From secondary to tertiary education in the Netherlands

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Abstract

In the Netherlands recent decades have seen two specific (though largely unrelated) sets of changes which have been important with respect to the relationship between secondary and higher education: the structure and content of secondary education, and the regulation of access to higher education. In this article, the latest developments in secondary education are described, and changes in the admission policy to post-secondary education (the hogescholen and the universities) are discussed.

Introduction

Since the start of the 1990s, the production of knowledge has been seen as an increasingly important component of the nation’s economy, and an important place in this production is reserved for higher education (see eg. Van Heffen et al, 1999). From this perspective, an efficient and effective transition of human capital from secondary to higher education is crucial. In public education systems, governments have developed policies to smooth the transition from the former to the latter stage of education (Kaiser and Dc Weert, 1994; Vossensteyn, 1997a). This article explores the relationship between secondary and higher education in the Netherlands from a historical point of view. Issues of equality and quality have always marked the story of transition to higher education, causing an ongoing debate on adjustments either in higher education or in secondary education. In the Netherlands, two specific — though largely unrelated — aspects have been important: the structure and content of secondary education and the regulation of the access to higher education.

The Dutch educational system

The Dutch education system includes the following levels: primary education for children between the ages of four and twelve, secondary education as a continuation of primary education for pupils between the ages of twelve and eighteen, a binary higher education system for students aged seventeen/eighteen and above, and adult and vocational education (see figure 1).

At the end of comprehensive primary education, pupils at the age of twelve move on to secondary education, which consists of two stages: the first tier (two years of basic education) and the second tier. After the first tier, pupils continue either in more vocationally oriented educational paths (in Dutch, abbreviated to VBO and MAVO, right side of figure 1) or tracks preparing for higher education (in Dutch abbreviated to VWO and HAVO, shown on the left side of figure 1). In the vocationally oriented path, the VBO is known as junior vocational secondary education as the MAVO can be characterised as general junior secondary education. These two types of the vocationally oriented path last two years and provide a basis for further vocational training in senior vocational education (SBO), either in full-time or in part-time tracks combining learning and working. Pupils choosing the preparatory path for higher education have two options; studying the three years of preparatory higher professional education (HAVO) or the four years of preparatory university education (VWO). Higher education in the Netherlands consists of a binary system of both the higher professional education (HBO institutions, in Dutch hogescholen) and university education (WO). Both the universities and the HBO institutions have their own focus on education, as defined in the Higher Education and Research Act (WHW) of 1993. The universities prepare students for independent scientific work in an academic or professional setting and the hogescholen prepare students to develop practical skills for particular professions.
To make things a little more complicated than is suggested in Figure 1, two things must be added. First, whereas the figure suggests that basic education ends after two years, schools are free to continue (parts) in the third year of secondary education. In addition, it may be the case that some pupils within one school finish their basic education in two years, whereas other pupils might take more time (however not exceeding three years). Second, the figure hides the fact that second tier tracks may have their roots in basic education. Schools are to some extent autonomous in choosing the year in which tracks such as VWO and HAVO start. This may actually be the second year, thus overlapping with basic education.

**Figure 1: the structure of Dutch education**

The long and winding road to basic education

The system as set out above is undergoing considerable change. In fact, Figure 1 describes the situation after the implementation of basic education (see above), but does not reflect all recent developments in the second tier. The changes in vocational education (MAVO and VBO), to be implemented from the beginning of 2000, will not be discussed. We will continue with the present changes in the pre-higher education tracks of HAVO (preparing for higher professional education) and VWO (preparing for university education) since 1998. But to understand present-day debates and policies on and changes of the structure and contents of secondary education, some historical background on the introduction of basic education and its consequences for the second tier of secondary education may be helpful.

Until the 18th century, education used to be organised by local and regional governments or established as a result of personal or collective initiatives. Governmental ‘interference’ in Dutch education stems from the end of the 18th and beginning of 19th century and is closely linked to the emergence of the Netherlands as a nation state. From that time on, government was able to centrally organise education, in particular through legislation. Important hallmarks in the history of education in general were eg. the revision of the Constitutional Law (1848), the Act on Secondary Education (1863), the Act on Primary Education (1920) and the (new) Act on Secondary Education (1963, implemented in 1968). Throughout the period until the 1980s, three essential political issues dominated the debate on the structure of secondary education: the increasing involvement of government in terms of quality, equality of rights and legal security; the right for each religious community to have its own educational provisions; and developments towards diminishing class distinctions in education (Van Kemenade, 1981).

The present general structure has its roots in the new regulations implemented in 1968. The 1963 Act on Secondary Education gave cause for a rigorous change in the structure of secondary education. The term ‘Mammoth Act’ was introduced by one of the Members of Parliament to indicate the huge impact of the
restructuring. After a debate that started shortly after World War II on renovation and innovation in education, the then Minister was able to introduce the new structure and regulations. The length of the period of policy preparation (1951 — 1968) and the fact that the new regulations encompassed six previously separate laws (Drop, 1985) indicate the comprehensiveness of the change. The basic features of the 1963 structure were:

- pupils had the chance to develop capacities in accordance with his/her talents and predisposition;
- pupils could opt for general education or professional education;
- the moment of choice for either differentiation would be later (compared with the previous structure); and
- many options would be created for vertical or horizontal movements in the system. A semi-stratified system emerged in which VWO, HAVO and MAVO were introduced.

Since 1968, many relatively small changes have been made to the system of secondary education. Larger schools have been created, providing most of the educational pathways; new courses have been introduced: for instance Russian and Spanish language and technology; short-cycle secondary vocational education (KMBO) has been introduced; and formerly differentiated tracks have been integrated.

However, in the 1970s and 1980s a fundamental debate took place on the overall structure. In particular, two objectives of the 1963 educational structure — postponing pupils’ educational choices and horizontal and vertical flexibility, (being aspects of the realisation of the idea of equal opportunity in education) — have been points for debate, already shortly after the introduction of the 1963 regulations. The Contourenplan, a 1975 white paper of Minister van Kemenade, fuelled the debate. He proposed the abolition of the different tracks for the pupils from 12 to 15 or 16 and the organisation of general education in one school type: the so-called middenschool, inspired by the idea of the Scottish comprehensive schools and the German Gesamtschulen. Doing justice to the variety of pupils would be realised by internal differentiation. The main argument for the change was to decrease educational inequalities by postponing pupils’ choices. A political and didactical debate started in which — roughly — two camps could be distinguished. On the one hand, those that were of opinion that the separation into different tracks shortly after primary education would harm equal opportunity for pupils. The pioneers in this camp were mostly academics in educational studies and representatives of the Labour Party and other left-wing parties. This view was opposed by those who thought that the middenschool would not do justice to the equal opportunity principles and that bringing together pupils from different background and with different talents would have no synergetic effect (the view of representatives of the Liberal and Christian Democratic parties). Some stated that this would even be at the cost of the ‘better’ pupils that intended to pursue their education in pre-university — and consequently university — education. Although experiments took place with the middenschool, the idea was never implemented, due to the political and educational debate that polarised the views and made it to some extent a debate between believers and non-believers. However, some elements of the alternative structure were later, taken up in the plans of State Secretary Wallage in the mid-1980s. He proposed the so-called basisvorming (basic education) for pupils of 12 to 14. Basic education can be seen as a compromise. To the proponents of the middenschool, the initial idea was still recognisable but in a weaker form. Furthermore, schools were given some leeway in the implementation of the idea of basic education, varying from forming heterogeneous classes with pupils of different backgrounds and abilities during the period of basic education to separating the pupils (based on their skills and abilities) shortly after entering the basic education period. As such, there is more variety between the schools in the way the courses are structured, the length of the period postponing pupils’ choices, and the grouping of pupils in classes. Basic education was implemented, first experimentally from the end of the 1980s, and later as a requirement from the mid 1990s.

All pupils in the first two years of all types of secondary education receive basis education in fifteen subjects. For each of the subjects national core objectives have been formulated. The way in which the schools intend to achieve these objectives is up to them. The third year is flexible: either students continue basic education or work towards the preparation for the bovenbouw (the second tier of secondary
education). The school advises the pupil and the parents/guardians after two years basic education. In total, some 80% of the contents of the courses of basic education are determined nationally, the schools themselves (taking into account the needs and wishes of the pupils) can decide upon 20% of the courses.

After the basic education, in principle two paths lie ahead of the pupils, either the VBO/MAVO path towards vocational education (from 2000 on termed VMBO), or the VWO/HAVO path towards higher education. The second tier for VWO/HAVO has been implemented in some 125 schools in 1998. It was fully implemented in all 700 schools in 1999. In terms of size, a third of the pupils nowadays opt for the preparatory tracks for higher education in VWO and HAVO, whereas two thirds choose the vocationally oriented VBO and MAVO.

Preparing for higher education: the second tier of VWO and HAVO

The new structure and contents of VWO and HAVO, preparing pupils for higher education, are to a considerable extent similar to those before the implementation of the second tier of secondary education. Two basic changes are to be implemented, one concerning the so-called profiles preparing pupils for specific post-secondary tracks and one concerning a new approach to teaching and learning. The differences can be summarised as follows (Peters and Terlouw, 1997).

First, the traditional set of subjects for the final examinations will disappear. In the previous structure the pupil could choose six to eight subjects. The limitations of the school (in terms of eg. teachers available for the subjects) were the sole restrictions on pupils’ choices. With the implementation of the second tier, the set of about sixteen subjects selected by the pupil will be termed doorstroomprofiel (profile). There are four profiles, each preparing for a set of study programs in higher education: culture and society (preparing in general for the social sciences, history, languages and culture), economy and society (preparing for economy and social sciences), nature and health (preparing for medical sciences and biology), and nature and technology (preparing for natural sciences and engineering). The profile should form a consistent set of knowledge and skills. Each profile consists of a compulsory part (50%) meant for general education, a profile part (30%) to prepare for higher education, and a free part (20%) for personal development. The examinations will consist of school examinations (a file, in which the acquired knowledge and skills will be taken up) and national examinations.

Second, the entrance requirements will change. In the near future, higher education institutions determine a profile that is required for enrolling in a specific program. The profile nature and technology, for instance, is sufficient to enter the university program of Pharmacy. The higher education institutions may also allow students of another profile to enrol, but then additional requirements (parts of profiles) can be required. In the example of Pharmacy, pupils with a nature and health program might enter, but should have completed courses in Chemistry in the optional part of the program.

Third, deficiencies should be overcome before entering the program. Whereas many higher education programs offered possibilities to make up for shortcomings in the qualifications in the first part of the first year, from now on this should be settled before actually enrolling a program.

Fourth, course contents will change. There is more attention to skills (design, problem solving, communication, co-operation, planning, etc.) in the profiles. Furthermore, some subject matters disappear or are replaced by other subject matters. Also new courses are introduced, such as informatics and management and organisation. Study and professional orientation are integrated in all profiles, including an orientation on higher education in general, and a self-reflection on the pupil’s career. It prepares the pupils for the choices to be made after secondary school (labour market or higher education).

Fifth, the traditional organisation of the learning process will change. This traditional organisation consisted of group teaching, in which the learning process was mainly directed by the teacher. In the new structure a new form of teaching and learning will be introduced, coined with the term studiehuis (study house). It implies that pupils learn in an active and autonomous way and that in teaching, justice is done to the differences between pupils. Pupils should be offered different learning routes, dependent on their
talents, interests and pace. Furthermore, the teacher should be considered as a tutor of the pupil’s learning process.

**Selecting entrants to higher education: the impact of massification**

In the Netherlands admission to both the hogescholen and the universities is open to students with the relevant qualification. This open admission has always been one of the cornerstones of Dutch higher education policies. However, the transition from elite to mass higher education provided a reason for government to intervene in the open admission policy. The process of massification started in the late 1960s with growing student numbers at the universities and continued in the 1980s by the upgrading of the hogescholen to the higher education sector, which at that time included only the universities. Before the implementation of the HBO-Act in 1986, the hogescholen were officially part of the secondary education sector and were regulated by the 1963 Mammoth Act. The upgrading process of the hogescholen to higher education was accompanied by the merger of the former 400 institutions providing higher professional education to 58 institutions now known as hogescholen. With the introduction of the WHW in 1993 the hogescholen and the universities are both governed by one set of regulations.

This massification of higher education confronted the Dutch government with other problems than in a period of elitism. One can think for instance of the increasing costs of higher education (which was partly resolved by passing the costs more and more on the students by increasing the level of tuition fees) and issues related to an increasing variety among the student population. In addition, the broadly supported idea of open admission, being an aspect of equality of higher education, was put under pressure. Due to the process of massification in the late 1960s, some study programs were facing increasing student numbers. In particular universities offering medicine and dentistry programs did not have enough capacity to deal with these growing numbers. After a debate that was initiated in 1968 and intense public discussion about the introduction of a more selective university system, the then Minister introduced the Machtigingswet in 1972. This law regulated the admission to costly study programs (like medicine and dentistry) for which the number of applications exceeded the total teaching capacity (numerous fixus). This first regulation concerning the restriction of the intake of first year students at the universities ended in 1975 with the introduction of the ‘weighted lottery’ as the selection criterion to be used. In short this means that the higher the average grades of a secondary school leaver, the higher the chance of gaining admission (see for details below).

The period from 1975 to 1999 can be characterised as a period of much discussion about the use of the weighted lottery as a selection criterion, but it is also a period in which no actual policy changes took place. Psychologists, politicians and higher education professionals were debating the introduction of other selection criteria or other ways of using the weighted lottery. In these discussions it was stressed that a weighted lottery was considered to be less acceptable and there were efforts to design a selection system in which the performance of secondary school leavers was more emphasised (Commissie Toelating Numerus Fixus opleidingen, 1997). With the installation of the Drenth Committee in 1996, the debate about the weighted lottery as selection mechanism was fuelled again. The only difference from the lengthy discussions before was the fact that, partly based on the conclusions of the committee, the Minister changed the selection methodology in 1999.

It must be noted that the debates on selection mainly focused on university education, partly due to the gravity of the problem and the fact that HBO was not part of higher education. At the hogescholen a totally different selection mechanism was in use until 1993. Before the introduction of the WHW in 1993, the hogescholen could decide autonomously about entrance to their programs. They made use of mechanisms varying from a lottery to personal talks with students (In ’t Groen et al, 1984). Since the introduction of the WHW, the weighted lottery system has also been in force at the hogescholen.

**State of the art: the current selection system**

In spite of the process of massification of higher education (an increase of student numbers of almost 50% over the 1975-1998 period) open admission is still one of the characteristics of Dutch higher education. By law admission to hogescholen and universities is open to all students who have the necessary entrance
qualification. Admission to hogescholen is open to students who hold one of the preparatory higher education certificates (the HAVO or VWO certificate) or any equivalent qualification. To enrol a university program, students must hold a pre-university school leaving certificate (VWO), a higher professional (HBO) first-year certificate or a full four-year higher professional qualification (HBO). The Minister of Education, Culture and Science may designate other certificates as being equivalent to those normally required. Alternatively, applicants aged 21 or over who do not possess the required qualifications may be admitted to both hogescholen and universities after passing a colloquium doctum entrance examination. Hogescholen may also impose subject-specific entrance requirements particularly when the intended study program leads to a professional qualification (such as art programs, hotel management and physical education teacher training). All such requirements must have the Minister’s approval (Boezerooy, 1999). In addition to the educational entry requirements for university programs mentioned above, two examination subjects of the secondary school may be required for some of the programs. For instance, a student may be required to have passed examinations in the subjects of physics and chemistry to enrol in the study program of pharmacy. These are national requirements set by the Minister. When students do not fulfil the requirement of the examination subjects, they can enrol the specific program, but they cannot take any exams until they have made up their academic shortfall.

The only limitation to this open admission is the system of numerus fixus introduced in 1972. It is important to note here that only a limited number of programs have such an entrance limitation. There are nowadays three types of numerus fixus. The first type (also the oldest one) is known as the capacity fixus. When the number of applicants exceeds the national teaching capacity, the Minister decides upon the number of places (nationally and at the institutional level) which will be available. The Minister of Education, Culture and Science may also limit the intake of students if it can be shown that the supply of graduates from a particular program exceeds the need of the labour market by a substantial amount and when this is expected to be the case for a number of years (labour market fixus). In practice, a combination of the capacity fixus and labour market fixus is applied to determine the opleidingsfixus. For the year 1999-2000 the fixus is applied to medicine, biomedical sciences, biomedical health sciences, veterinary science and dentistry at the university level and to ergotheraphy and some other therapy studies, tourism, journalism and social juridical service at the hogescholen (IBG, 1999). A third type of numerus fixus is the institutional fixus. Higher education institutions are given much more autonomy in determining their teaching capacity. If the number of applicants exceeds the expected enrolments in such a way that the teaching capacity of a particular institution is insufficient (in fact endangering the quality of teaching), the institution can apply for selection.

The admission of students is administered by an independent agency, the Informatie Beheer Groep (IBG). For each academic year, the fixus programs are announced (based on forecasts and information of the higher education institutions). If the choice pattern of the future students indeed turn out that there is a mismatch between the number of places and applications, the selection mechanism is applied. The main characteristic of this mechanism is that a lottery decides on admission to courses with entrance restrictions (irrespective the type of fixus). However, it is a weighted lottery, which provides greater chances for admission by candidates with higher average examination results in secondary education. Candidates are divided into five lottery categories. Category A, which is the highest, includes candidates with the highest examination grade point average (8.5 or higher). Category F, the lowest one, includes students with an average examination grade of 6 to 6.5. A sixth category is added for foreigners. In general it can be stated that the higher the lottery class, the higher the chance on admission. The distribution of candidates over the locations where the numerus fixus program is offered takes place on the basis of the preferences of the candidates, as far as possible, but it could turn out that students are admitted to a university which was not preferred by the student. Students who are not placed may reapply in a later year but do not receive any credit for the waiting period (Vossensteyn, 1997a).

The recent discussions and a new selection mechanism

The debate on the selection mechanism in use since 1972 was revived in 1996 with the installation of the Drenth Committee. This committee was supposed to make recommendations about possible changes to the higher education admission system. The committee’s advice was to provide direct access to people
with high grades in secondary education and to apply a weighted lottery system to people with lower grades. Furthermore, the committee recommended that about 10% of the study places should be reserved for people with job experience. A public debate followed the discussion around the recommendations of the Drenth Committee, in which the “case of Meike Vernooy” played an important role. Meike Vernooy was a secondary school leaver with on average extremely good examination grades (9.6 out of a maximum of 10). Her attempts to enrol in Medicine were rejected several times. Due to the recommendations of the Drenth Committee and the publicity around Ms Vernooy in the media, public and political discussion resulted in a change in regulation by the Minister of Education, Science and Culture in 1999. Effective from 1 September 1999, a new selection system was implemented. The main difference compared with the former system is that all candidates with an average grade of 8 or higher in secondary education will be admitted directly to the program of their choice. Other applicants will still have to go through the weighted lottery procedure as described above. Some additional changes will take place in the year 2000. From 1 September 2000 both universities and hogescholen will have the opportunity to make use of decentralised (institutional) selection. A maximum of 10% of the total places available can be used by higher education institutions to grant admission to applicants on basis of motivation, work experience or talent, for example.

**Implications for the transition from secondary to higher education**

As may be clear from the background of the implementation of basic education, the motivations for change in secondary education lie clearly in a changing view on how to realise equal opportunities for students leaving primary education. Of course, there were objectives with respect to the career of the pupils after secondary education (equipping pupils in an optimal way for the labour market and/or higher education), but this only came on stream when the second tier needed to be developed. At that moment the question of preparing students for independent study (learning to learn) came into hearing. Consequently, the ideas on the studiehuis emerged. Also the problematic hybrid function of the HAVO (combining the preparation for higher education and the labour market) was reconsidered and changed into an unambiguous preparation for higher education. The deliberations on the structuring of the second tier of secondary education (VWO/HAVO) should therefore be seen as both adjusting it to basic education and to the requirements of higher education and the labour market. The discussions on selection have sometimes been intense, but the idea of open admission (given certain requisite qualifications) has never been challenged. The 1972 numerus fixus regulations, necessary to cope with the change from elite to mass higher education, have not been changed seriously. The changes in secondary education can be considered to have been of much more impact. Therefore, we explore how this new structure can be seen as a solution to the transition problems from secondary to higher education.

Van Dyck and Van Asselt (1996) summarised the problems regarding the physical transition from secondary to higher education in the last twenty-five years as follows: deficient selection in secondary education, a lack of study and general skills, a lack of study and professional orientation, and shortcomings in higher education. Note that in particular secondary education was blamed for inefficient transition to higher education, causing high dropout rates and long graduation times in higher education. Without doubt, these problems are omnipresent in other educational system, but have had specific appearances in the Netherlands. According to Van Dyck and Van Asselt (1996), the problem of deficient selection will diminish, for the standards of the second tier will be raised and the objective is to determine the levels of the pupils more adequate. Study and general skills will be improved by the concept of the studiehuis, in which learning to learn has a dominant place. Elements of professional and study orientation are deliberately interwoven in the second tier courses. A number of the shortcomings of higher education seem to have been solved by recent measures with respect to the quality of the programs (national quality assurance system), including the selective and orientation function of the first year of higher education. In addition, networks of schools (scholennetwerken) have emerged in which secondary education schools and higher education institutions exchange information, organise meetings between teachers, organise lectures for pupils, etc.

**Looking back and forward**
In all, there seem to be reasons to positively evaluate the changes in secondary education. Also, the changes with respect to the selection mechanisms for entry to higher education (good to excellent secondary achievements are valued more, and autonomy for the institutions to determine part of the inflow) seem to be received well by the higher education industry. The positive evaluations above, however, are — by necessity — theoretical exercises. It will take some years, before the first generations of pupils having successfully completed the second-tier of secondary education enter higher education and higher education has gained experience from the changes concerning selection mechanisms. Then the consequences of the restructuring can be assessed. A serious flaw concerning the expected impact is the fact that both secondary and higher education are constantly on the move. Many higher education institutions are still in favour of additional (thus stricter) selection criteria for higher education. The experiences with decentralised selection might push forward the debate on selection, changing the current situation.

Moreover, whether the recent changes in secondary education will survive is also open to debate. An important question for instance is, how the pupils’ choices impact on the shortage of enrolments in engineering and the natural sciences. Recent polls indicate that smaller proportions of pupils will chose the nature and technology profile, leaving open the question as to whether this smaller share will lead to reduced numbers in natural sciences or engineering in higher education. The polls also indicate that the traditional choice pattern by gender has not changed in the new situation and that a far smaller group of VWO pupils will continue on to university education (50% versus 65% nowadays). Recently (December 1999), thousands of pupils in the first year of the second tier demonstrated against the high workload involved in the new teaching approach (studiehuis), putting pressure on the State Secretary of Education to make policy adjustments. Teachers and school managers complain about the fast rate of implementation. It remains to be seen how both the structures of secondary and higher education will look at the beginning of the new millennium. The history of Dutch education has shown that change is indissolubly connected to education, despite the many strong institutional roots resisting change.

References


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