocational school, Secondary TVE schools 3c) Pre-vocational year, short forms (1-2 years) of secondary TVE schools, Special Needs schools, Schools fort he training of gym instructors	3a,b,c
>12	>18	Post-secondary level(**)	4a) Completed secondary TVE colleges(****), Secondary TVE colleges for adults, 4b) Special courses, Courses at universities (<2 years), Special pedagogics courses, Secondary colleges for social and medical occupations, Master craftsman course, Courses for building workers	4a,b
-	>18	Tertiary level (non-university)	5b) Technical, vocational, pedagogical (teaching and non-teaching), social and medical academies resp. non-university colleges, Post-secondary TVE colleges(*****), Courses at universities (>2 years)	5b
-	>18	Tertiary level (universities)	5a) Universities (Master, Bachelor), Universities of applied sciences/tertiary TVE colleges 6) Universities (PhD)	5a,6

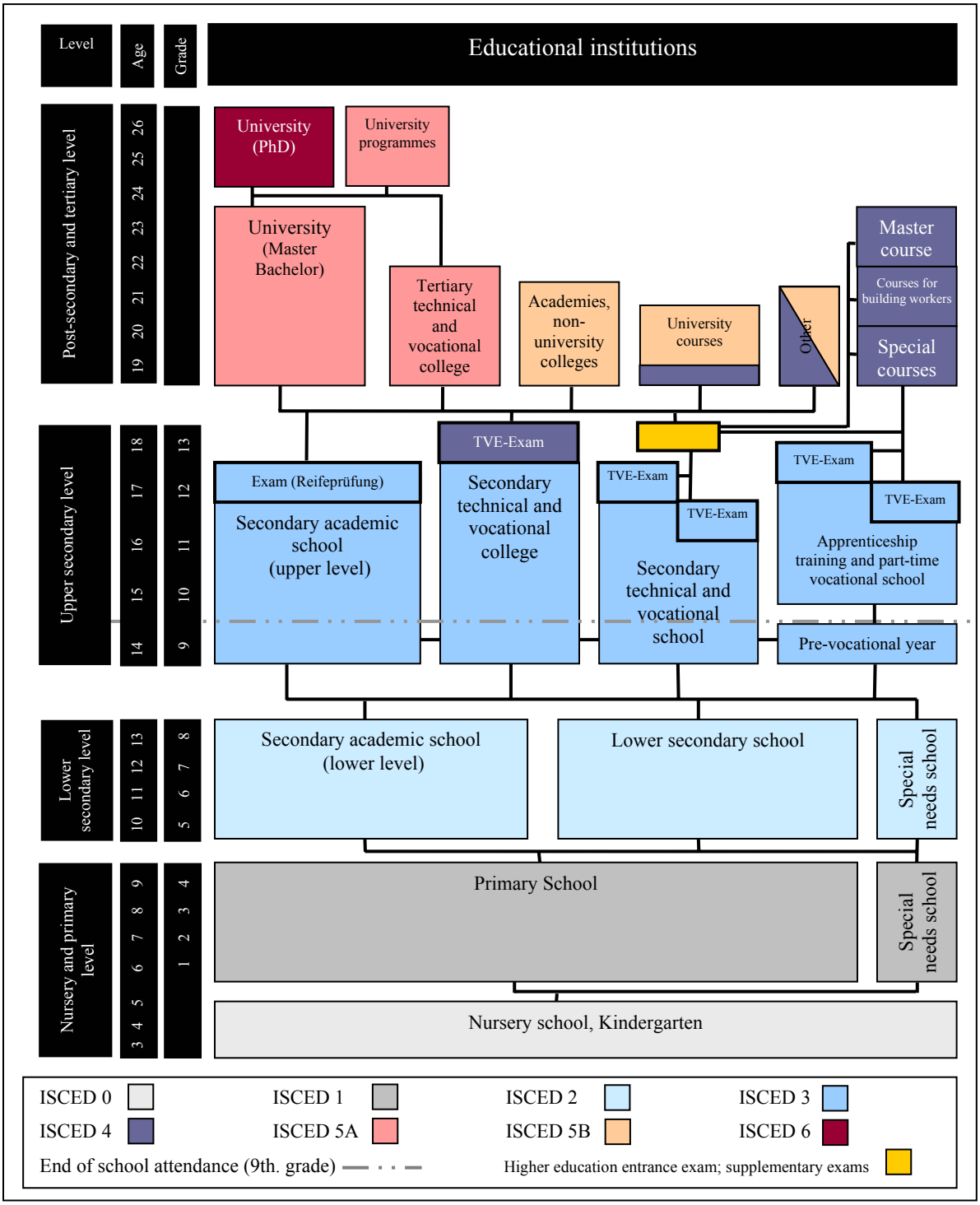
Note:
(*) School attendance normally ends after the completion of the 9th grade and therefore reaches into the upper level of secondary education.
(**) Most of these programmes are special forms of secondary TVE colleges.
(***) The attendance of a secondary TVE college without TVE-exam is in some aspects equated to upper secondary academic education and secondary TVE schools.
(****) Secondary TVE colleges are part of upper secondary education. The TVE-exam of a secondary TVE college is counted as post-secondary according to ISCED (level 4).
(*****) Post-secondary non-university colleges are - according to ISCED- counted as tertiary educational programmes. According to national classifications and law they are post-secondary.
Academic secondary schools (4 years lower level, 4-5 years upper level)
Secondary TVE schools (3-4 years), special forms (1-2 years)
Secondary TVE colleges (5 years)

Source: CEE-overview; based upon ISCED documents and documents of the BMBWK

1.4.4 Chart of the Austrian education system

The following chart (chart 2) gives an overview of Austria´s educational system, and illustrates the structure of vocational education and training (IVET), including its most important elements. Thereby the secondary educational pathway especially for people in employment is omitted. Classic pathways in terms of education and transfer are shown as lines. Brief explanations of each level are given, specialities are illustrated in many of the following chapters.

Chart 2: Chart of the Austrian education system.



Source: CEE-chart based on data of the BMBWK.

1.4.5 The education system at a glance

1.4.5.1 Nursery school

Pre-school education for children aged between 3 and 6 usually takes place in a so called kindergarten or nursery school. Although attendance is voluntary and not compulsory, 90% of parents take the opportunity for the 5 years old ones. Kindergartens are organised as either part-time or full-time institutions. Education emphasises on the support of self-development and focuses on playful and creative contents and options in and for peer groups.

1.4.5.2 Primary school

Primary education starts as soon as school is compulsory which is on the first of September following a child´s sixth birthday. It takes place in primary schools and covers a period of four years (1st to 4th school year). Primary schools are designed to provide all pupils with the same elementary education and to support preparation for their further educational career. Marking and grading is based on their (oral) achievements as well as their attention levels and activity in class. Once they reach the last year of primary school they have to take written exams and tests (written proof of performance).

1.4.5.3 Lower secondary education

After primary education pupils have to choose between two types of school for another period of four years at secondary level I (5th to 8th year). They either go for the lower level of an academic secondary school or opt for a lower secondary school. The quota of special needs pupils at secondary level I is pretty low.

The only criterion for accessing a lower secondary school is the successful completion of the last year (4th class) of primary school. Lower secondary schools provide pupils with a basic general education. German, mathematics, and a foreign language, which are the main subjects, are taught in three different sub-levels, depending on the pupils capability and performance. There is a range of other school types that belong to the group of lower secondary schools such as lower secondary school for sports. These schools set individual focuses and offer appropriate activities in addition to the general curriculum. 70% of all pupils choose the attendance of a lower secondary school (cf. BMBKW, 2002d, p. 38).

The lower level of academic secondary schools aims to impart a broad and advanced general education. Access criteria for the attendance of academic secondary schools are a primary school leaving certificate which proves excellent or good performance. Particular attention is paid to the main subjects. If the certificate is not satisfactory an extra entrance examination has to be taken. From the third level onwards schools focus on their own type of specialisation. The “Wirtschaftskundliches Realgymnasium” for example emphasises on economics.

1.4.5.4 Upper secondary education

At secondary level II (9th - 13th year) there is a broader scope of opportunities offering a variety of options that meet the interests of adolescents([17]). The ninth school year is a significant one as students complete compulsory schooling. Further more, the completion of the ninth year gives the students the opportunity to transfer into professional life for the first time. Once school is not compulsory any more an optional apprenticeship training is also possible. At this point adolescents have to make a decision which effects their vocational future enormously since they have to decide whether to go for further vocational training at schools, for academic secondary schools or operational vocational education. To complete compulsory education, to take the last year of compulsory schooling after secondary level I, there are several options:

(a) attendance of a pre-vocational school (one year),
(b) attendance of the upper level of an academic secondary school,
(c) attendance of a secondary technical and vocational school (BMS),
(d) attendance of a secondary technical and vocational college (BHS).

Pre-vocational schools don´t require more than one year and qualify pupils to transfer either straight into the professional life or into an apprenticeship training([18]). Attendance of pre-vocational school is not bound to a successful completion of secondary level I. Pre-vocational schools focus on education in terms of practical experience to provide a specific knowledge about the professions concerned future job-options and about life as person under employment in general. Therefore they gear a general education and provide knowledge about all kinds of jobs. Nevertheless attendants do not obtain a full vocational education per definition; there is no diploma or certificate which qualifies them for a particular job. Beside compulsory subjects, there are subjects focusing on trade and certain occupations, e.g. electronics or economy, which are optional.

Nearly 90% start an apprenticeship training - which is known as dual training system in Austria - after completing their education in a pre-vocational school. Company-based training of apprentices is complemented by compulsory attendance in part-time vocational schools. This division guarantees general education and occupation-specific knowledge. From the beginning onwards apprenticeship training is complemented by the compulsory attendance of a part-time vocational school. In order to access apprenticeship training the successful completion of compulsory education is required. By taking the apprenticeship leaving exam a diploma is achieved that correspondences with a secondary

([17]) At this point in time adolscents have to make a decision which strongly affects their future „educational career“, since they have to opt between a wide spectrum of education and training possibilities in order to complete their compulsory education. This decision at an early stage is considered significant for the total education he/ she will achiece in his/her personal future. (e.g. Lassnig/Schneeberger, 1997, p. 48f)

([18]) Pre-vocational schools belong to secondary level II, even though they focus on education in terms of pre-qualification for a future profession.

school leaving certificate and that allows the student to take up the profession concerned([19]). Pre-vocational schools do not provide vocational education per definition since they don´t qualify attendants for one certain job or profession.

The upper level of academic secondary schools (including self determined types of the upper level) offers advanced general education which, after four years, leads to access to university. There are various types at the upper level, setting individual focus, e.g. on languages or science. In addition to that, pupils are allowed to choose a certain number of compulsory subjects by themselves. The successful completion of the fourth school level is required in order to access. Pupils who have attended lower secondary schools are sometimes obliged to give proof of knowledge through an extra exam. Graduates of the upper level of academic secondary schools obtain the "Reifeprüfung" certificate which entitles them to enrol in university and universities of applied sciences.

Secondary technical and vocational schools (secondary TVE schools) usually require three to four years and provide both, general education and vocational training. Beside these types there are schools which require one to two years only([20]). To attend secondary TVE schools that require at least three years the successful completion of the 8th school level or an entrance exam is required. The curriculum focuses on practically-orientated education as well as on practical training pertaining to performance within an internship. Secondary TVE schools with a duration of three to four years provide a general education as well as a medium vocational training which gives its graduates access to the professional life (BMBWK, 2003, p. 3).

Secondary technical and vocational colleges (secondary TVE colleges) start after the successful completion of the 8th school year. If former school performances were not satisfactory, an entrance exam has to be taken. During five years one can achieve both, an advanced level of general education and a first class quality vocational training, which leads to a double qualification. Graduates of secondary TVE colleges boast the TVE diploma as well as the "Reifeprüfung" and are therefore entitled to attend university, university of applied sciences, or academies. Furthermore, they are qualified to take up the profession concerned. In these cases practically-orientated education is focused on as well.

1.4.5.5 Post-secondary education

Despite the fact that post-secondary education is of lower quality than education within the tertiary sector, attendants need to hold the "Reifeprüfung" certificate. That is true for special types of schools providing vocational education as well as training, and for university courses that require less than two years. According to ISCED, master craftsmen courses, courses for building workers, courses for any

([19]) Details on Austria´s trade, commerce and industry regulation shall be left out in this report.

([20]) These short-term options, provided by secondary TVE schools, are not considered part of vocational training, but as a part- qualification for the occupation concerned, e.g. in the field of forestry and agriculture or business schools.

specialisation, courses for further advanced training as well as courses in the field of healthcare also belong to post-secondary education. As special types of secondary TVE schools and secondary TVE colleges they provide advanced knowledge about the professions concerned without offering the possibility to obtain the "Reifeprüfung" certificate. Some schools in the field of healthcare also belong to post-secondary education; attendants need to have reached a certain minimum age for entrance. Many courses at post-secondary educational level are designed for people under employment and are organised as in-service training.

It has been pointed out before that in terms of post-secondary education there is a mixing and mingling of education within the non-university tertiary as well as within continuing education and training for adults (cf. chapter 1.4.3).

1.4.5.6 Tertiary education

Graduates who boast the "Reifeprüfung" certificate as well as those who hold the "Berufsreifeprüfung" or Higher Education Entrance Exam – which can be taken by people under employment or graduates of an apprenticeship training – are entitled to attend courses at the tertiary educational level. Under certain circumstances, e.g. working experience plus additional exams, access to several courses at tertiary educational level (such as universities of applied sciences, universities of art) might be given as well. Basically there is the sector of education at universities and universities of applied sciences and the sector of non-university education such as teacher training academies, colleges([21]), special courses at university and several short-term studies. Universities of applied sciences, universities of art and (regular) universities belong to the university sector. Depending on the choice of course and the educational background an entrance exam might be required to gain access to certain types within tertiary education, e.g. art. Universities mainly aim for a scientific vocational education and training whereas universities of applied sciences focus more on practical teaching in a school like system. Relating to training and course duration and acquired proof of performance several academic degrees are available. Depending on the field of study graduates may obtain the Bachelor-degree, a Master degree ("Magister") or become a graduate engineer ("Diplom Ingenieur"). Those who achieve the "Master" are entitled to enrol in studies for a PhD at universities, which is the ultimate attainable educational level in Austria.

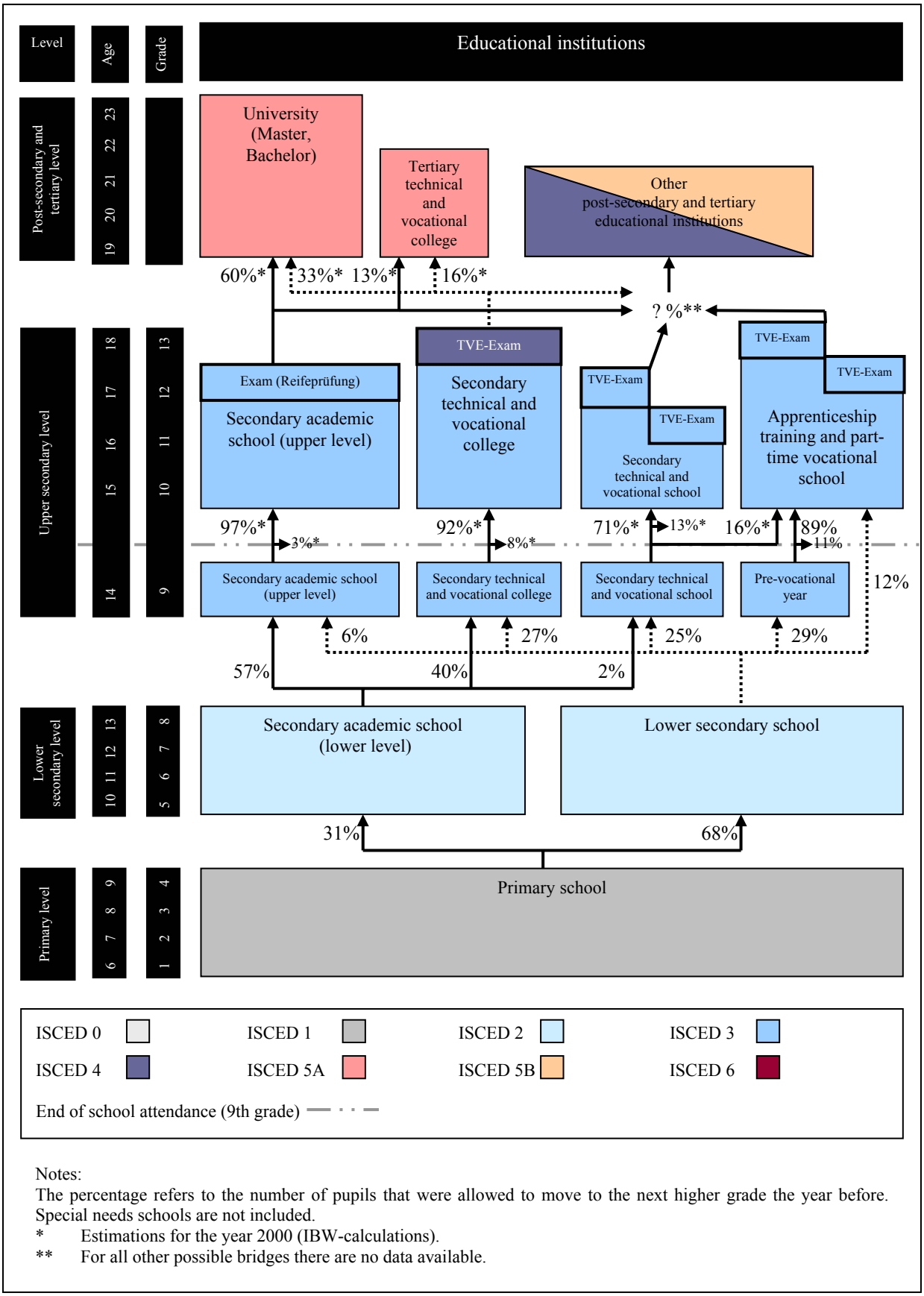
1.4.6 Bridges and transfer rates in the education system

During their education pupils often have to come to a decision concerning their future educational career and have to choose between several options for their further education. Sometimes these decisions have to be taken at a very early stage (e.g. transfer from 4th to 5th school level; transfer from

([21]) Post-secondary colleges don´t belong to the tertiary sector.

8th to 9th school level), and might strongly affect the child´s personal future education (cf. Lassnig/Schneeberger, 1997, p.48f). Chart 3 illustrates the most important stages of necessary decision-making within the Austrian educational system as well as transfer rates concerning the different school types in 2001. On the one hand they refer to official school statistics, on the other hand they are based on comparisons concerning graduates and beginners. There is no statistic data which makes pupils´ individual progression in Austria transparent. Neither do any public studies reflecting the personal and educational future of school drop-outs exist.

Chart 3: Transfer rates in the educational system in the year 2001.



Notes:
The percentage refers to the number of pupils that were allowed to move to the next higher grade the year before. Special needs schools are not included.
* Estimations for the year 2000 (IBW-calculations).
** For all other possible bridges there are no data available.

Source: CEE-chart based on data of the BMBWK (BMBWK, 2002d, p.38) and the IBW (IBW, 2003, p.25).

2 Introduction to initial vocational education and training

In Austria IVET is defined as education and training on the professions concerned at secondary level II (ISCED level 3). Initial vocational education and training starts after a successful completion of compulsory education and is offered through two different pathways:

(a) Secondary vocational schools at secondary level II (secondary TVE schools (including schools covering a period from one to two years) and secondary TVE colleges, teacher training colleges, and training colleges for other educational staff);

(b) Education within the dual training system (company-based training of apprentices complemented by compulsory schooling([22])).

Entrance to the types of schools mentioned first usually takes place during the last year of compulsory education (9th school level) whereas entrance to the later mentioned ones takes place once compulsory education is successfully completed (10th school level).

Table 9: Educational pathways of teenagers after completion of compulsory education (distribution of pupils in the 10th grade) in the year 2001/02.

	Percentage
Apprenticeship training / Part-time vocational school	40,9%
Secondary TVE schools (*) (**)	14,6%
Secondary TVE colleges (*)	25,6%
Academic secondary schools	19,0%
Not in education	No data available(***)
Total (98.974 teenagers in school)	100%

Notes:
(*) Schools for the training of teachers and non-teaching education staff included.
(**) Short forms included (1 year).
(***) There are no proved data for drop outs of the educational system available. There only exist some (diverging) estimations (cf. footnote 5).

Source: Statistics Austria (Statistik Austria, 2002a) (CEE-calculations).

Pre-vocational schools belong to the secondary level II, too. They cover a period of one year and provide an education which prepares pupils for life under employment. Nevertheless they are considered an option within the range of compulsory schools providing general education since a successful completion does not equal a qualification for one certain profession. During the last year of compulsory schooling pre-vocational schools focus on conveying pre-qualifications for pupils who

([22]) Vocational schools are defined as compulsory schools as well (BPS), since attendance is compulsory from the beginning of apprenticeship training onwards.

aim for an apprenticeship training. 90% of pre-vocational school attendants start an apprenticeship training afterwards (cf. BMBWK, 2002d, p. 28). All in all 80% of students go for an initial vocational education after the completion of the 9th school year. Table 9 illustrates the educational pathways of adolescents, chosen after a successful completion of compulsory education.

Table 10: Main pathways of IVET in Austria.

Educational pathway	Short description
Secondary TVE schools	Length between 1 and 4 years. Secondary TVE schools with a length of less than 2 years award a partial TVE-exam, schools with a duration between 2 and 4 years a complete TVE-exam. This completed TVE-exam is in many aspects equated to the exam of the apprenticeship training. Both convey occupational qualifications at a medium level (skilled workers and clerks) and give access to reglemented occupations (schools with a length of at least 3 years). The typical entrance age is 14. There exist some special forms of TVE schools (e.g. short forms, master courses). 73% of the pupils have completed lower secondary schools, 9% have completed the lower level of an academic secondary school. The first year of a secondary TVE school is often used as an alternative to the pre-vocational school by teenagers that are planning to start apprenticeship training after their school attendance.
Secondary TVE colleges	Normal length 5 years. Pupils conclude with a higher TVE-exam (double qualification "Reifeprüfung" and "Diplomprüfung") that gives access to tertiary educational programmes as well as provides the access to reglemented occupations and qualifies for the exertion of self-employed professions. The typical entrance age is 14. Special forms of secondary TVE colleges are colleges for adults resp. employed people and post-secondary colleges. 31% of the pupils have completed the lower level of academic secondary education, 58% have completed a lower secondary school. The first year of a secondary TVE college is partly used as an alternative to the pre-vocational school by teenagers that are planning to start apprenticeship training after their school attendance.
Apprenticeship training and part-time vocational schools for apprentices	Apprenticeship training has a length – according to the trained profession – between 2 and 4 years (most of them 3 years) and concludes with the apprenticeship leave exam ("Lehrabschlussprüfung"). The training is mainly work/company-based with a part-time attendance in a part-time vocational school for apprentices. Apprentices must have completed their school attendance before starting their training. The apprenticeship training conveys occupational qualification at the level of a skilled worker/clerk; access to reglemented professions is provided. 42% of the apprentices have completed the pre-vocational year, 19% come from a lower secondary school. Furthermore 13% of the apprentices come from secondary TVE schools, 9% from secondary TVE colleges and 5% from the upper level of an academic secondary school.

Notes: Differences in the figures between table 10 and chart 3 are accounted by the fact that table 10 lists the educational background of teenagers in the different IVET pathways and chart 3 lists the rates of transition after lower secondary education and school attendance.

Source: CEE according to information from the BMBWK and BMWA([23]).

([23]) Source of the data concerning the educational background of the pupils is the publication „Kenndaten des österreichischen Schulwesens" of the Federal Ministry of Education, Science and Culture (BMBWK, 2002d, p. 37). Schools for agriculture and forestry are not included; neither adult participants, post-secondary colleges and special courses.

Usually attendants are aged 14 when they start vocational education; 15 when starting the apprenticeship training. The duration of education covers a period of one to five years. The majority of young people opt for a type of vocational education that lasts between three and four years. Table 10 illustrates entrance age, period of training, and the aimed levels of qualification within the different types of IVET. A description in more detail is presented in the respective chapters.

IVET- schooling usually takes place in state schools whereas the responsibility is incumbent upon Federal Ministry of Education, Science and Culture. The Federal Ministry of Agriculture, Forestry, Environment and Water is in charge of schools and colleges for agriculture and forestry; the Federal Ministry of Health and Women is responsible for occupations respectively education and training in the field of healthcare. The operational part within the apprenticeship training takes place in private companies which meet the conditions and requirements for training candidates. These criteria and requirements are set up by the Federal Ministry of Economic Affairs and Labour. Adolescents who neither choose a vocational school nor an apprenticeship training at secondary level II usually opt for other advanced academic schools and institutions. Their initial vocational education starts after they have obtained the "Reifeprüfung" certificate and takes place in the sector of post-secondary education as well as in tertiary training institutions, such as academies, colleges, universities of applied sciences, and universities. Nevertheless, these educational pathways are not considered initial vocational education; even though they are supposed to be education and training on the professions concerned.
Up to now there are no flow-statistics in Austria. Therefore, it is rather difficult to estimate the number of drop-outs, including a differentiation of educational pathways and levels. Ambitions to expand school statistics towards individual statistics shall be realised within the next years. The quota of adolescents who quit school after their successful completion of compulsory schooling is pretty low, even if an exact figure is unknown. Estimates vary between 2% and 9%([24]).
Table 11 illustrates the proportion of young people aged between 15 and 20 as well as aged between 14 and 19 in school-based IVET at an upper secondary level. The age difference from 14-19 is typical for the training within the appropriate education levels. The last few years have pointed at a numerical stability concerning the quota of adolescents within initial vocational education. The trend towards school based vocational education is increasing .
Table 12 shows the total number of pupils who attend vocational schools and participants who achieve an apprenticeship training, divided by their sex. The proportion of men and women has been pretty constant since the 1990s. Only within recent years a declining rate of young women has occurred. Although the proportion seems to balanced at first glance there is definitely a clear segregation in certain educational pathways as well as in several fields of trade. Within apprenticeship training the rate of female participants is only 33%, which reflects an increase of only 4% since 1970 (cf. Nowak, 2002, p. 11). As far as secondary TVE colleges are concerned the rate of women is 50% whereas it is

([24]) For further details concerning school droup-outs see (Bergmann et al, 2001) and note 5.

60% as far as secondary TVE schools are concerned. In the sector of teacher training colleges the female rate is more than 75% (cf. Statistik Austria, 2003a, p. 113)([25]).

Table 11: Participation rates in IVET as a proportion of the total of young people aged 15-20 and 14-19 (1990-2001).

	Years							
	1990		1995		2000		2001	
	Number	%	Number	%	Number	%	Number	%
Young people in IVET (15-20 years)	320.059	50,0%	255.160	45,7%	278.269	47,9%	277.759	47,6%
Young people overall (15-20 years)	640.586	100%	558.885	100%	581.113	100%	583.106	100%
Young people in IVET (14-19 years)	322.059	52,9%	277.170	49,8%	296.164	51,1%	295.742	51,3%
Young people overall (14-19 years)	609.310	100%	556.418	100%	580.100	100%	576.876	100%

Notes:
For apprentices there are no age data available; therefore the overall number of apprentices has been included. In 1990 the age of pupils was not collected; therefore the overall number of pupils was included that year. "Young people in IVET" includes apprentices, secondary TVE schools, secondary TVE colleges, schools for the training of nursery/kindergarten teachers and non-teaching educational staff; as well special forms such as post-secondary colleges, special courses, master craftsman courses, courses for building workers and schools/colleges for social and medical occupations (these are statistical subgroups of other types of schools/colleges and therefore not severable by age and gender. these special or post-secondary forms have a typical participants age above 19 resp. 20 and therefore drop out of the age groups displayed in this table.).

Source: Statistics Austria (Statistik Austria, 2002a), Asutrian Federal Economic Chamber (Wirtschaftskammer Österreich, 2003) (CEE calculations).

([25]) A list of women´s quota referring to educational pathways is provided in table 14 as well.

Table 12: Gender ratio in IVET 1990-2001.

	Years							
	1990		1995		2000		2001	
	Number	%	Number	%	Number	%	Number	%
Female	143.099	44,4%	139.591	44,9%	152.634	46,7%	153.638	46,7%
Male	178.960	55,6%	171.222	55,1%	174.416	53,3%	175.005	53,3%
Overall	322.059	100.0%	310.813	100.0%	327.050	100.0%	328.643	100.0%

Notes:
"Young people in IVET" includes apprentices, secondary TVE schools, secondary TVE colleges, schools for the training of nursery/kindergarten teachers and non-teaching educational staff; as well special forms such as post-secondary colleges, special courses, master craftsman courses, courses for building workers and schools/colleges for social and medical occupations (these are statistical subgroups of other types of schools/colleges and therefore not severable by age and gender.).

Source: Statistics Austria (Statistik Austria, 2002a), Austrian Federal Economic Chamber (Wirtschaftskammer Österreich, 2003) (CEE calculations).

2.1 Development of IVET

The roots and traditions of the Austrian initial vocational education originate in medieval times([26]). Historically job-training is based on schooling offered by convents as well as on education provided by united craftsmen who had organised early forms of trainee-ship for future professionals in the field of trade. For a very long time this has been the only form of systematic education. However, job training which was carried out by urban craftsmen was strongly divided into social classes and determined by a strict regulation of rights and duties. At the beginning of the 19th century this form of education vanished thanks to an increasing appreciation of liberalism in economic affairs as well as other political and economic changes and the growing industrialisation. It was the state itself that took over the responsibility for apprenticeship. In industrial enterprises a training system was established which was based on the system of the craftsmen. At the end of the 19th century another innovation came into existence: in addition to the traineeship programme, trainees had to attend part-time compulsory school (1897), which can be considered a pre-form of today`s system of (compulsory) vocational schooling for apprentices.

Apart from these introductions, so called academies came into existence. They mark the beginning of qualified job training at school: vocational education at school was born. Up to the 19th century a vast variety of vocational education emerged which met at the same time the increasing demand for skilled workers in the industrial world. These schools were set up frequently by representatives with economic interests. The existing system was expanded by introducing technical and commercial

([26]) A detailed timechart on the historical development of Austria´s educational system is provided on the homepage of the BMBWK: http://www.bmbwk.gv.at/start.asp?isIlink=1&bereich=3&l1=15&l2=25&l3=141&OID=2010#

schools. This is another early division which is very close to today´s system of secondary TVE schools and secondary TVE colleges.

Both, World War I and World War II, in particular the regime of National Socialism strongly affected the Austrian educational system (e.g. close down of Jewish institutions, limited education for women etc.). So it was even more necessary to establish a new educational system once democracy was re-established in 1945. This reform was introduced as far as operational education as well as vocational education at school is concerned. As there were political conflicts during the post-war period the reform was delayed till 1962; finally the law was passed. This new legislation contained numerous new changes, which still can be considered the basis of today´s prevailing system. So the division into secondary TVE schools and secondary TVE colleges was introduced at this time. Later on the existing options concerning the sector of post-secondary education were extended significantly.

In 1970 apprenticeship training was eventually reformed after a long period of political struggle. In the course of this the Austrian Federal Economic Chamber became a more important authority in the matter of safeguarding a proper appreciation of apprenticeship training. In addition to that, the introduction of an advisory body, the so called "Berufsausbildungsbeirat" (VET advisory council) was set up, which happened to guarantee the involvement of the social partnership in case of legislation changes. New changes followed shortly afterwards: in 1978 the law was reformed one more time which upgraded the quality of apprenticeship training. It emphasises certain qualification criteria that trainers and other staff have to fulfill as well as certain requirements companies have to keep up to. Further on curricula for different trades were implemented.

Since the 1970s the Austrian vocational education system is based on this structure and implementations of contents. Meanwhile, numerous adaptations concerning the schooling system as well as the dual training system have been established. That is how the general quality of initial vocational education has increased continuously till it reached today´s high level. The most important reforms and changes in the field of educational pathways, which have been carried out during the last years shall be pointed in the following. Tendencies within vocational education are also mentioned([27]):

(a) Changes in the field of apprenticeship training:

- General education – The number of subjects concerning general education has risen. Curricula place more emphasis on languages such as English or German and focus much more on information and communication technologies (IT). Because of that vocational schools for apprenticeships, especially for certain professions, require more time;
- Transfer – Vocational schools for apprentices were set in secondary level II to enable a smoother transfer between the different school types;

([27]) A detailed illustration of current developments within vocational education is provided throughout the regular report of the Federal Ministry of Economic Affairs and Labour (BMWA, 2001b).

- Certificate of „Berufsreifeprüfung“ – The “Berufsreifeprüfung” was legislated and gives the graduates access to university;
- Shortened period of apprenticeship – This was introduced for apprentices who are well „pre-educated“ since they have achieved a certain level of education before (e.g. A-level, classes within secondary TVE colleges). For students holding a “Reifeprüfung” certificate or for those who attended a secondary TVE college for some time, the apprenticeship training might be shortened as these qualifications are taken into account. This shortening makes apprenticeship training as a second educational pathway more attractive. This is also true for those students who decide to transfer from their current educational state to apprenticeship training;
- Legislated frame conditions – In order to make apprenticeship training more attractive to companies, several changes have been encouraged. The employer doesn’t have to pay a share of the apprentice´s health insurance for the first three years, an adaptation of the apprentice’s rights and duties has been worked out which meets modern and current work conditions, the overall procedure has been made easier, and compulsory schooling for apprentices has become staggered;
- Apprenticeship training in groups – To guarantee a broad education within similar professions apprenticeship training in groups has been introduced. This specific form of apprenticeship training is based on a basic education and was introduced to counteract a fragmentation into too small fields of competence;
- New occupations – Numerous professions, especially in the field of information and communication technologies, have occurred since the 1990s. Beside new IT-professions this concerns also operator jobs (e.g. multimedia). Those new job-types are considered a contribution to the general effort of achieving the integration and advancement towards IT-qualifications as a general task within apprenticeship training;
- Modulation – There is a general attempt to establish a modulation within apprenticeship training which is meant to lead to a division of today’s 300 existing apprentice-professions into 100 basic training programmes, including continuing education through modular courses that offer specific knowledge on the profession concerned. This process is discussed right now and is said to be the most important reform within apprenticeship training since 1970 (cf. ZBW, 2002b, p.12);

(b) Changes in the field of TVE schools:

- Autonomy – Autonomy of TVE schools has been expanded and allows schools more responsibility in pedagogical, personal, and financial matters as well as in administrative matters. Because of that more emphasis is placed on autonomy concerning the curricula, guaranteeing the schools´ freedom to develop individual specialisation in certain areas;

- Practically orientated education – Practically orientated education as well as the realisation of projects becomes more and more important. In terms of these tendencies students have the chance to put their obtained skills into action and enlarge their know-how. Business schools, for example, established extra centres for business management and gained further cooperation with various companies in the field of economical projects. Secondary technical vocational schools aim for the realisation of projects, too. In secondary technical industrial schools all kinds of technical project activities are carried out, whereas in secondary technical industrial colleges the projects carried out focus on engineering. These projects are part of the students performance in class and are therefore taken into account as far as grading is concerned([28]). The involvement of (partner) companies is particularly targeted within the process of realising a project;
- „Tree-Model" – Several reforms have lead to the restructuring of curricula for secondary TVE colleges. Its basic structure can be considered the structure of a tree (cf. BMBWK, 2001b, p.17f): education that later on makes a variety of professions possible is based on a common general education. Specialisation towards one specific profession is provided during the last years of someone's overall education. That's how a fragmentation is being counteracted since a balanced scope of measures for specialisation is maintained;
- Internationalisation – There is an increasing emphasis on foreign languages and on trying to establish networking within the EU in terms of IVET.

(c) Other changes:

- Transfer within the educational system has expanded significantly in numerous areas (e.g. schools and colleges for people under employment, simplified measures to exit or enter in between, accreditation of education and skills which have been obtained before in case of a transfer between different types of IVET, access to the tertiary sector for those who don't hold the "Reifeprüfung" certificate [e.g. "Berufsreifeprüfung"]).
- Post-secondary sector – Besides federal institutions private courses with an university character are maintained;
- Tertiary sector – Concerning novelties within this sector, the establishment of Universities of Applied Sciences ("Fachhochschule") (1993) is the most remarkable one. Universities nowadays award the Bachelor degree. Holding a Bachelor degree, Master courses may be attended (1990). Both innovations are in line with international developments. The establishment of private universities has been legislated as well.

([28]) Within secondary technical industrial colleges projects may cover up to 40% of the total teaching during the final year respectively term. Therefore, parts of the Reifeprüfung respectively diploma-examination might be left out

(d) General trends:

- In general there is a noticeable trend towards the Reiferprüfung certificate, and advanced secondary vocational education respectively training at the tertiary level whereas apprenticeship has become less attractive. In order to gain more appreciation there is an encouragement for providing continuing education and training options which also include the apprenticeship leaving exam ;
- In recent years apprenticeship places have declined significantly. Changes in law shall attract companies and encourage them to provide apprenticeship places in order to counteract this tendency;
- Because of regular technical innovations and the trend towards higher specialisation it is necessary to adapt curricula regularly, making them more flexible in all fields of vocational education. General requirements have to meet all the prevailing working conditions and demands when it comes to the point of leave;
- General efforts are made to extend networking and transfer within the overall educational system as well as to maintain international comparability and credits.

2.2 Relationship between IVET and general education

More than 60,3% of the Austrian population have obtained a leaving certificate in some field of IVET between the ages of 20 and 64. In addition to other graduates from universities, universities of applied sciences, and other institutions similar to university this rate has increased to 68,2% (cf. BMWA, p.12). Therefore, the output of IVET can be considered pretty high. Educational pathways are very attractive later on and because of that there are approximately 80% of all adolescents who attend some kind of IVET in their tenth year of schooling (cf. table 9).

In recent years general tendencies in the Austrian educational system have moved significantly towards advanced secondary education. Both, vocational schools and academic secondary schools are affected. Particularly the quota of students who attend a secondary vocational college has increased noticeably to more than 50% since the 1980s. This is the result firstly of the federal´s effort to provide advanced vocational education institutions which have increased from 150 to more than 300. Furthermore, the number of adolescents who attend a secondary school has decreased to 20%. The number of adolescents who take part in apprenticeship training has decreased particularly because of the negative development as far as the the market of apprenticeship places is concerned, and generally because of the tense jobmarket. Since 2000 a decline of 6%, since 1980 a decline of even 35% has been observed. Referring to the relevant year of birth the quota of apprenticeship beginners in 2002 is 41,8% (cf. Austrian Federal Economic Chamber, 2003, p. 2).

Table 13 illustrates the proportion of adolescents, as far as vocational training and school attendance are concerned, at secondary level II. Parallel to a declining number of graduates who only have achieved compulsory schooling the rate of those who enter secondary level II has increased. The distribution of initial vocational education and academic secondary education has remained steady during the last years, even though there is a tendency towards secondary TVE colleges.

The quota of women in general academic education as well as in vocational education is illustrated in table 14. Nevertheless, female and male quotas in these fields have become fairly equal in recent years. In particular there is a female surge towards secondary TVE colleges. Therefore, this survey might mislead in terms of prevailing segregations. The profession within chosen vocational training mostly follows certain schemes of segregation. Concerning apprenticeship training this means that two out of three apprenticeship candidates are male.

Continuing education and training after secondary level II has also become more attractive. This is noticeable for both, the post-secondary and the tertiary sector. Especially continuing adult education has extended which is very significant for the variety of the Austrian Economic Chambers and Chambers of Labour. Therefore, there is no specific focus on one generally structure or common education but strong emphasis on meeting individual needs and requirements based on achieved education and knowledge that further on meet the demands of a society, that changes in terms of technical, economical and social matters (cf. Rothe, 2001, p. 193p).

Table 13: The distribution of participiants between IVET and general education (upper secondary level) 1990-2001.

	Years							
	1990		**1995**		**2000**		**2001**	
	Number	**%**	**Number**	**%**	**Number**	**%**	**Number**	**%**
Young people in IVET	322.059	64,4%	310.814	61,1%	327.050	61,5%	328.643	61,5%
Young people in general education	177.832	35,6%	197.970	38,9%	204.307	38,5%	206.097	38,5%
Overall	499.891	100%	508.784	100%	531.357	100%	543.740	100%

Notes:
"Young people in IVET" includes apprentices, secondary TVE schools, secondary TVE colleges, schools for the training of nursery/kindergarten teachers and non-teaching educational staff; as well special forms such as post-secondary colleges, special courses, master craftsman courses, courses for building workers and schools/colleges for social and medical occupations (these are statistical subgroups of other types of schools/colleges and therefore not severable by age and gender.). „Young people in general education" includes academic secondary schools and pre-vocational schools (Pre-vocational schools are counted as general education schools).

Source: Statistics Austria (Statistik Austria, 2002a) (CEE calculations).

Table 14: The proportion of female participiants in IVET and general education (upper secondary level) 1990-2001.

	Years							
	1990		1995		2000		2001	
	Overall	Female ratio	Overall	Female ratio	Overall	Female ratio	Overall	Female ratio
Young people in IVET	322.059	44,4%	310.814	44,9%	327.050	46,7%	328.643	46,7%
Young people in general education	177.832	51,4%	197.970	54,0%	204.307	53,6%	206.097	53,6%

Notes:
"Young people in IVET" includes apprentices, secondary TVE schools, secondary TVE colleges, schools for the training of nursery/kindergarten teachers and non-teaching educational staff; as well special forms such as post-secondary colleges, special courses, master craftsman courses, courses for building workers and schools/colleges for social and medical occupations (these are statistical subgroups of other types of schools/colleges and therefore not severable by age and gender.).
„Young people in general education" includes academic secondary schools and pre-vocational schools (Pre-vocational schools are counted as general education schools).

Source: Statistics Austria (Statistik Austria, 2002a), Austrian Federal Economic Chamber (Wirtschaftskammer Österreich, 2003) (CEE calculations).

As mentioned before (cf. table 10) educational pathways chosen in terms of initial vocational education in Austria provide a variety of different qualities and qualification levels depending on the choice of options. So graduates from the one-year pre-vocational school achieve a part-qualification as well as those who hold an apprenticeship leaving exam or graduate from a secondary TVE school. There are also the ones who hold the double qualification "Reifeprüfung" and a diploma from a secondary TVE college. Differences concerning contents – including differences within education and training for similar professions – and in administrative matters are going to be illustrated later on.

It is the general task of secondary TVE schools to complement occupation-specific knowledge on the one hand and to impart general education on the other hand which differs significantly from the dual system and its orientation towards operational training.

Basically the transfer within different educational pathways is possible; restrictions concerning the transfer into other school types occur only because of the differences in the curricula. Therefore, an entrance and graduation is only possible, if new attendants start from first year([29]).

In case of transfer from apprenticeship training into secondary TVE schools the usual access criteria are valid (e.g. successful completion of eight years of schooling, certain grades in certain subjects etc.). Transfer from an secondary TVE college or secondary TVE school into an apprenticeship training is no problem at all and happens quite often (22% of all apprenticeship trainees). There are two reasons for that: Firstly, the first year in a secondary TVE school or secondary TVE college is used as an alternative to pre-vocational schools. Secondly, students transfer to apprenticeship training

([29]) Exceptions are sometimes possible.

if they are not able to achieve the required proof of performance in class and fail. Since it is common to take pre-qualifications into account the overall period of apprenticeship training might be shortened. To counteract the lack of access to university-level-education, the so called "Berufsreifeprüfung" respectively Higher Education Entrance Exam for graduates of secondary TVE schools as well as for apprentices who hold the Apprenticeship Leaving Certificate were introduced (cf. chapter 2.1.3). Apprenticeship training is the only educational vocational training in Austria that requires nothing but the completion of compulsory education and is therefore accessable by law for each adolescent irrespective of his or her former school performance. In reality a number of apprenticeship trades demand a successful achievement at the point of school leaving anyway. Therefore, a process of selection in the field of apprenticeship training takes place. In particular this phenomenon occurs within internal assessment rules and an informal division into more or less difficult apprenticeship trades. This aspect will be discussed in one of the following chapters.
The Austrian educational system basically tries to make a second educational pathway as well as the catching up on qualifications possible. The establishment of the so called "second education" meets these interests. There are several options that ensure secondary TVE education, advanced secondary TVE education as well as the academic secondary education for people under employment who nevertheless aim for an appropriate certificate. In case someone wants to obtain the Apprenticeship Leaving Certificate even though he or she is already under employment this can be done in private institutions as well as by auditing in part-time vocational schools. Later on there is the possibility within the "third education" to take an exam as external candidate and to prove competence in certain subjects.

Studies have shown that those who have successfully completed vocational education and training have more chances to find a job and to enter the job market than those without (cf. Bergmann et. al., 2001; Lechner et. al., 1999; Lassnig/Schneeberger, 1997). Tabel 15 illustrates the unemployment rate among those who have successfully completed vocational education. The job situation for those who only have achieved compulsory education is very difficult indeed. Their chances for good employment have declined significantly for years now. Basically there is only one conclusion: the higher the achieved education, the more chances for an appropriate occupation. This would also lead to a declining rate of unemployment. Graduates from academic secondary schools without vocational training are, referring to statistics, confronted with as high chances as graduates of secondary vocational colleges. The quota of unemployment for women is slightly higher than the one for men in all fields whereas these differences become less depending on the level of education; the quota of women under employment who are highly educated and graduated also increases (cf. OECD, 2000, p. 290f)).

Table 15: Number of unemployed people and unemployment rates by educational background (national calculation method).

	Years							
	Ø1990		Ø1995		Ø2000		Ø2002	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate
Compulsory education	81.507	9,5%	96.764	11,4%	87.502	12,1%	105.077	14,6%
Apprenticeship training	59.941	4,5%	85.541	6,3%	76.116	5,4%	98.092	6,2%
Secondary TVE schools	9.914	3,0%	13.193	3,8%	12.227	3,3%	13.843	3,7%
Academic secondary school (upper level)	4.705	3,0%	5.622	3,1%	5.135	2,5%	6.805	3,2%
Secondary TVE colleges	5.283	2,6%	8.600	2,9%	8.297	2,6%	11.460	3,3%
University/Tertiary colleges/Academies	4.446	2,1%	5.998	2,3%	5.040	1,7%	7.140	2,3%
Overall	165.796	5,4%	215.718	6,6%	194.317	5,8%	232.417	6,9%

Source: Public Employment Service, special calculations.

The listed unemployment rate follows national calculation methods and refers to registered unemployed. Statistics do not provide proper information about school graduates and graduates of apprenticeship training who are not yet entitled to be on the dole. Often is very little detailed information available either; since basic statistics are missing it is hardly possible to find information about the individual´s situation later on in life and their personal development.

Referring to investigations on this matter adolescents who have obtained vocational education and training are able to find an occupation faster than school drop-outs or those who quit an apprenticeship training or haven ´t got any educational training at all (cf. Bergmann et. al., 2001, p. 31f). In terms of the duration of unemployment, a decline can be observed for those who were engaged in higher education or in higher vocational education (cf. BMWA, 2001b, p. 22).

2.3 Qualification structure

As illustrated before there are several levels of qualification within initial vocational education at secondary level II. Basically vocational part-qualifications (secondary TVE schools up to 2 years), full vocational education for skilled workers (secondary TVE schools from 3 years onwards as well as

apprenticeship training([30])), and finally vocational education and training which gives access to university (secondary TVE college) can be obtained. The graduation from a secondary TVE college is the uppermost level in the secondary sector. Students achieve a double qualification consisting of the "Reifeprüfung" and TVE Diploma Examination. This double qualification makes the access to regularised occupations easier. Further more, the graduate can ask the Federal Ministry of Economic Affairs and Labour for permission to hold the title of, for instance, an engineer. Further on they are entitled to enrol at university or university of applied sciences and academies.

Graduates of other forms of vocational training have several options to obtain the right to study at university. So graduates from those secondary TVE schools which cover a vocational education from 3 years onwards have the possibility to take the "Berufsreifeprüfung" which is legally in line with the "Reifeprüfung" examination. Proof of knowledge is thereby required in both fields, general education and specific skills in the profession concerned. Accreditation might be given for certain trade qualifications. Another possibility to enter the tertiary sector is to take the Higher Education Entrance Exam. This examination can be taken if former vocational training has been achieved and if the candidate is at least 20 years old. In contrast to the "Berufsreifeprüfung" this exam only allows restricted access to university([31]). Besides working experience in the professional field concerned additional exams are required. Access to universities of applied sciences is different: the Higher Education Entrance Exam and the "Berufsreifeprüfung" can be substituted by explicit work experience. Other additional exams need to be taken instead([32]).

Certain options for post-secondary education apply particularly to graduates from secondary TVE schools as well as from the dual training system (e.g. Master Craftsman Courses) and provide an advanced qualification within the appropriate profession.

Colleges provide vocational education for graduates from an academic secondary school at the same level as secondary TVE colleges.

As illustrated in chapter 1.4.1, provision and administration within the matters of initial vocational education is partly incumbent upon the responsibility of the Federal Ministry of Education, Science and Culture (BMBWK) and partly incumbent upon the Federal Ministry of Economic Affairs and Labour (BMWA). The first one is in charge of schooling in secondary TVE schools and secondary TVE colleges whereas the second one is responsible for operational matters in the dual system of apprenticeship training. Provincial inspectors are the authorised body for administration matters in the provinces whereas the Federal Economic Chamber is the responsible authority concerning apprenticeship training([33]). But certain exceptions, general laws and other ordinances are decided upon a federal authority, the same is true for questions and decisions concerning contents of education. The

([30]) An examination certificate from a secondary TVE school that requires 3 years is as far as vocational qualifications are concerned in line with the apprenticeship leave certificate.
([31]) This is limited to the subject of studies that the applicant has applied for.
([32]) This is, however, irrelevant, as the additional examination and the Higher Education Entrance Exam are identical.
([33]) Agriculture and Forestry are the only exceptions; responsibility is incumbent upon the Chambers of Agriculture.

provinces operate as advisory authority and are responsible for the realisation of decrease as well as for specifications within their own region. The federal authority is responsible for certification that gives evidence of a successful completion of secondary TVE schools or secondary TVE colleges. As far as apprenticeship training and vocational training are concerned, this responsibility is incumbent upon the provinces. Besides the responsibilities and competence of those public institutions, the role and power of the social partners within IVET has to be pointed out as well (cf. Chapter 2.5). The participation of both, employers and employees is particularly manifested in the right to officially examine bills, in the representation in certain panels, in the advisory function for administrative authorities as appreciated advisory bodies, and in direct responsibilities in the field of apprenticeship training such as examination boards.

In order to maintain the quality of education and schooling, curricula are updated regularly by experts of the school administration as well as by representatives of the social partnership, including economy and industry. Frame curricula set up by the federation safeguard are common standard within initial vocational education.

2.4 Schools, training centers, providers

Initial vocational education at secondary level II takes mainly place in state schools. Responsibility is incumbent upon the federal authorities whereas provinces are in charge of part-time vocational (compulsory) schools. In the school year 2001/02 private institutions in the field of BMS, BHS and BPS have reached a quota of 24,5% of all schools and 9,9% of all pupils (cf. BMBWK, 2002b, p. 252f). Private schools that provide the opportunity to complete the official and legislated education take federal curricula as guidelines. Since these school types exclusively aim for vocational education and schooling, they do not provide any education in general subjects. They often offer special forms of secondary level II as post-secondary education (e.g. colleges and secondary TVE colleges, master craftsman course and BPS). Curricula contents and profession specific profiles of these schools are illustrated in chapters later on.

With the 14th amendment of the school-law the grade of school autonomy has expanded significantly in 1995. Since then the body of school community ("Schulgemeinschaftsausschuss") consisting of teachers, pupils and parents is entitled to enact ordinances concerning an updated curriculum in a certain frame. This provides the opportunity to develop individual profiles as well as to adapt curricula based on local and sectional interests. Furthermore the range of different education and training options for students has increased as well. Apart from that possibilities within autonomy lead to a certain grade of freedom and self-government in terms of teaching time and financial rights (e.g. provision of all kinds of teaching material).

Specific matters concerning the dual training system will be explained in the main chapter of this report.

2.5 Role of social partners and enterprises

The system of the economical and social partnership as a special political interest is a very important aspect in Austria`s political setting and has influenced the development of the country after World War II. The core of this economical and socio-political cooperation between representatives of employers and employees as well as representatives of federal authorities, is the so called Parity Commission, which has been established in 1957. It consists of the federal chancellor and three federal ministers as well as the chairmen and vice chairmen and other public servants of four more organisations (Chamber of Labour, Trade Union Federation, Federal Economic Chamber, Chamber of Agriculture). Eligible to vote are those organisations which follow the principles of parity and consensus when coming to a decision. The commission is not based on legislated rules but on the arrangement of all participants to perform on the basis of a mutual agreement. Thereby the regular exchange of ideas with all parties is the most relevant aspect of the partnership. The participation of the social partners comprises the right to officially examine and accredit legislation as well as the assistance in an expert-commission fulfilling an advisory task. Furthermore, representatives of the social partnership act as mandatories of legislating bodies. In terms of vocational education the participation of the social partners (Federal Economic Chamber and Chamber of Labour) is a quite intensive one and shall be pointed out in the following whereby each educational pathway is illustrated separately:

(a) The so called „Landesschulrat“ is obliged to listen to and to act as an advisory instance for official representatives responsible for school matters (BMS, BHS, BPS). The same applies to the board of trustees of pedagogical training academies. For the future a cooperation of vocational schools and economical representatives is intended. The realisation of this cooperation might ask for different advisory bodies;

(b) The so called “Berufsausbildungsbeirat“ (VET advisory council) on a federal and provincial level, which consist of several interest-representatives and act in a similar way on the level of apprenticeship training. However, their importance is more significant. Their duties comprise a broad scope of activities such as providing advice in administrative matters of vocational education. Furthermore, it´s responsible for giving a hand as far as other content matters in the overall vocational system are concerned. Suggestions concerning a reorganisation of the vocational training are frequently made by them. The BMWA might then enact decrees. The federal “Berufsausbildungsbeirat“ is comprised of six representatives of the Federal Economic Chamber and the Chamber of Labour. Furthermore, two teachers support the “Berufsausbildungsbeirat“ by acting as an advisory instance;

(c) The social partners are responsible for vocational education and training as far as the establishment of apprenticeship training places in the respective regional economic chambers are concerned. They carry out all administrative matters within apprenticeship training following directions given by the federal authorities. By doing so all federal duties and responsibilities are

delegated to several representatives. There is an intensive cooperation of the regional economic chambers and the apprenticeship authorities of the regional chambers of labour. As far as agriculture and forestry schooling is concerned the ministry of agriculture, forestry, environment and water is the responsible body;

(d) In terms of apprenticeship training social partners have got an exclusive right to make suggestions concerning the composition of the examination boards that hold the apprenticeship leaving exam. Furthermore, they play an important rule as far as the examination for apprenticeship - trainers([34]) are concerned.

2.6 Planning and forecasting

The increasing orientation of training pathways towards the job market is caused by certain current crises (e.g. lack of apprenticeship training places, educational deficits at schools and universities, the general tense job situation, a lack of skilled workers in certain trades) which have initiated a process of reflection that is followed by initiatives concerning both, educational plans based on inquiry and realisation of qualification developments at an early stage.[35] Still, on a national level there is no elaborate and systematic instrument for the observation, the planning and the adaptation of education to recent developments as far as qualifications are concerned, with the exceptions of universities of applied sciences (cf. Markowitsch, 2001, p.11f). It is still the work of a group of experts that is responsible for the design and development of the vocational educational system is Austria. Processes and instruments that lead to an adaptation and anticipation of educational contents are not yet implemented in Austria (cf. Steiner, 2002, p.48).

In terms of the regulation of initial vocational educational systems a difference has to be made between training at school and the dual training system (apprenticeship training). Since schooling is bound to a ministerial centralisation, it is not as intensely connected to current qualification developments on the job market as the operational training is (cf. Markowitsch, 2001, p. 9). Therefore, it is also necessary to distinguish between those different educational training pathways when it comes to the investigation and analysis of models of qualification changes.

The educational contents of vocational schools (BMS, BHS as well as colleges and academies) are fixed in skeleton curricula by the Federal Ministry of Education, Science and Culture. Schools and their pedagogical staff have some freedom to adapt the skeleton curriculum to their local context based on current social and technical developments. This leads to an enlarged flexibility as far as the

([34]) Fore precise information on the participation of the social partners in vocational education refer to the appropriate laws.

([35]) Markowitsch gives a clear overview of models that allow an ear understanding of which qualifications are needed within the Austrian educational system. He´s doing so in a lecture hold at a coordination workshop of "Lebenslanges Lernen" by the BMBWK (Cf. Markowitsch, 2001, p. 7f). This lecture was composed on behalf of CEDEFOP in the frame of the project "Observation of Innovations" and was published in: Burkart, Sellin. CEDEFOP-Anticipation of Occuppation and Qualification Trends in the European Union. Innovations for effective anticipations of qualification and competence trends and the adaption of that provision in the member states. 2000.

composition of the individual curriculum is concerned and allows later on an extended orientation towards local economical circumstances and other needs. The curricula are reformed every five to ten years by the ministry. The impetus is mostly given from ministerial bodies and different school types through their feedback. The working process respectively its participants comprises several educational bodies and other experts. The suggestions and composed concepts are then presented to representatives of the social partnership for accreditation and approval. The new curricula are finally passed through new amendments. Restructured curricula are realised within a cycle of ten months to two years([36]). The ministry thinks about an introduction of an advisory body that is exclusively in charge of the observation of qualification developments on the job market in order to design new curricula that meet current requirements and trends. All in all the process of adaptation in vocational educational schools is carried out centralised. The process of anticipation of future qualification requirements becomes more important.

In recent years a trend towards socio-scientific research has begun, which can be considered a basis for decision-making as far as political and educational matters are concerned. Because of reforms and other initiatives more attention is paid to general economical developments as well as to practically orientated education at school. This is true for both, secondary TVE schools and secondary TVE colleges. Besides general adaptations which meet the requirements of the modern professional life (e.g. usage of new media in class, initiatives to introduce foreign languages) schools may modify the curriculum and develop their own specific profile within the framework of school autonomy and pilot projects (e.g. business management centres, economical projects, technical projects, engineering projects, companies that open the doors for students who want to gain practical experience). This leads to a continuous improvement of the quality of vocational education and training. In particular education and training in secondary TVE colleges meet the current requirements of the job market pretty well (cf. Markowitsch, 2001, p. 11).

As far as apprenticeship training is concerned, the educational contents are prescribed in job profiles of the different apprenticeship trades, which are composed by the Federal Ministry of Economic Affairs and Labour (BMWA). In addition to these basic instructions there are adapted curricula for part-time vocational schools which are set up by the Federal Ministry of Education, Science and Culture as well as by local administrative staff ("Landesschulrat") and other experts. The working out of job profiles is based on the suggestions which are made by a federal advisory body called "Bundesberufsausbildungsbeirat" (federal VET advisory council), consisting of representatives of the social partnership. Strategic work is also done in panels whereby social partners and experts of each professional department (e.g. economy) are involved. The formation of these panels and their work is orientated towards certain needs and is initiated by a certain cause. The actual composition work has got an informal and intransparent character. In the overall organisation of apprenticeship trades

([36]) The actual process of passing the appropriate bill requires a lot of time.

research and scientific expertise are of secondary importance. Research only occurs as an evaluation of needs and demands of major companies. The reorganisation of an apprenticeship profession approximately requires one year. Sometimes the duration of one year is extended up to three years, which is because of the social partners´ difficulties to reach an agreement. As far as apprenticeship training respectively the development of educational training concepts are concerned, the relevance of the social partnership becomes evident. The federal state delegates the tasks of reorganisation and reforming to the "Bundesberufsausbildungsbeirat", which leads to the connection of apprenticeship training with the demands of professional life.

The two mentioned systems concerning the educational development of apprenticeship training have one thing in common: they are based rather on the work and results of the experts than on systematic evaluations and scientific analysis. Furthermore, they both react to current developments through close collaboration with partners from economical institutions.
In this respect the universities of applied sciences([37]) are an exception concerning vocational education in Austria. Apart from administrative and legislative aspects of this quite young educational institution (in Austria since 1994) they are remarkable in respect to their organisation and course of studies. In order to safeguard an appropriate scope of courses and lectures a group of scientific experts and of those who are experts in the professional fields concerned work out a proper course scheme. This is examined in first instance by a research institution in order to check if the concept meets all the required interests. Following that, the course scheme is presented to an advisory council ("Fachhochschulrat") for further approval and accreditation. In addition to that two more aspects are evaluated: firstly the needed number of future graduates is evaluated, secondly the acceptance of the educational and training profile is analysed by possible future employers. Based on these information the "Fachhochschulrat" is entitled to allow the responsible body of the university of applied sciences to establish the course of studies concerned, that can require up to five years. During this period the course of studies is subject to monitoring which is based on specific key indicators. As soon as the first of five years has expired an evaluation on the implemented course scheme takes place. Depending on the results this course of studies will either be kept or excluded. Besides general affinity to economical matters and enterprises, the explained processes of adaptation and anticipation within universities of applied sciences lead to their status of being the most modern type of education in the tertiary sector of vocational training.

The recent studies on the question of which qualifications and skills are being asked for on the job market in Austria, can be distinguished by either the aim of the research work or by the institution that commissioned the investigation concerned (cf. Markowitsch/Litschka, 2002, p. 98f). Three groups of those commissioning an analysis are relevant: analysis on behalf of the PES (Public Employment

([37]) For further details about universities of applied sciences refer to the main chapter.

Service), analysis on behalf of a federal ministry and analysis carried out in order to examine study-needs at universities of applied sciences. The studies on behalf of the PES and ministries are similar in many respects. They are sectorially orientated and neglect local aspects more or less, or rather take only certain target groups or segments of the job market into account (e.g. women, IT). The period of forecast is a short-term one (one to five years) and the mainly used method in the analysis is a quantitative one. Forecasting is mostly done linearly and takes hardly any scenario models into account. Since there is a wide spectrum of methods, research questions, target groups and definitions, it is nearly impossible to deduce results that can be generalised. This has lead to ambiguous results. As far as the analysis of needs and demands in terms of establishing a course of studies at universities of applied sciences is concerned, the "Fachhochschulrat" asks for a version that brings together analysis of secondary statistics and primary evaluations. Since the introduction of universities of applied sciences in Austria approximately 100 analyses have been carried out, all of them referring to a basic research question and all presenting results that is focus on one specific job profile. In summary, this points out that there is a lack of innovative and sophisticated analysis of qualification needs in Austria([38]); further on it is necessary to take these results into account for future developments and institutionalisation of vocational education.

In order to illustrate an actual middle-term qualification forecast, the results of an analysis of the Austrian Institute for Economical Research (WISO) shall be briefly presented in the following (cf. Biffl, 2001). For the period up to 2005 the analysis proclaims that the educational participation of Austria´s population will increase continuously which will lead to the steady rising of better qualified professionals as well as to a significant increase as far as the qualification of people under employment is concerned. Even though a general overaging will be seen to emerge within the next years, a shortage of manpower is not expected as there are many unemployed people to fall back on to. In terms of the qualitative aspect a deficit will certainly appear since these people won´t be able to meet the growing economical requirements; unless an enormous effort by employment politics is made. This lack of qualified employees will mainly concern people who have successfully completed a higher vocational education, such as secondary TVE colleges, or who hold a university diploma (universities of applied sciences, colleges); a shortness of qualified manpower will occur within these sectors. Referring to the forecast there will be a demand for male employees in particular. Since apprenticeship training, which is dominated by men, hardly provides any possibilities of transfer to upper levels (low participation within continuing education and training afterwards) and since the tendency towards university after a successful graduation from a secondary TVE college keeps increasing, a lack of qualified professionals will appear. Apart from the lack in the field of IT-technologies, which has been

([38]) The analysis of Markowitsch/Humpl/Hörtnagel, 1999 offers an elaborate overview of the positive and negative aspects concerning the Austrian studies of qualification needs.

mentioned before([39]), this is also true for other branches. Referring to this analysis even a lack of qualified healthcare staff will occur.

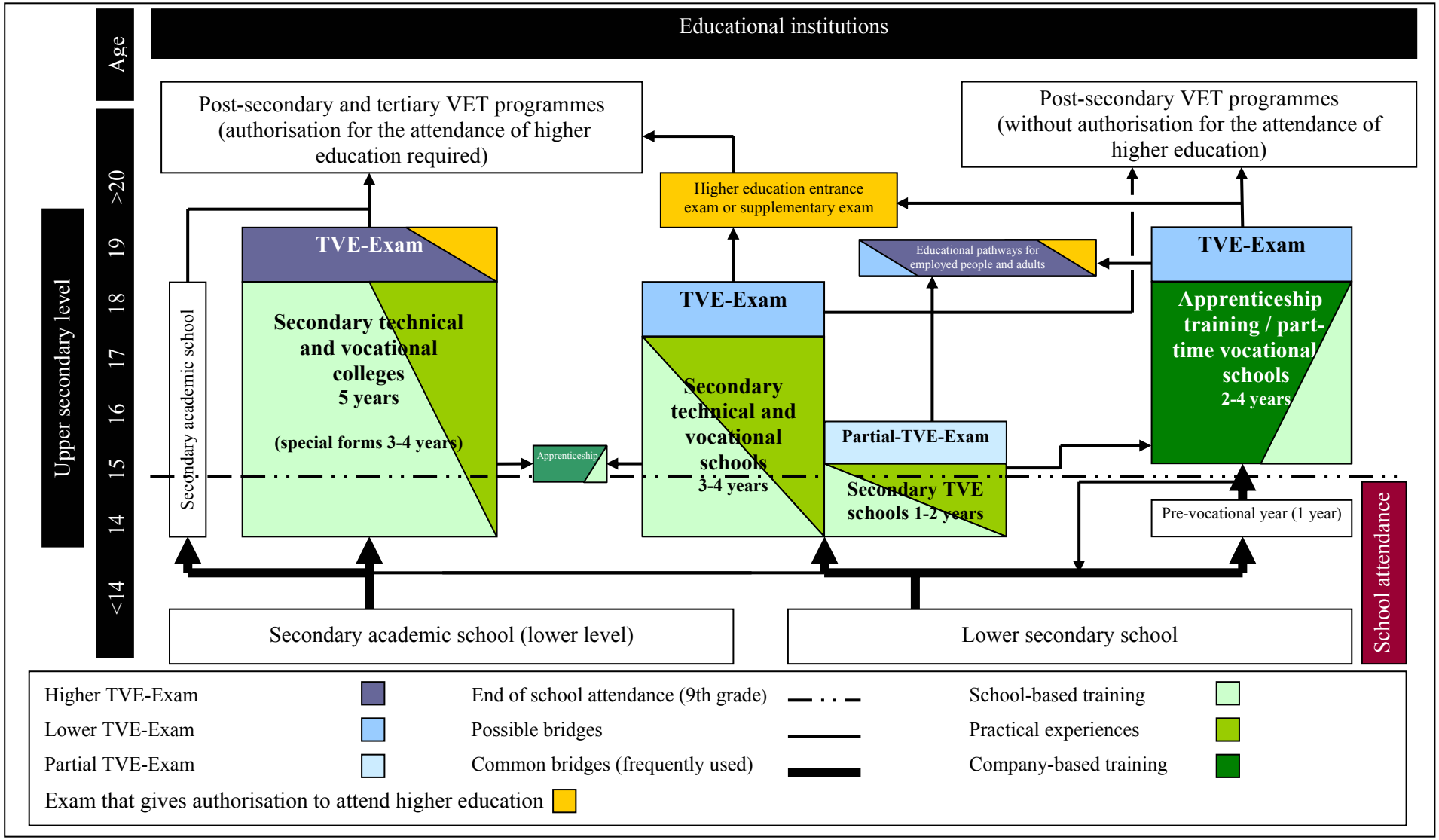
The provision of appropriate education leading to higher qualification can be considered a future challenge for the Austrian educational system. Besides initial vocational education, it is later on necessary to guarantee transfer - particularly concerning apprenticeship training - within the overall educational system as well as to guarantee a steady updating of skills and know-how throughout continuing education and training.

2.7 Main pathways within IVET

So far this chapter has intended to illustrate Austria´s initial vocational education (secondary level II). Chart 4 shows the main pathways within initial vocational education schematically in order to demonstrate information in coherence and in an integrated manner. In order to provide the possibility of comparison, an effort has been made to illustrate the educational pathways in a parallel manner. The chart refers to typical educational paths in secondary vocational education (secondary TVE schools) as well as in advanced secondary vocational education (secondary TVE colleges) and the dual training system. The chart comprises the age of adolescents, duration of education, reachable levels of qualification, typical vertical and horizontal transfer, contents of education and training as well as continuing education and training. All in all this is a simplified illustration, which is still in line with the major forms of initial vocational education even if it hardly pays any attention to special cases within the system. Further details are provided in the respective chapters.

([39]) For another example, which doesn´t discuss quantitative estimations concerning the needs of skilled workers but deals with the qualitative movements of required qualifications, in particular within the IT branche, refer to: ZBW, 2002a respectively ZBW, 2003.

Chart 4: Chart of the main pathways of IVET in Austria.



Source: CEE-chart.

3 IVET at lower secondary level

As we have already learnt in chapter 2, initial vocational education and training in Austria is understood to be the occupational education of young people after their general compulsory schooling. Therefore, one can say that the initial vocational education only begins at the upper secondary level. It is not possible to achieve an occupational degree at the lower secondary level. There, education is limited to elements of general education and to the cultivation and formation of individual personalities. However, teaching units that serve the purpose of a professional orientation are offered.

The first important decision concerning a professional career has to be made by the end of the 8th grade. Decision guidance and support as well as teaching units on professional orientation are therefore already needed at the lower secondary level. Classes on professional orientation are anchored in the curricula of 7th and 8th grade and are carried out in all schoolsforms of the lower secondary level (lower level of secondary academic schools, lower secondary schools, special needs schools, upper level of primary school([40]) as an one hour mandatory tutorial. It is possible to either offer an independent class on professional orientation or to integrate it into other subjects. Another possibility would be to do a one-week project on professional orientation. The main goals of classes on professional orientation are the following:

(a) Pupils should discover their own interests, hopes, and affinities and should learn to question them;
(b) Work should be recognized according to its relevance within the society and should be integrated in their own concept of life;
(c) The situation of the current job and labour market as well as the situation of certain groups (e.g. women) should be introduced and explained;
(d) Different job sectors should be introduced and a review of the various opportunities within the Austrian educational system should be given;
(e) The vast offer of consulting service and supportive institutions (e.g. Centres for professional orientation consulting, teachers, parents,...) should be made transparent and it should be taught how to use them.

([40]) There are not many special needs schools and upper levels of primary schools.

4 IVET at upper secondary level: School-based

The possibilities of initial vocational education at the upper secondary level in Austria are secondary technical and vocational schools([41]) and secondary technical and vocational colleges, including schools for teacher training([42]). Company-based training of apprentices is complemented by compulsory attendance of a so-called part-time vocational school. This schoolform will be discussed in detail, together with apprenticeship, in chapter 4. All other schools of the upper secondary level (upper level of secondary academic schools, pre-vocational schools) belong to the group of schools for general education. Pre-vocational schools, however, have a somewhat ambivalent character that shall be shortly discussed now.

Pre-vocational schooling qualifies the students for transfer to an apprenticeship training but does not include a TVE-exam or diploma of any kind. One-year pre-vocational schools can be attended after the eighth year of compulsory schooling. During this year general education focusing especially on professional orientation as well as introductory classes on occupation-specific knowledge are offered. These classes, such as classes on metal, electronics, wood, trade and office, the service sector, and tourism can be chosen according to the individual interests of the students. Which classes are offered depends on the school. The student has to achieve 15 credits in the above mentioned subjects and another 19 credits in subjects conveying general education contents. As schools are free to chose which classes they offer they often adapt their offer to regional needs. As far as professional orientation is concerned the investigation of different companies and other practical activities are considered very important. Those students who complete their ninth year of compulsory schooling at a one-year pre-vocational school usually wish to either do an apprenticeship training afterwards or to begin to work right after school. About20 % of all students chose to do their ninth year at a pre-vocational school. About 90% of these students take up apprenticeship training (cf. BMBWK, 2002d, p. 38). Table 16 shows the age distribution according to the sex of pre-vocational students for the year 2001. Table 17 shows the distribution of students in their ninth year.

([41]) Including special forms, e.g. one- year schools for agriculture and forestry, that do not offer a complete professional qualification.

([42]) Alternance which is mentioned in the CEDEFOP register cannot be translated within the Austrian educational sytem.

Table 16: Age distribution in pre-vocational schools by gender 2001/02.

	Age (in years)						
	<=12	**13**	**14**	**15**	**16**	**>=17**	**Overall**
Female	0	0	3.733	2.697	362	83	6.831
Male	0	0	6.799	5.420	617	39	12.919
Overall	0	0	10.532	8.117	979	122	19.750

Source: Statistics Austria (Statistik Austria, 2002, p. 264f).

Table 17: Distribution of pupils in the last year of school attendance (9th grade) 2001.

	Year 2001	
	Number	**%**
Pre-vocational schools	19.750	20,5%
Secondary TVE schools	21.264	22,1%
Secondary TVE colleges	30.503	31,7%
Upper level of academic secondary schools	21.194	22,0%
Others (*)	3.502	3,6%
Overall	96.213	100%

(*) e.g. lower level of academic secondary schools, lower secondary schools, special needs schools, special forms.

Source: Statistics Austria (Statistik Austria, 2002b, p. 206f).

The initial vocational training in schools happens, as already mentioned, in secondary technical and vocational schools (secondary TVE schools) and secondary technical and vocational colleges (secondary TVE colleges), including schools for teacher training. Each year about 40% of young people decide in favour of vocational education. In the academic year 2001/2002 the proportion between schools and colleges was 33% to 66%.

The different educational possibilities not only differ as far as their focus in content is concerned but also as far as achievable qualifications are concerned. Secondary technical and vocational schools require between one and four years. In secondary TVE schools that require one to two years, the student achieves some occupational qualification. After having attended a secondary TVE school for three or four years, the student has achieved a complete vocational training. It is the task of such a school to impart general education contents and to complement the occupation-specific knowledge and skills. The completion of a three or four year secondary vocational and technical school is seen as equated with an apprenticeship leave exam (“Lehrabschlussprüfung”). Secondary technical and

vocational schools are fulltime-schools. There are, however, special forms for people under employment, including the possibility of external exams.
The most important secondary technical and vocational schools are the following:

(a) Technical schools, schools for commercial occupations, and for crafts mainly in the following sectors: engineering, electrical engineering, electronics, computer technics, constructional engineering , chemistry and chemical engineering, textiles, wood, glass, printing techniques, graphical design and branches of applied arts;
(b) Schools for commercial occupations in the fields of economy and administration, e.g. three-years secondary business schools;
(c) Schools for office management and data handling and processing as well as schools for traders for informatics (two to three years);
(d) Vocational schools for business, focusing on the organisation of companies, business economics and management, nutritional science, health and social matters, human ecology, touristics and foreign languages (three years),
(e) Schools for domestic science and home economics in the field of housekeeping, kitchen and service, hotel- and restaurant industry (one to two years),
(f) Vocational schools for fashion and clothing, focusing on fashion design, clothing, fashion marketing
(g) Colleges of hotel management and tourism, focusing on gastronomy, sports, touristic information and communication technology, and foreign languages (three years);
(h) Vocational schools for occupations in the social service sector, schools for nursing service, elderly care, family assistance etc.(two to three years) ([43])
(i) Vocational schools in the fields of agriculture, gardening, viniculture, fruit growing, dairy industry, as well as agriculture and forestry (one to four years);
(j) Schools for healthcare and nursing, schools for medical-technical assistants (one year) ([44]);
(k) Other vocational schools such as schools for keepers, for personal hygiene;
(l) Schools for teacher training: schools for physical education pedagogists and sports teachers.

Successful students of secondary technical and vocational colleges obtain the Certificate of Secondary Education as well as a TVE-Diploma after five years and a school-leaving exam. It is because of this double qualification that secondary technical colleges have recently become enormously popular and that the number of successful graduates is still growing. Nowadays, 25% of all students chose a secondary technical college after their compulsory schooling period. According to the curriculum a third of the offered subjects are subjects on general education contents. As mentioned above students

([43]) Some of these schools require students to be of a minimum age.
([44]) These schools are organised as courses on specific conditions in law matters.

have to successfully run through five years of education([45]) in such a full-time school. There are also special kinds for people under employment and the possibility of an external exam. Post-secondary TVE colleges, for instance, convey the knowledge of secondary technical colleges.
The most important kinds of secondary vocational and technical colleges are the following:

(a) Institution of higher technical and commercial education in the fields of technics and commercial occupations, and for crafts, mainly in the following sectors: constructional engineering, interior design and wood craft, electrical engineering, timber industry, textile chemistry, engineering, mechatronics, media technics- and management, chemistry and chemical engineering, food technology, computing and organisation, industrial engineering and management, company management, art and design, artistic design, photography and visual media;
(b) Institutions for higher education in fashion and clothing, in the fields of fashion design, fashion marketing, and clothing;
(c) Institutions for higher education in the fields of hotel management, tourism management, media informatics, foreign languages, and economy;
(d) secondary colleges for business administration with different focuses, such as marketing, controlling, economy informatics, operational organisation, information management, logistics, forwarding etc.;
(e) Institutions of higher education focusing on business administration, nutrition science, foreign languages, healthcare and social services, human ecology, environment and economy, media informatics, and environmental economy;
(f) Higher educational institutions for agriculture and forestry, educating students to become qualified skilled employees in the fields of agriculture, gardening, viniculture, fruit growing, dairy industry, forestry, food technology and nutrition science;
(g) Schools for teacher training, such as for kindergarten pedagogy and social pedagogy.

The professional orientation of education in secondary vocational and technical colleges as well as secondary vocational and technical schools is quite specific, especially as far as the upper level is concerned. Many schools focus on specific professions or groups of professions (e.g. professions in the field of electronics).These orientations can be reinforced by autonomous decisions concerning the curriculum. It is because of such procedures that not each and every form of schooling can be found in different parts of Austria. Choosing one´s focus depends on various factors: administrative requirements, general conditions and site-related factors, such as the educational offer in the region, regional and economical focuses, the availability of teaching staff, infrastructure and cash resources

([45]) Special forms are possible (three or four years).

(cf. Schaffer, 1997, p. 149). For all these reasons boundaries are known to be set by reality as far as a partly autonomously designable curriculum is concerned.

The official magisterial responsibility for these schools is incumbent upon the Ministry of Education, Science, and Culture (BMBWK). Because of historic reasons this does not apply to all concerns of schools for agriculture and forestry. There are concerns that are still partly regulated by a specific law concerning agricultural education. Therefore, it is the Ministry of Agriculture and Forestry, Environmental and Water Economics that is responsible (BMLF). The same applies to occupational areas of apprenticeship training. In these cases, however, the Chamber of Agriculture takes over the role of the Federal Economic Chamber. The responsibility for secondary technical and vocational schools in the fields of agriculture and forestry is incumbent upon the departments of the respective provincial government.

The following tables show the rates participation rates of 16 – 19 year old as well as 14 – 19 year old adolescents in initial vocational educational paths (table 18). Typically a student attending a secondary technical and vocational school respectively a secondary technical and vocational college is between 14 and 19 years old. Table 19 provides an apportionment of students attending vocational schools by age and sex. In this table the trend in direction secondary technical and vocational college degree is not transparent. Since 1980 the number of students attending a secondary technical and vocational college has increased 155%, despite of a general downswing in the number of students. The relative proportion of students deciding in favour of secondary technical and vocational colleges after the 9th grade increased per year from 9% to 25%. Compared to this, the number of students attending a secondary technical and vocational school as well as the number of students attending a secondary academic school has decreased. As far as the interpretation of the tables is concerned it shall be pointed out that it is absolutely necessary to pay attention to the remarks. Table 20 makes the proportion concerning the sexes of students in their initial vocational educational paths transparent. The statistics show that there are slightly more women and that the relative proportion has been increasing in recent years. The influx of female students applies in the first instance to secondary technical and vocational colleges.

Table 18: Participation rates in school-based IVET as proportion of young people aged 16-19 and 14-19 (1990-2001).

	Years							
	1990		1995		2000		2001	
	Number	%	Number	%	Number	%	Number	%
Young people in school-based IVET (16-19 years)	176.543	41,6%	88.775	24,3%	106.968	27,3%	107.863	27,7%
Young people overall (16-19 years)	424.479	100%	365.615	100%	391.546	100%	390.229	100%
Young people in school-based IVET (14-19 years)	176.543	29.0%	153.793	27,6%	169.564	29,2%	171.980	29,8%
Young people overall (14-19 years)	609.310	100%	556.418	100%	580.100	100%	576.876	100%

Notes:
In 1990 the age of pupils was not collected; therefore the overall number of pupils was included that year.
"Young people in school-based IVET" includes secondary TVE schools, secondary TVE colleges, schools for the training of nursery/kindergarten teachers and non-teaching educational staff; as well special forms such as post-secondary colleges, special courses, master craftsman courses, courses for building workers and schools/colleges for social and medical occupations (these are statistical subgroups of other types of schools/colleges and therefore not severable by age and gender. these special or post-secondary forms have a typical participants age above 19 and therefore drop out of the age groups displayed in this table.)

Source: Statistics Austria (Statistik Austria, 2002a) (CEE calculations).

Table 19: Young people in school-based IVET by age and gender (1990-2001).

	Year 1990 / Age in years							
	<=14	**15**	**16**	**17**	**18**	**19**	**>=20**	**Overall**
Female	Not collected.							93.502
Male								83.041
Overall								176.543
	Year 1995 / Age in years							
	<=14	**15**	**16**	**17**	**18**	**19**	**>=20**	**Overall**
Female	16.154	21.435	17.712	14.001	12.243	6.557	12.740	100.842
Male	11.273	16.156	12.958	10.773	9.323	5.208	20.904	86.595
Overall	27.427	37.591	30.670	24.774	21.566	11.765	33.644	187.437
	Year 2000 / Age in years							
	<=14	**15**	**16**	**17**	**18**	**19**	**>=20**	**Overall**
Female	14.389	21.214	19.851	16.760	15.232	8.722	14.016	110.184
Male	10.258	16.735	15.425	12.879	11.414	6.685	16.870	90.266
Overall	24.647	37.949	35.276	29.639	26.646	15.407	30.886	200.450
	Year 2001 / Age in years							
	<=14	**15**	**16**	**17**	**18**	**19**	**>=20**	**Overall**
Female	14.421	22.096	19.716	17.274	14.867	8.943	14.952	112.269
Male	10.348	17.256	15.649	13.288	11.209	6.917	17.945	92.612
Overall	24.769	39.352	35.365	30.562	26.076	15.860	32.897	204.881

Notes:
In 1990 the age of pupils was not collected; therefore the overall number of pupils was included that year.
"Young people in school-based IVET" includes secondary TVE schools, secondary TVE colleges, schools for the training of nursery/kindergarten teachers and non-teaching educational staff; as well special forms such as post-secondary colleges, special courses, master craftsman courses, courses for building workers and schools/colleges for social and medical occupations (these are statistical subgroups of other types of schools/colleges and therefore not severable by age and gender. these special or post-secondary forms have a typical participants age above 19 resp. 20.)

Source: Statistics Austria (Statistik Austria, 2002a) (CEE calculations).

Table 20: Gender ratio in school-based IVET (1990-2001).

	Year							
	1990		1995		2000		2001	
	Number	%	Number	%	Number	%	Number	%
Female	93.502	53,0%	100.842	53,8%	110.184	55,0%	112.269	54,8%
Male	83.041	47,0%	86.595	46,2%	90.266	45,0%	92.612	45,2%
Overall	176.543	100%	187.437	100%	200.450	100%	204.881	100%

Notes:
"Young people in school-based IVET" includes secondary TVE schools, secondary TVE colleges, schools for the training of nursery/kindergarten teachers and non-teaching educational staff; as well special forms such as post-secondary colleges, special courses, master craftsman courses, courses for building workers and schools/colleges for social and medical occupations (these are statistical subgroups of other types of schools/colleges and therefore not severable by age and gender.)

Source: Statistics Austria (Statistik Austria, 2002a) (CEE calculations).

4.1 Access requirements

As far as public vocational schools and colleges are concerned it is the ministry of Education, Science, and Culture that establishes the access requirements([46]). Generally there are no tuition fees but for some private schools. Usually students enter such schools at the age of 14, after they have successfully completed the 8th grade of a lower secondary school or secondary academic school. 40% of all students of secondary academic schools chose to go to secondary technical and vocational colleges, while only 3% chose to go to a secondary technical and vocational school. Students coming from a lower secondary school chose secondary technical and vocational colleges as well as secondary technical and vocational schools in equal ratio, namely 25%. (cf. BMBWK, 2002d, p. 38)([47]).

A successful completion of the 8th grade is a prerequisite for the access into a secondary technical and vocational school. There are, however, exceptions. Latin, geometrical drawing and obligatory subjects they have chosen as emphasised ones do not have to be successfully completed. Students coming from a lower secondary school who were in the third sub-levels (in order to do justice to the individual pupil´s abilities and pace of work, lower secondary schools stream pupils in the subjects German, Mathematics and a modern foreign language into three sub-levels) in either German, English, or Maths are required to do an entrance examination in these subjects([48]). If the student has successfully completed a pre-vocational school such an entrance examination does not take place. Secondary technical and vocational schools emphazising either sports or arts may require an entrance

([46]) Deviations are possible (e.g. private schools).
([47]) The statistics do not include information concerning school transfer as far as schools in the fields of agriculture and forestry are concerned.
([48]) If there are no sub-levels the grade in the subjects concerned has to be A, B or C.

examination. Usually students start a vocational school by doing the first grade. There is, however, the possibility to skip grades and enter a school at a different level if she or he passes a specifically designed examination. The transfer from one secondary technical and vocational school to an equivalent one does not require an exam.

A successful completion of the 8th grade is also a prerequisite for the access into a secondary technical and vocational college. Again there are the exceptions of Latin, geometrical drawing, and obligatory subjects they have chosen as emphasized ones. Students coming from a lower secondary school who either were in the third sub-level or have just passed (grade: D) the subjects mentioned above within the second sub-level are required to do an entrance examination. Students who were in the second sub-level and have passed the above mentioned subjects, achieving grade C or better, need either an entrance examination or the approval of the teachers´conference to enter the new school without such an exam([49]). Secondary vocational and technical colleges emphasizing arts as well as schools for social- and kindergarden pedagogy require an entrance examination. Usually students start a vocational college by doing the first grade. There is, however, the possibility to skip grades and enter a school at a different level if she or he passes a specifically designed examination.

Every adolescent is free to chose the school he or she wants to go to. She or he has to successfully fulfill the access requirements though. The choice, however, is not unlimited as not every kind of vocational school can be found in every part of Austria. What is offered varies from region to region. Still the main forms of vocational schools can be found all over the country. Very specific school such as a vocational school for keepers (only one in Austria) or for forestry (two in Austria) are on the other hand harder to find. In general, schools are only allowed to accept a certain number of students. The number depends on the infrastructure of the school. In the case of too many students passing the entrance examinations, autonomous decisions have to be made by the school.

4.1.1 Promoting participation

The Austrian educational system aims at providing each young person the kind of schooling and education that she or he is looking for according to her/his interests and abilities. Especially the possibility to make up leeway for missed chances shall be emphasized.

The basic form of an Austrian vocational school is a full-time school with obligatory attendance. There are, however, other forms that allow an alternative education. These alternative educational paths are designed for adults under employment mainly. Even though it is taught according to specific curricula successful students achieve the same TVE exam or diploma as students graduating from a subject-related school. The orientation of such schools depends usually on the professional qualifications and experience of the participants. In most cases these schools are designed as evening

([49]) If there are no sub-levels the grade in the subjects concerned has to be A or B. If this is not the case a resolution has to be passed by all respective teachers.

schools, partly imbedding so-called individual and social phases. Employed people who make up for missed education may draw benefits provided by the public employment service. Normally it is possible to take an external examination on the certain subject matters concerned that is held by a board of examiners and offers students the possibility to reach sub-goals or to achieve a proper degree (e.g. External "Berufsreifeprüfung" (the "Berufsreifeprüfung" is a supplementary examination providing an additional possibility of access to tertiary education for skilled workers)). Many private institutes offer preparation courses for such external examinations.

In chapter 4.1 the acceptance of previous knowledge was discussed. However, previous knowledge is only accredited if the achieved qualifications are in accordance with the curriculum of the respective school (e.g. professional experience as an internship). If needed, placement tests have to be taken. Furthermore, people under employment have the opportunity to attend preparation courses. These courses prepare the students for secondary technical and vocational colleges and are designed for candidates who meet the minimal access requirements. For TVE-Exam holders there are building-up courses that lead successful students to a TVE-Diploma that is equivalent to the TVE-Diploma of a secondary technical and vocational college. There are also secondary technical and vocational schools which are designed for people with a minimum of professional experience who have completed compulsory schooling respectively for degree holders who have completed the short-form of a secondary technical and vocational school, e.g. schools for forestry and agriculture (3-4 years).

There are many forms of pedagogical support for students, varying from private tutoring classes to school-internal supporting measures such as promotional classes([50]) to official offers of support by the education division respectively by the Federal Ministry of Education, Science, and Culture. A survey of these programmes can be found on the homepage of the ministry([51]). As far as the financial support of students is concerned there are various promoting measures. These measures are regulated by the "Schülerbeihilfegesetz" (law for the regulation of financial supports for students) and concern such areas as travel expenses, fees for dormitories, fees for school events etc. Besides, there are indirect supporting measures such as family assistance payments. A survey of such financial measures can be found on the homepage of the Federal Ministry of Education, Science, and Culture([52]).

4.2 Curricula

The curricula of the Austrian school system are based on the "Schulorganisationsgesetz" and on the "Schulunterrichtsgesetz" and are legislated by the Federal Ministry of Education, Science, and

([50]) In secondary TVE colleges and secondary TVE schools tutoring classes can be introduced in the subjects concerned taking up to 16 teaching units per year. Autonumous regulations are possible.

([51]) http://www.bmbwk.gv.at/start.asp?bereich=3&OID=3272&l1=18&l2=76&l3=265

([52]) http://www.bmbwk.gv.at/start.asp?bereich=3&OID=1617&l1=21&l2=287&l3=3402

Culture. The curricula are designed by a team of experts from the Ministry of Education, Science, and Culture. The social partners are involved through advisory bodies ("Berufsausbildungsbeiräte") as well as through representatives in other boards and through their general right to examine bills and decrees (cf. chapter 2.5). The team of experts was introduced in order to meet the challenges coming along with national and international developments in the fields of qualification and the employment market and as far as changes in economic policy, education policy, and social policy are concerned. The regional education divisions as well as the superordinated Federal Ministry of Education, Science, and Culture are responsible for the implementation of the curricula([53]).

The decrees on the syllabus regulate the implementation of important elements of the curriculum in all school forms. In recent years an increase in school-autonomous decisions on what shall be emphazied within the curriculum has been observed. Such autonomous decisions have to be approved by the school board and allow individual schools to set a focus in accordance with the general educational goals (cf. BMBWK, 2000, p. 8f). This system allows, for instance, a school-autonomous cutback of semester hours in general obligatory subjects in order to provide more time for obligatory subjects that are professionally relevant. Such autonomous decisions in accordance with individual needs and problems are explicitly wanted.

4.2.1 Content and delivery

As far as the description of the content of teaching and the various kinds of teaching are concerned a distinction between secondary technical and vocational schools and secondary technical and vocational colleges has to be made. Secondary technical and vocational schools convey general educational contents as well as professional knowledge to the extent of either a partly completed (1-2 years) or fully completed (3-4 years) vocational education. How many semester hours there are to be achieved depends on the form of the school (e.g. vocational school for economy and trading (3 years) with 93 semester hours, vocational school for technics (4 years) with 144-148 semester hours). Subjects of general educational content take up a quarter of all semester hours. Subjects conveying specific theoretical knowledge also take up approximately a quarter of all semester hours.

The majority of the semester hours – a little less than a half really - are dedicated to practically orientated education. Such lessons are carried out in various different manners. There are, for instance, lessons that are carried out in facilities, laboratories, and kitchens that belong to the school. It is also possible that the student gains experience by working in a company as part of his practically-orientated education. Such internships are even obligatory in certain school such as vocational schools for trading. Another possibility would be to install project work of any kind as part of the practically orientated education. Furthermore, students attending a secondary technical and vocational school are obliged to do internships in their specific areas. Only students of a commercial secondary school are

([53]) Some educational institutions are directly controled by the BMBWK.

not obliged to do such an internship. Generally these internships take place during the students´ summer breaks and in the extent of at least 4 weeks. Such internships have to be accomplished before the beginning of the third year([54]). Colleges for hotel management enjoin on their students to do such an internship for 24 weeks.

Secondary technical and vocational colleges convey general educational contents as well as professional knowledge to the extent of a fully completed vocational education. The extent of semester hours varies as it depends on the contents of education but is generally known to be between approximately 160 and 190 hours (e.g. commercial academies 158, polytechnic 185) and spread over 5 years. Subjects of general educational content take up a third of all semester hours. Subjects conveying specific theoretical knowledge also take up approximately a third of all semester hours. The same applies for practically-orientated education. Such practically-orientated lessons are again carried out in various different manners. There is the possibility to carry them out in facilities, laboratories, and kitchens that belong to the school. It is also possible that the student gains experience by working in a company as part of his practically-orientated education or gets engaged into project work. The practically-orientated education in schools for teacher training and the like takes place in kindergardens and children´s homes etc. and is supervised by specifically trained pedagogists. In secondary technical and vocational colleges internships in the extent between 8 and 24 weeks are obligatory as well. Again such internships have to be done during breaks from school and have to be completed by the end of the 4th grade([55]). In the field of tourism 8 months of engagement in an internship is demanded A detailed list of the curricula of all different kinds of vocational schools and colleges can be found on the homepage of the Federal Ministry of Education, Science, and Culture([56]).

The obligation to do an internship is anchored in the curricula of secondary technical and vocational schools as well as colleges and aims at different things: First it should enable the students to put their theoretical knowledge into practice. Furthermore, it teaches them general demands and virtues such as punctuality and responsibility. It also allows the students to seriously reflect upon their individual professional ideas and wishes and to establish a first contact with the economical world (cf. BMBWK, 2002g, p. 17f). It is important to pre-discuss as well as reflect upon such internships in school. There are schools who offer help in finding a company that is willing to accept students. Some of these obligatory internships are also paid for (e.g. Internship in the field of hotel and restaurant industry). (cf. Chamber of Labour, 2003).
In the design of curricula for secondary technical and vocational schools and colleges a tendency towards emphasizing practically-orientated classes, information- and communication technology, and towards classes on personality development as well as on competences needed for an international

([54]) Special regulations (e.g. short-forms).
([55]) Partly prefixed time tables for internships respectively separation of first and second internships.
([56]) http://www.berufsbildendeschulen.at

labour market (such as foreign languages) can be observed. Furthermore, project work on the one hand and opportunities to gain professional experience on the other hand have been reinforced during recent years. Practically-orientated education within secondary technical and vocational education focusing on either trading, economy, or tourism was introduced in so called centres for business management and in succession instutionalized. It was aimed at giving students the opportunity to try out and apply their knowledge in business management in simulated situations. A similar idea can be observed as far as companies are concerned that serve as practice institutions. Furthermore, economy projects are carried out in colleges focusing on either trading, economy, or tourism that give students the opportunity to cooperate with (mainly regional) companies and to therefore get in touch with real life economical processes (e.g. realising a business idea etc).

In secondary technical and vocational schools and colleges focusing on technics, industry technics-projects (secondary technical and vocational schools) and engineering projects (secondary technical and vocational colleges) are carried out. The completion of such a project is regarded as an efficiency statement as far as the total content of an education focusing on technics and trading is concerned. The project offers the opportunity to self-dependenly apply and deepen the knowledge and skills they have achieved during their schooling by being engaged in complex project work. By doing so one does not only nurture the students´ methodical and technical competence but also their people skills, their individual abilities to plan, organise, and manage a project. Therefore, such projects increase in an integrative manner the input of knowledge. In recent years the focus was set on the integration of school external partners (e.g. companies, research facilities). Because of the increase in the projects´ level of complexity connected with an increase in time exposure the project can now be taken into account as far as the school-leaving examinations and certificates are concerned (e.g. projects in engineering in secondary technical and vocational colleges). National as well as international inter-school competitions make it even possible for students to compare the results of their project work with other students.

4.2.2 Assessment

Students attending an Austrian school are assessed on the basis of a five-level grading system. The grade reflects, depending on the subject matter, their oral, written, and practical achievements. At the end of the school year students obtain a certificate that shows their level of achievement in the various subjects. In order to be allowed to attend the next school-level the students has to successfully complete the level he is in. A successful completion demands grade D or better in each and every subject. If this is not the case either an examination takes place or the student has to repeat the year again. If the student only fails one subject her or she is allowed to move on to the next level, providing that an appropriate effort and adequate achievements can be expected. However, this is only possible if there is an approval of all class teachers, if the subject is offered in the next level as well, and if the

student mastered the subject in the previous year. The students are graded in every subjects by the respective teachers. The content criteria for exams are predetermined by the curricula.

After a successful completion of the ultimate grade, students of secondary technical and vocational schools and colleges can take a TVE-exam respectively a school-leaving exam to achieve a TVE-diploma respectively a school leaving certificate. These exams are regulated by decrees from the Ministry of Education, Science, and Culture. These exams consist of written, oral, and practical elements. Such exams are held by the subject teacher under the direction of an examination board that consists of a representative from the regional education division, the headmaster/headmistress of the school, and teachers teaching the subjects the examinations are about. The public oral exams are held by an examination board. According to their individual focus on certain subjects the students have the choice to influence the modalities of their school leaving examinations respectively TVE-exams (e.g. additional exam subjects, emphasis either on oral or written examinations, practically-orientated project work or thesis, etc). The appointed days for the examinations are adapted to the schedule of the academic year as well as to the type of school and are decreed by the Ministry of Education, Science, and Culture. The main examination date lies within the last eight weeks of the school year. Additional examination dates can be offered and take place within the first six weeks of the new school year or within the last eight weeks of the semester. If the student fails the examination he or she is given the opportunity to take the exam again at another date. A detailed survey of the examination regulations for secondary technical and vocational schools and colleges can be found on the homepage of the Ministry of Education, Science, and Culture([57]).

4.2.3 Quality assurance

Usually chief representatives from regional education authorities as well as school inspectors are in charge of controlling the schools. They are responsible for the performances and the quality within schools. This rather traditional way of controlling schools by sending people in charge whose field of duty includes aspects of administration, consulting, and controlling has recently been supplemented by more modern approaches towards quality assurance. By trying to implement an initiative called "Quality in Schools – Q.I.S." the Ministry of Education, Science, and Culture tries to animate schools to autonomously take care of quality assurance and quality improvement([58]). In the future, the systematically engagement of all school partners in matters of quality assurance and improvement shall be an inherent part of school life (cf. BMUK, 1999b, p. 11f).

The so called "school program" forms the core of this initiative for quality assurance. This program includes an autonomously developed overall concept and mission statement of the school, statements on the actual state of the school, descriptions concerning concrete goals and measures as well as an

([57]) http://www.berufsbildendeschulen.at
([58]) www.qis.at

outlook for the future. There are five areas of quality assurance that should be discussed: Teaching and studying, living space "classroom and school", school partnerships and connections to external institutions, school management, professionality and human resources development. The "school program" has to be understood as a temporar (revisions at regular intervals) and voluntary agreement, that serves the purpose of orientation. The school program is meant to be used as a guideline for pedagogical actions and activities, as a tool used for public relations, and a measuring rod for the school itself. This concept asks for evaluations at regular intervals in order to determine the relation between the tagert state and the actual state. In addition to the Q.I.S. initiative as a strategy for quality assurance are other measures in the fields of quality assurance and quality management are taken. Monitoring systems are established on a regional as well as national level. Furthermore, more and more evaluations and improvement-actions as far as the school as an institution and teaching are concerned are carried out. As far as teaching is concerned efforts concerning transparent assessment, feedback on the individual performance of students at regular intervals as well as feedback and evaluations from students on the classes are made.

4.3 Learning outcomes

Secondary technical and vocational schools and colleges convey general educational contents as well as professional knowledge. Professional knowledge is taught through lessons on theory as well as through lessons on practical matters. These lessons are emphazised in the curriculum. Students attending a secondary technical and vocational school or college complete their schooling with the achievement of a TVE-diploma or a similar vocational certificate. Attending a secondary technical and vocational school for 1-2 years leads to a partly completed vocational education, attending a secondary technical and vocational school for 3-4 years leads to a fully completed education, attending a secondary technical and vocational college leads to a so called higher vocational education diploma. The holder of such a diploma has the opportunity to either start working or to enter a university or university of applied sciences. According to the law on vocational education (§34a), to the labour as well as social security law, the diploma of an at least 3-years secondary technical and vocational school, of a secondary technical and vocational college, or of a school that is similar to the mentioned ones has to be regarded as evidence of knowledge of the same significance and valency as a certificate achieved as result of an apprenticeship leave exam ("Lehrabschlussprüfung") (cf. BMWA, 2002, p.54).

4.3.1 Qualifications / certification

The positive completion of a three year secondary technical and vocational school is in many respects similar to the apprenticeship leave exam ("Lehrabschlussprüfung") in the dual training system. This is, for instance, true as far as the standard of the conveyed professional knowledge is concerned. The

qualification level of both, secondary technical and vocational schools as well as apprenticeship training, strike for is that of a skilled worker respectively of an employee. Furthermore, both kinds of schooling allow the immediate practise of the occupations concerned and the access to reglemented professions or to professional independency. Graduates from secondary technical and vocational schools have the opportunity to attend an advanced training course and to achieve a secondary technical and vocational college diploma.

Graduates from a secondary technical and vocational college obtain the certificate of secondary education and a TVE-Diploma and have therefore a double-qualification. They are entitled to study at universities and universities of applied sciences as well as to immediately practise the occupations concerned. It is this obtainable double qualification that has been leading to an increase in interest in secondary technical and vocational schools in Austria. The high standards of secondary technical and vocational colleges are also reflected by the European Union´s approval. Students graduating from a secondary technical and vocational college obtain occupation-specific knowledge and skills on a secondary level. Other members of the European Union understand such education as part of post-secondary education. After 3 years of professionalism and with the permission of the Ministry of Economic Affairs and Labour, students graduating from secondary technical and vocational colleges for agriculture and forestry have furthermore the opportunity to take the title "Ingenieur". This allows them to practise the occupation concerned as a freelancer without having taken a master craftsman examination. If students have evidence of professional qualifications it is possible to shorten the time frame they would have normally needed to complete a university of applied sciences.

For every student successfully graduating from either a secondary technical and vocational school or a secondary technical and vocational college the so-called „UnternehmerInnenprüfung" (a supplementary examination that allows to start up a company and be an independent entrepreneur) can be substituted provided that 160 teaching units in relevant subject matters can be proven (cf. BMBWK, 2003, p.12f). The accreditation of professional qualifications within secondary technical and vocational education is passed by the Ministry of Economic Affairs and Labour (BMWA) and is based on the Austrian Trade, Commerce, and Industry Regulation Act and the law on vocational education. A completion of all grades as well as a successful school leaving examination and the so obtained school leaving certificate or diploma are required as pre-requisites.

4.3.2 Progression and transition

With the exception of data from studies on sub-populations there is no statistical data on the transition of young people after the completion of their vocational education (cf. Lechner et al, 1999, p. 8). Therefore, only general statements can be made taking statistics on unemployment as well as part of statistics on education as a basis. As already discussed in chapter 2.2 students graduating from vocational schools, especially from secondary technical and vocational colleges, have good chances as far as the transition into professional life is concerned. As only 3,3% end up unemployed they are way

below average. Many students graduating from a secondary technical and vocational college continue their schooling by either accessing university or a university of applied sciences. A study was carried out that proves that in 1994 nearly 60% of all graduates from secondary technical colleges and 54% of all graduates from secondary colleges for business administration have taken up studies at university (cf. Lassnigg 1994 quoting Lechner et al, 1999, p. 12). Often they took up studies at university as a result of rejected applications. According to the results of this study, 37% of all secondary technical college-graduates have applied for jobs in their fields of occupation without success before entering university. This study does not include data on universities of applied sciences. However, it can be assumed that there was an increase of graduates from secondary technical colleges who were taking up tertiary education.

Interpreting the statistical data concerning the pre-education of students who are entering tertiary education as well as the 2001 school-statistical data concerning the number of students successfully completing a secondary technical and vocational college, one can observe that 31% of the students initially registering for university studies hold a degree or certificate from a secondary technical and vocational school and that 50% of those entering a university of applied sciences hold such a diploma as well. Therefore, the assumption is permissible that each year the proportion of initially registered students that hold a TVE diploma takes around 50%. This percentage also corresponds with the results of studies carried out by other national educational research institutions that show a percentage of 33% of students holding a TVE-diploma initially registering at university and a percentage of 16% of students holding a TVE-diploma entering a university of applied sciences (cf. educational research institution, 2003, p.25). Further statistical data on progression at a secondary and post-secondary level does not exist. Neither is there any informational data on the progression of students holding a certificate from a secondary technical and vocational school. It is, however, generally believed that students graduating from a secondary technical and vocational school are increasingly facing challenges and problems as far as the transition into professional life is concerned, negatively reinforced as the tendency towards higher vocational education could be seen to emerge. Students holding an apprenticeship leave certificate struggle with the same situation. Those students who drop out from vocational school form a very heterogeneous group. There is, however, no specific data on how many school drop-outs there really are and what they actually do after they have dropped out. There are studies whose results suggest that the drop-out rate in secondary technical and vocational colleges lies between 20% and 36% (cf. Lassnigg/Schneeberger, 1997, p. 15). The proportion of drop-outs in secondary technical and vocational schools seems to be explicitly lower. The main reasons to drop out of school appear to be either a lack of effort and accomplishments or the students´ wish to transit to gainful employment and professional life. If a student drops out off school because he or she wants to do some apprenticeship training, it is possible to accredit his or her years in school to the time he or she needs in order to successfully complete his/her apprenticeship training. The certificate he/she obtained last counts as his/her highest individual certified level of education. Within the Austrian

educational system it is possible for young people to take up schooling again in the fields of secondary and tertiary education. There are, for instance, schools for employed people respectively external examinations leading to TVE-diploma. It is also possible to regularly go back to where you have dropped out. In some cases an access examination is pre-requisite for such a comeback. Other possible paths besides that of regular schooling will be discussed in chapter 6. They generally concern young people though who were engaged in apprenticeship training and not really young people who were engaged in general schooling.

5 IVET at upper secondary level: Apprenticeship training

Apart from vocational schools and colleges, initial vocational education in Austria on a secondary level is – to a large extend – provided by a dual training system, the apprenticeship training. The dual training system can be characterized as an enterprise-based training of apprentices completed by compulsory vocational schooling. The task of apprenticeship training is to impart a general education and to complement it with occupation-specific knowledge and skills that guarantee access to regulated and unregulated jobs. The basis is the Vocational Training Act.

Vocational education in the form of apprenticeship training with part-time vocational schooling can be distinguished from compulsory full-time technical and vocational school education in three significant aspects (cf. BMWA, 2001a, p. 6):

(a) Training takes place, to the largest extend, not in schools, but in a production or service enterprise of private and public enterprises with an emphasis on the training of practical skills. The apprentice is thus part of a company and is employed by the training enterprise according to an apprenticeship training agreement, and hence protected by Labour Law and Social Security Law([59]). The status of apprenticeship training equals regular employment status; trainees receive payment for training lessons;

(b) The duality of vocational training is also reflected in its administrative responsibility. The Ministry of Education, Science and Culture is responsible for vocational school matters, the Ministry of Economic Affairs and Labour is responsible for in-company apprenticeship training. The dual administration system is based on three federal laws: the Vocational Training Act, the School Organization Act and the School Education Act. Further responsibilities concerning in-company training and vocational schooling lie with the

([59]) Apprentices are insured against illness, accidents and unemployment and are entitled to old-age insurance. They receive compensation in the form of payment for their work in the company.

provinces (Länder)([60]). The costs of the enterprise-based part of apprenticeship education and training are covered by the respective training enterprise.

(c) Assessment of performance and examinations emphasize the practical part of the vocational training and are highly practice-oriented. The Apprenticeship Leave Exam ("Lehrabschlussprüfung") is taken before a board of practitioners who are familiar with the requirements of the world of work at the end of the training period and consists primarily of occupation-specific practical works.

Admission to apprenticeship training is basically open to all young people. Admission criteria are a successful completion of the ninth grade of compulsory schooling and a free apprenticeship placement. Every year approximately 40% of an age group opt for an apprenticeship in the framework of the dual training system. At the moment, 120.486 Austrian people have a regular, valid apprenticeship agreement and are being trained in 38.999 companies providing apprenticeship training (cf. Austrian Chamber of Commerce, 2003, p.1). The biggest part of apprenticeship occupations in small and medium enterprises may be broken down by economic sectors as follows: commerce, handicraft, trade and tourism covering a total share of almost 80% of all apprentices. 12% of all apprentices are being trained in industrial enterprises. When entering apprenticeship training, young people are also required to attend compulsory (part-time) vocational schools until the end of their apprenticeship training and, respectively, until a successful completion of the last year of vocational schooling. It is the task of these vocational schools to impart occupation-specific theoretical knowledge and a well-balanced general education according to federal framework curricula. Tuition is provided - depending on the organization and on the apprenticeship trade –as a year-round tuition (i.e. once a week throughout the regular school year), as block tuition (i.e. tuition is provided in full-time course form of eight weeks) or seasonal (limited to one season). At the end of apprenticeship training, apprentices have to take the Apprenticeship Leave Exam ("Lehrabschlussprüfung"). It consists of a theoretical part (written and oral)([61]), a practical part and a technical discussion. The exam is taken in front of an examination board. In case of failure, a repetition of the exam is possible. The success-rate for Apprenticeship Leave Exams in the year 1999 amounted to 83% (cf. BMWA, 2001b, p.43). The responsibilities for apprenticeship training of first instance lie with the Federal Advisory Boards on Apprenticeship appointed by the Austrian Federal Economic Chamber, established in every federal state/province. They are responsible for all administrative issues and interests of apprenticeship training enterprises and apprentices.

([60]) The Parliament of the Provincial Government (or the Governor of the Province) acts as the authority for Vocational Education of the second instance. Financial support of vocational schools lies with the provinces. The costs for staff are borne partly by the provinces, partly by the federation.

([61]) The theoretical part is omitted if – at the time of the Apprenticeship Leave Exam – a diploma of the vocational school is available and if the vocational school has been completed successfully.

At the moment, young people can choose from 273 apprenticeship trades which are formally approved and regulated by federal legislation; they are registered in the list of apprenticeship trades, the BMWA (choice of double-apprenticeship is possible([62])). For each of the approved apprenticeship trades, the Federal Ministry for Economic Affairs and Labour issues the apprenticeship training ordinances, defining the specific description of occupational skills or the respective apprenticeship trade (occupation-specific knowledge and professional skills) and that are obligatory for all enterprises providing apprenticeship training. Enterprise-based occupational contents are thus coordinated with curricula in vocational schools. Apprenticeship training periods last approximately between two and four years, in 65% of the cases the training may be reduced to three years. Despite a high number of possibilities, a small number of apprenticeship trades prevail in a high concentration. 48% of male apprentices train for ten of the most popular apprenticeship trades; with females, the concentration lies with 75%. One can speak of a very high gender-based segregation concerning the choice of apprenticeship trades. The most popular apprenticeship trades with female apprentices at the moment are retail trade servicewoman, hairstylist and office assistant. Male apprentices favour motor vehicle mechanic, electrician and joinery. Apprenticeship trades can be broken down as follows: trades of commerce in the dual training system, occupations concerned with agriculture and forestry([63]) and occupations in the medical sector([64]):

(a) Trades of commerce in the dual training system:
- Administration Trades,
- Building Industry Trades,
- Chemical Industry Trades,
- Printing Industry Trades,
- Electrical Industry Trades,
- Gardener Trades,
- Paramedical Trades,
- Moulding Industry Trades,
- Glass Industry Trades,
- Commercial and Financial Trades,
- Wood Industry Trades,
- Information and Communications Technology,
- Ceramic Industry Trades,

([62]) Frequent double-apprenticeship occupations are merged in own vocational school classes. Even triple-apprenticeship does exist, i.e. gas-, water-, heating-fitter.

([63]) Responsibilities do not lie with the Federal Ministry for Economic Affairs and Labour, but they lie – in accordance to secondary technical and vocational schools (BMS) and colleges (BHS) - with the Federal Ministry for Agriculture. This form of apprenticeship training is regulated in the Vocational Training Act for Agriculture and Forestry. The function of the Economic Chamber is transferred to the Chamber of Agriculture.

([64]) Partial responsibilities lie with the Federal Ministry for Health and Women Matters.

- Food and Drink Industry Trades
- Leather Industry Trades,
- Media Trades,
- Metal Industry Trades,
- Music Industry Trades,
- Optical Industry Trades,
- Paper Industry Trades,
- Personal Service Trades (i.e. cosmetician),
- Stonework Industry Trades,
- Technical Specialists Trades (i.e. surveyor assistant),
- Textile Industry Trades,
- Tourism Industry Trades,
- Traffic Trades

(b) Apprenticeship trades in the dual training system of agriculture and forestry:
- i.e. gardening, viniculture, forestry, dairy farming, etc.)

(c) Medical service trades in the dual training system:
- General Medical (Nursing) Service Trades,
- Children and Baby Care Service Trades,
- Psychiatric (Nursing) Service Trades([65]).

Due to constant structural changes in economy and society, the apprenticeship training system is facing constant changes as well. This development needs to be supported by steadily adapting and modernising existing apprenticeship trades and by introducing newly designed ones. In the last years, this has become most obvious in the field of information and communications technology. Despite the fact that through the creation of so-called "group-apprenticeship" trades a certain concentration of occupation-related training has been achieved, for the years to come a reorganization of fields of apprenticeship trades is in discussion. The 300 existing occupations are characterized by a very high degree of specialisation, almost a fragmentation, (cf. ZBW 2002b, p.122) are meant to be reduced to approximately 100 basic occupations with possibilities of specialisation (cf. Schneeberger, 1999, p. 30ff).

The number of apprentices in Austria has slightly decreased in recent years, a phenomenon which will increase in years to come. This is not only reflected by a demographic development towards low birth rates, but by a current trend towards full-time school education. More and more young people opt for higher education in full-time schools offering the A-Level ("Reifeprüfung") Certificate plus the

([65]) For single apprenticeship a minimum age of 18 is required.

entitlement to being admitted to university. Thus, the age of first employment has risen significantly in the last decades. At the same time, the labour market offers less apprenticeship occupations. Since the middle of the 90s one can observe a rise of people looking for a vacant apprenticeship placement in comparison to actually available placements, a so-called shortage of vacant apprenticeship places. In 1992, for each person applying for apprenticeship, 3.7 places were available, while in 1995, it were only 0,9, and in 2000, only 0,7 (cf. BMWA, 2001b, p.49f.). Calculated for the year 2002, this amounted to a proportion of 0,58 reported vacant apprenticeship places per applicant ([66]). This development can – on the one hand – be traced back to economic structural changes in typical fields of apprenticeship training (i.e. area of production), in which fewer employees are necessary. The field of service trades has a smaller share of apprentices.

One can also observe a tendency of more and more enterprises withdrawing from apprenticeship training ([67]), which can be also traced back on a rise of expenses for apprenticeship, a steady prolongation of training time in (part-time) vocational schools and a declining maturity of apprenticeship applicants. In order to prevent a further decline of training enterprises, the State offers reductions of tax contributions and financial assistance for employees.

Table 21 and table 22 illustrate the development of apprenticeship training over a certain period of time. The numbers illustrate, on the one hand, the percentage of apprentices between 16 and 19 (15 and 19), on the other hand, the figures illustrate the development according to gender. An illustration according to age is not possible due to missing statistical data. The age interval 15 to 19 corresponds with the typical age of apprentices in Austria. One can clearly see the relative and absolute decrease of young people who have entered apprenticeship training in recent years. The percentage of girls in apprenticeship occupations is fairly low with only 33% and focuses on a limited number of non-technical occupations.

([66]) CEE-calculations based on the Public Employment Service Monthly-Online-Statistics (www.ams.or.at).
([67]) As a survey about rising restrictions of training enterprises Schneeberger/Kastenhuber, 1996 need to be mentioned.

Table 21: Participation rates in apprenticeship training as a proportion of young people aged 16-19 and 15-19 (1990-2001).

	Year							
	1990		1995		2000		2001	
	Number	%	Number	%	Number	%	Number	%
Apprentices overall	145.516	34,3%	123.377	33,7%	126.600	32,3%	123.762	31,1%
Young people overall (16-19 years)	424.479	100%	365.615	100%	391.546	100%	390.229	100%
Apprentices overall	145.516	28,0%	123.377	26,9%	126.600	26%	123.762	25,6%
Young people overall (15-19 years)	519.087	100%	458.680	100%	486.024	100%	483.957	100%

Notes: For apprentices there are no age data available; therefore the overall number of apprentices has been included.

Source: Statistics Austria (Statistik Austria, 2003a), Austrian Federal Economic Chamber (Wirtschaftskammer Österreich, 2003) (CEE calculations).

Table 22: Young people in apprenticeship training by gender (1990-2001).

	Years							
	1990		1995		2000		2001	
	Number	%	Number	%	Number	%	Number	%
Female	49.597	34,1%	38.749	31,4%	42.450	33,5%	39.968	33,2%
Male	95.919	65,9%	84.627	68,6%	84.150	66,5%	80.518	66,8%
Overall	145.516	100%	123.377	100%	126.600	100%	120.486	100%

Notes: For apprentices there are no age data available; therefore the overall number of apprentices has been included.

Source: Austrian Federal Economic Chamber (Wirtschaftskammer Österreich, 2003) (CEE calculations).

5.1 Access requirements

Training in the apprenticeship system is the only initial vocational education in Austria that does not depend on a specific school-leaving certificate and is basically open to everyone. The only requirement is the completion of the last year of compulsory schooling ([68]) (the traditional age of entry is 15). Apprenticeship education depends on the finding of a free apprenticeship placement, the young person has to apply to possible training enterprises for admission to apprenticeship training. Most

([68]) Several occupations in the medical services require a minimum age of 18.

young people start applying in their last compulsory school year. In prevocational schools, application instruction and the search for a vacant apprenticeship occupation is part of the curriculum. The application is similar to a regular application for a future employment, written, including a curriculum vitae and the required certificates. Vacant placements are being reported by the enterprises to the Public Employment Service Austria, who provide counselling service for young people through Career Guidance Offices. The Apprenticeship Offices of the regional economic chambers in the provinces also help to find apprenticeship placements.

Even though apprenticeship is open to all young people regardless of previous school achievement, an oversupply of apprentices and the increasing competition for vacant apprenticeship placements results in a significant choice for training enterprises, who can select - according to achievement in school or according to first impressions at the application interview (i.e. appearance, age, social competence, etc.) - from a variety of applicants. Enterprises have no obligation to employ an apprentice, which leads to a strict selection.

In reality, a successful completion of the last year of compulsory school is required. In the various sectors of apprenticeship trades a certain hierarchy exists, which divides them into "easy" and "complex" apprenticeship trades. Certain technical training enterprises – as the most popular example one could mention occupations in the field of information and communications technology – prefer school graduates with a high grade point average. Other occupations, i.e. building industry trades, are rather chosen by young people with a bad grade point average. Large training enterprises rank applicants according to results in entrance exams. Even though there are no reliable statistical numbers, one can assume that an obvious selection practice in the admission of apprentices is the reality.

Regional and supra-regional vacancies on the apprenticeship market present a certain limitation for young people to the choice of an apprenticeship occupation. Waiting periods for vacant places in the desired apprenticeship trade are quite frequent, but they can be bridged by supplementary education (see chapter 6). The attribution to a specific vocational school happens in accordance with the apprenticeship occupation. In some cases, a longer journey to the designated vocational school are unavoidable (the apprentices are attributed to the designated provincial vocational school, for a few very specific occupations exists, for instance, only one specific school in the whole federate state) ([69]).

In recent years, apprenticeship placements and training enterprises have decreased, while the number of apprentices searching for a vacant apprenticeship placement has increased (cf. Schneeberger/Kastenhuber, 1996, p.13ff; cf. Schneeberger et. al, 2000, p. 17; cf. BMWA, 2002b, p. 29). The government tries to stop this decrease with systematic subsidies and advantages for employees (i.e. apprentice-bonus, tax allowances). Not taking formal admission criteria for apprenticeship into consideration, one can see a clear structure in transition rates from secondary level II respectively the first year of secondary level II. Table 23 illustrates apprenticeship beginners in the

([69]) Because of the frequent use of a block (tuition) system, apprentices are accommodated in a residence for apprentices.

year 2001 according to their previous school education. The majority of apprentices come from lower secondary schools and prevocational schools.

Those changing from secondary technical and vocational school, are no school dropouts, but young people who have decided not to attend a prevocational school in their last compulsory school year.

Table 23: The educational background of apprentices 2001.

Educational background	%
Pre-vocational schools	42,3%
Lower secondary schools	19,1%
Secondary TVE schools	13,1%
Secondary TVE colleges	9,4%
Academic secondary schools	5,2%
Others or unknown	10,9%
Overall	100%

Notes: Agricultural and forestry schools are not included. "Educational background" includes not completed schooling (e.g. transfers after the first year of a secondary TVE school or college).

Source: Federal Ministry of Education, Science and Culture (BMBWK, 2002d, p. 38).

5.1.1 Apprenticeship contracts

The apprenticeship training agreement between the training master (training enterprise) and the apprentice is the basis for the vocational education and training in the dual system.

It has to be - in accordance with the Vocational Training Act – in writing and has to contain the following principles, which correspond with the apprenticeship as regulated in the legally approved list of apprenticeship trades and by the Federal Ministry of Economic Affairs and Labour:

(a) Name of apprenticeship trade
(b) Duration of the apprenticeship (2-4 years, depending on apprenticeship, special accreditations are treated separately),
(c) Date of entry into and end of apprenticeship (if the Apprenticeship Leave Exam is taken before the actual date of end, apprenticeship ends with the ALE)
(d) Personal data of apprentice,
(e) Personal data of training master,
(f) Indication of compulsory attendance of vocational school,
(g) If necessary, training measures outside the training enterprise, in apprenticeship training alliances;
(h) Remuneration of the apprentice,

(i) Signing date of the agreement,
(j) Signatures of parties involved (if apprentices are minors, the parent's signature).

Blank forms of apprenticeship training agreements can be obtained at Apprenticeship Offices of the Economic Chamber. Remuneration for the apprentice must be in accordance with the Vocational Training Act and must correspond with similar apprenticeship trades and is, in Austria, usually negotiated in advance by the collective agreement partners and employee/employer-associations. Apprentice's remuneration increases annually, and in the last year of apprenticeship it amounts to 80% of the average income of a fully trained worker. The training master is responsible for registering the apprentice with the Apprenticeship Office, the social security and the vocational school. The Apprenticeship Office examines the apprenticeship training agreement and the aptitude of the training enterprise and keeps a record of the agreement. At the end of apprenticeship, the apprentice remains employed with the training enterprise for at least three months.
Huge diversity of potential training enterprises demands standardized norms and a uniform level for enterprises providing training for apprentices in the dual system. Training enterprises in Austria are only entitled to train apprentices if they meet the necessary minimum requirements:

(a) The potential training enterprise must be approved of as a training enterprise according to the Vocational Training Act;
(b) The potential training enterprise needs to have a sufficient number ([70]) of experienced, skilled trainers, who have occupation-specific qualifications and who have attended apprenticeship trainer courses or taken apprenticeship trainer examinations at the Economic Chamber;
(c) The training enterprise must be able to provide all facilities and requirements necessary to impart to the apprentices all skills and knowledge necessary for the occupational profile of the respective apprenticeship trade, and to provide necessary supplementary training opportunities.

These requirements have to be registered when enterprises provide apprenticeship training for the first time and are being examined when an apprenticeship training agreement is signed. A cancellation is possible during the three months trial period by both, the apprenticeship training enterprise as well as the apprentice without giving any reasons. After this trial period, a cancellation of the apprenticeship is only possible if both sides have very good reasons ([71]).

([70]) The sufficient number of trainers depends on the actual number of apprentices, in order to guarantee ideal training circumstances.
([71]) Reasons that justify a cancellation of the apprenticeship agreement correspond with a virtual impossibility of a dismissal of the apprentice during apprenticeship time.

5.1.2 Promoting participation

Vocational education and training has a very long tradition and a large significance in Austria. The majority of actively working people comes from the dual training system and even today, 40% of an age group choose company-based initial vocational education. Being confronted with the trend of an increasing number of young people opting for higher education, the apprenticeship training system is facing major challenges. The apprenticeship needs to be maintained and revitalized as an educational alternative. In recent years, initiatives have been taken in this direction. One strategy is to increase the permeability of the education system. This means providing the possibility of supplementary examinations, an additional possibility to access tertiary education for skilled workers, the possibility of post-secondary education (adult education), admission to a tertiary technical and vocational colleges (also without A-Level Exam) or the accreditation of prevocational education for the apprenticeship period. Everyone who has completed a secondary school (i.e. a secondary technical and vocational school) is entitled to reduce her/his apprenticeship-training period and to accredit prevocational experience for the vocational school period. Attending a part-time vocational school is not necessary if a corresponding secondary school (i.e. secondary technical and vocational school) has been successfully completed and a special request has been placed with the Apprenticeship Office. Curriculum contents of existing training apprenticeship trades are a different matter. Promoting participation means offering modern, future-oriented training programmes. Particularly in the field of new technologies, the range of possibilities has been increased exceedingly, but dynamically changing demands require immediate action. The already mentioned splitting of vocational education in the dual system into single modules – a point of discussion in coming years, - is an important step into the direction of attractive, modern apprenticeship. The dual training system is, in many respects, comparable to a regular employment, particularly as far as enterprise-based regulations, responsibilities and employment- and training periods are concerned. Vocational schools are obligatory and - depending on their organisation – once a week, blocked or seasonal.
If performance is insufficient, the respective year has to be repeated([72]). Schools provide extra tuition for students who need to catch up. In regard to the Apprenticeship Leave Exam, instruction facilities offer preparatory courses. Furthermore, apprentices receive financial support - similar to the support students get in regular full-time schools – provided by the Federal Ministry for Social Security and Generations (i.e. family assistance payments, free public transport, public transport assistance payment, etc.). Adults get the opportunity to graduate from a secondary vocational school as special students. And the Apprenticeship Leave Exam can be taken in second-chance education.

Young people, who are unable to fulfil the requirements of the dual training system without help, can take measures to obtain support or a prolongation of the apprenticeship period. On the first of September 2003 the new form of “Integrative Vocational Education” (cf. Styrian Economic Chamber,

([72]) The percentage of students in one age group who fail is lower than 3% in vocational schools. (cf. Schmid, 2003, p.1)

2003) has come into effect. Integrative vocational education – like apprenticeship – has to be in accordance with the Vocational Training Act and permits prolonged apprenticeship ([73]) respectively vocational education with part-qualifications for young people at disadvantage, with personal difficulties of placement. This form of education has been developed by the employers and employees and exists due to the fact that not all young people can meet the fast rising demands of training enterprises, particularly in the technological industry. Integrative vocational education is designed to meet the needs of young people for the best possible accredited education, as well as the need of the economy for skilled workers. These special apprenticeship agreements are exclusively arranged via the Public Employment Service and are aimed at young people who possess one of the following characteristics:

(a) No successful completion of secondary level II,
(b) Special pedagogical extra tuition at the end of compulsory education,
(c) Disabilities in accordance with the Employment of Disabled People Act,
(d) Further restrictive job-placing factors taken from the educational background or from the occupational profile.

Integrative vocational education offers two alternatives:

(a) Prolonged Apprenticeship: Young people who seem to be able to pass the Apprenticeship Leave Exam without support, but who might need to extend their regular apprenticeship period, can arrange a special apprenticeship training agreement with an extension of up to two years;
(b) Part-qualifications: Young people who obviously lack the abilities to successfully complete ordinary apprenticeship, have the chance to include part-qualifications in their apprenticeship training agreements that focus on specific skills of the respective occupational profiles. The apprenticeship training periods last between one and three years, depending on the respective apprenticeship trade.

Traditional models in the field of special needs and the individualization of apprenticeship trades like pre-vocational (Anlehre) and pre-apprenticeship training (Vorlehre) (cf. Schlossar, 2001, p. 26f) have been replaced by integrative vocational education. Pre-apprenticeship training is no regular apprenticeship training, but a form of special-needs training for students with personal difficulties of placement. Target groups for pre-apprenticeship training include students who have not successfully completed the last year of secondary level I or who have graduated from special schools with special pedagogical curricula. Pre-apprenticeship training is based on a pre-apprenticeship training agreement.

([73]) Integrative vocational education is established as a measure to meet special needs in otherwise regular apprenticeship training. There is also the possibility to impart- for vocational courses in accordance with the Vocational Training Act – the curriculum contents of the first apprenticeship year within a maximum period of two years of training, thus facilitating their transfer to an ordinary apprenticeship (see chapter 6).

Pre-apprentices work – similar to ordinary apprentices – in training enterprises and attend part-time vocational schools. The aim of pre-apprenticeship training is to impart curriculum contents of an existing training occupation of the first apprenticeship year within a maximum period of two years, thus facilitating their transfer to an ordinary apprenticeship. The Public Employment Service provides special needs training during the pre-apprenticeship training. At the end of pre-apprenticeship training, students receive a certificate about their school achievements and their achievement in the training enterprise([74]).

Pre-vocational training (Anlehre) is comparable to pre-apprenticeship training, but is not regulated by law and only exists in several provinces (especially in Styria). Pre-vocational training (Anlehre) depends on the initiative of private enterprises and organizations([75]). The target group are also young people who, due to insufficient previous educational achievement, most likely can not expect to successfully complete ordinary apprenticeship. Pre-vocational education is limited to three years. The training enterprise is the private organization. Apart from a one-year vocational preparation and orientation phase, pre-vocational training (Anlehre) includes enterprise-based practical training (Schnupperlehre) and a special occupational training. Practical training takes place in special training enterprises, theoretical education is imparted in vocational schools or by the private organisation. During the whole training period, the trainees receive socio-pedagogical instruction. The aim of the initiative is to facilitate the trainees' transfer to an ordinary apprenticeship after pre-vocational training. Trainees receive a written certificate about qualifications acquired during prevocational training.

5.2 Curricula

The basic legal provisions for in-company apprenticeship training are laid down in the Vocational Training Act. The Federal Ministry for Economic Affairs and Labour issues the regulations for each apprenticeship trade in form of an ordinance (occupational profiles, curriculum contents, apprenticeship period, etc.). It is a characteristic feature of the Austrian apprenticeship system that these ordinances are designed and issued in close coordination with the employers and employees (Management and labour force; Sozialpartner) – in this case, members of the Federal Advisory Board on Apprenticeship. The introduction of new or the adaptation of existing apprenticeship trades is usually initiated by the employers and employees. Curricula for vocational schools are issued as federal framework curricula by the Ministry for Education, Science and Culture and are laid down in the Federal School Organization Act and the Federal School Instruction Act. Occupational profiles and vocational school curricula are being coordinated on the federal level.

([74]) The form of pre-apprenticeship training has been heavily criticised, particularly by representatives of workers' organizations (cf. Chamber for Workers and Employees, Kammer für Arbeiter und Angestellte, 2000, p. 4f). It has been criticised that pre-apprentices receive no real occupational qualifications, but are only being used as cheap labourers.

([75]) This form of pre-vocational training has only prevailed in Styria. The largest private initiator is "Youth at Work" ("Jugend am Werk").

In the dual training system, the employers and employees are closely involved in the design and implementation of the apprenticeship training system:

(a) The Apprenticeship Offices of the regional economic chambers act as authorities of the first instance and are thus the executive bodies of the Federal Ministry for Economic Affairs and Labour. The Apprenticeship Offices are being supported by the Offices for the Protection of Apprentices of the Chamber of Labour. In Austria, federal responsibilities are directly carried out by the employers and employees. This can be applied to all aspects of the apprenticeship system, from the appropriate design of the apprenticeship training agreement to the supervision of employment-based regulations;
(b) The Federal Advisory Boards provide counselling service for the District Administration Authorities. On a federal level, they comprise 12 members with a right to vote, assigned by the Economic Chamber and the Chamber of Labour. By the Ministry for Education, two vocational school teachers are co-opted as advisory members in the board. The main task of the Federal Advisory Boards is to provide and to appraise examination regulations for apprenticeship training. On the provincial level, four advisory board members provide counselling service for the Apprenticeship Offices and the Governor (Government) of the Province;
(c) On the provincial level, the employers and employees decide on appeals and have an obligation to expert evaluation in apprenticeship and vocational schooling matters;
(d) As far as matters of examination in the dual training system are concerned, the employers and employees are involved in two ways. On the one hand, they have the exclusive right of suggesting appointments for the chairpersons for the Apprenticeship Leave Examination Boards, finally appointed by the Governor in the last instance.

On the other hand, the employers and employees also nominate the boards for the apprenticeship trainer examinations.

Vocational schools have, like most other schools, certain autonomy in designing occupational profiles in accordance with framework curricula; this autonomy concerning the curriculum, however, can be rather limited in comparison to other school types. Further autonomy-regulations are comparable to those in other compulsory schools (i.e. financial decisions on the acquisition of material). Wide freedom of arrangement is granted to the training enterprises. This is highly dependent on the investment, effort and occupation-specific knowledge of instructors and trainers in the respective training enterprises as well as on the equipment and facilities the enterprise is able to provide in general. Large enterprises are able to provide more modern training resources than smaller enterprises, as they usually possess better facilities. Basic training requirements according to the occupational profile have to be fulfilled and have are being examined by the Apprenticeship Offices. In larger

enterprises, elected employee representatives also have rights concerning the planning and implementation of apprenticeship education and training. In some branches, apprentice-tutors with a counselling function are appointed for training enterprises supporting apprenticeship training, as they are closely linked to the Federal Advisory Boards on Apprenticeship

5.2.1 Content and delivery

As far as curriculum contents in the dual training system are concerned, one has to distinguish between instruction in vocational schools and training in training enterprises. The emphasis lies on enterprise-based education. Instruction in annual part-time vocational school is held either once or twice a week throughout the regular school year, enterprise-based training takes place three or four days per week. Instruction provided in a full-time course form (block-tuition) interrupts enterprise training for eight to twelve weeks per year (or is limited to one particular season), the rest of the year is dedicated to training in the enterprise. Training periods can vary with different apprenticeship trades. The time invested in work and school amounts to 40 hours per week.

In-company training is based on requirements and occupation-oriented contents as stipulated in the occupational profiles and apprenticeship training regulations, adapted by the enterprise.

Even though a special enterprise- and occupation-specific training leads to a specialisation of apprentices, apprenticeship training is designed in a way that enables apprentices to acquire practical knowledge and skills necessary for the occupation according to the occupational profile. Learning is characterized by working productively for the enterprise. The apprentices are instructed by being actively integrated in the economic operations and by working independently in the framework of the enterprise. The apprentice is able to practice an occupation in a qualified way immediately after the Apprenticeship Leave Exam. In order to guarantee a large variety and diversity of education and to enable smaller enterprises with smaller capacities to provide training of full value, they can offer supplementary practical training in part-time vocational schools and other training facilities, or form apprenticeship training alliances with other enterprises. In this way, the dual training system is extended into a triple training system, in order to achieve higher quality education([76]) Large training enterprises very often have their own apprenticeship workshops, used exclusively for apprenticeship training.

The apprentice's obligation to attend part-time vocational school is in regulated in the apprenticeship training agreement and is in line with the Compulsory Schooling Act. Vocational schools provide education and training in a particular apprenticeship trade. The apprentice is registered in a particular

([76]) As reference the following evaluation of a triple apprenticeship training programme in the field of the Styrian car industry, in which the positive aspects of this new model and consequences on the traditional apprenticeship system are being presented has to be mentioned: ZBW, 2002b.

school according to her/his apprenticeship trade and the location of the training enterprise ([77]). Classes correspond to a particular apprenticeship trade or to a group of related apprenticeship trades. Due to different previous school achievements and enterprise-based backgrounds, apprentices are rather a heterogeneous group of students, who require a very individual adaptation of curriculum contents on their respective degree of education. An exact coordination of enterprises and vocational schools is therefore not possible. Subject-related technical knowledge and occupation-specific skills account for up to 75% of instruction provided in vocational schools, divided into theoretical and into practical education. One quarter of school-time is devoted to general knowledge and foreign language instruction.

Tasks of education in part-time vocational schools are:

(a) Promoting and supplementing enterprise-based education and training by occupation-related theoretical knowledge (also practical training in workshops, kitchens and laboratories);
(b) Improving general education;
(c) Providing occupation-related terminology in a foreign language.

Apprenticeship training is - based on an apprenticeship training agreement - limited to a certain period, which is in line with the training period of the respective apprenticeship trade. Training ends on the agreed date or with the Apprenticeship Leave Exam in the last months of apprenticeship training([78]). It is also possible that apprenticeship training ends without a regular completion by the apprentice, it expires (i.e. failure in the Apprenticeship Leave Exam). Or the apprentice is unable to successfully complete vocational school in the period agreed upon. In both cases, the exam can be taken or repeated at a later point, also after apprenticeship training.

If the vocational school certificate is missing, the Apprenticeship Leave Exam can be taken with a supplementary theoretical part.

5.2.2 Assessment

Assessment in vocational schools is based on written, oral and practical performance, in accordance with the Austrian 5-point grading system, graded by the appropriate teachers. Instruction in compulsory classes can take place in two different groups with varying performance. Students receive certificates about their annual performance. On successful completion of all school levels, they receive a Technical and Vocational Education Certificate or Diploma. The certificates of the vocational school need to be presented to the apprenticeship-training master. In the training enterprise, no grading or school-based assessment takes place. The apprentice receives - according to her/his in-company (and

([77]) Usually, the nearest school in the own province.
([78]) Under certain conditions, it is possible to take the exam at an earlier date.

school-based) performance - feedback about her/his progress from the training master and the instructors. Alternative forms of performance assessment are the so-called apprenticeship competitions organized by the Economic Chamber, with participation on a voluntary basis. They offer the opportunity of performance evaluation in related occupations.

The Apprenticeship Leave Exam at the end of the apprenticeship-training period is designed to assess the general performance of apprentices and is the only assessment for the enterprise-based part of the training. The exam takes place in front of an examination board, also consisting of representatives of the employers and employees. Exam contents are settled in federal examination regulations and consist of theoretical (written and oral) and practical tasks. The theoretical part is omitted if the apprentice can prove successful completion of vocational school. Supplementary examinations in related apprenticeship occupations are possible. The single tasks are graded from Excellent (1) to Failed (5), the examination board then decides on the overall result of the examination. Special reports have shown that the success rate in Apprenticeship Leave Exams for apprentices with a successful completion of vocational school is 89%, for apprentices without a successful completion it is 62% (cf. Schneeberger/Kastenhuber, 1996, p. 56). In the case of failure, the Apprenticeship Leave Exam can be repeated as often as desired. There are further special conditions for people with incomplete apprenticeship training, school education comparable to apprenticeship training and for people with work experience. It is not obligatory to take the Apprenticeship Leave Exam.

5.2.3 Quality assurance

The provincial school boards and their vocational school inspectors are responsible for the supervision of vocational schools. They take care of the proper implementation of federal curricula and educational regulations. In the field of apprenticeship training, this supervising function lies mainly with the Apprenticeship Offices of the Economic Chamber, but also with the Offices for the Protection of Apprentices of the Chamber of Labour.

As far as vocational school matters are concerned, the initiative introduced by the Ministry of Education, „Quality in Schools – Q.I.S“ explained in Chapter 4.2.3, has to be mentioned.

In all areas of technical and vocational education one has to consider the huge effort on the federal level to transpose and to adjust training regulations and federal framework curricula. The re-organization of training programmes always takes place in cooperation with employer and employee representatives and subject-related experts. The re-organisation of existing apprenticeship trades in the dual training system is usually initiated by employer and employee representatives (Federal Advisory Board on Apprenticeship). The necessary re-formulation of occupational profiles is based on surveys and research projects. The adaptation and co-ordination of different apprenticeship training programmes occurs on the federal level.

5.3 Learning outcomes

Austrian apprenticeship training offers, if successfully completed, a qualified worker training on the level of a skilled employer, which entitles apprentices to immediate transition to professional employment and to exercise regulated and unregulated jobs. Completion of apprenticeship is, in many respects, comparable to completion of secondary technical and vocational education, in particular as far as working in regulated jobs or working autonomously is concerned.

5.3.1 Qualifications / certification

Training in the dual training system is completed with the Apprenticeship Leave Exam, which proves the successful completion of vocational education in a federally acknowledged apprenticeship trade. The Apprenticeship Leave Exam is designed as an examination about the overall level of knowledge and is taken in front of an examination board. It is not obligatory to take the Apprenticeship Leave Exam, but the majority of apprentices decide to do so. The Apprenticeship Offices of the Economic Chamber provide an Apprenticeship Leave Certificate containing all the examination results. On request, completion of apprenticeship can be certificated in "articles of apprenticeship" (Lehrbrief). People with an Apprenticeship Leave Certificate are entitled to name themselves according to their profession (professional title, i.e. Fitter, Goldsmith), or to use the title foreperson (master) or craftsperson in the respective apprenticeship trade. In the case of double-apprenticeship, requirements for both apprenticeship trades have to be fulfilled. In the case of single-apprenticeship, it is also possible to take the Apprenticeship Leave Exam in a related apprenticeship trade in order to acquire double qualifications.

Apprentices furthermore receive certificates about their annual performance, and on successful completion of all school levels, they receive a Technical and Vocational Education Certificate or Diploma. In the case of dropping out of apprenticeship without Apprenticeship Leave Exam or ahead of time, apprentices receive a certificate signed by the training enterprise that equals a "recommendation" (reference) recording the actual training period and acquired skills and qualifications during this period. Less than 10% off all apprentices cancel their apprenticeship training (cf. Schneeberger/Kastenhuber, 1996, p. 49).

5.3.2 Progression and transition

For the dual training system, exact statistical data for the transition of apprentices from apprenticeship training into professional life on the labour market or into further education is not available, only in a very small number of surveys. Unemployment statistical data clearly show that apprentices with an Apprenticeship Leave Certificate have higher employment-chances than apprentices without comparable qualifications. Unemployment rate of apprentices, however, is altogether higher than of

graduates of secondary technical and vocational schools and colleges. These facts have also been confirmed by other surveys. Special figures for the age group of 20 to 24 year-olds (the group of young adults who have only recently completed their initial vocational education) show that unemployment rates of vocational school graduates range between 3-5 %, unemployment rates of apprentices range between 6-7% (cf. Lassnig/Schneeberger, 1997, p. 19). Even if these numbers are no longer up to date, one can assume that, due to increasing tension on the Austrian labour market, the situation has not improved.

As far as the dual training system is concerned, very often an uncomplicated transition of the apprentice who has completed training into regular professional employment is being assumed. This assumption has been investigated more closely in several surveys in the 1990s and, being inappropriate, has been corrected. Apprenticeship training has similar transitional problems due to the labour market situation as other forms of vocational education. In addition, training enterprises are obliged to continue apprentice-employment for three months after the expiry of the apprenticeship training agreement. After apprenticeship training, 25 % of the apprentices leave their training enterprise (cf. Brandel 1994 nach Lechner et. al, 1999, p. 11). These results clearly show that despite close links between the apprenticeship training system and the economy, processes of occupational mobility can not be avoided. Transitional processes are frequently influenced by changes in trades and branches related to the apprenticeship trade.

Apart from direct professional employment, graduates of the dual training system can also choose from other educational possibilities. A classical shift towards higher education and professional independence is a master craftsperson course or the master craftsperson exam. Through these and other prerequisites pertaining to trade law, independent professional status in the respective occupation can be achieved. The master craftsperson exam represents the highest level of the trade- and craft-oriented vocational system. Besides, there exist advanced training courses, schools for employed or external examinations, providing apprentices with a certificate that equals an advanced technical and vocational education diploma. The "Berufsreifeprüfung", supplementary examination introduced at the end of the 90s, also equals a certificate of secondary education and gives graduates of the dual training system access to tertiary education. The Higher Education Entrance Exam entitles to limited access to tertiary education. Direct access without a certificate of secondary education to the "Fachhochschule", the institute of technical and vocational higher education, is possible with sufficient professional experience and supplementary examinations([79]). The Statistics of Austrian Higher Education gives insight into tertiary education (cf. Statistik Austria, 2003b). In the year 2001, 2,5% of first-time registered, ordinary students have passed the "Berufsreifeprüfung", external examination or the Higher Education Entrance Exam. In the institute of technical and vocational higher education the number

([79]) This form of tertiary education without advanced examination is only used by a relatively low number of people.

amounted to 6,6 %. No exact information can be provided as far as further educational possibilities are concerned.

6 Other youth programmes and alternative pathways

With regard to "Other Youth Programmes and Alternative Pathways" in Austria, measures and initiatives need to be mentioned that are dedicated to the education of young people who are not disabled, but who are still unable to find a vacant apprenticeship placement.

Within the scope of the JASG I (a law designed in 1998 to enforce the rights of young people to (vocational) education) two special training programmes have been introduced as some sort of rescue net for current school-leavers in case of a shortage of apprenticeship placements([80]): A foundation for apprenticeship training (Lehrlingsstiftung) and vocational training courses (Berufslehrgänge). Foundations are independent educational institutions - in accordance with the Vocational Training Act – who are able to offer apprenticeship training for young people. Vocational courses usually take place over a period of 10 months, in training facilities providing the knowledge and skills of the respective apprenticeship occupation. Due to the re-enactment of the JASG-Law (2000), no further foundations are created; previous foundations are phased out. At the moment, only vocational training courses are being provided. Table 24 illustrates the number of participants of JASG-courses IV and V.

Financing of these programmes is provided in the form of subsidies by the federal state, the provinces (Laender) and the European Subsidy Fond administered by the Public Employment Service([81]). Responsibilities for the provision and implementation of the JASG-courses I-III lay with federal project organizations, exclusively established for this purpose, in coordination with the Public Employment Service. With the JASG-re-enactment of 2001 (JASG IV), responsibilities for the implementation of JASG-measures have been shifted to the respective federal organizations of the Public Employment Service. Due to the present legal situation, the JASG-Law will expire at the end of December 2005.

([80]) JASG has originally been initiated in order to cushion the shortage of apprenticeship placements of years with a high birth-rate. Only young people, who had completed compulsory education in the respective year, were admitted to this programme.

([81]) For a detailed list of the financing, a reference to the following report: Dornmayer et. Al, 2003, p.66ff.

Table 24: Young people in training courses within the bounds of the "Jugendausbildungs-Sicherungsgesetz" (JASG) 2001 and 2002.

	Year 2001 (JASG IV)		Year 2002 (JASG V)	
	Number	**%**	**Number**	**%**
Female	1.188	53,0%	2.033	48.1%
Male	1.058	47,0%	2.192	51,9%
Overall	2.246	100%	4.225	100%

Source: Public Employment Service, special calculations.

Requirements for participation in vocational training courses within the framework of JASG are the successful completion of the two last compulsory school levels. The youth has to be registered with the Public Employment Service in search for an apprenticeship placement. For this purpose, at least five independently written, unsuccessful letters of application have to be at hand and the PES has to be unable to see any chance for an acceptable alternative apprenticeship placement. People can only be assigned to JASG-courses by the PES. The course training is based on a respective training agreement between the trainee (or her/his legal representatives) and the organisation([82]) responsible for the training.

JASG-vocational courses take place over a period of 10 months and can – if requirements for participation are met again – be extended([83]). The educational content must be in accordance with apprenticeship occupations, which are in demand on the labour market of the province. Courses provide acquisition of skills and knowledge according to the respective occupation and start off with an orientation phase. Training is organised in a way similar to the contents imparted in a regular first year of apprenticeship training. Vocational school is obligatory for course-participants. The main task of these courses is the transfer of apprenticeship-applicants into regular apprenticeship training, if possible during the actual course period (transition-concept). The portion of practical training amounts up to 60% and is dependent on the demand of potential training enterprises. On completion of a JASG-course, the acquired skills are officially confirmed and the period of JASG-course participation is taken into account in the case of a transition into regular apprenticeship training([84]). To ensure successful course completion, individual measures of support can be provided. Enterprises who agree to train JASG-participants receive subsidies.

([82]) The responsible organisation must not be authorised to provide instruction/training itself, according to §2 of the Vocational Training Act.

([83]) The person takes part in another JASG-course with increasing level of performance and receives instruction that equals the following regular apprenticeship year. In 2002, out of 5500 JASG-participants (courses and pre-vocational training) 1000 were taken over from the previous year. In 2003, apprentices who have received their training exclusively in JASG courses, have - for the first time - taken their Apprenticeship Leave Exam.

([84]) It is a prerequisite that the subject-specific orientation of the course corresponds with the respective apprenticeship occupation. Courses that are only subject-similar can be partially accredited.

Within the framework of JASG - beside vocational courses mentioned above – measures for vocational orientation and support accompanying the training are taken. The emphasis with all JASG measures always lies on integration of and adjustment to new technologies, and particularly on the consideration of the special situation of female apprenticeship-applicants. With JASG-course V (2002), the number of placements has been increased considerably. Main target group are 15-18 year old school graduates of the same age group. In addition, a special federal government programme is being provided for young people between 19 and 24.

7 VET at post-secondary (non-tertiary) level

The educational opportunities after the secondary educational level II are very diversified and are in a national as well as international context often assigned to ambiguous terms. Often the offers in post-secondary, tertiary/non-university, tertiary/university, and adult education blur. In Austria post-secondary education is understood as education that does not include studies at tertiary colleges or at universities of applied sciences, that target on participants that are more advanced in age and level than students at secondary level II and that either hold a school leaving certificate ("Reifeprüfungszeugnis") or are at a prescribed minimum age (cf. Statistik Austria, 2002a, p.12). Educational offers that do not require the above mentioned are rather to be seen as part of adult education or of on-the-job training, with the exception of continuative classes for those who completed apprenticeship training that count as classes on a post-secondary level([85]). Educational offers that are close to education offered in tertiary colleges and educational institutions that seem to be similar to tertiary colleges are understood as belonging to the non-university tertiary level and have to therefore be discussed separately. The compilation below is geared to the classification found in ISCED97. The mentioned educational opportunities belong to post-secondary educational opportunities and are categorised as ISCED level 4b:

(a) University courses requiring up to 4 semesters,
(b) Schools for healthcare (e.g. skilled medical-technical staff),
(c) courses (e.g. course on pedagogy for special needs)
(d) master crafts-person courses, part-time industrial master colleges, and courses on building crafts([86]).

Other forms of post-secondary education are not mentioned in the report of ISCED97 as 4b and are therefore seen to belong to tertiary/non-university education (level 5b). The ISCED level 4a includes

([85]) Master crafts-person courses, part-time industrial master colleges, and courses on building crafts are considered part of ISCED 5b (non university tertiary level). We think we meet the ISCED classifications more precisely by considering the above mentioned part of ISCED 4b as the access requirements and aims considerably differ from other educational paths as far as the level of qualification is concerned.

([86]) Master crafts-person courses, part-time industrial master colleges, and courses on building crafts as well as other courses shall not be discussed in detail.

completions from secondary technical and vocational colleges; these are – according to the Austrian classsifcation - clearly assigned to the secondary level II but are acknowledged to be on an higher level in the international context.

The access requirements and aims of the mentioned educational paths differ greatly. University courses that require between one to four semesters serve the practically-orientated education as well as specific continuing education in certain areas. Around a third of all university courses focus on technics, another third has its emphasis on jurisprudence and economics. The last third is distributed between different subjects reaching from medicine to pedagogy. University courses can serve the purpose of academic deepening, the purpose of professional continuing education, as well as the purpose of initial vocational education. However, they generally build on former professional experience and serve the deepening of subject-specific knowledge after a successfully completed education.

There are some specific schools that belong to the group of schools for healthcare, such as schools for skilled medical-technical staff or schools for healthcare and sick-nursing, that are intended for initial vocational education in the field of nursing care. The duration of such a training lies between 1-2 years. In takes usually place in a specific form of a vocational academy for healthcare. Sometimes it is also organised as a course that takes place in the premises of a hospital. Usually school leaving certificates (Reifezeugnisse) are not required in order to be able to access. The applicants, however, have to be, of a certain minimum age and have to prove that they have successfully completed a certain number of years of schooling.

There are also special courses that are meant to complement the technical education of people who have already successfully completed secondary technical educational institution. Special courses on pedagogy, for instance, serve the purpose of knowledge deepening and are designed for people who have successfully completed a school for teacher training. There are many of such pedagogical courses.

Master crafts-person courses, part-time industrial master colleges, and courses on building crafts are courses that are designed to serve knowledge deepening following the dual training system. Successfully completing such a school means to have deepened occupation-specific knowledge on the one hand and to have achieved extended industrial rights on the other hand.

Table 25 shows the number of participants of the mentioned schools for the year 2001. One doesn´t have direct access to such data as post-secondary education is usually ranked among special forms of upper secondary level education and therefore not explicitly shown in statistics. Those who participate in university courses are usually understood to belong to the group of auditing students. A more detailed analysis was only possible after the Ministry of Education, Science, and Culture carried out a special analysis. As far as university courses are concerned there is one more thing that needs to be

mentioned, namely that it is possible for private educational institutions in Austria to install courses with the characteristics of a university-course. Such courses belong to the post-secondary sector but cannot be explicitly shown in statistics as private educational institutions are not obliged to report to the Ministry of Education, Science, and Culture. It has only occurred this year that Austria Statistik initiated a collection of such data. A differentiation according to the age of the subjects was not possible. However, people who take up such forms of education are known to be between 17 and 25 years old. Segregation as far as sex is concerned can be observed. It is nearly exclusively females who attend courses and schools (educational paths leading into pedagogical and medical directions). Master crafts courses, on the other hand, are generally attended by males. As far as university courses are concerned a balanced proportion between males and females can be observed.

The table also shows that the area of post-secondary education constitutes a rather small part of the Austrian educational system. Furthermore, post-secondary education generally focuses on rather specific contents. The target group, the contents, and the organisational design are quite heterogeneous. A concentrated description of the different paths of education follows. The main reason for this is the nearly unmanageable number of forms of appearance of the described opportunities that does not allow a more detailed description within the frame of this report. For further information please refer to the homepage of the Ministry of Education, Science, and Culture.

Table 25: Persons in post-secondary VET by gender 2001.

	Year 2001									
	Courses		**Master craftsman course, Courses for building workers, etc.**		**Other schools**		**Courses at universities (<2 Years)**		**Overall**	
	N	**%**	**Number**	**%**		**%**	**N**	**%**	**N**	**%**
Female	3.850	75,2%	138	4,0%	8.055	86,2%	2.408	46,1%	14.451	62,5%
Male	1.271	24,8%	3.300	96,0%	1.291	13,8%	2.819	53,9%	8.681	37,5%
Overall	5.121	100%	3.438	100%	9.346	100%	5.227	100%	23.132	100%

Notes:
These schools and courses are statistical subgroups of other types of schools/colleges and therefore not severable by age and gender.
„Courses at universities (<2 years)“ includes courses at scientific and non-scientific universities. Courses offered by private institutions are not included (no data available).
„Courses“ includes pedagogic and special-pedagogic courses.
„Other schools“ includes (post-)secondary colleges and schools for social and medical occupations.

Source: Statistics Austria (Statistik Austria, 2002a), Federal Ministry of Education, Science and Culture (Special calculations).

7.1 Access requirements

A school leaving diploma ("Reifeprüfungszeugnis") or an equivalent diploma is required in order to be able to access a university course. Sometimes professional experience and the evidence of physical ability are pre-requisites as well. In this case an entrance examination has to be taken. Usually tuition fees as well as taxes for examinations have to be paid for university courses. Besides attending such classes as a regularly registered student, there is also the possibility to just audit a class. It is, however, only the regularly registered student who is able to complete the class in the common manner. Sometimes the access requirements for university courses include a successful completion of university studies. Sometimes such courses are also termed as continuous studies and belong to the area of tertiary education.

Schools for healthcare usually require from applicants the successful completion of a certain year of schooling (10th grade) or a minimum age (usually 17 years). Furthermore, they have to present a attestation from a public health officer as well as their criminal records. These reports are meant to give information on the physical and mental ability and the integration of the applicant. Sometimes preparation courses are offered that prepare the applicant for the actual entrance examination.

In order to be allowed to attend a master craftsman course, an apprenticeship leave certificate or a diploma achieved after the successful completion of a secondary technical and vocational school has to be presented. These certificates must prove that the applicant has already obtained education in the professional field concerned. Schools offering courses on building crafts also ask for an apprenticeship leave certification as an access requirement. Furthermore, experience in the professional field has to be proven in most cases.

All the mentioned schools and courses are bound to certain restrictions. Generally speaking one can say that an applicant meeting the access requirements is allowed to enter the school concerned. However, school-internal restrictions such as a maximum number of students or a certain number of training places play a major role as well. In such cases applicants will be ranked either according to the date of registration or to certain school-internal criteria. Not every kind of school can be found all over the country. Therefore, it can be said that from those interested in specific knowledge a certain extent of mobility is demanded.

7.2 Curricula

The university courses discussed in this chapter usually require one to four semesters. There are also university courses that require up to eight semesters. Four semesters, however, marks the borderline to the non-university tertiary sector. The course content gets conveyed in a theoretical as well as practical manner. These courses enjoin compulsory attendence. At regular intervals assessments of performance take place. Furthermore, there are leave examinations. The courses are designed for people under employment and take therefore place either staggered or in the evenings. It is also allowed to hold

courses during vacation periods. University courses are brought into being by a decree, discussed and agreed on by the department council. As university courses are generally very popular a vast number of various courses exist by now.

Schools for healthcare usually require 1 to 2 years. The education implies both, theoretical and practical knowledge. Practically-orientated classes as well as internships take place in hospitals. In order to successfully complete such a school a leave examination held by a board of examiner has to be taken. Master crafts courses (2 years) and courses on building crafts (3 years) usually convey first and foremost practical knowledge and skills, accompanied by some theoretical input.

7.3 Learning Outcomes

A successful completion of an at least 30 semester hours university course allows the student to call him/herself an "academic……" (the word academic is followed by a term describing the education respectively profession concerned). After a successful completion of a university course with a minimum of 50 semester hours, the successful graduate is allowed to call him/herself "Master of Advanced Studies....." (the phrase is followed by a term describing the education or respectively profession concerned). University courses are considered modern extra qualifications, especially for those who have successfully completed tertiary education.

Graduates from schools for healthcare and similar courses obtain a vocational diploma. Holding such a diploma allows the graduate to hold his/her job title and to work in the professional field concerned.

Students attending master crafts courses complete their education by taking an exam similar to an examination for a master craftsman´s certificate. Holding such a certificate makes it then also possible to work as an independent entrepreneur. Furthermore, the leave examination is accepted as a substitute examination for the examination for trainers in the area of apprenticeship training. The successful completion of a course on building crafts allows the graduate to work in the field of profession concerned. Furthermore, the completion of a course on building crafts gives the opportunity to take an examination for a master craftsman´s certificate as well.

8 VET at tertiary level

Chapter 8 deals with the vocational-related offers at tertiary level in Austria (ISCED level 5 and 6).

A distinction between non-university institutions respectively institutions offering courses on college-level (ISCED 5b) and universities respectively universities of applied sciences (ISCED 5a and 6) shall be made:

(a) Non-university education at tertiary level:

- Post-secondary TVE colleges([87]),
- Vocational academies,
- University courses that require more than 4 semesters,

(b) Education at tertiary level at universities and universities of applied sciences:

- Academic Universities,
- Art academies,
- Universitiy of applied sciences

Post-secondary TVE colleges offer those holding a school leaving certificate ("Reifeprüfungszeugnis") or an aequivalent certificate theoretical as practically-orientated education in various professional areas and at the level of a secondary technical and vocational college. Post-secondary TVE colleges usually require 2 or 3 years and are therefore attractive for graduates from secondary academic schools who wish to achieve a first qualification in the professional field concerned. Post-secondary TVE colleges are generally designed as special forms of secondary technical and vocational colleges. There are special forms for people under employment. Some of the most important fields offer by post-secondary TVE colleges are listed below:

(a) Technical, commercial post-secondary TVE colleges and those focusing on art and design:

- engineering;
- electrical engineering, electronics, communications engineering,
- textiles,
- computing and organisation,
- chemistry and others

(b) Post-secondary TVE colleges focusing on trading:

- marketing,
- controlling,
- information management,
- corporate planning and others,

(c) Post-secondary TVE colleges in the human sector:

- tourism and recreation-economy,
- pedagogy and education,
- textiles and others.

Vocational academies are educational institutions that offer those holding a school leaving certificate a 3 years vocational training. Vocational academies are similar to universities as far as the modalities for

([87]) Post-secondary colleges do not belong to the tertiary sector. However, they are considered part of ISCED 5b and are therefore treated in this report as belonging to the tertiary sector.

studies and exams are concerned. The emphasis lies on academies in the field of pedagogy. The fields offered by vocational academies are listed in the following:

(a) Academies for teacher training:
    - Pedagogical academies (training for teachers in the field of compulsory education)
    - "Berufspädagogische" academy (particularly for teachers teaching in secondary technical and vocational schools and colleges)
    - Pedagogical academies in the field of agriculture and forestry,
    - Pedagogical academies in the field of religious instruction.

(b) Academies for occupations in the social services sector.

(c) Academies for occupations in the healthcare sector,
    - Academies for midwives,
    - Academies for occupations in the field of medical-technical services.

(d) Military academies.

Courses that require 4 semesters, along the lines of university courses, aim at the achievement of a practically-orientated extra qualification, at advanced vocational training respectively at the deepening of subject-related knowledge. For graduates from secondary schools it is also possible to achieve initial vocational training by attending such a university course. There might, however, be access requirements that need to be fulfilled. The vast offer in university courses is rather varied. A third of the courses focus on technics, a third on law and economics. The last third is shared by courses focusing on the remaining spectrum of university courses.

In Austria the tertiary academic sector can be subdivided into academic universities, art universities, and universities of applied sciences. However, a separation between vocational training and academic training is not always possible. Universities of applied sciences aim at a practically-orientated, vocational training, in the case of graduates from secondary academic schools, at initial vocational education. As far as universities are concerned the differentiation made has to be more precise. Universities also offer vocational training. According to the subject matter, however, the focus is either set on practical or academic aspects. There is no official differentiation between vocational and academic studies. Therefore, classifications have to be done based on the concrete contents and the orientation of the respective course([88]). Generally speaking, technical studies usually focus more on practically-orientated aspects. Furthermore, university teacher training studies can be seen as part of vocational education. The introduction of "Bakkalaureat" studies (1999) as part of the internationalisation of educational pathways can be seen as a step towards an official differentiation

([88]) The job profiles concerned are fixed in the respective curricula and make an understanding of the respective subject of studies possible.

between academic and vocational education on level of universities. In Austria there are 19 universities offering studies in the following subjects:

(a) theology,
(b) law,
(c) social and economic science,
(d) medicine,
(e) humanities,
(f) natural sciences,
(g) petroleum engineering, metallurgy, applied geosciences
(h) natural ressources, materials sciences
(i) art and music.

26% of all students are presently engaged in studies in humanities, 24% in studies in social and economic science, 14% are engaged in technical studies, 10% in studies in natural sciences, 8% are engaged in studies in law, and another 8% in medical studies (cf. Statistik Austria, 2003b, 60f).

Since 1994 there are universities of applied sciences in Austria. The intention of their introduction was to broaden the educational sector on the one hand, and to underline the harmonisation with international educational systems on the other hand. Universities of applied sciences usually require eight semesters and are designed in the manner of a school (as opposed to the organisation of universities). These eight semesters already include an internship that students are engaged in for usually one semester. Tertiary technical and vocational schools aim at conveying basic knowledge the profession concerned, specific knowledge on the contents of the respective professions, and most importantly on knowledge on the practical demands of the profession concerned. Universities of applied sciences are very popular. Therefore, most universities of applied sciences have more applicants than available study places. There are 124 courses offered by universities of applied sciences on the following six subject matters:

(a) economy,
(b) technics,
(c) tourism,
(d) information technology and media,
(e) healthcare and social services,
(f) national defence([89]).

([89]) Not discussed in this report.

Approximately 45% of all students studying at university of applied sciences take courses on technics, 40% take courses on economy (cf. Statistik Austria, 2003b, p.279f).

Universities of applied sciences are not designed by the Federal Ministry of Education, Science and Culture – as opposed to other educational institutions. Neither are there any resolution passed by the National Assembly as far as universities of applied sciences are concerned. In fact, universities of applied sciences are applied for and are managed by legal bodies (college-sustainer). The approval is incumbent upon the "Fachhochschulrat", an independent board of 16 experts from professional fields concerned. These experts are appointed by the Federal Ministry of Education, Science, and Culture. Universities of applied sciences are financed by financial support from the federation, from the respective sustainer, and in many cases also from the state or from other corporate bodies.
Table 26 shows the rates of participation in tertiary education as part of the totality of 19-25 year olds respectively 18-25 year olds. The latter complies with the age interval that is typical for Austria. As tertiary education requires the student to have successfully completed secondary education ("Reifeprüfungszeugnis") access to tertiary education is only possible from an age of 18 onwards. Students coming from secondary technical and vocational colleges are older when they are allowed to access tertiary colleges as secondary vocational colleges require one year more than other school forms. Furthermore, male applicants are usually older as they are obliged to do military service respectively civilian, community service. Because of the mentioned differences a distinction has been made between university-offers and offers from non-university institutions that is transparent in table 26.

Table 26: Participation rates in tertiary VET as a proportion of young people aged 19-25 and 18-25 (1990-200)1.

	Years							
	1990		1995		2000		2001	
	Number	%	Number	%	Number	%	Number	%
Students at universities and tertiary TVE colleges (19-25 years)	104.247	11,5%	104.906	13,3%	121.406	18,0%	114.461	17,0%
Students (other tertiary educational programmes)	14.802	1,6%	16.985	2,2%	22.810	3,4%	24.233	3,6%
People overall (19-25 years)	906.903	100%	787.344	100%	674.535	100%	671.355	100%
Students at universities and tertiary TVE colleges (18-25 years)	109.767	10,8%	109.879	12,5%	124.788	16,1%	119.446	15,5%
Students (other tertiary educational programmes)	14.802	1,5%	16.985	1,9%	22.810	2,9%	24.233	3,1%
People overall (18-25 years)	1.016.611	100%	878.442	100%	774.459	100%	769.524	100%

Notes:
„Students at universities and tertiary TVE colleges“ includes students at scientific and non-scientific universities, art colleges, universities of applied sciences resp. tertiary TVE colleges („Fachhochschulen”) .
„Students (other tertiary educational programmes)“ includes academies, (post-secondary) TVE colleges and courses at universities (>2 years).
„Fachochschulen“ have been established in 1994 in Austria.
Age data for “other tertiary programmes” are not available; therefore the overall number of students has been included.

Source: Federal Ministry of Education, Science and Culture (BMBWK, 2002b and special calculations), (CEE calculations).

The following tables are dedicated to the many different paths of education and show these broken down into age and sex for the years 1990 until 2001. As far as non-university offers are concerned (table 27) it is not possible to give data on the age of the objects (cf. notes). Therefore, they are integrated into one category. Because of the considerable differences between universities of applied sciences and universities, these two institutions are mentioned separately in the tables. Table 28 shows data on universities, table 29 data on universities of applied sciences. The number of students has increased considerably in the last decade. This development is characterised by an enormous increase in female students (cf. proportions as far as sex is concerned in tables 30 and 31). More than a half of all students studying at universities and approximately a third of all studying at universities of applied

sciences are female. Furthermore, a future tendency towards more participation in tertiary education by female students can be observed.

The statistics show a considerable change in the year 2001. It was then that tuition fees were introduced. This lead to the drop-out of many half-time students and of students who were registered but never really engaged in their studies. In 1994 universities of applied sciences were introduced in Austria. Since then a continuous increase in students can be observed. Universities of applied sciences have developed into very popular, practically-orientated alternatives to universities. As far as an international comparison is concerned, Austria seems to have rather few people who successfully complete tertiary education (cf. table 10). Recent OECD studies show that Austria is ranked among the OECD countries with the least people who successfully completed tertiary education (cf. OECD, 2003, p. 43f). However, the specific structure of the Austrian education system, especially the university system, has to be taken into account (cf. IBW, 2003, 39f). First of all, there have only been universities as tertiary institutions for a long time. Alternatives at tertiary level such as universities of applied sciences ("Fachhochschulen") were only introduced a few years ago (1994). Therefore, the statistics show rather small numbers of graduates from alternative tertiary institutions such as universities of applied sciences. This leads furthermore to the fact that much importance is attached to secondary technical and vocational schools respectively colleges. In comparison with other OECD countries Austria shows a high number of graduates from post-secondary institutions as well as in graduates from long-term university studies.

Table 27: Young people in tertiary non-university VET by gender (1990-2001).

	Years							
	1990		**1995**		**2000**		**2001**	
	Number	**%**	**Number**	**%**	**Number**	**%**	**Number**	**%**
Female	10.275	69,4%	12.011	70,7%	17.107	75,0%	17.821	73,5%
Male	4.527	30,6%	4.974	29,3%	5.703	25,0%	6.412	26,5%
Overall	14.802	100%	16.985	100%	22.810	100%	24.233	100%

Notes: The table includes academies, (post-secondary) TVE colleges and courses at universities (2> years). No age and gender data available.

Source: Federal Ministry of Education, Science and Culture (BMBWK, 2002b; special calculations), Statistics Austria (Statistik Austria, 2002b) (CEE calculations).

Table 28: Students at universities by age and gender (1990-2001).

	Year 1990 / age in years											
	<=17	**18**	**19**	**20**	**21**	**22**	**23**	**24**	**25**	**26-29**	**>=30**	**Overall**
Female	58	3.212	6.156	7.033	7.302	7.582	7.305	6.738	5.701	14.094	11.359	76.540
Male	62	2.308	5.466	7.683	8.700	9.232	8.967	8.462	7.920	21.501	16.518	96.819
Overall	120	5.520	11.622	14.716	16.002	16.814	16.272	15.200	13.621	35.595	27.877	173.359
	Year 1995 / age in years											
	<=17	**18**	**19**	**20**	**21**	**22**	**23**	**24**	**25**	**26-29**	**>=30**	**Overall**
Female	2	3.186	6.459	7.508	7.781	7279	7.400	7.212	6.492	18.212	19.295	90.826
Male	103	1.742	4.471	7.031	8.140	8.199	8.742	8.715	8.541	25.894	21.556	103.134
Overall	105	4.928	10.930	14.539	15.921	15.478	16.142	15.927	15.033	44.106	40.851	193.960
	Year 2000 / age in years											
	<=17	**18**	**19**	**20**	**21**	**22**	**23**	**24**	**25**	**26-29**	**>=30**	**Overall**
Female	60	4.009	8.499	9.649	9.239	9.179	9.105	8.870	8.240	29.272	21.497	117.619
Male	61	1.151	4.037	6.600	7.635	7.883	8.023	8.264	8.297	20.652	39.025	111.628
Overall	121	5.160	12.536	16.249	16.874	17.062	17.128	17.134	16.537	49.924	60.522	229.247
	Year 2001 / age in years											
	<=17	**18**	**19**	**20**	**21**	**22**	**23**	**24**	**25**	**26-29**	**>=30**	**Overall**
Female	41	3.709	8.139	9.763	9.589	8.690	8.256	7.339	6.342	16.101	18.576	96.545
Male	53	999	3.446	6.549	7.611	7.504	7.470	7.099	6.740	19.041	21.168	87.790
Overall	94	4.708	11.695	16.312	17.200	16.194	15.726	14.438	13.082	35.142	39.744	184.335

Notes:

„Students at universities“ includes students at scientific and non-scientific universities and art colleges. Not included are universities of applied sciences resp. tertiary TVE colleges („Fachhochschulen”).

Missing data concerning the age of students might cause differences to the overall sum of students.

Source: Statistics Austria (Statistik Austria, 2002b) (CEE calculations).

Table 29: Students at tertiary TVE colleges resp. universities of applied sciences ("Fachhochschulen") by age and gender (1995-2001).

Year 1995 / age in years												
	<=17	**18**	**19**	**20**	**21**	**22**	**23**	**24**	**25**	**26-29**	**>=30**	**Overall**
Female	0	23	86	42	27	13	16	5	8	16	7	243
Male	0	22	93	188	176	82	78	73	49	130	65	956
Overall	0	45	179	230	203	95	94	78	57	146	72	1.199
Year 2000 / age in years												
	<=17	**18**	**19**	**20**	**21**	**22**	**23**	**24**	**25**	**26-29**	**>=30**	**Overall**
Female	0	164	479	611	522	389	297	205	151	389	394	3.601
Male	0	58	364	812	1.048	988	898	631	491	1.279	1.519	8.088
Overall	0	222	843	1.423	1.570	1.377	1.195	836	642	1.668	1.913	11.689
Year 2001 / age in years												
	<=17	**18**	**19**	**20**	**21**	**22**	**23**	**24**	**25**	**26-29**	**>=30**	**Overall**
Female	0	218	724	830	770	513	328	244	185	490	490	4.792
Male	1	59	366	1.069	1.315	1.240	975	736	519	1.493	1.720	9.493
Overall	1	277	1.090	1.899	2.085	1.753	1.303	980	704	1.983	2.210	14.285

Notes:

The table includes students at "Fachhochschulen". „Fachochschulen" have been established in 1994 in Austria.

Missing data concerning the age of students might cause differences to the overall sum of students.

Source: Statistics Austria (Statistik Austria, 2002b) (CEE calculations).

Table 30: Gender ratio at universities 1990-2001.

	Years							
	1990		1995		2000		2001	
	Number	%	Number	%	Number	%	Number	%
Female	76.540	44,2%	90.826	46,8%	117.619	51,3%	96.545	52,4%
Male	96.819	55,8%	103.134	53,2%	111.628	48,7%	87.790	47,6%
Overall	173.359	100%	193.960	100%	229.247	100%	184.335	100%

Notes:
The table includes students at scientific and non-scientific universities and art colleges. Not included are universities of applied sciences resp. tertiary TVE colleges („Fachhochschulen").

Source: Statistics Austria (Statistik Austria, 2002b) (CEE calculations).

Table 31: Gender ratio at tertiary TVE colleges resp. universities of applied sciences ("Fachhochschluen") 1995-2001.

	Years					
	1995		2000		2001	
	Number	%	Number	%	Number	%
Female	243	20,3%	3.601	30,8%	4.792	33,6%
Male	956	79,7%	8.088	69,2%	9.493	66,4%
Overall	1.199	100%	11.689	100%	14.285	100%

Anmerkungen:
The table includes students at "Fachhochschulen". „Fachochschulen" have been established in 1994 in Austria.

Source: Statistics Austria (Statistik Austria, 2002b) (CEE calculations).

8.1 Access requirements

All mentioned educational paths require the applicant to hold either a school leaving certificate ("Reifeprüfungszeugnis"), a TVE-diploma or evidence of the successful completion of a Higher Education Entrance Exam. Further access requirements are described in the following.

Applicants for post-secondary TVE colleges are required to hold a school leaving certificate and to do an entrance examination. For public secondary TVE colleges no tuition fees are charged. There are, however, private secondary TVE colleges where students are liable to pay costs. Secondary TVE

colleges are usually organised as full-time schools. There are special forms though that are designed for people under employment (3 years).

Academies require not only evidence of a successfully accomplished school leaving examination but also an ability test respectively some kind of proof of the individual skills and of certain prerequisites (e.g. integrity, state of health, etc.).

University courses sometimes require professional experience and the successful completion of university studies. It is also possible that access examinations are held. Generally, tuition fees have to be paid for university courses. The number of available places is very limited. Specific university courses that are meant to be continuing courses for students who have just successfully completed their studies belong to the group of so-called post-gradual programs.

In some cases students are required to take extra examinations respectively additional examinations depending on the pre-education of the applicant (e.g. latin for medical school). Such extra examinations or additional examinations are held in order to provide the students with knowledge they have not achieved during secondary school and have to be taken by the students either before entering university or within the first year. Art universities always demand entrance examinations. Students at universities have to pay a tuition fee of 364€ a semester. This is true for Austrian students as well as for students coming from countries belonging to the EU or EWR. Students coming from other countries are required to pay more. For some studies the maximum amount of students is fixed and can not be exceeded. Applicants are usually ranked according to specific criteria. In some cases a general stop of acceptance is possible.

Universities of applied sciences require school leaving examinations as well as other certificates or examinations, depending on the individual college. Some of the most common ones are entrance examinations, other efficiency statements, pieces of work, or the evidence of specific experience. Every year there is a limited amount of college places and there are certain access processes that regulate who is accepted and who is not.

Besides the formal access requirements there is a written entrance examination that helps to rank the applicants. In addition an oral interview on the student´s motivation and his/her personal background takes place. Students at a university of applied sciences are at all levels on equal terms with university students. Universities of applied sciences also accept students who do not hold a "Reifeprüfungszeugnis" but can prove enormous knowledge in the subject concerned as well as professional experience. In some cases additional examinations are required. The access into universities of applied sciences is therefore also possible for graduates coming from the dual training system.

It has to be mentioned that not every kind of school can be found all over the country. Certain post-secondary TVE colleges, academies, courses, university studies, and universities of applied sciences can only be found in very few or even just one place.

8.2 Curricula

Post-secondary TVE colleges can be seen as special forms of secondary technical and vocational colleges. It is their duty to convey subject related knowledge (usually taught in secondary technical and vocational colleges focusing on the concerned subject matter) to graduates from secondary academic schools, secondary technical and vocational colleges or from similar schools and to empower and qualify the students to carry out the profession concerned. Students graduate from post-secondary TVE colleges by taking a leave examination on those subject-specific matters that have not already been required in their former schools. Post-secondary TVE colleges emphasise practically-orientated teaching. A general analogy with secondary technical and vocational colleges can be observed as far as the taught subjects, the curriculum, and the relation between the semester hours of the individual subjects is concerned. Post-secondary TVE colleges usually take two years and are organised as full-time schools([90]).

There are classes on theory as well as practically-orientated classes on the subjects concerned. The modalities as far as examinations are concerned are analogue to those in regular school forms. Most curricula include compulsory internships.

Academies offer a 3-year higher vocational training in the non-medical, pedagogical, and social service sector. Besides theoretical as well as practically-orientated classes on the subjects concerned the required internships are emphasised. The organisation of classes and teaching is similar to the organisation at universities and is regulated by curricula for the specific forms of education and training. Students have the opportunity to specialize in respectively emphasis on certain aspects.

University courses are based on fixed curricula. Such curricula include information on the aim of the course, the length, its structure, on the criteria that have to be fulfilled in order to be allowed to take the course concerned, and on the criteria concerning assessment and grading. University courses usually require between four and nine semesters. They are constituted and justified by a decree enacted by the respective university council and are regulated by the university itself. A cooperation with other legal parties is possible.

As far as universities are concerned, the structure of studies and of courses relevant for the studies concerned is regulated by the curriculum. There are compulsory subjects, optional subjects, and so-called “Freifächer“ (free subjects). These subjects are offered in various forms, such as lectures, seminars, and excursions. Recently curricula-reformations have been carried out that have led to the re-organisation of many courses that are now designed as courses with obligatory attendance. Generally there are exceptions as far as people under employment are concerned. However, such exceptions are usually not offered. It is most of the time up to the student to decide which exam he/she takes at which point in time.

The assessment is based on written or oral exams that are taken in order to be able to successfully complete specific courses as well as on exams on bigger amounts of learning matters that are also

([90]) There are special forms for people under employment.

carried out either in written or in oral form. There are different numbers of semester hours depending on the subject of study. Some studies only require 100 semester hours, other up to 300 semester hours. Studies are split into different sections that have to be successfully completed. A successful completion requires a successfully taken diploma examination. The curricula are designed and worked out by the commitees of the departments concerned. The commitees have to take into account the general guidelines of the Federal Ministry of Education, Science, and Culture. As a result of this, it is possible that there are different courses offered at different universities within the same branch of studies.

Universities of applied sciences require between six and eight semesters. Universities of applied sciences are designed as full-time schools and organise their lessons into so-called “Jahrgangsklassen” (cf. study years). Besides theoretical classes on the subject matters concerned, practically-orientated classes are emphasized. Furthermore, study-related projects are carried out and internships are obligatory for students. Universities of applied sciences usually have good connections to various companies. Generally speaking, university of applied sciences organize their educational input and training into a so-called “Grundstudium“ (general studies, 4 semesters), a so-called “Aufbaustudium” (continuing studies, 4 semesters), and two further semesters for the obligatory internship (1 semester) and for the writing of a thesis (1 semester).

Universities of applied sciences can be founded by any legal person. The permission is incumbent upon the so-called “Fachhochschulrat”. Before a new university of applied sciences can be founded the subject matter it is designed to focus on has to be proven to be relevant as far as the labour market is concerned. For this reason, studies have to be carried out. Universities of applied sciences require a maximum of 5 years. After these 5 years an evaluation on the training´s quality and success is carried out and it is decided whether the school concerned is allowed to keep its doors open or whether it has to close down. The quality of training and schooling in universities of applied sciences shall be assured and guaranteed by carrying out such an evaluation and by seriously interpreting the results.

8.3 Learning Outcomes

Students studying at post-secondary TVE colleges complete their studies with a diploma examination that is held by a board of examiners. This means that graduates from a post-secondary TVE college not only hold a “Reifeprüfungszeugnis” but also a second certificate (professional qualification) and therefore a double qualification. The achieved qualification is more or less equal with the qualification achieved by successfully completing a secondary technical and vocational school. After three years of professional experience graduates from post-secondary technical and vocational colleges can ask the Federal Ministry of Economic Affairs and Labour for permission to hold the title of an “Ingenieur“. After six years of professional experience they also have the possibility to take an exam that then

allows them to hold the title of a "Diplom-HTL-Ingenieur"([91]). The completion of a post-secondary technical and vocational college can also substitute the so-called "Unternehmerprüfung" (a supplementary examination that allows to start up a company and be an independent entrepreneur). If the required teaching units (160) have been achieved, evidence of professional experience is not required. The successful completion of post-secondary TVE colleges also makes access to reglementated professions and to professional independence easier. In order to successfully complete an academy,

the positive assessment of individual achievements, the successful completion of all diploma-examinations, as well as the writing of a thesis (only asked for by certain academies) are required. Graduates from academies in the field of healthcare are allowed to hold the title of a "Diplomierter...", followed by the term of the profession concerned. The same applies to academies in the field of social services. In order to successfully complete a pedagogical academy a so called "Lehramtsprüfung" has to be taken. The successful completion of this examination allows the applicant to work in the professional field concerned, namely as a teacher. This examination consists of written part-examinations, of the writing of seminar-papers on certain topics as well as on an overall evaluation of all internships, and of an oral exam held by a board of examiners. Graduates from university courses that require a minimum of 30 semester hours, are allowed to hold the title "Akademische/r....", followed by the term describing the profession concerned. The successful completion of university courses that require a minimum of 50 semester hours allows the applicant to hold the title "Master of Advanced Studies...", followed by the term describing the profession concerned. The title of "Master of Business Administration" is conferred on graduates from university courses in the field of economy that are internationally comparable. University courses are primarily understood to be extra qualifications.

Once all the required examinations are taken, one is obliged to write a thesis in order to be able to successfully complete university studies. Such a thesis is meant to give evidence of the student´s ability to work independently and in a scientific manner. Furthermore, a diploma examination has to be taken, held by a board of examiners. Usually art universities require performances respectively works of art in the fields concerned instead of the writing of a diploma thesis. Graduates from universities are allowed to hold the title of a "Magister". A successful completion of technical studies gives the applicants the right to hold the title of a "Diplom Ingenieur". Only students who graduate from medical school are permitted to hold the title of a "doctor" (PhD). As far as all the other subjects are concerned the title of a "doctor" can only be achieved by successfully completing post-graduate studies. To register for post-graduating studies the successful completion of a "Magister-Studium" has to be proven. Post-graduate students are required to write a dissertation if they want to reach a PhD-level, the ultimate academic level in Austria. As a result of the introduction of an amendment in 1999, a three-level-system was introduced for certain subjects of study (e.g. business administration).

([91]) This alternative will most probably expire in 2006.

Following this system, former diploma studies (usually eight semesters) were changed into so called Bakkalaureat-studies (six semesters)([92]). After successfully completing Bakkalaureat-studies the possibility to continue by getting engaged into Magister-studies (two semester) is given. This development serves the purpose of adaption as far as an international context is concerned. Furthermore, it makes a rather short academic education possible. Together with other reforms the introduction of this new system shall lead to a higher rate in success for students who are now also able to complete an academic education without writing a diploma-thesis. The qualifications achieved at Bakkalaureat-studies and at universities for applied sciences are highly appreciated and are regarded as relevant in terms of economical matters. In order to successfully complete a university of applied sciences the writing of a diploma thesis is required. Furthermore, an examination held by a board of examiners has to be taken. The successful completion of a university of applied sciences in the field of technics entitles the students to hold the title of a "Diplom Ingenieur FH" whereas graduates from universities of applied sciences in other fields of studies are allowed to hold the title of a "Magister FH". In order to be allowed to enroll in a PhD-program at university the above mentioned titles have to be held. However, many graduates from universities of applied sciences do not get engaged in PhD studies, as they are greatly demanded for by the job market.

([92]) In order to succesfully complete Bakkalaureat-studies a Bakkalaureat- thesis has to be written. One holds the title of a "Bachelor" followed by the term describing the profession concerned.

9 Appendix

9.1 List of Abbreviations, Glossary

€	Euro
AHS	Secondary Academic Schools (lower and upper level)
AK	The Austrian Chamber of Labor
AMS	Public Employment Service ("Arbeitsmarktservice Österreich")
BAG	Berufsausbildungs-Gesetz (Law dealing with the topics of vocational education and training)
BMBWK	Federal Ministry of Education, Science and Culture
BHS	Secondary Technical and Vocational Colleges
BIP	Gross Domestic Product (GDP)
BMHS	Secondary Technical and Vocational School and Colleges
BMLF	Federal Ministry of Agriculture, Forestry, Environment and Water Management
BMS	Secondary Technical and Vocational Schools
BMWA	Federal Ministry of Economic Affairs and Labor
BPS	Vocational School for Apprentices; Part-time Vocational School
CEDEFOP	European Centre for the Development of Vocational Training
ZBW	Center for Education and Economy
EU	European Union
ESF	European Social Fund
FPÖ	Freedom Party of Austria
HTL	Secondary Technical College
ISCED	International Standard Classification of Eucation (UNESCO).
IV	Federation of Austrian Industry.
IVET	Initial vocational education and training.
JASG	Jugendausbildungs-Sicherungsgesetz (Law to safeguard education and training for adolescents)
JaW	Jugend am Werk. Biggest Austrian NPO dealing with youth topics.
Km²	Square Kilometer (1 kilometer = 0.62137 miles)
Labour-Force-Concept:	In the EU commonly used way to calculate the rate of unemployment based upon results of the Labour-Force-Survey.
LAP	The Apprenticeship Leave Exam
NAP	National Action Plan for Employment
OECD	Organization for Economic Co-operation and Development
ÖGB	The Austrian Trade Union Federation
ÖNACE	Austrian Systematics for the Classification of Economic Activities. Based upon the European NACE (Nomenclature générale des activités économiques dans les communautés européennes).
ÖVP	Austrian People's Party

PES Public Employment Service

PTS Pre-Vocational School

SPÖ Social-Democratic Party of Austria

Statistics Austria: Federal Institution. Responsible for performing scientific services in the area of federal statistics.

TVE Technical and vocational education

UNESCO United Nations Education, Scientific and Cultural Organization

VET Vocational Education and Training

WK The Austrian Federal Economic Chamber

ZBW Center for Education and Economy

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BPD Austria (2000). Österreichisches Jahrbuch 2000. Wien: Bundespressedienst.

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CEDEFOP: www.cedefop.eu.int

Center for the Development of Schools: www.zse.at

Center for Education and Economy: www.zbw.at

Austrian Chamber of Labor: www.arbeiterkammer.at

Austrian Federal Economic Chamber: www.wko.at

Austrian Institute of Economic Research: www.wifo.at

Austrian Institute for Research on Vocational Training: www.oeibf.at

Center for Education & Economy (ZBW - Zentrum für Bildung und Wirtschaft): www.zbw.at

Federal Ministry of Economic Affairs and Labor: www.bmwa.gv.at

Federal Ministry of Education, Science and Culture: www.bmbwk.gv.at

Federal Ministry of Finance: www.bmf.gv.at

Federal Ministry of Social Security and Generations: www.bmsg.gv.at

Federation of Austrian Industry: www.iv-net.at

Eurostat: europa.eu.int/comm/eurostat

Eurydice: www.eurydice.org

Informations for Apprentices Online: www.lehrling.at

Informationsystem on vocational education and training (IBW): www.berufsinfo.at

Institute for Advanced Studies: www.ihs.ac.at

Institute for Advanced Studies, EQUI – Employment, Qualification, Innovation: www.equi.at

Institute for Research on Qualification and Training of the Austrian Economy : www.ibw.at

Public Employment Service: www.ams.or.at

Public Employment Service, Informations on trades and occupations: www.beruf4u.at

Quality in Schools: www.qis.at

Section VET, BMBWK: www.berufsbildendeschulen.at

Statistics Austria: www.statistik.at

Technical and Vocational schools and colleges in Austria: www.berufsbildendeschulen.at

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3s Consultancy: www.3s.co.at