Chapter 1
Vocational Education in the Netherlands

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1.1 Vocational Education in the Netherlands

Vocational education in the Netherlands largely developed from private initiatives in the nineteenth century. In the twentieth century, it gradually became part of the public education system. With the growth and inclusion of vocational education as part of public education, tensions developed between "education" and "work" that persist until this time. Vocational education programmes, on the one hand, are required to focus on specific learning outcomes associated with particular occupations, including securing qualifications that certify competence to practice. Being part of a public education system, however, these programmes, on the other hand, generate different expectations. Currently, Dutch vocational education programmes are expected to have broader goals than qualifying for jobs. They are expected to deliver a so called triple qualification: for work and career, for citizenship and social participation, and for further learning and personal growth. Moreover, it can be difficult to adequately prepare vocational students for work, as opportunities for engaging them in occupational practice to get experience, experiment, and practise are not always available. Of course, there are still training programmes within the labour system (e.g., in-company courses) and there are still courses with experiences in both the workplace and educational settings, like dual programmes. Yet, vocational

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E. de Bruijn et al. (eds.), *Enhancing Teaching and Learning in the Dutch Vocational Education System*, Professional and Practice-based Learning 18,
DOI 10.1007/978-3-319-50734-7_1

education in the Netherlands is a substantial subsystem of the public education system and, therefore, qualifying for work has become a key target. Frictions between the education and labour system have, therefore, become perennial issues and elements of this subsystem of vocational education, which over time are revealed by various ways and for various purposes.

In this chapter, the aim is to introduce the current Dutch vocational education system and discuss how it works. Described within it are important factual features of Dutch vocational education (i.e., positioning in the education system as a whole, characteristics and patterns of participation) and also some fundamental issues that determine the specificity of this system. These issues relate to the nature of vocational education and its being enacted as part of the public education system. Yet, the mere characterization of vocational education as part of a public education system and an indication of tensions between the systems of education and labour are too general statements to capture the complexities and peculiarities of vocational education in the Netherlands. Instead, these general trends and elements need to be described and elaborated in terms of the peculiarities of the Dutch context. From earlier research and evaluations of Dutch vocational education (e.g., De Bruijn, 2004; Nieuwenhuis, Coenen, Fouarge, Harms, & Oosterling, 2012; Nijhof & Van Esch, 2004; Van der Sanden, De Bruijn, & Mulder, 2002; Westerhuis, Christoffels, Van Esch, & Vermeulen, 2015), five categories of issues were identified that capture the characteristics and enactment of Dutch vocational education. These five issues are (a) co-makership, (b) freedom of education, (c) education versus employment imperatives, (d) present or future focus, and (e) lifelong learning. These issues are elaborated here to understand some main underlying premises of the current system.

The first issue is that of co-makership. Schools and companies need each other to enact effective provisions of vocational education, but also to decide upon what should constitute the educational aims of these programmes. In the Netherlands, the relevant actors are interconnected through a so-called public-private frame. Co-makership between education and labour operates within this public frame in ways that make the provision of Dutch vocational education quite country specific.

The principle of freedom of education constitutes the second issue. This principle derives from the Dutch constitution that regulates the extent and degree by which the government can prescribe the purposes and design of education. Publicly funded educational institutes, therefore, have some discretion in organising and enacting their plans for learning, that is, intended curriculum or syllabus and its enactment. This division of responsibilities is reflected in the particular structures and processes of Dutch vocational education.

The third issue underlying Dutch vocational education is the fundamental tension between broad accessibility to educational provisions and qualifying for occupational practice. As part of the public education system, Dutch vocational education has to be inclusive for all young people aged 16 years and older who apply, and must prepare them to enter the labour market as well as make them "ready" for citizenship and further education. Dutch vocational education is shaped by balancing these dual purposes for all students in its programmes. The fourth fundamental issue

is tension between educating for the present and for the future. Vocational education is required to prepare its students for occupational practice in the short term (e.g., getting a job), but at the same time needs to prepare for future challenges by taking into account future economic and societal developments (e.g., by developing capacities to remain employable). This issue is particularly reflected in the design of vocational education provisions and in the relation between what is referred to as generic, or broadly applicable, and as occupational specific knowledge and skills in vocational educational programmes.

The fifth and final issue is the contribution of vocational education to lifelong learning (i.e., learning across the lifespan). Public vocational education, although established to provide initial education, is increasingly being expected to contribute to workers' further professionalization. This double goal is a fundamental issue for Dutch public vocational education, in particular in terms of challenge of its relevance and worth for the future.

All five of these issues are manifested as being multi-levelled and present at macro (system) level, at meso level (i.e., the region and institutes) and at micro (programme) level of the purposes, forms and practices of the Dutch vocational education system. So, although individually some of these issues are far from unique to the Dutch vocational education system, the particular complex of factors together makes its character and enactment quite nationally distinct. Hence, to understand and appraise this vocational education system, such a set of factors needs to be elaborated. In this first chapter, the aim is to define and describe these issues to elaborate a nuanced understanding of Dutch vocational education. The later chapters in the book elaborate and offer more detail about specific aspects of this provision so a more comprehensive account develops. However, before elaborating these five issues in Sect. 1.4, the vocational education system is overviewed in Sect. 1.2 and how this is manifested in terms of current enrolment and patterns of participation is provided in Sect. 1.3.

1.2 Vocational Education as Part of the Education System: Origins, Design and Provision

Qualifying for occupational practice is organised and regulated differently across countries. At a system level, one explanation that accounts for these differences is the positioning of vocational education in the national education system, as well as its relation to the labour market and particular occupational practices (Marsden, 1990; Müller & Shavit, 1998). Some countries are characterized by having a labour market system in which qualifying (i.e., securing that you are competent) for occupational practice is part of the first phase of a working career itself, so after entering the labour market and getting a labour contract. These countries have an underdeveloped public system of vocational education and an internal labour market exists, as qualifying for work focuses on the companies in which people work. The United States and United Kingdom are examples of such liberal market economies with an

internally focused labour market, except in some technical sectors where there exists (or existed) apprenticeships. Initial (public) education in these systems focuses on the acquisition of general skills and knowledge. The skills workers develop in and through their work are often company specific and, therefore, are seen as less relevant for the external labour market. At the same time, there are few regulated occupations whose practice is dependent upon securing particular qualifications. So, in such de-regulated circumstances, certified entry-level qualifications are not a requisite for securing access to specific kinds of employment. Hence, if employment is available, it is relatively easy for young people to get access to work, except that demonstrable experience is often required in place of qualifications.

Conversely, other countries have a regulated occupation-based labour market in general and a well-developed system of vocational education at intermediate level (Van Lieshout, 2008). Occupational qualifications are used by employers to define jobs and to select candidates for these jobs. Germany and the Scandinavian countries are examples of coordinated market economies with an occupation-based labour market with strong institutional links between representatives of the labour market and educational processes.

Dutch educational and training provision in that respect could be characterized as a hybrid system of vocational education that is steered and shaped by arrangements in which governments and social partners cooperate to provide labour market-relevant initial vocational education for mainly young people, whilst also preparing them for participation in society and also further study. Hence, the Netherlands has a country-specific profile because of its public provision of an intermediate level of vocational education that also offers subsequent routes in higher (professional) education.

The distinct vocational education profile within the Dutch education system has its recent origins in the Law on Secondary Education ("Mammoetwet") which was established in the 1960s. Full-time vocational education, as it existed at that time, was organised for the first time through provision of an overarching law which regulated the interconnections between various educational programmes in a coherent design of secondary education.

Figure 1.1 depicts the system design of secondary and tertiary education in which children enter at age 12 after completing primary education (i.e., age 4–12). The outline of the system in Fig. 1.1 shows the differentiation in level and nature of these programmes. Students can choose a pathway that is predominantly vocational (i.e., occupationally specific) in emphasis (i.e., the left side of Fig. 1.1), predominantly general educational in emphasis (i.e., the right side of Fig. 1.1) or mixed (i.e., following the arrows in Fig. 1.1 that cross over). Pathways include programmes at two or three levels: lower secondary education (i.e., referred to as pre-vocational or junior general programmes in Fig. 1.1); upper secondary education (i.e., referred to as senior secondary vocational or general education in Fig. 1.1); and higher education (i.e., either named professional or academic as depicted in Fig. 1.1).

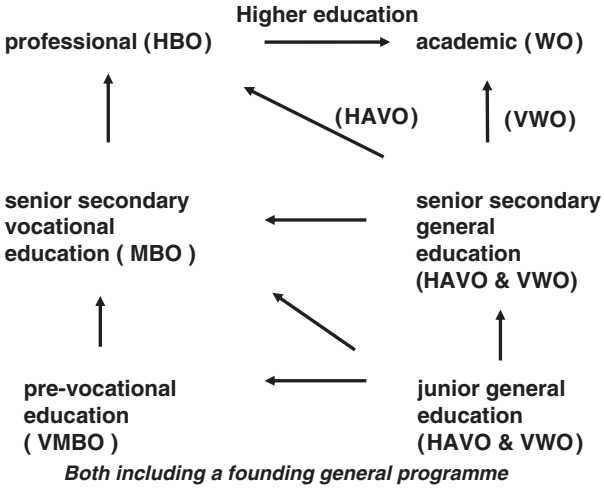

Fig. 1.1 Design of Dutch education at secondary and tertiary level using current acronyms (De Bruijn, 2006)

From the 1960s onwards, the design of the Dutch education system beyond primary education has three main characteristics (cf., De Bruijn, 2006; Van Kemenade, 1981):

1. *Early tracking*: At the age of 12, children and their parents select a type of secondary education, either a pre-vocational, general or pre-university programme, in which to participate. Each programme at lower level has follow-up programmes in upper secondary education. In this way, choices at age 12 foreshadow future educational careers. Hence, the system is characterized by early tracking of careers.
2. *Combination of general and vocational education*: Each pathway through the education system starts with a general educational programme in lower secondary education, even in the occupationally oriented pathway at the left side of Fig. 1.1. Each starts with a basic general programme (the first 2 years of VMBO are general too) and results in a qualification for the labour market either after completing secondary education (MBO) or after completing education at tertiary level. From the perspective of the designers of the system, the latter indicates that academic education is perceived to (also) lead to employment. In addition, leaving the system with a qualification of general education at secondary level is not an intended educational outcome.
3. *Transfer opportunities*: Transfer from one pathway to another or within pathways is possible at various stages as part of the system design. These opportunities for transfer create a system where no dead ends are held to exist. That is, all pathways are held to provide opportunities to enter higher education. Ideally, these transfer opportunities can compensate for early choices at age 12, and any deleterious effect of inappropriate early tracking.

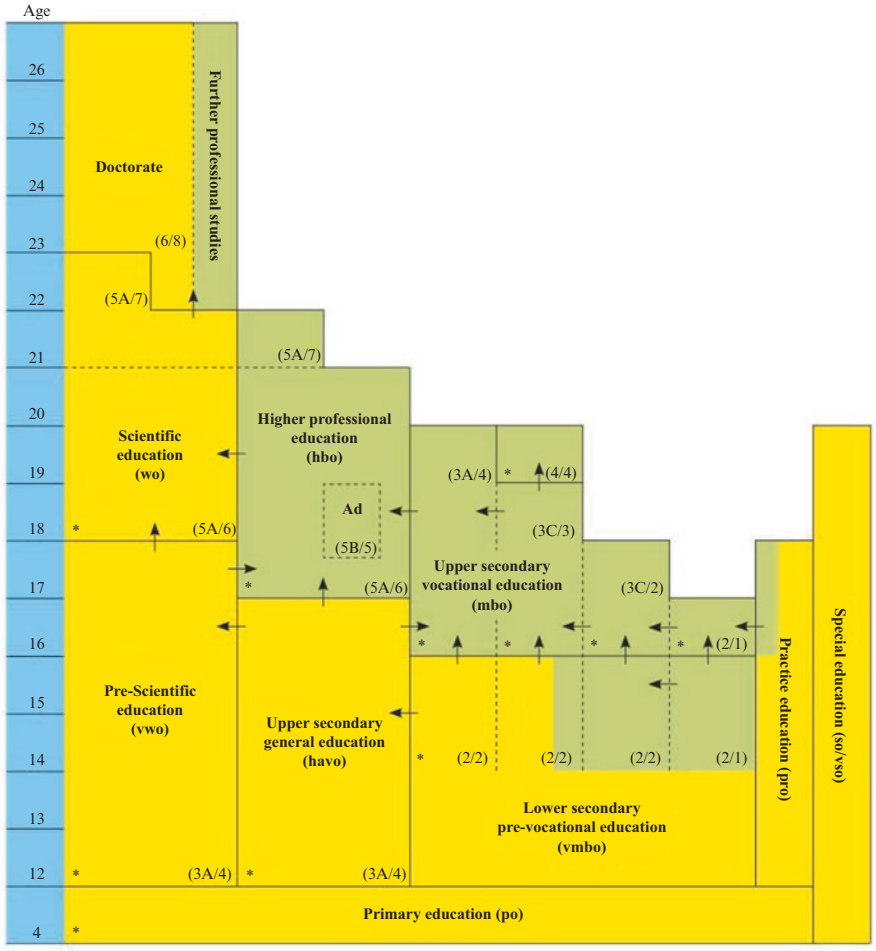

Fig. 1.2 Dutch education system (Source: Van der Meer and Smulders (2014), *OECD-review: Skills beyond school – National background report for the Netherlands*, Hertogenbosch: Ecbo)

From the presentation of these three characteristics of the Dutch schooling system design, it is evident that the system is highly stratified with a relatively strong vocational orientation. Figure 1.2 depicts the designated pathways in more detail and as the system currently exists. It is still possible to recognize the impact of the "grand design" of the 1960s in the contemporary structures.

In terms of transition routes, the education system is organised in three layers with primary education at the bottom. The layer above it comprises two sub-levels: lower and upper secondary education. The differentiated programmes are:

- VMBO (lower general and pre-vocational 4-year programmes) that predominantly prepare for upper secondary vocational education (MBO, ISCED Level 3 and 4). MBO comprises 1–4-year programmes at four qualification levels with Level 1 being entrance courses and Level 4 qualifying both for work and higher professional education (HBO, associate degree and professional bachelor, ISCED Level 5);
- general secondary education (HAVO), a coherent 5-year programme that prepares students for higher professional education (HBO/professional bachelor, ISCED level 5); and
- pre-university education (VWO), a coherent 6-year programme preparing for academic education (WO/academic bachelor, ISCED Level 6).

Although pathways in secondary education differ in length and number of transitions, in its design each pathway offers opportunities to enter higher education. Further on in the chapter, we will see that actual patterns of participation differ from this design and, moreover, that over time policies have either facilitated or hindered these pathways becoming a reality.

The third layer of the Dutch education system is higher education, which in the Netherlands has a binary structure. Universities of applied sciences offer higher professional education (HBO) including 2-year associate degree courses, 4-year professional bachelor courses and a limited number of (part-time) professional masters. Entrance to professional masters (HBO) is for workers in the occupational field who hold a bachelor degree. Academic universities offer academic bachelor courses, academic masters and PhD programmes. Graduates from VWO and those who successfully completed the first year of professional bachelor studies are permitted to enter academic bachelors. Those who hold an academic bachelor degree and those who successfully completed a pre-master programme are permitted to enter academic master programmes. PhD programmes are open for holders of a master degree (either academic or professional).

Changing pathways is possible at particular points along the way. At the end of lower secondary education, students from the general stream of VMBO are allowed to enter upper secondary general education (Year 4 HAVO). This articulation also works the other way around. That is, those who successfully completed lower general education within HAVO or VWO (3 school years) are allowed to enter MBO courses at Level 2, 3 or 4. At the end of upper secondary education, both graduates from MBO qualification Level 4 courses and HAVO/VWO graduates are allowed to enter higher professional education (HBO, associate degree or bachelor courses). During tertiary education, changing pathways is possible for students from professional bachelor programmes who do not have a diploma of pre-university education (VWO). They gain entrance to academic bachelors after successfully completing the foundation year (first-year exam). Graduates from professional bachelors have to complete a pre-master programme (of approximately one year) to enter an academic master.

In this book, we concentrate on Dutch vocational and professional education within the public system at ISCED Levels 3–5; that is, MBO and HBO. From here

we use the term "vocational education" to emphasize that the various educational programmes primarily aim to prepare and qualify directly for work. This delineation of vocational education implies that prevocational education will not be discussed further as its function is preparatory for subsequent educational programmes. Academic education is also excluded from the discussion here, although professional studies are also part of this level of education. As for higher education, we only include associate degree courses and professional bachelors that have direct applicability to employment and specific forms of employment and hence fall under the ambit of vocational education.

The current public provision of vocational education at intermediate level and professional studies in higher education has evolved over the last 50 years. A 100 years ago, the public education system in the Netherlands did not offer any vocational programmes. At that time, qualifying for work was not perceived to be a state responsibility. Subsequently, most vocational programmes originated from the labour and welfare system, and became part of the education system many years afterwards. In 1919, the first legislation of vocational programmes qualifying for craft-related and industry work were established at two qualification levels (low and intermediate). Then, after the Second World War, in the 1950s – known as the "rebuilding years" – high-quality educational programmes that qualified students for work was seen as a societal necessity. Public financing of vocational education programmes became more common. Furthermore, differentiation in levels (i.e., low, intermediate and higher) of vocational education programmes developed. As noted, with the implementation of the law on secondary education in the 1960s (the second system law; the first being the one on primary education), the majority of vocational education programmes were regulated for the first time as part of the national public education system. The predecessors of the prevocational VMBO programmes, (full-time) MBO and HBO, became programmes within secondary education, which were formerly programmes at respectively low, intermediate and high qualification levels. The apprenticeship system was not included in this law. However, it also came under the influence of the public sector through a separate law that stated that the supervisory tasks for apprentices and the school part of the programmes were to be facilitated by public funding.

In later years, both MBO and HBO were arranged in separate laws. In the 1980s, HBO was regulated separately from secondary education; schools offering these professional studies were named "Hogescholen". At this time, the many occupation-specific schools merged into big, multi-sectoral tertiary education institutes. In the beginning of the 1990s, a new law on higher education and scientific research (the third system law) regulated both HBO and academic universities (WO). Thus, the binary structure of Dutch higher education was created by this law at this time. The binary structure accommodates aspects of both education and research in these institutions. From 2000 onwards, HBO institutions received some public funding for research and established small research departments. From that moment onwards, many Hogescholen changed their name to universities of applied sciences.

The integrated system of vocational education in the Netherlands is relatively recent. As of 1996, various vocational educational paths and school types (apprenticeship system and school-based vocational education; initial and adult vocational education) were all integrated into a single vocational education and training (VET) system. This system law (abbreviation: WEB) created, for the first time in the Netherlands, an integrated system of senior secondary vocational education (MBO), bringing the formerly separate systems of school-based VET and work-based apprenticeship into a single system (Onstenk, 2004; Nijhof & Van Esch, 2004). Different types of schools, branches, curriculum designs as well as combinations of school-based and work-based educational provisions were integrated under a single national qualification structure. Dutch full-time vocational education had, compared to other countries, already a relatively large practical component. The WEB made workplace learning an essential part of every senior secondary vocational education and training programme. There are two educational pathways: a school-based pathway (BOL) and a work-based (i.e., apprenticeship) pathway (BBL). Both pathways combine learning in school and in workplaces, but in different proportions. The school-based pathway includes workplace experiences for 20–60% of the total curricular time. Since 2005 the average percentage of time students engage in work over all courses in all sectors has risen to more than 50%. However, lately this percentage has diminished somewhat as a result of a new emphasis on (theoretical) knowledge. The work-based pathway includes apprenticeship in a company for at least 60% of the time, as well as a 1- or 2-day school release. In both strands, regional VET Colleges deliver the school-based component, but bear responsibility for the whole learning process as well as for awarding the qualification. In senior secondary vocational education (MBO) training programmes and qualifications are offered in four different fields: (a) technology, (b) commerce/administration, (c) services/health care, and (d) agriculture. Training courses are provided within the framework of the national qualification structure for vocational education at four different levels, ranging from entry and basic vocational training (1 to 2 years) to craftsman and middle management training (3 to 4 years). Level IV qualifications give entry to higher professional education.

Fig. 1.3 Short description of Dutch MBO

It took some more time before MBO was regulated in a separate law (see Fig. 1.3 for a concise description of MBO and its development). In the 1990s, the fourth system law came into force, regulating vocational education at intermediate level (i.e., full time, part time or apprenticeship/dual), adult education (i.e., second chance general education, and (language) education for new migrants). Thus, in 1996, by law, all existing vocational education at intermediate level, including the apprenticeship system, was transferred into one unified system. Or, to be more exact, from 1996 onwards, the process of shaping such a unified and integrated system commenced. As part of this development of a unified system of intermediate vocational education, regional vocational colleges were established. Over the next few years, the highly differentiated small and specific schools were transformed into an institutional field of multi-sectoral regional colleges (ROCs).

In sum, this section has attempted to outline and overview the design and structure of the Dutch education system by three key principles, namely early tracking, transfer opportunities with no dead ends, and pathways starting with general education and ending with qualifying provisions aligned to the labour market. As a result, the structure and ordering of the Dutch education system can be characterized as being highly stratified and with a strong vocational (i.e., occupational) orientation. Described here also is how the Dutch vocational education system developed from private initiatives and has currently become positioned within the public education system at the upper secondary and tertiary levels. The Netherlands have a partly occupation-based labour market and vocational education operates within a private-public frame in which social partners, schools, and government cooperate. In these ways, the Dutch vocational education system is acknowledged as being relatively unique because of its extensive provision at intermediate level and access to higher (i.e., professional) education. In the next section, we elaborate the participation patterns to see how the design of the system works out in practice.

1.3 The System in Practice: Participation in Vocational Education

Participation in Dutch vocational education as delineated in this chapter (and book) is mostly by young people of 16 years and older, but also by a small number of young working adults. Most young people participate to obtain a starting qualification (i.e., a diploma of a programme that is by law defined to be the minimum qualification for young people to leave the education system, being a diploma of HAVO/VWO or MBO Level 2). In the Netherlands, there is a distinction between compulsory education and schooling to obtain a starting qualification. For minors between 5 and 16 years of age, full-time education is compulsory, and every minor is obliged to participate in full-time education for 12 full-time school years. For young people aged between 16 and 18 years education is compulsory until they obtain a starting qualification. Young adults between 18 and 23 years old without a starting qualification are assisted in securing one. Schooling is compulsory for young adults aged up to 27 years who do not have a starting qualification and who apply for social welfare, until they acquire a starting qualification.

For many participants in MBO and HBO, schooling is not compulsory and a portion of them already obtained an initial qualification as defined above (i.e., MBO diploma at Level 2 or a HAVO/VWO diploma). A portion of these students enrol because they want to move to a next step/level in their educational career prior to commencing work (i.e., initial education), and a portion of them participate as workers who want to qualify further for professional life (i.e., post-initial education). However, as workplace learning experiences are becoming a growing part of vocational education in the twenty-first century, this distinction between initial and

Table 1.1 Participation figures in senior secondary and higher education (CBS, Statline; MBO online)

Participation in 2014/15	(Pre-)vocational	General academic
Senior secondary (age 16 and older)	492,000 (MBO)	235,000 (year 4–6 HAVO/VWO)
Tertiary (higher education)	447,000 (HBO)	254,000 (WO)

post-initial vocational education is now blurring and the distinctions between these participation patterns become less clear.

Participation numbers in both MBO and HBO increased rapidly during the 1970s and 1980s. This increase was a combined effect of introducing part-time compulsory education for young people aged 16 and 17 years of age (in 1975), enlarging the provision of MBO with full-time programmes at qualification Level 2, and a global trend to lengthen educational careers (De Bruijn, 1997). However, currently, the intake in MBO is decreasing, although not in the full-time programmes leading to qualifications at Level 4, as these are very attractive because of their dual qualification outcome, that is, for occupational practice and further study in higher education (see Table 1.1). The levels of intakes for HBO are currently increasing more gradually and often stabilizing. Demographic patterns in the current decade and particularly the ageing population are key contributors to the stabilization of the number of participants.

MBO is the second largest sector in Dutch education (primary education is the largest) and HBO the third. To indicate these levels of participants, Table 1.1 presents the participation figures for 2014/2015 of the various programmes at senior secondary and tertiary level.

As noted above, the Dutch education system is relatively strongly occupationally oriented although the lower secondary level pathways commence with general education. This quality of the Dutch education system is reflected in the actual patterns of participation. Between 70 and 75% of the age 15 cohort is enrolled in lower general education (Statline/CBS, 2015).[1] Yet, by age 17, about 60% of the cohort is enrolled in vocational education programmes and by age 18 the level of enrolment is 70%. Most participants in these vocational education programmes are younger than 23 years old, and are particularly participating in full-time programmes.

To indicate the size and importance of vocational education from the perspective of the labour market, the education levels of the workforce are illustrative. In 2015 around 55% of the working force was qualified at MBO Level 2 to 4 or HBO (De Graaf-Zijl et al., 2015). Furthermore, from an international perspective, classifying MBO 4 qualified as intermediate qualified professional actually downplays the extent of the vocational education programme as in other countries workers with these qualifications are classified as higher educated professionals (OECD, 2013 in De Graaf-Zijl et al., 2015).

[1] VMBO includes prevocational programmes and general ones; the general programmes have considerably higher numbers of enrolment (nearly 70%) than the pre-vocational ones (over 30%).

Information about patterns of participation, in particular at the transition movements, is important for understanding and gauging how the design of Dutch education actually fulfils its goals as set out in the earlier sections. Three transition moments are relevant in these considerations as these moments are crucial in the educational careers of young people (as depicted in Figs. 1.1 and 1.2):

1. Transition from lower secondary education (VMBO or the first phase of 3 years HAVO/VWO) to upper secondary education (MBO or second phase of two to 3 years HAVO/VWO);
2. Transition within MBO after completing programmes at qualification Level 2 and 3, and transition from MBO programmes of qualification Level 4 to HBO; and
3. Transition after completing HAVO or VWO, either to higher education or MBO Level 4.

To understand the student flows at the first transition moment (from lower secondary to upper secondary education), it is important to consider that general programmes are those with the largest number of students. VMBO comprises both prevocational and general programmes. Since the 1960s, levels of participation in the former (and its predecessors) have diminished (De Bruijn, 1997; Meijers, 1983; Westerhuis & De Bruijn, 2015), whereas participation of young people of 16 years and older in (vocational) education increases; at age 12, children and their parents tend to prefer a more broad and general educational programme that keeps open all further educational possibilities until the age of 16. Furthermore, advisory boards of government, various political parties and prominent intellectuals and leading media stress that the growing dynamics and complexity of society demand an educational programme in lower secondary education that provides the foundations for further education; the advice is also that postponing school choice will support children from disadvantaged groups. It is predicted that by 2030, enrolment in these prevocational programmes will be very low, about 10–15% (Westerhuis & De Bruijn, 2015). Westerhuis and De Bruijn assume that by 2030 the patterns of participation in lower secondary education (for young people aged between 12 and 16 years) in the Netherlands will be quite comparable to other OECD countries. However, until then, the international average percentages are lower than the Netherlands for enrolment in occupationally oriented programmes or subjects in lower secondary education which stand at around 4% across all OECD countries (OECD, 2014a).

After completing VMBO, nearly all students enter upper secondary education, with most entering MBO. The vast majority of graduates from the general VMBO programmes also enter MBO. A percentage of graduates from the general VMBO programmes (i.e., those with high school marks) enter upper secondary general education (HAVO) which after some fluctuations comprises a relatively stable 20%. The success rate of these VMBO graduates in HAVO is slightly lower than their counterparts who commenced at age 12. The main reason for this outcome is that many HAVO schools do not allow VMBO graduates to repeat HAVO Year 4 again if they fail the first time, whereas HAVO students enrolled in HAVO already in the lower phase are allowed to repeat. As for students from the lower phase of HAVO/

VWO, most continue with the upper phase of HAVO/VWO. However, a small percentage of these students enter MBO. In fact, entering MBO is mostly the consequence of not being able to complete HAVO one way or another. Over time, the percentage of HAVO/VWO drop outs (particularly after HAVO Year 3 or 4) entering MBO is roughly 40%. Around 25% of the HAVO students who failed their exams enter MBO and 50% enter general education for adults to obtain their HAVO diploma via this alternative route (Statline/CBS, 2015). For VWO students who fail their exams, continuing with MBO is mostly not an attractive option and most enter general education for adults or try again next year.

The second cluster of transition moments that is relevant to understanding the Dutch education system in practice are those within MBO between the various program levels and the transitions from MBO to higher education (HBO). As explained in Sect. 1.2, MBO comprises educational programmes at four qualification levels. Programmes at Level 1 are entrance courses and do not prepare for qualified work. Programmes at Levels 2, 3 and 4 qualify for jobs at corresponding levels and, as discussed, can be obtained via two different educational pathways, that is, either through full-time education with a substantial component of workplace learning in terms of placements or apprenticeship/dual programmes in which students are employees. Since the 2010s, combinations of the two educational pathways (e.g., first part full time and final part apprenticeship) have been made possible and are more frequently enacted. Participation in full-time programmes outnumbers those in apprenticeship programmes although enrolment figures are also influenced by economic circumstances and times. In 2010, approximately two thirds of MBO students were enrolled in full-time programmes (foremost at Level 4) and one third in apprenticeship programmes (foremost at Level 2). The prediction is that by 2020 the proportions will be around 20% apprenticeship and 80% in full-time programmes (Neuvel & Westerhuis, 2013). It should be noted here, however, that full-time programmes also have a large component of work-based experiences (on average 40–50% of the time). Participation is not symmetrically divided across qualification levels. In 2013, 75% of the students are enrolled in programmes at qualification Level 3 and 4 and over 20% in programmes at Level 2. Participation rates in full-time programmes at Level 4 are highest, about 40% currently, and the numbers are still increasing, whereas participation in programmes, in particular apprenticeship programmes at Levels 2–3 decline, also because of demographic changes (KBA, 2014; Van der Meer & Smulders, 2014).

MBO graduates at any level are allowed to enter programmes at the next qualification level, which, in principle, makes pathways possible from MBO Levels 2 to 4 that, subsequently, give access to higher education (i.e., professional bachelor programmes in HBO). In 2010, about 50% of the students who started in MBO with a programme at Level 2 proceeded with a programme at Level 3 or 4. Of the group that proceed, 60% succeed (Van Wijk & Schouten, 2013). In general, success rates are highest of MBO 2 to 3 tracks (mostly apprenticeship) and MBO 3 to 4 tracks (mostly full-time programmes). Noteworthy here is the apparent watershed existing between Levels 2 and 3, also related to the nature of the pathways.

Cohort studies are helpful to identify how planned educational pathways work out in reality. From two cohorts of students (2005 and 2006) who left VMBO and entered MBO the actual tracks are known (Neuvel, in Westerhuis & de Bruijn, 2015). These show that:

- Graduates from general VMBO programmes more often start with MBO programmes at Level 4 than graduates from prevocational VMBO programmes (even if their admission qualification is formally equal): at 60% versus 40%. Subsequently, graduates from prevocational programmes start more often at Levels 2 or 3 which causes more transition moments during their educational career, if they want to proceed after having completed these programmes.
- Graduates from prevocational VMBO programmes enter HBO less often than graduates from general VMBO programmes: at approximately 20% versus more than 40%.

Thus, although there are no dead ends in the design of the Dutch education system, the pathways through the system are sometimes hard to realize, particularly when the commencement point is in the prevocational track in VMBO and/or at MBO Level 2. The key barriers appear situated within MBO. Participants in a MBO 4 programme have multiple potential outcomes because graduates have a relatively good prospect for employment and their qualification also opens up possibilities for further education. As for the transition from MBO Level 4 to HBO, approximately 50% of the graduates of full-time programmes succeed and between 10 and 15% of graduates from apprenticeship programmes. It is to be noted that the latter programmes are specialist training and the enrolment numbers are low; about 70% of the participants are workers who are at least 23 years old and have not been enrolled in formal education for at least 4 years.

The numbers of MBO graduates from full-time programmes at qualification Level 4 entering HBO have been decreasing over the past decade, yet still constitute a substantial number. In terms of HBO starters (either associate degree or professional bachelor) the percentage with a MBO 4 qualification is relatively stable: in 2005 it was 28% and in 2014 30%. The MBO Level 4 graduates who do not proceed with their educational career directly have a relatively good prospect of securing employment in the labour market, and ample opportunities to catch up schooling later or take up other courses at post-MBO level. A MBO diploma of full-time programmes at qualification Level 4 is a double qualification as it certifies for participation in the labour market and also higher and further education and training. The success rate of MBO 4 graduates in HBO, however, is lower than of HAVO graduates. In particular, this appears to be caused by the number of MBO graduates dropping out in the first or second year of the professional bachelor for various reasons. These include duration of the bachelor study after having competed MBO, difficulties with the academic elements of the bachelor study, attractiveness of the labour market, or a combination of pull and push factors. MBO graduates seem particularly interested in the (shorter) associate degree programmes; a number of graduates from associate degree programmes proceed within the bachelor and complete the full bachelor programme after all.

The third cluster of relevant transitions relates to the further educational career of HAVO/VWO graduates. From the 1980s till the beginning of the 1990s, the number of HAVO graduates who entered (full-time) MBO programmes at qualification Level 4 rose to 30% (De Bruijn, 1995; De Bruijn & Voncken, 1998). Some 50% entered HBO at that time. From the mid-1990s onwards, the percentage of HAVO graduates who entered MBO reduced, ending up at 5% in 2004 and 3% in 2011. The number of HAVO graduates entering HBO in this period rose to 79% in 2004 and 78% in 2011. These developments are presumably the combined effect of (a) the implementation of the new Law of Vocational and Adult education (WEB) in the 1990s in which the constituting parts of MBO (i.e., apprenticeship training, schools for Level 2 full-time programmes and schools for Level 4 full-time programmes) were integrated, and (b) a change in the curricula in upper secondary general education aiming for a better preparation for higher education (Moerkamp & De Bruijn, 1999). These changes enabled HAVO graduates to more frequently proceed with HBO. According to the design of the education system and policies of the 1990s, HAVO graduates should follow up their educational career with HBO and not with MBO. Patterns of participation should become more efficient, following the designed pathways and not "piling up" diplomas as HAVO graduates were doing before, taking the "more easy way" through the system by first doing MBO to be sure to be successful in HBO or at the labour market. The same process is visible with VWO graduates, although less dramatic. In the beginning of the 1990s, nearly 30% of the VWO graduates entered HBO (professional bachelor). This percentage dropped from 1995 to 15% in 2004 and 12% in 2011. About 85% of VWO graduates now enter academic university (i.e., WO).

In this section, the patterns of participation in Dutch education were presented. It showed how vocational education has a crucial position in providing opportunities for promising educational careers and prospective labour market positions. The system is designed to avoid educational dead ends. However, it is less effective in its realization. Early tracking foreshadows pathways and makes some careers, if not dead ends, difficult. It enhances the risk of participants leaving the education system before some qualification is acquired. There is a clear shifting pattern of participation as students and their parents prefer general education in lower secondary education as a strategic decision to secure a pathway to higher educational levels. In senior secondary and tertiary education there is no such shift; enrolment in vocational programmes outnumbers by far enrolment in (pre-) academic education. It should be noted these vocational programmes are mostly full-time programmes with a large component of workplace learning and preparing for occupations at intermediate and higher qualification level. It might be concluded that the Dutch education system can be characterized both in its design and its realization as being highly stratified and with a strong vocational (i.e., occupational) orientation, the latter in particular at senior secondary and tertiary level.

Following from this outlining of the Dutch vocational education with respect to its design, roots, provision and participation, the next section identifies key issues.

1.4 Fundamental Issues of Dutch Vocational Education

This section presents vocational education in the Netherlands as it is influenced by the underlying principles and tensions that were sources of its current structuring and forms. Consequently, current practice, recent developments and debates are discussed, organised around five fundamental issues of Dutch vocational education as defined in the introduction of this chapter: (a) co-makership, (b) freedom of education, (c) accessibility versus qualifying for occupational practice, (d) educating for the present and for the future, and (e) vocational education and its contribution to lifelong learning. The aim is to provide a nuanced understanding of Dutch vocational education that is elaborated in greater detail across the contributions to this book.

1.4.1 Co-makership

The provision of vocational education in the Netherlands is a product of cooperation amongst various stakeholders within a public frame (i.e., regulations by government and law). The public frame is reflected at all levels: at macro level in legal regulations, in conditions for quality assurance and public responsibility at meso level, and at micro level in frames for designing programmes (e.g., number of contact hours, qualifications of teachers). Within these public frames, stakeholders from education and labour shape and specify vocational education provisions and structures. Hence, it is possible to define Dutch vocational education as an education system that operates in a public-private frame where social partners (i.e., organisations of employers and of employees) and education cooperate, within the legal space that law and government provide and regulate.

Interactions between partners within this public-private frame are not straightforward and often cause frictions. These frictions can be illustrated by the developments and debates with respect to the qualification structure for MBO. As recalled earlier in this chapter, the implementation of the vocational education law (WEB) in 1996 promoted the integration of all vocational education at intermediate level, regardless of whether it is full time, part time or apprenticeship. The challenge at that time was to create a coherent system. The key instrument to realize that objective was assumed to be a qualification structure in which all levels of qualification were to be organised in relation to occupations, with two equivalent pathways of education (full time and apprenticeship) to obtain certification for these qualifications. Occupational branch-specific knowledge centres, in which social partners and education were represented, had the task of making detailed proposals for qualification profiles that subsequently were established by the government. In this procedure, which is essentially also the current one, social partners are important actors, because they bring in dynamics and needs of current occupational practice. For full-time and part-time MBO, this procedure to define and establish attainment

targets was innovative at that time. Equally, the apprenticeship system became part of the education system, while until that time it had been steered by the social partners themselves. Two types of logic, that of labour and that of education, were brought together in one system through these reforms.

In 1996, it was proposed that the national qualification structure would be an effective means to regulate interactions between both of these systems (i.e., education and labour). However, the various stakeholders interpreted the qualification structure quite differently. So the nature and content of the qualifications and structures were consistently the subjects of debate. Ideally, the qualification structure should be a means for communicating the connection amongst vocational programmes, labour market and occupational practice; instead, it turned out to be a means for stakeholders to express their own expectations and demands. For social partners, the qualification profiles formulate qualification demands for graduates entering employment. For educational institutes, qualification profiles are frames to design programmes and exams (Van Lieshout & Scholing, 2009; Van der Meijden & Petit, 2014). Social partners also want qualification profiles to be transparent and to reflect the kinds of performances they endorsed. Contrarily, educational institutes want qualification profiles that offer opportunities to design vocational programmes that are not too specific in aims and content and that can be implemented in an education-based curriculum with pre-specified knowledge and skills.

In the 2010s, the tentative outcome is a qualification structure whose nature and content is characterized by a relatively strong education logic in which parts also leave space to accommodate a labour logic. This compromise fits in a more general trend to replace the national steering of the focus and design of vocational programmes with an emphasis on decision-making at the regional level. It is striking that co-makership in the region was one of the main features of the apprenticeship system as it was enacted prior to 1996. As a consequence of the integration and public framing in the 1990s, however, the infrastructure of the apprenticeship system at local level was discontinued. Being an autonomous provision, the apprenticeship system was able to transform into one of the two educational pathways in MBO (i.e., full-time programmes and apprenticeship training). In the 1990s, the national infrastructure of the apprenticeship system was expanded to full-time education, but has subsequently transformed into an overarching and uniform structure to control the quality of placements in companies (Onstenk, 2016b).

The general picture is that from the moment of integration of vocational education at intermediate level in 1996, at first, national economic stakeholders had a significant role in steering the process and there was less influence from local organised economic actors. More recently, the influence of economic actors at local level has increased (Westerhuis & Van der Meer, 2016). The actual influence of local industry, enterprises, and supervisors at the workplace in designing, guiding and assessment tasks in vocational programmes is, however, dependent on the attitude of institutes, managers and teachers in vocational education, because ultimately (public) educational institutions are responsible for student graduation. Yet, as workplace learning is a substantial part of vocational programmes and as graduates have to find employment in the region, educational institutes are aware they have to

cooperate with companies and employer organisations to deliver responsive vocational education.

For HBO, co-makership between education and labour organisations has a very different history and tradition. Although HBO and MBO have comparable origins, as sketched in Sect. 1.2, the framing of HBO as higher education led to a quite different development. HBO, in fact, was incorporated in the tradition of academic education, in which educational logic prevails and labour logic is not present. Furthermore, higher education has a less strict governmental interference compared to MBO.

At a system level, there is no formal influence of economic actors. Decisions about aims, goals and content of programmes are at the discretion of the universities of applied sciences. Over the years, a macro-functionality test was established, when public funding of a new programme is requested, in which the government demands proofs of labour market needs for the new programme. A public-private cooperation has never formally been arranged for HBO. Because of the nature of its programmes, namely education qualifying for occupations, involvement of economic actors with HBO appeared to be persistent over time (i.e., it has remained from the past when HBO was organised in occupational domain-specific schools) or eventually developed (again). This involvement and cooperation is most prominent at the regional level and not so much at the national (although there are some national competence profiles, formulated in cooperation with business and professional organisations). In many ways, this regional engagement is consistent with the more autonomous roles of the applied science universities, which differentiates them from the vocational colleges for MBO (ROCs).

The debate about the competence and qualification of educators in vocational education is another illustration of the public-private frame in which co-makership between education and labour is enacted (Van der Klink & Streumer, 2016). From the perspective of educational logic, a general competence profile and a qualifying pathway provided by a formal teacher education institute is seen as the most effective one. Such a preference naturally counts for the teachers who, from this perspective, are seen as most important educators for vocational education. From the perspective of labour logic, specific expertise of occupational subjects and practice are perceived to be essential for vocational educators, including supervisors at the workplace who are held to be as important as teachers in schools (cf., Aalsma, Van den Berg, & De Bruijn, 2014). In MBO, the public frame is relatively prescriptive and, therefore, qualification profiles of many teachers are to a large extent general or broad. The premise is that education staff other than teachers (e.g., practical instructors) and supervisors at the workplace will provide the necessary specification of vocational knowledge, skill and practice. However, the debate on this issue is perennial and the actors involved take different positions, and these can change over time. At the local level, the discrepancy is less evident than at national level; schools experience the necessity of using both general teaching expertise and specific vocational know how. In the provision of teacher education, it is problematic that there are only a few qualifying teacher programmes for vocational subjects in MBO; most teacher education programmes are qualifying for general subjects for

secondary education and MBO with only some differentiation at the end of the programme.

In sum, the concept of co-makership refers to the relations among the social partners who initiate, advance and enact vocational education programmes. Yet, these relationships are far from uniform or straightforward. They differ across levels of education and the balance between the logic of education and industry, with HBO having the strongest emphasis on the educational side. Also, these relations play out differently between national prescriptions and localised decision-making and discretion in the regions.

1.4.2 Freedom of Education

The Dutch concept of freedom of education is deeply related to the so-called "school war" on religious grounds at the turn of the twentieth century. In this school war, three sorts of freedom were central: (a) freedom of choice (of school); (b) the freedom of foundation (i.e., the freedom of parents to establish a school on the grounds of a specific view of life); and (c) freedom of organisation (i.e., the freedom of managerial and educational organisation of a school which applies to contents of learning, methods and personnel). The public funding of schools is expected to respect these three types of freedoms. Across the twentieth century, this freedom of education has been grounded in the Dutch constitution and articulated in a simplified definition referring to a division of responsibilities. That is, government decides upon goals and attainment targets, but decisions about how to organise educational provisions to achieve these goals are at the schools' discretion. This division of responsibility and governance has more than once caused difficulties across the history of Dutch education (cf., Bronneman-Helmers, 2011). In its role of guardian of educational quality sometimes imposing national converging regulations, government can easily be accused of violating freedom of organisation.

Thus, the Dutch concept of freedom of education causes tensions because *what* education should be for (i.e., goals, attainments targets) and *how* these goals are achieved (in terms of managerial and educational organisation) are always interrelated. Moreover, if education is funded with public money, then guarding the quality of education is also demanded by the public itself. As a consequence of these tensions, debates about education in the Netherlands inevitably become highly politicized. One of the most influential councils of government states that the fact that a public debate about the aim and contents of education, that is, what education should offer youth and society, is almost completely absent, could be seen as the downside of Dutch freedom of education (WRR, 2013).

As for vocational education, the impact of freedom of education is quite different for MBO than for HBO. In higher education, the core of quality control is a system of periodic quality control and accreditation organised by the sector itself. The Inspectorate is more distant and only in the case of real calamities does the control

become more intensive and prescriptive. Being part of higher education, HBO institutes (i.e., universities of applied sciences) have considerable freedom of organisation. Prescribing what constitutes courses, programmes and qualifications is left up to the universities' discretion. Indeed, no legal frame exists to establish qualification profiles for programmes (except for the relatively recent demand to prove that these new qualifications are needed at the labour market). If there are legal frames, these come from professional bodies or from the public sector (e.g., health care, welfare, education itself in relation to teachers, and so on). In the 2010s, the Inspectorate has intensified its guardian role because of criticisms about the validity of graduation. Furthermore, governments have imposed stricter rules about the quantity of teacher-student contact in the first year of the bachelor study. Both measures were taken in response to specific incidents that resulted in a public debate and concern about the quality of higher education, in particular of the professional bachelor studies.

As for MBO, the distinction in responsibilities and steering regarding what and how is consolidated in the WEB, in particular with the establishment of a national qualification structure for MBO. Despite the strict distinction in responsibilities for the what and how, MBO institutes still claim they experience restrictions in their freedom to organise education (De Bruijn & Howieson, 1995; Van der Meijden & Petit, 2014). A recurring issue is that schools claim that the qualification profiles in which knowledge, skill and attitudes are defined for vocational education programmes have a direct influence on the curricula and offer limited scope to tailor programmes to preferred educational concepts or models and also to local circumstances. Despite the less detailed qualification profiles in recent years, the complaints from the schools remain more or less the same. The underlying issue tends to be the struggle on who is to decide and define educational objectives, and how contradictory demands (e.g., national and regional; occupational, social and educational) are articulated and addressed. Sometimes it seems that this struggle about who decides is given more importance than what is actually decided about vocational education content.

Notwithstanding these critical remarks and underlying tensions, and despite the prescriptions of qualification profiles, there are examples of vocational programmes that match their education and teaching concept and local conditions (De Bruijn & Leeman, 2011; Huisman, De Bruijn, Baartman, Zitter, & Aalsma, 2010). To what extent the qualification profiles prescribe the organisation of education or to what extent teams might not be able to design curricula are yet to be thoroughly researched. Both options might be explained by the fact that the educational field experiences difficulties in designing curricula that take into account the different demands from companies as well as young people. In general, qualification profiles and attainment targets limit the possibilities of how to organise education to some degree, which becomes stronger possibilities if schools lack the educational expertise to design well-structured curriculum and align these with appropriate experiences.

Furthermore, the two educational pathways (full time and apprenticeship programmes) which are the legislated and prescribed tracks to realize defined qualifications, also constrain the freedom of organisation. From the 2010s, this strict division in the pathways is being eased, but because specific funding rules which are embedded in the way the systems of education and work coordinate vocational education are related to both pathways, this is not very easy to realize. For instance, full-time education has public funding if enough lessons are provided for students (1600 a year of which 1000 lessons at school) and for which student might receive a study loan. Apprentice programmes are funded by companies and government. Programmes consist of at least 850 h a year of which 200 are at school. Apprentices are employees who receive wages. This established coordination of the vocational education system shows how dominant the influence of these prescribed pathways is on the design of curricula.

Another, somewhat different aspect is the mandatory quantity of time for teacher-student contact as an aspect of educational quality controlled by the Inspectorate. This obligation as part of the role of government to guard the educational quality, also limits freedom of organisation, in particular because learning sites and assignments that are common in vocational education like workplace learning, authentic projects, online interaction and simulations are not automatically included in the definition the Inspectorate applies.

Increased constraints in guarding quality by government and controlling the performances of educational institutes over the last two decades are quite noteworthy. Although these increased constraints, enacted as quantitative and control measures, apply to all education types, for vocational education, MBO and HBO, it is rather new and methods and its definitions are not a good fit with the provision of vocational education because the educational logic prevails, for instance by not including workplace learning or learning in other contexts or ways in the standards of the (obliged) amount of lessons offered in educational programmes (Van de Venne, Honigh, & Van Genugten, 2016). The Educational Council (Onderwijsraad, 2015) proposes to implement other quality control mechanisms in which both qualitative and quantitative standards are used. These will become part of professional standards and work arrangements in educational institutes, teams and for teachers themselves, rather than being externally enforced by Inspectorate controls.

The constitutional concept of freedom of education, as described in this section, offers an additional perspective for understanding the governance and organisation of vocational education within a private-public frame as discussed in the previous section. The turbulent process of developing a qualification structure for MBO might be better understandable through this conception. The struggle between stakeholders on who is to decide was mingled with the debate on the distinction between what should be learned and how this is organised. Ultimately, as government has to decide about educational goals and provisions, but should constitutionally offer maximum freedom for schools in how to organise education, the educational logic can prevail in such circumstances. The limited influence from social partners at national level might be partly explained from this peculiarity of the Dutch education system.

1.4.3 Accessibility and Qualifying for Occupational Practice

A typical dilemma for vocational education in a public-private frame is to both support all students in their personal development and allocate them to the labour market through preparing and qualifying them for occupational practice. In theory, these two tasks need not be at odds. As occupational practice is dynamic and partly unpredictable and students' wishes and needs require to be addressed, it should be possible to design vocational programmes that are responsive to occupational practice whilst enhancing the development of students' potential (De Bruijn, 2006; Mertens, 2001; WRR, 2013).

Yet, when attempting to realize both tasks, frictions are common, in particular from the perspective of involved parties with distinct agendas like students, parents, employers, teachers or government. This tension can be noticed in several ways in Dutch vocational education. Tension between accessibility and qualification in MBO can be recognized in the legal obligation for vocational education colleges (ROCs) to offer each student of 16 years and above an appropriate programme that prepares and qualifies them for the labour market. As noted, MBO comprises vocational programmes at four qualification levels that are part of the national qualification structure. Ever since entry Level 1 qualifications were introduced as part of the WEB, there has been a debate about whether these programmes could and should have any civil effect (i.e., be recognized by employers). In fact, in the 1980s and 1990s the full-time courses at Level 2 were objects of the same debate because the apprenticeship system was preferred by employers for jobs at that level (e.g., De Bruijn, 1997).

Across the history of MBO, programmes for resilience, remedial teaching, social participation, equipping schools for drop outs and vulnerable youth, career choice and so on, are sometimes designed and enacted as separate programmes and sometimes integrated in qualifying programmes for the labour market. According to the WEB, such programmes should be related to initial occupational preparation and qualifications. The underlying rationale was that to do otherwise would mean these programmes would provide little additional value to their participants and they, in turn, would be less motivated. This rationale was based on research undertaken on these programmes that, in particular, focussed on impacts for participants in respect of dropout rates, civil effect, or educational career (e.g., Nieuwenhuis, 1991; De Jong & De Wild, 1989). Over the years, the civil effect of the Level 1 programmes of the WEB was judged to be problematic. Recently, government decided to change names: Level 1 programmes became entrance programmes (Ministerie van Onderwijs, Cultuur en Wetenschap [OCW], 2014b, 2015a). Thus these programmes, for as long as this new nomenclature exists, have a distinct status albeit with the aim to prepare for occupational qualifying programmes.

Another issue which reflects a tension between accessibility and qualification is the triple qualification objective of MBO. By law (WEB) MBO has to prepare and qualify students for the labour market, for further education and social participation. In the process of refining and enacting these programs and these tasks, their

divergence becomes evident. Qualifying for social participation is manifested in separate modules or courses for resilience and civic education but also for maths and Dutch language. Qualifying for further education is restricted to the transition from programmes at qualification Level 4 to HBO and concretized in particular modules that prepare for HBO. Addressing career development issues is most of the time perceived to be part of qualifying for social participation and is catered for more often in terms of stand-alone modules or workshops than as an integrated element of the curriculum. Seldom connections are made between qualifying for social participation, and qualifying for both further education and work. Integration is scarce, both in the qualification profiles and aims of programmes and the curricula. Therefore, qualifying for work is often perceived to be not only distinct from but even oppositional to civic education, career development and personal development. Accessibility in terms of catering for personal development apparently sometimes seems be contrary to educating for the labour market and occupational practice (Van den Berg & De Bruijn, 2009). As Meijers, Lengelle, Winters, and Kuijpers (2016) describe, recently practice is changing and more examples of integrated curricula in this respect are developing.

The problems at the lower levels of MBO are: (i) the downward pressure on the middle segment of the labour market, (ii) the difficulties in integrating the triple qualification assignment for MBO and (iii) worries about the attractiveness of vocational education; all these issues together seem to be disastrous for the 1990s' objectives for integration of MBO in one comprehensive system. In 2015, it was proposed that the title MBO (vocational education at intermediate level) will only hold for MBO 4 programmes (OCW, 2015a; Van der Meer, 2015). Programmes at Levels 2 and 3 are to be renamed as intermediate craft education. Here it shows a remarkable pendulum in time. If this actual separation of different levels of MBO turns into reality in the near future, the resemblance with the situation before the WEB is striking. In the 1970s and 1980s, predecessors of MBO Level 4 programmes were offered by (rather high-status) MBO schools whereas separate regional schools and related temporarily provisions offered the predecessors of MBO programmes at Levels 2 and 3.

In HBO, the debate on the quality of HBO in relation to stricter admission requirements also reveals tensions between accessibility and qualification for the labour market. The focus in this debate is foremost on MBO students entering HBO. As already noted, dropout of MBO graduates in the first year(s) of HBO bachelor programmes is considerably higher than for students with other forms of education (Neuvel & Westerhuis, 2013). After all, MBO graduates are already prepared and qualified to apply for interesting labour market positions. The recently developed 2-year associate diploma programmes might better cater to the need for further training of many MBO graduates, in particular when combined with working. However, MBO graduates who *do* continue in HBO after the first 2 years succeed, but often experience difficulties with the more academic aspect of HBO, such as writing or acquisition of disciplinary knowledge.

The recent debate in HBO about a stricter set of admission requirements is part of a broader discussion about making demands beforehand in terms of its relation to

the occupational skills and knowledge required by occupational practice. If considerable numbers of students are unable to meet these requirements during and at the end of their study, then stricter admission requirements may become an option to solve this issue (of course accompanied by intensification of guidance and quality of the educational provision). However, this debate is also about requirements from the perspective of educational logic, like the academic quality of graduation projects, and not solely on demands from the perspective of labour logics, that is, the qualification requirements employers ask from graduates to become a new employee.

Finally, the tension between accessibility and qualifying for the labour market is reflected in the developments in the flow of students within the vocational education system, in particular within MBO itself. As Figs. 1.1 and 1.2 depict, the designated vocational education pathways comprise prevocational programmes in VMBO and subsequent programmes in MBO and HBO. Participation rates, as presented in Sect. 1.3, indicate that the preparatory stage of these vocational pathways gradually changes its nature from prevocational to general. Most young people participate in general education up to the age of 16. The inflow in MBO, particularly full-time programmes at qualification Level 4, therefore changes as well: most students have a background in (lower) general education. It seems that graduates from prevocational programmes have more difficulties in commencing Level 4, even though they meet the admission requirements.

With respect to apprenticeship programmes, it is noted that employers often prefer that students start at MBO Level 2, and work their way up regardless of their educational background in lower secondary education. Key in the student flow through MBO is the transition from programmes at Level 2 to programmes at Levels 3 or 4. If a barrier exists here then there is no vocational education route from lower level to higher education (i.e., there is no real vocational education pathway). As the figures presented in Sect. 1.3 indicate, the student flows within MBO show there are indeed obstacles in the pathway from programmes at Level 2 to Level 3 or 4 and further to HBO. Allocating opportunity in the labour market seems to conflict with accessibility of the system.

Apart from the watershed within MBO comprising the two educational pathways (apprenticeship or full time) and qualification Level (2 versus 3 and 4), national policies also play a role. In the 1990s, government tried to hinder the accumulation of diplomas at subsequent levels of qualifications as much as possible, with the premise that students ought to start their educational career at the qualification level they were able to. This accumulation was perceived to be inefficient (Bronneman-Helmers, 2011; De Bruijn, 1997). In the early 2000s, national vocational education policies turned in favour of piling up diplomas. In line with EU policies (European Commission, 2012), a taskforce and projects were established to stimulate student flow through the vocational education system to elevate the level of qualification population. The underlying argument was that the design of the education system, with no dead ends, offered the possibility of transitions up to higher education and could thus ameliorate for undesirable effects of the early selection at age 12. However, since 2010 national policies changed, partly because of the economic recession leading to financial cut backs. Cautious but systematic (e.g., by

differentiating in financing of student participation in programmes) government aims at regulation of student flows, focussed on identifying pathways that are not too lengthy.

Over the years, notwithstanding continuous changing policies, participation patterns show that young people on various grounds adopt other routes through the system than that which the system design intended (De Bruijn, 2006; Neuvel & Westerhuis, 2013). Detours, piling up diplomas, or taking leave will always be part of educational careers, either before starting work or during a work career. However, young people who proceed with their further educational career at age 16 with a programme at MBO qualification Level 2 will encounter more difficulties on their way through the system than those who proceed at age 16 with a programme at MBO qualification Level 4 right away.

To understand the development and impact of these policies in the Netherlands, it is helpful to identify how nearby countries, Germany and Denmark, cope with issues of accessibility, preparation and qualifications for the labour market. Germany and Denmark resemble the Netherlands in many respects, but have made different choices about educational pathways and, therefore, show different developments (cf., Westerhuis & De Bruijn, 2015).

In Germany, access to the dual system of vocational education has been delinked from previous education. Many participants are from high-status general education programmes. Graduates from lower level programmes that are more or less comparable with Dutch VMBO are excluded because the dual system is labour market related and has a restricted number of placements. This selective entrance is a result of the perceived high status of the dual system by German employers, students and parents (Westerhuis & De Bruijn, 2015). This perceived high status, in turn, makes alternative pathways at the lower end of the labour market almost impossible. In Germany, therefore, there is only one key route to qualified entrance of the labour market. Other pathways exist, but are less relevant in terms of their allocation to the labour market, that is, to finding a job. From a Dutch perspective, we might question what would be the effect of a more selective labour market on the employment prospects of MBO Level 2/3 graduates. The risk exists that these vocational programmes will be perceived by employers, students and their parents as second-class provision. The development towards separate vocational schools for vocational programmes at qualification Levels 2 and 3, the fact that Dutch apprentices have fewer opportunities for transitions, and the development that there is less need for intermediate qualified personnel, seem to indicate that these risks are potentially serious and could become reality in the near future.

Denmark offers a completely different picture. There are no prescriptive pathways in the education system. Lower secondary education has no differentiation in programmes or schools. After completing this lower phase, when they are 16 years old, students are allowed to stay another year if they are undecided about how to proceed with their educational careers. Furthermore, entering the Danish vocational education system at intermediate level, their programme commences with a half-year orientation at school before deciding which programme suits them best. After that first half year, young people are allowed to choose between numerous programmes.

These programmes all comprise considerable time learning in workplaces but show much variation in their scope (i.e., more broad or specific) and in duration (i.e., lasting between 1 and 5 years). This variation might be difficult to comprehend for the outsider, but young people can be certain that programmes will cater for the development of their potential and (future) ambitions. Cooperation with workplaces is firmly embedded in this dual system to assure that young people's selected pathways are aligned to labour market developments.

From a Dutch perspective, the Danish developments imply that the differentiation of qualification levels in MBO would disappear. The length of programmes in MBO would vary then even up to 7 years and flexible opportunities to transfer would replace the accumulation of diplomas. Flexible opportunities for transfer could become more effective as students are not obliged to complete whole programmes before transferring to another (using a metaphor: to travel from A to C could be without going to B first and will be quicker).

1.4.4 Educating for the Present and for the Future

A pressing issue of vocational education is how occupationally specific its programmes should be. Acknowledging potential tensions between the education and labour system, the simple answer would be that basically no optimum exists. However, in reality, when defining vocational qualifications and designing curricula, the relation with features and developments in occupational practice is an important and, possibly, necessary standard to which its efforts should be directed. Dutch legislation requires an investigation of the labour market needs for vocational programmes, the so-called macro-functionality test (cf., Van Lieshout & Scholing, 2009; Vink, Oosterling, Vermeulen, Eimers, & Kennis, 2010). There is a governmental need to control the implementation of new vocational education programmes in relation to labour market functionality to be accountable for and prudent with the use of public funds. Moreover, economic parties and vocational institutes themselves have a need to be able to ground the relevance of the programmes they offer in either community need or economic imperatives.

All parties making up the vocational education system will aim to regulate frictions between education and labour market imperatives. This is despite the fact that, at the same time, all parties are aware of the unpredictability of economic and societal developments that make any predictions about employability problematic. The various global crises of the last 20 years made it again absolutely clear that it is difficult to make confident predictions of the demand for particular occupations in the labour market. In addition, there is the inevitable problem of the lapse of time between changes in vocational programmes and when the first students graduate from these new programmes. Intermediary practices in vocational education, such as placements, training departments in companies, small enterprises in school, and cooperation between parties in organising vocational education taking shared

responsibility, stand to ease the frictions between the education and labour imperatives.

Intermediary links can work to diminish the urgency of answering the question of for what precisely, at a specific moment, vocational education should qualify. Big companies sometimes prefer broadly defined competence to be realized through vocational education. These companies then organise specialization and further professionalization in-company (e.g., Van der Meijden & Van der Meer, 2014). Small- and medium-sized enterprises (SME), however, prefer graduates who are immediately deployable when they start working. Cooperation within industry sectors in respect to training and professionalization and apprenticeship provisions could smooth this demand of SME (Van der Meijden & Van der Meer, 2014).

From the perspective of educational policy, the fundamental question of the added value of vocational education remains. For MBO, the answer basically is to realize the triple qualification target: qualifying for work, further education and social participation (Westerhuis et al., 2015). For initial vocational education (MBO and HBO), the shared opinion on the added value with respect to qualifying for work is to provide a firm foundation for future working careers of graduates, including the competence for lifelong learning. Although opinions differ on other targets that should be realized, this common goal is reflected in the emphasis on educating for key qualifications in the 1980s, broad professional competence around 2000 and a recent focus on so-called twenty-first century skills (cf., Christoffels & Baay, 2016; Nijhof & Streumer, 1998). These titles and underlying concepts underline the importance of a generic, though occupationally oriented, content of vocational programmes whereby generic implies basic skills and understanding which can be further expanded and specified during working careers.

Although previous paragraphs refer to general developments, it is important to be aware of the variety in vocational education. We have referred to differences between companies already; other variation exists also. Whereas a more broad focus is present in vocational programmes at higher qualification levels, we see it less in vocational programmes at lower qualification levels, where there is a tendency to prepare students as specifically as possible for occupational practice. At the same time, we see variation in focus, depending on the nature of educational pathways. In dual programmes with a very large component of workplace learning, content might be more specific than in programmes with less learning at the workplace. Variation also exists between occupational domains depending on culture, traditions and the nature of vocations. Furthermore, there is differentiation between learning objectives, which can lay emphasis on either knowledge or skill or on a combination of generic and specific elements, like work process knowledge. Finally, variation relates to, among others, economic climate, technological change, societal needs and changes in ways of working and who works. In a more negative economic climate, companies focus more on primary business (e.g., Doets, Van Esch, & Westerhuis, 2008; Nijhof & Van Esch, 2004). The plea for graduates who do not need too much training any more is much louder than in times when there is a favourable economic climate. When the economic climate is more negative, qualifying for the labour market is perceived to be a public task, whereas in economic

boom periods employers prefer to turn new workers into effective employees through in-company training.

When defining aims and curricula of vocational education, since it is part of the public education system, the issue of specificity and topicality is always present. It is about the distinction between educating for existing occupational practice and that of the future; it is also about the definition of vocational skill or competence (cf., Onstenk, 1997, 2001; Turkenburg, Van den Bulk, & Vogels, 2014). Occupational competence (i.e., in a narrow definition of competence) seems to be the opposite of also narrow definitions of general skill, competence, "Bildung", citizenship, personal development and normativity. As we described earlier in this chapter, these narrow definitions are reflected in vocational curricula that are concretized in numerous separate modules addressing the various policy-related definitions of the triple qualification objective of MBO. In HBO, similar eclectic curricula exist. Specificity and generality remain conflicting concepts reflected in a fragmented curriculum.

The starting point in a broad definition of vocational competence is that specificity and generality relate to each other (reflected in the statement that the best specialist is a generalist and vice versa). In the broad definition of vocational competence the instrumental dimension (what do I have to know and how to perform?) is inseparably related to the normative one (who and how do I want to be?). In the German language, the term "Berufsbildung" refers to this level and kind of commitment to paid occupations. In English, "vocation" refers to the personal significance of one's job whereas "occupation" refers to it as a sociological category. Vocational education is, therefore, education that qualifies students for a social practice and at the same time supports students to develop personal meaning and sense (Billett, 2011; Colley, James, Tedder, & Diment, 2003).

Despite good practices, teams and institutes within Dutch vocational education experience difficulties designing integrated vocational curricula from the perspective of a broad definition of vocational competence. Many curricula reflect a conflict of meaning of how to understand vocational competence. The qualification profiles (MBO) and defined programme qualifications (HBO) as well as many vocational curricula in MBO and HBO are rather fragmented in this respect (e.g., De Bruijn & Bakker, 2016; Wesselink & Zitter, 2016).

1.4.5 Vocational Education and Its Contribution to Lifelong Learning[2]

Dutch vocational education – MBO and HBO – as part of the public education system mainly provides initial vocational education. Although adults are an important target group for the dual and part-time vocational programmes in MBO and HBO,

[2] Onstenk (2016a) discusses the issue of lifelong learning and the relation with the provision of vocational education in more detail.

these programmes are lengthy and costly. Even more importantly, most of these programmes can be characterized as alternative or compensating tracks to obtain the same qualification as young people do in initial, mostly full-time programmes. Thus, these dual and part-time programmes in MBO and HBO are not tailored to the educational needs of (adult) workers in practice (Committee for flexible higher education for employees, 2014; OECD, 2014b).

Due to various reasons such as technological developments, dynamics of the labour market, globalization and later retirement, there is a need for further training of workers in all age groups. An appeal has been made also to publicly funded vocational education institutes (i.e., MBO and HBO) to contribute to addressing this need (cf. OECD, 2014b). There is a need for substantial vocational training, in particular, for intermediate qualified employees as a response to the growing demand for higher educated employees in combination with the predicted decreasing demand for intermediate qualified employees (Van den Berge & Ter Weel, 2015). Training courses offered by private suppliers often are perceived to be too specific, focused on single instrumental skills, and the regular provision of MBO and HBO is said to be too inflexible to meet these needs (OECD, 2014b). As noted, the 2-year associate diploma programmes that were developed over the last decade seem to be better at fulfilling these training needs. Except for the associate diploma programmes, MBO and HBO institutions are asked to provide a variable spectrum of programmes of less extensive, but still substantial, post-initial education (Fazekas & Litjens, 2014). These courses should go beyond instrumental training of skills, should also focus on understanding, and should offer flexible, tailor-made education in which learning experiences at the workplace are addressed and expanded and online guidance is provided, because this is how workers sustain their employability demand level (cf., Committee for flexible higher education for employees, 2014). Such programmes should preferably deliver certificates which participants could collect in a portfolio to prove that they obtained a higher qualification level.

National policy supports the initiatives for the provision of training and education programmes for adults and to make certification of their learning possible (OCW, 2014a, 2015b). Recent trials with individual study credits, extending legislation, certification of modules of regular MBO and HBO programmes and implementation of more associate diploma programmes are all incentives being enacted to stimulate employees' participation in training and education. Concurrently, publicly funded vocational education is being pressed by government to enact such provisions. In the 1980s and 1990s, there were analogous initiatives such as modularization of vocational programmes to increase responsiveness to occupational practice and offering training possibilities for employees (De Bruijn & Howieson, 1995). Furthermore, regulations and practices for assessing and certifying existing competencies (i.e., recognition of prior learning) were aligned to these initiatives. These initiatives are enjoying renewed momentum. Whereas in other countries similar initiatives were enacted in the previous century, in the Netherlands developments in publicly funded vocational education on modularization, certification and recognizing prior competence and its contribution to training for adult workers stagnated at the end of the late 1990s (Doets et al., 2008). For the coming years, new

initiatives and practices associated with these goals are likely to become increasingly necessary.

Special attention is likely needed for low-qualified workers and the ones just one step above them as these are the most vulnerable. As it stands, low-qualified employees appear to participate less in training than high-qualified employees (Borghans, Fouarge, De Grip, & Van Thor, 2014). Yet as already mentioned, at the same time, employment prospects at the lower end of the labour market are not good (De Graaf-Zijl et al., 2015). As the nature of jobs and payments deteriorates, probably intermediate qualified workers will take up positions of low-qualified work as worthwhile forms of employment are becoming increasingly scarce in the intermediate part of labour market. An important assignation here is for MBO to provide as many young graduates as possible with a qualification at Level 2 (i.e., the starting qualification for entering the labour market) to address this need. As noted, drop outs have decreased in the last two decades with fewer low-qualified people (lower than MBO Level 2). For those remaining in these roles, further training will be equally important as they will also have to remain current with labour market changes up to their late sixties as working life becomes longer. Providing appropriate and timely vocational education provisions is a preeminent task of publicly funded MBOs.

MBO Level 2 qualified workers are categorized as intermediate, but they actually have fewer options. Following future developments as predicted in current analyses (De Graaf-Zijl et al., 2015; Van den Berge & Ter Weel, 2015), in particular, will cause MBO 2 qualified workers the most difficulties. They will have less opportunity to proceed to higher qualified outcomes and work and, therefore, will likely fall to the lower end of the labour market and themselves displace lower skilled workers there. However, all of the previously mentioned initiatives with respect to training and education focus on the higher qualified within the intermediate qualified group. National policy on flexible vocational education does also address programmes at Level 2 and 3 (OCW, 2014a) but actual processes for progressing are less consistent. For example, the pathways from MBO 2 to subsequent levels of MBO are inflexible and, therefore, do not effectively address needs of workers' learning. In addition, this pathway is hindered by government because piling up diplomas in MBO is discouraged by financing rules as discussed in Sect. 1.4.3. If students are engaged in lengthy tracks they count less for public financing. In addition to the limited attention of and inconsistencies in national policies with respect to the contribution of public funded vocational education to the training needs of this group of workers, more detailed analyses of labour market dynamics in this segment are also missing. Hence, the kinds of effective guidance required are absent.

1.5 Understanding Dutch Vocational Education in Practice

In the previous sections we presented five issues that are helpful to understand Dutch vocational education in practice. Beyond the principles of the design of the Dutch education system and the positioning of vocational education within it, the

elaboration of these issues illuminate how the system is enacted. The particulars of the private-public frame assist in illustrating the processes by which Dutch vocational education is shaped, the resulting programmes, and the articulation of cooperation between schools and enterprises. The freedom of education issue, which is in some way or another present in all educational debates and policies, offers an additional perspective and adds a further element. The described tensions between accessibility and allocation to the labour market and between educating for the short term and the future are perennial issues for any vocational education system, but play out in country-specific ways.

The final issue is the contribution of Dutch vocational education as part of the public education system to lifelong learning, which foreshadows a challenge for the future of the system and tests its responsiveness to emerging national challenges. It calls for more responsiveness by the various actors in the system. Participation patterns show there are groups that experience difficulties in their careers through the system. Yet, schools are sometimes not alert to these difficulties, programmes and pathways are not flexible enough, and the coherence of the provision of intermediate vocational education is, subsequently, at stake. Concurrently, developments in the labour market and occupational practice cause pressure precisely on jobs at intermediate level. Dutch vocational education, therefore, needs to transform further into a transparent and responsive provision for educating for occupational practice for various groups before, during, and across working life. The chapters in the rest of this book show how Dutch vocational education copes with this complex and challenging education project.

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