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Alternative Approaches to Financing Lifelong Learning

Country Report the Netherlands

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Preface

The production of the Dutch country report on monitoring and financing lifelong learning has been somewhat of a lifelong experience in itself. The gathering of the data, the analysis and the writing took a long time, and is still only a phase in a longer process. A shortened Dutch version will be produced, the results will find their way into the international synthesis report and we will continue to explore the theme of financing lifelong learning, the development of adequate indicators and the collection and analysis of new data in the time to come. The fact that lifelong learning has become a vital cornerstone of Dutch (educational) policy is a contributing factor in this respect.

Beside the authors, other people or agencies made valuable contributions to the project. Here we would like to thank Prof. dr. J. de Koning and E.T.J. Dölle from the Netherlands Economic Institute, dr. H. Oosterbeek and W. Houtkoop from the Max Goote Expert Centre and dr. M.J.A.M. Aalders. Also the members of the advisory group from the ministry of Education, Culture and Science, the ministry of Economic Affairs and the ministry of Social Affairs and Employment and finally Statistics Netherlands (CBS) that responded so quickly to our endless requests for data.

Chapter 1 Background to the Study and Country Setting

1.1. Background of the study

In January 1996 the OECD Education Committee at Ministerial level was held in Paris around the theme of 'Making Lifelong Learning a Reality for All'. There was a broad agreement that a strategy for lifelong learning is a key condition for the continued development of OECD countries. The large and continuing shift in employment from manufacturing industry to services, the gathering of momentum of globalisation, the wide diffusion of information and communication technologies and the increasing importance of knowledge and skills in production and services are changing the skill profiles needed for jobs. With the more rapid turnover of products and services and with people changing jobs more often than previously, more frequent renewal of knowledge and skills is needed. Along with these developments, confounded by factors such as the ageing of populations, emerging new values and patterns of leisure and work, and changing family relationships, there is the risk of a new polarisation emerging between those who participate fully in the acquisition and use of knowledge and skills, and those who are left on the margins. Ministers accepted lifelong learning for all as the guiding principle for policy strategies that will respond directly to the need to improve the capacity of individuals, families, workplaces and communities continuously to adapt and renew. (OECD 1996e). Ministers focussed their discussion on issues of implementation. One key element is the question how to pay for lifelong learning for all. Ministers of Education observed in their Communiqué: 'There are substantial potential benefits from lifelong learning, and increased investment is likely to be needed if these are to be realised. Incentives must be found which will mobilise new resources, but how the responsibility for such investments is shared, will depend on the traditions and circumstances of different Member states. While some countries are prepared to fund lifelong learning largely from the public purse, others will need to find ways of mobilising new investment if lifelong learning is to be affordable. Ministers request the OECD to deepen its analysis of policies which offer incentives for learners, their families, employers and other partners to mobilise larger investments for learning and which promote cost-effectiveness, equity and quality'.

In the project 'Monitoring and Financing Lifelong Learning' this request is addressed for a number of countries. Three leading questions guided the work;

- *Defining the lifelong investment decision*; How broadly or narrowly is lifelong learning defined, and what are its goals and objectives. Given the definition, what are the gaps to be filled,
- *Evaluating the lifelong learning investment*; Given the scope and objectives of the lifelong learning investment decision, and given the size of the gaps that are to be filled, how much is it likely to cost and how might costs be reduced and benefits increased,
- *Mobilising and disbursing the resources for lifelong learning*; Given the definition, objectives, benefits and costs of the lifelong learning investment, how might the necessary resources be mobilised and disbursed.

This country report is about the Netherlands. In January 1998, only two years after the OECD meeting, the Dutch Cabinet launched The National Program of Action 'Lifelong Learning' based on the same body of ideas that steered the OECD initiative. In that sense the results of this study can be useful both for the national policy discussion and for the discussions at OECD level.

In the following sections the economic-, social- and political context of the discussion about lifelong learning in the Netherlands is sketched and a number of comments are given to the data and analysis presented in the subsequent chapters.

1.2. Economic and social context

Education and training are very important means to improve the present functioning of the labour market. Although overall labour supply clearly still dominates overall labour demand, there are large differences between types of professions. Certain professions are characterised by difficulties in filling up vacancies, while in the case of other professions and sectors, there are hardly any problems. These differences are closely linked to the educational background needed. For the coming years, especially graduates of certain types of higher education (e.g. technics, informatics, transport, accountancy) will be hard to find for employers and bottlenecks are expected to appear (ROA, 1996). In a few directions for graduates of senior vocational education, this will also be the case (e.g. care, process-technology). Sufficient supply of these types of graduates out of initial education will be essential to prevent bottlenecks in the labour market. Moreover, training is important to give adults the opportunities to shift their skills into the directions which are heavily demanded on the labour market.

Recent developments reinforce the importance of lifelong learning. This is in the first place technological developments. Skills learnt in the initial education phase no longer suffice for a whole career. An obvious example is the quick penetration of computers in working life. In 1985 nearly 40% of companies made use of computers. In 1996 this has increased to 80% (CBS 1998). Learning on the job will not always be sufficient to cope with those changes. From time to time people will have to have the possibilities to “refuel”. The technological developments will not only lead to updating of skills, but in certain cases jobs will also disappear. Between 1985 and 1991, yearly 10.4% of the jobs disappeared. Between 1970 and 1980 this proportion was lower, namely 8.7% (Broersma & Den Butter 1996). This shows on the one hand that the pace of job-erosion is accelerating, but on the other hand that the current speed and uniqueness of this process should not be exaggerated.

The second factor contributing to the growing importance of lifelong learning are increasing economic changes. Consumers are less loyal to certain brands and make faster changes in their preferences. Companies must anticipate these developments. Otherwise they are in danger of loosing turnover. Van der Zwan (1987) already found that companies who heavily invest in market and product innovations perform better than those that do not. The increasing internationalisation means that not only shifts in domestic demand are relevant, but also shifts in global preferences and shifts in national production specialisations are relevant. Skills have to adapt to all those economic changes. For example, nowadays, already 20% of all employees in the Netherlands often have international contacts and another 18% sometimes (OSA 1997). With a yearly growth in real terms of about 6% of import and export in the nineties, this proportion is expected to increase further on in the coming years.

Finally, demographic developments are of major importance. The ageing of the population and the growing share of ethnic minorities are the most significant changes. But these are precisely the groups with a vulnerable position on the labour market and low activity rates. If their participation rate would not change, the overall participation rate will diminish, reinforcing the bottlenecks on the labour market. Activity rates have traditionally been relatively low among women, but there an overtaking manoeuvre is taking place. To avoid future shortages, it will be essential to further increase the participation of women, older workers and ethnic minorities. If this increase will not take place, then serious bottlenecks on the labour market in the longer term can be foreseen (De Koning et al. 1997). Already there are proposals from the SME organisation to increase the length of the working week to 40 hours.

Lifelong learning is an essential element in reaching a higher participation of those groups. Older workers are sometimes expelled from the labour market, because their wages are relatively high compared to their productivity. Employee training - in which they are presently underrepresented - is a means to improve this ratio (De Koning & Gelderblom 1992). With the population ageing, this group will become more and more important. Many women interrupt their participation because of care tasks in the household. Training can help them re-entering on the labour market by updating their skills or even shifting their skills towards a direction which is (more) needed in the labour market. Traditionally, limited numbers of women are educated in fields like technics, transport and

informatics. Immigrants often have to follow a longer term education trajectory before they can successfully enter the labour market. So all in all, post-initial education is an important means to increase the effective participation of these growing groups in the labour supply.

Although training is essential, it is not sufficient to increase the activity rates among those groups. Prejudice and practical restrictions (lack of child-care facilities) will also have to be dealt with. It is one of the major policy questions to what extent the market or the business community will solve this problem, and to what extent and for what purposes government intervention is needed.

1.3. Policy context

Policy discussions on the topic of lifelong learning have a rich history in the Netherlands, actual implementation of different aspects has been rather modest. Roughly speaking, until the eighties, there were part-time alternatives for regular secondary and tertiary education, a diversified field of liberal adult education often run by the voluntary sector, a well organised private sector especially in the field of correspondence education and the relatively uncharted sector of on-the-job training. Coherent policy was almost lacking for the post-initial phase. The eighties witnessed several blueprints for an all encompassing educational system, including what was then called the 'fourth sector' of adult and continuing education, but in the actual implementation only two elements remained. Adult basic education for people with little previous or no schooling that was set up as an independent and professionalised agency, protected by law and the Open University, modelled after its British example. At the end of the eighties, we also witness the fast growth of training funds and training facilities for the unemployed. However, because of budget cuts, the expenditures for training of the unemployed strongly decreased after 1994.

In the nineties, several policy developments come together, or are still in that process. There is the notion that business and (vocational) education have grown apart and should develop mechanisms through which the needs of the labour market can be expressed and translated into school goals and curricula. This has led to the so called 'structure of qualifications'. On a sectoral level industry describes broad job profiles at different levels, translates these into job qualifications and sub qualifications and these in turn are translated into educational goals, exams and curricula. The existing system of full time secondary vocational education and the apprenticeship system has been fitted into this structure. A major asset of the system is, that non-public providers can also offer courses, provided that they fit in the structure of qualifications and meet the necessary quality demands. It also offers the possibility to give the programs of other external providers (for example the training facilities for the unemployed) a position in the structure. Eventually this could also apply to recognized qualifications aquired through work or practical experience. The process is a joint responsibility of the industrial- and educational sector and has gone through several cycles already. The system has certainly served the purpose of bringing business and education closer together. A point of criticism is the abundance of separate job-descriptions and the question whether the system will be flexible enough to absorb changes over time and regional variations.

There is a strong sense that school leavers in particular, but the whole working force in general should obtain a minimum level of skills and knowledge, the so called minimum- or starter qualification. Starting point is that everybody should leave school with at least a vocational qualification necessary to enter the labour market. This was set at the primary phase of apprenticeship. In the ensuing (and still continuing) discussion the issues were whether this specific (minimum) qualification should be expanded, what the target group should be and whether this should be seen as a basic right (and obligation) backed by the law or an exhortation for the parties involved. Although there is some agreement that upper secondary general education or (some years of) full-time upper secondary vocational education should also be counted as a starter qualification, there is still no precise agreement about what should be included in the definition. Efforts to include the adult population in the target group have met with opposition, because of the large number of people involved. Millions of adults do not have a starter qualification and the costs involved to close that gap would be enormous. This is also the reason why the starter qualification has not become an individual right or obligation,

although for young people (potential school-leavers, unemployed youth) the sense of obligation is becoming stronger. The notion of an obligatory starter qualification was also abandoned because of the recognition that not everybody would be able to reach that level. For the at-risk groups in schools, and for some sectors, a lower level (assistant level) was defined as part of the structure of qualifications.

There is the notion that skills in knowledge must be updated regularly and that these efforts must be spread more evenly over the life-cycle. It combines with an increased awareness of the economic value of knowledge and the notion that education and training should be treated as investment rather than consumption. However it is mainly left to individuals and employers to make the necessary investments and create the necessary conditions. Fiscal instruments to promote training are one of the major instruments for government intervention.

There is widespread agreement that labour market participation must increase and that measures aimed at providing basic social security and measures aimed at the unemployed must be combined under the direction of local government to get as many people to the labour market as possible, either by creating employment or by making people employable through training or other means.

There is the notion that working and learning should be combined to an increasing extent. The traditional model of apprenticeship is adapted and expanded to fit other forms of education. The practical training in upper secondary and higher vocational education is expanded and experiments in university education are on the agenda. Although aimed at the initial phase of education, this could create better conditions for exchanges between work and education in the post-initial phase.

Finally efforts have been made to strengthen the public infrastructure of vocational and adult education by the development of strong and relatively independent regional educational centres. This has led to the formation of large centres, with a strong regional presence and a promise to cater for the needs of different target groups, young as well as adult. Whether they will fulfil that promise is a matter for the future.

These different ideas and developments have different origins, but they have combined to shape the landscape within which a concept of lifelong learning will develop in the Netherlands.

The National Knowledge Debate

A new element was introduced in the policy discussion in 1996. Going beyond the institutionalised, often department-driven policy-measures mentioned before, this discussion tried to emphasise the role of knowledge in the economy and society of the future. Leading questions where; 'What will society look like in the year 2010? What will we need to know and be able to do to function effectively in that society? An what measures need to be taken now so that we will have the necessary knowledge?' These questions led to the initiation of the National Knowledge Debate, a initiative undertaken by the Minister of Education, Culture and Science. The government posed these questions to the general public between march 1996 and march 1997.

In the recommendations of the Presidium of the Knowledge Debate, lifelong learning takes up a central role, as may be judged from this quote; 'Responsibility for lifelong learning doesn't rest solely, or even largely with the government, but also with trade unions, community organisations, employers and in particular the citizens themselves. It is up to citizens to keep their employability -i.e. their ability to work and to retain drawing power in the labour market- up to the mark. Employers should see training as a standard element of personnel policy. Educational establishments could increase the quality of their courses by providing updating contracts (maintenance contracts) when awarding diplomas. The government can selectively encourage lifelong learning, for example by tax allowances, by facilitating study leave or by distributing vouchers that would actively stimulate the demand for training. The government has a special responsibility for groups who, for various reasons, have difficulty in turning lifelong learning into a basic attitude' (OCW 1997m). The results of the

Knowledge Debate were presented to the Cabinet. They decided to set up a National Programme entitled 'Lifelong Learning'. A special Cabinet Committee was set up for this purpose, with all the relevant departments involved and chaired by the Prime Minister. They presented the program in January 1998.

National Programme 'Lifelong Learning'

The key elements of the programme are presented here. It is important to bear in mind that it is essentially a proposal to the next government with price-tags attached to different alternatives ranging from 665 million guilders to 1165 million guilders to be spent in the year 2002. It is also at least partly a continuation of policy measures already set in motion in a different context (like prevention of early school-leaving).

According to the programme, the Dutch economy at present performs very well, but the challenge is whether this performance can be sustained. Globalisation and technological developments demand a well skilled workforce and the quality of that workforce is one of the major economic assets of the Netherlands. To maintain and upgrade the quality of the workforce investments are needed. Investments in the employability of people; their ability to find and keep work. As far as the working force is concerned, this is mainly a responsibility of employers and employees. However government has an extra responsibility for employees-at-risk, like older employees, employees without a starter qualification and employees with flexible contracts. The government will stimulate the participation in lifelong learning for these groups.

Job seekers fall back on the safety net of social security. This could be turned into a trampoline amongst other things by training and other forms of learning. Young people should finish their school-career with an adequate qualification (minimum or starter qualification) at a level that is somewhere between ISCED 2 and ISCED 3. Those who leave school without that qualification, must have the opportunity to return to education to get a starter qualification, preferably in tracks where working and learning are combined or through recognition of skills and knowledge acquired outside the school.

In the programme of action three clusters are distinguished;

- Employability of employees and job-seekers,

To increase awareness, government will subsidise regional/local employability advisors to give information and advice. Also the development of instruments to screen the employability of employees/firms will be supported. Firms who invest in their workers in a structured manner will receive a recognition of quality 'Investors in People'. It will be investigated whether a recently introduced tax allowance for employers who invest in training, especially for SME's and older workers, can be applied to the non-profit sector as well. The suggestion to extend these tax measures to lowly qualified without a starter qualification in general, goes much further, and might be one of the more difficult choices for the next government.

It is proposed that the existing 'save-as-you-earn deduction' may be targeted at training by defining training and educational leave as saving goals and by increasing the amount that can be saved free of tax. Another incentive that is proposed is to give a tax free bonus to those who successfully finish a learning project. The work-place must increasingly be used as a learning environment. Acquired skills must be made visible and recognised. The government will set up independent assessment centres that can award certificates for those skills.

As far as job seekers are concerned, the government will ask the (independent) agencies responsible for the realisation of the social security to incorporate more training elements in the path from unemployment to work. In some cases training can be extended even when a job seeker has found (subsidised) work. The agencies for the social security and the employers must make the necessary arrangements to support this. In general, the funds for training at the disposal of the agencies for the

social security must be used more effectively. More experiments will be made possible to use money from unemployment funds to be invested in training.

- Employability of teaching staff,

Incentives will be implemented to stimulate the employability and mobility of teachers. This could take the form of skill maintenance contracts to be used for refresher courses or visits/practical training in the business community. The reward structure for teachers will also be made more dependent upon performance, professionalisation and the ability to obtain and use innovate skills and knowledge.

- Prevention of disadvantages and the reorientation of the educational system towards lifelong learning.

The age for compulsory education will be lowered to four years. It will be investigated whether the existing (costly) policy of reducing the size of school classes in the first years of primary education can be extended. A coherent set of measures to get early school leavers moving again will be put into place.

In a more general sense, innovations in education that are already going on like ICT in education, new combinations of learning and working in secondary and tertiary education, the 'study house' (to boost the independent acquisition of knowledge and skills and learn how to learn) can also make a contribution to lifelong learning.

Actual choices will be made by the next government, but it could be remarked that the elements of the programme, as far as the government is concerned, are mainly targeted at the initial phase of public education, and less so at the post-initial phase, in line with the agreed division of responsibilities. One of the positive points is that an effort is made to integrate existing measures from different actors in a more coherent framework.

Positions of political parties and social partners

There have been general elections in the Netherlands in May 1998 and an analysis was made of the programs of political parties and the social partners, as they prepared themselves for these elections and the ensuing negotiations about the program for the new government.

Lifelong learning is mentioned as a special area of attention in the programs of all political parties. All parties also mention the need for a closer collaboration between the educational- and the business system, by combinations of learning and working. Another topic in common for all parties is special attention for disadvantaged groups in adult education and training as a means to combat social exclusion. All parties agree that schools and educational institutions should become (even) more independent. The social democrats are the only party who explicitly mention a voucher system under the supervision of the social partners. They also mention that people should be entitled to reach a starter qualification, also in later life. Other parties mention fiscal measures or the use of skill-maintenance contracts by schools to stimulate lifelong learning.

As far as employability is concerned, all parties stress the necessity for more flexible arrangements between work, family-care, training and retirement. Training is seen as a necessary condition for more fluent transitions between these different spheres of life. Most parties claim extra funds for education, although reduction of the number of pupils per class in primary education and the introduction of ICT (measures already set in motion) absorb most of these funds. In general these extra funds are targeted at a strengthening of the initial phase in education. Explicit transfer of pubic funds from the initial to the post-initial system is never mentioned.

The social partners (trade unions and organisations of employers) also stress the importance of lifelong learning. They are more explicit in their wish that the budget for vocational education should be increased. The SME employer organisation is very explicit in its plans for new combinations of working and learning (they are co-founders of the SME pathway that is described in chapter 5 and proponents of the use of distance education in the dual system). Trade unions and SME stress the position of disadvantaged groups like older workers. Both also mention the importance of recognition of skills acquired in the work-place.

Political parties and social partners often mention very detailed plans as far as lifelong learning and related concepts like employability are concerned. It is not our intention to give a detailed analysis, if only because not all political promises are kept. What is important is the sense of urgency that these ideas seem to have in these programs and with it the probability that lifelong learning in one form or another will get political support in the next cabinet period.

1.4. Comments on data and analysis

Before we start with the presentation of the data, some important comments must be made.

Benchmark rates

Essential in the presentation of the data is the concept of target rate and participation gap. Target rates or benchmark rates give the percentage of a reference population that must reach a certain educational goal. The reference population might be different (e.g. the adult population, the 30 year olds) as might be the educational goal (e.g. participation in or completion of a certain educational level or program). A typical target rate would be '30% of 30 year olds must have completed tertiary education' or '90% of long-term unemployed must participate in retraining programs'. By comparing actual participation- or completion rates with these targets, the participation gap can be calculated and if a unit cost is available, the costs of closing that gap. The setting of these targets is always somewhat arbitrary. One option is to use external benchmarks as they were provided by the OECD at the beginning of this project. Those targets are based on 'best practice' in OECD countries and the notion that 'completion of upper secondary education seems a bare prerequisite' (OECD, 1996e, page 231 and page 236). This seems to underline the arbitrary nature of the targets, as is also stated by the OECD; 'But it should be remembered that insofar as Member countries are heterogeneous in their structure and circumstances, the notion of a best practice benchmark may be of only limited usefulness' (OECD, 1996e, page 236). Another option is for the separate countries to set their own benchmarks, but that would be very difficult from a political point of view, given the arbitrary nature of these targets. In this case we used the OECD-benchmarks with some modifications. For that reason, we have in some cases used a scenario-approach where calculations are made for different target rates. These rates reflect external benchmarks and internal discussions and give insight in 'what it would cost if..'.

Another comment on the use of these benchmarks is, that they are essentially static and might give the impression that once a certain target is reached, part of the lifelong learning puzzle is solved. However the essence of lifelong learning is that knowledge- and skill-demands change all the time and there will be a permanent need to maintain and upgrade skills and knowledge. In that sense reaching for example the target that 90% of the long term unemployed participate in retraining programs, only gives the basic condition for further learning. Furthermore these benchmarks are expressed in terms of formal educational qualifications and do not take account of skills and competencies acquired in the context of work and daily-life experiences.

Finally the cohorts of 27-year olds in secondary and of 30-year olds in tertiary education used to calculate the participation gaps, are much larger than younger cohorts. The cohorts of 27-year olds and 30-year olds consists of respectively 257.000 (born in 1968) and 264.000 people (born in 1965), whereas yearly cohorts aged 0-20 (born between 1975 and 1995) vary between 176.000 and 200.000. To correct

for this, one should reduce public costs in both secondary and higher education with a quarter[1]. Therefore in section 2.3.2 an additional calculation of public costs in secondary and higher education is given.

These sobering remarks might give the impression that working with target rates is not very useful. We think that it is, because it gives an impression of the order of magnitude of the costs-elements involved in implementing lifelong learning, while the scenario-approach leaves room for political debate and choice.

Formal and informal learning

Most of the data are restricted to formal, more or less institutionalised forms of learning. This doesn't pose a problem for secondary and tertiary education, but in the field of adult and continuing education, it leads to the exclusion of informal types of learning like on the job training or self directed learning. Also there are in general less detailed data about the extensive field of private or for-profit education as opposed to the public sector. There isn't as yet a reliable method to gather representative data about these types of learning, but it must be borne in mind that this is an extensive area of learning, especially for adults and that it might even increase in importance with a more extensive use of combinations of working and learning and the further introduction of information technology.

System and sector

In accordance with the OECD format, the data are presented in a sectoral fashion. The sectors in the analysis are upper secondary education (sometimes referred to as foundation learning), higher education, job-related training, education for poorly qualified adults and training for the (long term) unemployed.

There is a drawback to this sectoral presentation. It is obvious that changes in one sector will lead to changes in other sectors. Some attention is paid to these interrelationships, but we haven't as yet reached the stage where we could present a dynamic model of the whole educational system, including the initial and post-initial phase. Efforts will be made to do so in the sequel to this project.

Costs and benefits

In the report a description is given, amongst other things, of the costs and benefits of a system of lifelong learning. It seems however that the content is somewhat lopsided towards the cost-side. There is a reason for that. Determining the costs linked to education and training is far more easy than determining the benefits. In this report many detailed cost calculations are used. One of the main questions of this study is how cost reductions can be found while still performing the same or preferably an even higher output of educational production. Potential cost savings can be used to facilitate the implementation of life long learning. The abundance of data on costs makes it possible to get ideas about ways to make a more efficient use of funds dedicated to education and training. What financing mechanisms or other policy options are responsible for developments in the cost data? What can we learn from variations in cost data? How can we make use of these variations? Another also interesting perspective for facilitating life long learning is increasing the benefits of education and training. However, in contrast to the cost side, the availability of hard data on benefits is far more limited. In chapter 3 a more detailed description of this problem is given.

[1] As a percentage of the 1968-cohort, the 1975-1995 yearly cohorts vary between 69% and 78%. As a percentage of the 1965-cohort, the 1975-1995 yearly cohorts vary between 67% and 76%. Therefore we assume future public costs of closing the gap at three quarters of the calculated costs using 27-year olds and 30-year olds.

Adult education

Finally a technical comment as far as the description of the system of adult education is concerned. From the perspective of the participants, only those out of the labour force are counted when calculating the participation gaps in adult education for poorly qualified adults. Employed and unemployed following these programmes have been left out, because for them separate participation gaps are calculated. Otherwise for instance an employee following a course in adult education for poorly qualified adults (as job related training) would be counted twice. In this way the only group for whom no participation gap has been calculated are highly qualified adults not in the labour force.

From the institutional perspective, adult education for poorly qualified adults includes all forms of public adult education up to level ISCED 3. Therefore also part-time secondary education is included. It means that -with the exception of apprenticeship- the part-time varieties of secondary education (general and vocational) are included in the sections on adult education and not in the sections on secondary education. The main reason is that, traditionally the full-time and part-time varieties have developed more or less independently.

On the other hand, although part-time higher education can also be regarded as adult education, it is mainly described in the section on higher education because it is an integrated part of the system of higher education.

Chapter 2 Estimating Public Costs of Implementing Lifelong Learning

In this chapter a first estimate will be made of the public costs of achieving the educational needs implied by the objective of lifelong learning in the Netherlands. This estimate will be based on current enrolments in the various kinds of education. On the basis of current enrolment patterns, discussed in section 2.1, the increases in participation that are needed to realise the goal of lifelong learning in the various kinds of education will be estimated (section 2.2). The level of these targets is still open to discussion but are merely meant to give a rough sketch of the (financial) consequences of life long learning. Moreover in section 2.3 and 2.4, the costs associated with increasing participation in education will be calculated on the basis of existing cost figures per participant. Section 2.3 will deal with the public costs, whereas section 2.4 discusses the non-public or private costs. Moreover, in section 2.5 some remarks will be made about the dynamic evaluation of costs of the various types of education. The last section 2.6 then turns to the lifelong learning needs of four different reference groups in the Netherlands and discusses some of the barriers these groups face to participate in education or training. However, the first section starts with a brief outline of the Dutch educational system after which in section 2.1 current enrolments in the different kinds of education will be described.

2.0 The Dutch educational system

2.0.1. Introduction

One of the key features of the Dutch educational system is freedom of education. This principle includes:
1. the freedom to found schools and to determine the principles on which they are based in accordance with religious or ideological principles, and the freedom to organise the teaching;
2. financial equality between public and government-funded private education (*openbare en bijzondere scholen*);
3. the requirement for municipal authorities to provide a suitable form of public education.

Freedom of education is however restricted by the requirements laid down in the Compulsory Education Act. This act stipulates that children must attend an educational institution full-time until the end of the year in which they reach the age of 16 or have completed at least 12 full years. After full-time compulsory education it is obligatory to attend school at least part-time until the age of 18. The compulsory age to start education will be lowered to four.

These principles apply to primary, secondary, and higher regular education, but do not apply to other educational sectors like job-related training and training of the unemployed.

2.0.2. Primary education

The educational foundation is provided by eight years of primary education, for children aged four to twelve. Primary education is provided in primary schools, which are subject to the Primary Education Act that came into force in 1985[2]. In the first half of primary education the main aim shifts from social-emotional towards cognitive development. Attention for differences between individual pupils gains importance during the last four years of primary education, too. The intention of primary education is to provide a solid foundation for secondary education and lifelong learning in general. In order to reach this goal, the attention for differences between pupils has recently increased and attempts are being made to reduce class-size. Special attention is being paid to additional language lessons for groups of children who are lagging behind with respect to knowledge of the Dutch language, such as children from ethnic minorities. Another policy aim is to prevent unnecessary referral to the Special Education (*Speciaal Onderwijs*, which, among other aims, provides education for children with lesser cognitive abilities) because of below average knowledge of Dutch.

[2] This will soon be replaced by a new law on primary education (WPO).

2.0.3. Secondary education

2.0.3.1 General secondary education

After completing primary education, children flow into secondary education, which is governed by the Secondary Education Act, introduced in 1968. Secondary education is divided into four different types of secondary education; three levels of general secondary education and lower vocational secondary education:

1. pre (junior) vocational education (*Voorbereidend Beroepsonderwijs, VBO*) for 12- to 16- year olds;
2. junior/lower general secondary education (*Middelbaar Algemeen Voortgezet Onderwijs, MAVO*) for 12-to 16-year olds;
3. senior general secondary education (*Hoger Algemeen Voortgezet Onderwijs, HAVO*) for 12-to 17-year olds;
4. pre-university education (*Voorbereidend Wetenschappelijk Onderwijs, VWO*) for 12- to 18- year olds.

The first three years of secondary education are for a large part[3] the same for all pupils attending secondary education schools, except for pupils who attend special education. This means that all types of secondary education begin with this three year period of common curriculum (basisvorming).

Junior vocational education (VBO) lasts four years and leads to senior vocational education (MBO) and the apprenticeship system. It thus provides a basis for further vocational education.

Junior/lower general secondary education (MAVO) also lasts four years. Pupils who have completed MAVO, can go on to senior vocational education, they may flow into HAVO or they may enter the apprenticeship system. In 1999 MAVO and VBO will be integrated into one educational structure VMBO, a four year program with basically 3 specialisations: general, vocational and mixed.

Senior general secondary education (HAVO) lasts five years and in principle it prepares pupils for higher vocational education (HBO). However, in practice many pupils go on to VWO or flow into senior vocational education.

Pre-university education (VWO) at last has a duration of six years. Although it prepares pupils for university education, pupils who have completed VWO can also attend higher vocational education. VWO is provided at three types of schools: the Athenaeum (no classical languages), the Gymnasium (classical languages are compulsory) and the Lyceum (classical languages are optional).

A considerable part of secondary schools are part of a combined school embracing a number of different types of secondary education. The sizes of these schools vary greatly. At present a lot of secondary schools even offer all four different types of secondary education within the same educational institution.

The main difference between the different types of secondary education is the level at which the various subjects are studied and the number of lessons devoted to different subjects over the whole period of a particular type of education. For each type of secondary education one achievement level is determined after basic education. Pupils who pass one of the different types of secondary education are awarded a certificate ("diploma") which takes the same form throughout the country for the different types of school. Mobility between the various types of secondary education is possible.

In addition to these four different types of secondary education, there are two other types of vocational secondary education: senior vocational education (MBO) and apprenticeship. These two other forms of

[3] The common curriculum covers about 80% of the program.

secondary education usually are accessible after completing VBO, or after completing MAVO. Since 1996, MBO and apprenticeship are governed by a new Vocational and Adult Education Act (WEB), by which the various forms of vocational education and training became much more integrated by way of the creation of Regional Education Centres (ROC's) that provide the following kinds of education and training: adult basic education, general secondary adult education, apprenticeship system, senior vocational education and local non-formal education. That approach results from the aims of the WEB, among which are to harmonise the different types of education and to place the different forms of vocational and adult education into a single statutory framework, and to ensure that everyone is able to acquire a minimum starting qualification, with a special focus on specific target groups. The main element of this statutory framework is the so-called qualification structure. More about this will be said in the following subsection.

2.0.3.2. Senior secondary vocational education

For each educational programme in MBO and in the apprenticeshipsystem final attainment levels are determined. These attainment levels are integrated into vocational training profiles which themselves are based upon job-profiles. Both MBO and apprenticeship training are now brought together in this qualification structure. Within this qualification structure four different levels can be distinguished:
1. assistant training
2. basic vocational training (comparable to former primary apprenticeship)
3. advanced vocational training (comparable to former secondary apprenticeship)
4. specialist training or middle management training.

The second level of the qualification structure (basic vocational training) comes down to the starting qualification. Each educational programme on the four different levels can be attended by or the MBO-path or the appenticeship-path. Withinthis new structure the MBO is called the 'beroepsopleidende leerweg' (vocational training track) whereas the apprenticeship sytem is called the 'beroepsbegeleidende leerweg' (vocational guidance track). In the rest of the report we will use the old terms MBO and apprenticeship because they are easier to handle. Students who have successfully completed MBO or apprenticeship obtain a nationally recognised diploma or certificate.

Senior secondary vocational education (MBO, vocational training track) can be attended on both a full-time and a part-time basis. Full-time MBO may last up to four years and normally is attended by students aged around 16 to 20. Part-time MBO lasts two or three years and in general is attended by more older persons. Students who have successfully completed MBO can enter higher vocational education (HBO). In senior vocational education the practical component takes up between 20% and 60% of the total time spent in education.

2.0.3.3 Apprenticeship system[4]

Because the combination of work and learning is an important issue in lifelong learning, we will now devote special attention to the Dutch apprenticeship system. In apprenticeship training at least 60% of all time is devoted to practical training. Apprenticeships thus combine on-the-job training with theoretical training. The theoretical training is taught on a day-release basis, at present mostly within a ROC, whereas practical training usually takes place within firms. The responsibility for organising the practical training therefore lies with the employer. Apprenticeship training lasts between one and three years and is available to students over 16 who have completed their full-time compulsory education.

The Dutch apprenticeship system is based in the late 19th century, when, due to the limited accessibility of existing technical schools, and the large shortages of vocational educated labour, young people received training within firms, and part-time instruction within district schools. Advantage of such a system is the close contacts with every-day practice, which can function as a strong incentive to engage in learning and training. Further, technological changes can be incorporated into the curriculum relatively quickly.

[4] As mentioned above the new official name within the WEB is 'beroepsbegeleidende leerweg' (vocational guidance track).

However, as the system functioned, large differences existed between district schools and firms with regard to what was teached. Therefore the central government made attempts towards uniform qualifications throughout the apprenticeship system. More and more employers to an increasing extent had to pay their apprentices a wage in accordance with the collective labour agreement (CAO in Dutch), which implied strong increases in costs for firms. Working time became more regulated by the CAO's, too. The profitability for employers to train an apprentice fell sharply. The government answered this development by creating several subsidising schemes, of which the fiscal facilities (*fiscale faciliteit* in Dutch) under the Income Tax Contribution Relief Scheme (*Wet Vermindering Afdracht loonbelasting en premie voor de volksverzekering - WVA*) is the most recent one. Under the WVA an employer can receive a relief of his income tax bill up to a maximum of NLG 4,500 per apprentice per year, even in combination with several other subsidising schemes, such as those from the sectoral training and development funds (EIM, 1997). Many of those funds subsidise apprenticeship training through an industry-wide wage bill levy (Waterreus, 1997). Training of employed or unemployed under the apprenticeship system is also carried out by the national bodies, sometimes co-operating with the training and development funds in the sector involved. This latter co-operation exists, whenever the sectoral training fund does not serve as the national body, but operates separately, such as training fund of the metalworking industry, described in section 5.3.

The apprenticeship system is an umbrella term for 21 national educational bodies (Burgers, 1998). Each of them represents a different sector or occupational group. The organised firms, parents of the apprentices, and the schools by law are to be represented in the boards of the national bodies. The national bodies are responsible for the practical part of the apprenticeship training and constitute, together with the firms and the schools (formerly the district schools, nowadays the ROC's), the curriculum. Under the WEB, the ROC's are instead responsible for both the examination, qualification and counselling of the apprentices. The 21 national bodies are under a central, nation-wide body, the Association for National Bodies for Vocational Training (COLO). This association registers all articles of apprenticeship, and co-operates with the central government department of Education, Culture and Science, and that of Social Affairs and Employment.

A special element of the Dutch apprenticeship system, compared to the well-known German counterpart, is that it serves more than the aim of just training the youth. It also functions as a way of refreshing older people, whether employed or unemployed. In this sense we note that the number of older persons in the apprenticeship system is growing. Training for the unemployed was formerly carried out under the so-called PBVE, an adult apprenticeship training. Now preparation for apprenticeship training of unemployed is more or less carried out within the framework of the BBSW-measure, which will be discussed in the section on training of the unemployed.

2.0.3.4. Classifications

In international comparisons the six different types of secondary education in the Netherlands mostly are divided in lower secondary education and upper secondary education. In this definition upper secondary education comes down to the international defined ISCED3 educational level. Lower secondary education in the Netherlands consists of VBO, MAVO and the first three years of HAVO and VWO. MBO, and the years four, five and six (VWO) of HAVO and VWO belong instead to upper secondary education and more or less are comparable to ISCED3. A difficult category is the apprenticeship training. The lower levels have been categorised under lower secondary education and the higher levels under upper secondary education.

2.0.4. Tertiary Education

After completing secondary education students may flow into tertiary or higher education. Tertiary education in the Netherlands comprises higher vocational education (HBO)[5], university education (WO) and higher distance learning (Open University, OU). Since 1993, these sectors have been covered by one single act, the Higher Education and Research Act (WHW)[6,7]. The orientation on vocations is central to HBO-programmes, the interweaveness of education with research is central to WO-programmes (OCW 1993a, p.43). Both kinds of programmes are headed under the OECD-category 'university-level education'; the OECD-category 'non-university tertiary education' does at present not exist in the Netherlands (see f.e. OECD 1996, p.41).

Students can choose between attending higher education programmes full-time or part-time. Most full-time programs have a formal duration of four years, whereas the duration of part-time programs is in proportion to the study burden. Normally part-time students follow 50% of a full-time program, thus resulting in a study duration of eight years[8]. Entry requirements are equal for both full-time and part-time programmes and so is the value of the diplomas.

Anyone wishing to attend an university must have obtained either a pre-university (VWO) diploma or must have successfully completed the first year at an institute of higher vocational education. In addition, universities are allowed to establish special admission requirements for students who fail the mentioned requirements. University education is divided into eight sectors: language and culture, law, economics, behaviour and society, health, natural sciences, technology, and agriculture.

Universities have a two-tier system. The first tier or phase lasts four years and leads to the *doctoraal* examen[9]. The propaedeutic phase may last no more than one year. Students passing the final examination at a university are awarded one of the following titles, which are protected by Dutch law: *Doctorandus*, *Meester in de rechten* (law graduates) or *Ingenieur (ir.)* (technical universities and agricultural university). In the second phase students can obtain a doctorate by writing a thesis and be entitled to use the title *Doctor*. There are 13 universities in the Netherlands plus the Open University (OCW 1997d)[10,11].

The entry requirements for attending a HBO programme are less strict: anyone wishing to attend a higher vocational programme must have obtained either a diploma for senior secondary general education (HAVO), pre-university education (VWO) or senior secondary vocational education (MBO). Just as in university education there is a propaedeutic phase that takes one year. HBO covers seven different fields

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5 The term *Hoger Beroepsonderwijs* is variously being translated as both higher vocational education and higher professional education. In imitation of OECD (1991, p.45), we have chosen to use the term higher vocational education, while 'recognising that many of what are often termed the "semi-professions" (education, applied engineering, accounting et cetera) are served by the HBO system' (ibid.).

6 In Dutch: *Wet op het Hoger onderwijs en Wetenschappelijk onderzoek.*

7 Also part of higher education, and thus falling under the WHW, is teacher training for the various fields of education. Teacher training is provided both by institutions for higher vocational education and universities.

8 With the introduction of the Higher Education and Research Act, nearly all programs in higher education have a study burden of 168 credits. Exceptions hereupon are for example the medical studies. A student is supposed to work 40 hours for one credit, thus a total of 6720 hours over the whole study. This equals four years of 1680 hours of study a year for full-time students.

9 Recently, plans have been developed to differentiate in the length of the first phase (OCW 1997a, p.105). The existing four-year programs remain the rule, but universities can, in special cases, deviate from this. They have the possibility to offer 126 credit-curricula, i.e. 3-year courses. Students who pass these 3-year courses are awarded the title *kandidaat*. After the 3-year studies, continuing courses are still possible, leading to a *doctoraal* diploma. Furthermore, universities can offer courses with more than 168 credits, i.e. longer than four year.

10 Furthermore, there are some other institutions of higher education, mostly theological institutions and some international ones (OCW 1997d).

11 Nine of them are state-run universities, including three universities which focus predominantly on engineering and technology and one agricultural university. There is one municipal university, and three government-funded private universities (two catholic and one reformed university). It must be emphasised here that all 13 universities have the same status in the Netherlands, and are financed from public sources by the same standards.

of study: technology, agriculture, economics, social and cultural welfare, health, language and culture, and education.

Students passing the final examination of a four year HBO programme have the right to use the title *Ingenieur (ing.)* (higher technical and higher agricultural education), or the title *Baccalaureus* (graduates of the remaining HBO programmes). Internationally, HBO graduates may adopt the title "Bachelor". These titles are all protected by law in the Netherlands.

Before the merger wave in the 1980s there were about 400 institutions for higher vocational education. In a few years this number has been cut down to about 60 institutions today. Recently, non-state-funded private educational institutes have been given the opportunity to offer higher vocational education programs. The scope of this development can not yet be estimated. For instance, the LOI, one of the largest privately funded institutes for correspondence courses, has started in March 1997 with providing HBO programs through Internet, but the institute does not provide enrolment data.

The Open University (OU) was founded in 1984 to make higher education more accessible for adults and to experiment with alternative didactic forms like distance education. The Open University is intended for persons aged 18 or older who are unable or unwilling to enrol in the above described regular programmes of higher education.

There are four special features with which the Open University distinguishes itself from regular higher education. First, there are no admission requirements other than a minimum age of 18 years, i.e. admission is not conditional on prior programmes or certificates. Second, students are to a large extent free to put together their own study program. Third, because of the fact that the system is mainly based on distance education, students can study where they want. The last feature is that students can study at their own pace.

Apart from these three forms of higher education in the Netherlands, there are also two other more special forms of higher education, i.e. work-based learning within higher vocational education and short higher education programs. The last form of higher education that will be briefly discussed is work-based learning. Within higher vocational education work-based learning has started only recently, whereas within university education it does at present not exist. However, in the Design Higher Education and Research Plan (HOOP[12]) 1998 (OCW 1997a, p.34-35), the Minister of Education, Culture and Science announced that universities will get the opportunity to start work-based learning. It must be emphasised though that work-based programs within university education already exist at post-graduate level: for example in branches such as accountancy, medicine and teaching. Students participating in work-based programs will obtain the same level of knowledge as regular students, and thus the same diploma. The programs will take a longer time though.

One form of work-based learning is the so-called SME-pathway (*MKB-route*), which will be discussed as a case-study in chapter 5. This form has started in the previous academic year.

Besides regular initial education, in the sense of education mainly taking place in the first 20-25 years of life or so, there is also education and training of adults in later stages of their lifetime or career. In this report we give special attention to three types of education and training for adults: adult education for poorly qualified adults, education or training for the unemployed and education or training of employed workers.

[12] In Dutch: *Hoger Onderwijs en Onderzoek Plan*.

2.0.5. Training of poorly qualified adults

The system of education for poorly qualified adults[13] (not in the labour force) until recently consisted of basic adult education and part-time courses in secondary adult education. Basic adult education (*basiseducatie*) in the Netherlands was meant for adults with low levels of initial education (no more than 2 years of secondary schooling). It involved courses in language, calculation and social skills (CBS 1993, p.11). Dutch language courses for people from non-Dutch origin formed the majority of the courses.

Secondary adult education involved part-time courses in general lower secondary education (MAVO) and general upper secondary education (HAVO/VWO), and vocational upper secondary education (MBO). These courses are meant as 'second chance education' for adults who have no (major) certificate in secondary education. Furthermore the part-time courses in lower secondary education include courses in Dutch as a second language (NT-2) and transition classes (*schakelklas*). Dutch as a second language is mostly followed by higher educated immigrants, who are not served by basic adult education (Crince le Roy & Lems 1993, p.16). The transition classes are meant as a preparation for vocational or higher education (Janssen 1997, p.37).

As a consequence of a new Adult and Vocational Education Act (WEB) the following changes have taken place from 1 January 1997. Basic adult education together with NT-2 (the courses in Dutch as a second language under the heading of lower secondary adult education) is divided into programmes aimed at developing general personal and social skills, Dutch as a second language and programmes aimed at self-reliance (reading, writing, arithmetic). Next to this, secondary adult education will continue to exist (Ministerie van Onderwijs, Cultuur en Wetenschappen (OCW) 1996a, p.16).

The part-time courses in general secondary education have a particular position, in the sense that they are organised separately from the full-time courses in secondary general education. At present they are integrated in the Regional Education Centres (ROC's). Part-time courses in vocational education have always been organised together with their full-time counterparts.

2.0.6. Training of the unemployed[14]

Turning finally to training for the unemployed, under the period of consideration this largely took place under the responsibility of the Public Employment Service (PES)[15]. Until 1991 the PES was a Directorate General of the Ministry of Social Affairs and Employment, but in 1991 it was turned into an independent organisation. However, funding is still provided by the Ministry. An increasing share of the funds made available for training and other policies originates from the European Social Fund.

The Dutch situation is such that the PES has a number of, partly overlapping, measures for training unemployed persons. These measures are overlapping both with respect to the characteristics of the trainees as well as the fields of training. A considerable part of the training is carried out by training institutions coming under the PES, although training is also contracted out to public schools and private training institutions. Since the PES has become a decentralised organisation in 1991: the regional boards of the PES can within wide boundaries determine their own policy and strategy with respect to training unemployed persons.

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[13] Poorly qualified adults are according to OECD guidelines defined as adults with an educational attainment below ISCED 3.

[14] Parts of the text of this subsection are taken from a recent paper: J. de Koning (1998). This paper was produced in the framework of a joint project with other partners (leading partner: Wissenschaftszentrum Berlin) for the European Commission.

[15] Recently, the picture has however changed somewhat. For instance, private agencies for temporary labour are broadening their activities and are also offering training for unemployed job seekers who are willing to do work on a temporary basis. Often temporary work is seen as the first step towards permanent employment.

The following training instruments are used by the PES:

- centres for adult vocational training which are part of the PES (*Centrum Vakopleiding, CV* in Dutch);
- centres for basic training (*Centrum voor Beroepsoriëntatie en Beroepsuitoefening, CBB* in Dutch);
- Centres for female vocational training (*Vrouwenvakschool, VVS* in Dutch);
- General Training Scheme: a subsidy scheme for training which is also open to regular schools and private training agencies (*Kaderregeling Scholing, KRS* in Dutch);
- the Contribution Scheme Sector Specific Training for Job-Seekers (*Bijdrageregeling Bedrijfstakgewijze Scholing Werkzoekenden, BBSW* in Dutch);

Some of the centres for adult vocational training specialise in technical or administrative training; others cover both. The training contents resembles apprenticeship training, although a person has to follow continued training as a worker to obtain the apprenticeship diploma. Although the Centres will remain within the Public Employment Service, their ties with the rest of the PES will become looser. In the future no financial guarantees for a specific number of places will exist anymore. They will have to compete with other suppliers of training to assure their position in the future.

The centres for basic training and the centres for female vocational training are not part of the PES, but they are financially very much dependent on the PES. The centres for basic training originate from the Ministry for Health and Well-being. In that time they helped migrants to integrate in Dutch society. Although ethnic minorities are still forming a large part of the trainees, the centres are now also open to other groups with a weak labour-market position. Furthermore, the centres became more oriented on labour market integration. Training is basic, that is it:

- provides general information about the labour market;
- provides general cognitive skills in the field of the Dutch language and arithmetics and also social skills;
- provides pre-qualification basic vocational skills. It was hoped that the centres for basic training would be followed by vocational training, but this did not happen very often in practice,

Table 2.0 Dutch instruments for training the unemployed

	Profile of the trainees	Level of training	Duration of training	Current situation
Centres for vocational training	Unemployed persons	A number of modules of the official apprenticeship training	One year (in practice often shorter)	Independent part of PES with less financial certainties beforehand
Centres for basic training	Long-term unemployed Low skilled Ethnic minorities	Pre-qualification	One year (in practice often shorter)	Some of the centres disappeared due to cuts in the PES budget
Centres for female vocational training	Women wanting to re-enter the labour market Women from minority groups	Secondary and upper secondary level	Two years	Idem
General subsidy scheme for the training of unemployed people	Unemployed persons	Varies considerably	Mostly relatively short	Still exist
Contribution Scheme BBSW	Unemployed persons	Varies, includes (pre-) apprenticeship training	One year (or shorter)	Financed through PES, run by branch-organisations

The main purpose of the centres for female vocational training is to provide training for women re-entering the labour-market, in non traditional fields, particularly information and communication technology. Although existing courses are also open to women, it is difficult for them to cope with the male dominated environment. The courses are on the secondary or even upper secondary level which is

higher than the centres for vocational training. Training duration is also longer. Both the centres for basic training and the centres for female vocational training suffered from the cuts in the PES budget. A number of them did not survive.

The general training (subsidy) scheme allows employment offices to subsidise training for unemployed persons. Both field and duration of training varies considerably. The training subsidised under this scheme is carried out by different types of training institutions. The vocational centres mentioned before are also taking account of some of the training under this scheme. These centres, regular schools and commercial training agencies each make for one-third of training expenditure under this scheme (Zandvliet, 1991).

Under the BBSW scheme the PES co-operates with branche-organisations in training of the unemployed (*O&O-fondsen* in Dutch). This measure aims at stimulating branches to use training of unemployed as a means to counter labour market bottlenecks. The branches make training plans which are evaluated by the relevant regional PES-offices and the central office, to see whether they are eligible for the subsidy. There is a maximum subsidy per unemployed of NLG 7,000. Training which is meant as a preparation for the apprenticeship system is also eligible for the subsidy. One of the conditions is that the training has to make efficient use of the existing training infrastructure.

Table 2.0 summarises the main characteristics of the various instruments. The list of training instruments in table 2.0, however is not complete. Examples of other training measures are a subsidy scheme for computer courses and so-called applications clubs. These instruments will be labelled as 'other' instruments in this study.

2.0.7. Training of the employed

Coming to job-related training of employees, this mostly takes place through employer sponsored internal and external courses and informal training in the work situation. Although a large part of this field is left over to market-forces, collective agreements between the social partners also play an important role. As a consequence of collective bargaining agreements at industry level, in a lot of sectors levy systems have been set up. These levies are allocated to sectoral trainingfunds (known as *O&O-fondsen*), which among other things subsidise the training of employees.

Other forms of adult education are individually followed part-time courses in public and private education. Next to the part-time public education mentioned before, there is private distance education and post-school face-to-face education. The courses of these kinds of adult education are followed both by employees, whether or not as job-related training, as well as by others[16].

This concludes the outline of the Dutch education and training system. The next section will go on to discuss current participation in all educational sectors.

[16] Several other overlaps between categories of adult education exist. For example: employees can follow part-time education in general lower secondary education partly at the expense of their employer.

2.1 Current enrolment patterns

After the outline of the Dutch educational system in the previous section, the current section will provide an overview of the participation in the various kinds of education and training. Moreover some remarks will be made about the developments which can be expected in the different kinds of education in the next decade. The first subsection will start with foundation learning, which in the OECD guidelines is interpreted as upper secondary education. In subsection 2.1.2 we will turn to higher education in the Netherlands. The third subsection deals with adult education which subsequently discusses the following three kinds of education or training: adult education for poorly qualified adults, job-related training for employees and training for unemployed persons. Finally, in the last subsection some remarks on the future developments in the various kinds of education will be made.

2.1.1 Foundation learning (upper secondary)

Like already mentioned in section 2.0, upper secondary education in the Netherlands compromises several forms of education: general secondary education (classes 4, 5, and 6), senior vocational training or education and apprenticeship[17]. With the new law on vocational education (WEB), the latter two are placed in the same legal structure.

In 1995 in total 608,029 students were enrolled in full-time upper secondary education. As is shown in table 2.1a, of this total number of students 31,5% attended upper general secondary education. The great majority (68,5%) of all upper secondary students thus participates in vocational secondary education. Of this 68,5% attending vocational education, 47,5% attends senior vocational education, whereas 21,0% participates in apprenticeship[18]. Within senior vocational education most students are enrolled in the economic sector, followed by the technical sector.

Table 2.1a Students enrolled in upper secondary education, 1995

1995[a)]	General (classes 4,5, and 6)			Senior Secondary Vocational						Apprenticeship	Total
Specific education	HAVO	VWO	Total	I[b)]	II	III	IV	other	total		
Total number of students	91,487	100,291	191,778	86,855	16,832	95,194	72,700	17,113	288,694	127,557	608,029
Students as percentage of all upper sec. education	15.0%	16.5%	31.5%	14.3%	2.8%	15.7%	12%	2.8%	47.5%	21%	100%
Percentage of girls/women			52.4%	15.1%	33.6%	49.6%	87.7%	57.1%	48.3%	24.5%	44.6%

a) It is not possible at present to show more recent data, because 1996 data concerning the number of students participating in apprenticeship are not yet available.
b)The different sectors in senior vocational education are:
I: technical sector;
II: agricultural sector;
III: economic sector;
IV: social services and health care sector;
V: other, among which orientational courses.
Source: CBS, 1997 and data provided on request by the sector Education and Social Security.

When considering the share of girls or women in upper secondary education, it can be seen that girls are strongly underrepresented in apprenticeship, with only 24.5% of all students in apprenticeship being

[17] General secondary education stands for "Algemeen voortgezet onderwijs" (MAVO / HAVO / VWO), Senior vocational training for "Middelbaar beroepsonderwijs" and apprenticeship stands for "Leerlingwezen". Here we note that "MAVO", the lowest level of general secondary education, is not part of upper secondary education but instead belongs to lower general secondary education. The exact classification of apprenticeship training differs in existing statistics, but in our case, we include it fully into foundation learning.

[18] In interpreting the number and percentage of students enrolled in apprenticeship, it is important to remark that the apprenticeship programme is by definition part-time. The data thus refer to all students / pupils that participate in apprenticeship training. For general secondary education and senior vocational education only full-time students are taken into account.

girls. The main reason for this is probably the fact that apprenticeships are most common in the traditional industrial sectors in which the vast majority of working people is male. This contrasts to the situation in general secondary education where the number of girls just outnumbers the number of boys. Also in senior vocational education girls are relatively well represented, with almost half of the students being girls. However, girls in senior vocational education are highly overrepresented in the social services and health care sector (almost 88%), whereas they are hardly represented in the technical sector (15.1%).

In the Netherlands most students participating in full-time upper secondary education belong to the 16 to 20 year old age groups. Table 2.1b gives an overview of the net enrolment rates in upper secondary education for each of the age groups between 16 and 20 years.

Table 2.1b Net enrolment rates by single year of age in full-time upper secondary education (in %[a])

Year	Age				
	16	17	18	19	20
1990	49.0%	66.4%	57.0%	36.5%	20.5%
1991	50.9%	68.2%	57.7%	37.4%	21.2%
1992	50.6%	69.0%	59.1%	38.5%	22.6%
1993	51.3%	70.1%	60.2%	40.4%	23.9%
1994	52.0%	71.4%	61.1%	41.2%	25.5%
1995	52.6%	71.9%	60.7%	41.0%	25.5%

a) Enrolment rates relate to total participation of students in full-time upper general secondary education, senior vocational education and apprenticeship. In determining the participation rate in upper general secondary education only those students that are enrolled in the second stage of general secondary education are counted as participants. This means that only those students attending the highest classes/years of HAVO (4 and 5) and VWO (4, 5 and 6) have been taken up in the table.
Source: for general secondary education and senior vocational education: 1990-1992, 1994 and 1995 data:
CBS, *Pocketbook Educational Statistics, 1991, 1992, 1994/1995, 1996 and 1997*. For 1993 data: CBS, 1995c.
For apprenticeship: CBS, *Volwasseneneducatie, beroepsbegeleidend onderwijs en vormingswerk, cursorisch ondernemersonderwijs, 1990/1991, 1991/1992, 1992/1993*; and: CBS, *Internal data 1997*.
For population: CBS, *Monthly statistics on population, 1990-1995*.

The participation rates in the table refer to enrolment of students in full-time secondary general and vocational education and in the apprenticeship system. Only participation in full-time education is presented because it is very likely that the large part of the students in the given age range from 16 to 20 years are enrolled in full-time secondary education[19]. From 1998 on, part-time courses can only be followed if one is 18 or older. Moreover, for students aged 16 to 20 who would like to study part-time, there is the possibility of an apprenticeship, which is a combination of part-time studying and working part-time.

The enrolment rates in the table are calculated by summing up the participation rates of a particular age group in all three kinds of upper secondary education. For each of the abovementioned kinds of upper secondary education the enrolment rates by single year of age are calculated by dividing the number of students of a particular age group enrolled in that kind of education by the total number of persons in the population of that age group.

[19] Another reason to present only full-time enrolment in upper secondary education is that there is no information available on the participation rates by single year of age in part-time secondary education. Of all students (all ages) enrolled in general secondary education (MAVO / HAVO / VWO) the percentage that attended part-time education in 1995 equalled 8.9%. In senior vocational education 9.9% of all students enrolled, attended part-time education.

As can be seen from table 2.1b overall participation in full-time upper secondary education has increased from 1990 to 1995. In each age group, shown in the table, enrolment has increased[20]. After leaving general secondary education individuals more and more flow into other types of education instead of going to the labour market. This presumption is confirmed by the relatively large increase in the participation rate of 20 year old students in secondary education. The enrolment rate of this age group has grown with almost 25%. This development can be interpreted as a lengthening of the time that students spend in secondary education.

After having described participation in upper secondary education, the next subsection deals with participation in higher education.

2.1.2 Higher education

In describing the participation in higher education, we will start with regular higher education: university education and higher vocational education, both full- and part time. Next, higher distance learning provided by the Open University (OU) will be discussed. Finally we will deal with work-based learning.

2.1.2.1 Full-time education

In the academic year 1996/1997, the number of students registered in full-time university education was 154,076. As can be seen in table 2.2a, the bulk of the students (84%) is in the age-category 18-25. Only about 17% of all students is aged 26 years or older. In the same academic year a total of 233,328 students were enrolled in full-time higher vocational education. Here also the majority of students is aged 18 to 25 years, with more than half of all students aged 18-21. Only 6% is 26 years or older. Thus, the age profile of students choosing vocational education is younger than the age profile of students choosing university education. This reflects on the one side a longer entry road for university education. For instance HAVO takes five years, whereas VWO takes six years. Also, the average time spent in university education is longer than the average time spent in higher vocational education (5.8 years versus 4.5 years, see also section 2.3.2). Finally, included in the number of university students are students that participate in post-graduate courses; they already have obtained a WO-diploma and are older.

One of the reasons for the fact that participation in full-time higher education by students aged 26 or older is low, can be found in the financial sphere. Starting in the academic year 1991/92, full-time students older than 27 can no longer claim student financial aid in the form of WSF (see chapter 3 & 4).

Table 2.2a The age-distribution of students in full-time higher education, academic year 1996/1997.

	<= 17 years	18-21 years	22-25 years	26-29 years	>= 30 years
University education (N=154,076)	..%	40%	44%	12%	5%
Higher vocational education (N=233,328)	2%	53%	38%	5%	1%

Source: Calculations on the basis of data from CBS (data provided on request by the sector Education).
..% means that the figure is smaller than 1%.

Persons aged 55 years or older also participate in higher education, but only in very modest numbers. In the past decade some universities have even set up special courses for elderly, called higher education for elderly (HOVO)[1]. These courses must be viewed as distinctive from regular university education. As participation by older persons in the labour force rises, participation in higher education by this age category will probably decline (Bronneman-Helmers & Kuhry 1996, p.9). This effect could of course be mitigated if universities would provide more job-related contract education to (older) employees.

[20] In percentage terms the enrolment rates for each respective age group (from 16 to 20) increased with: 7.4%, 8.3%, 6.5%, 12.3% and 24.4%.

[1] In Dutch: *Hoger Onderwijs Voor Ouderen.*

When looking at table 2.2a, it can also be seen that some students are aged 17 years or younger, which is a-typical, since higher education in the Netherlands normally starts at the age of 18. These students could be 'early students', but it is more likely that this group concerns HBO students, with senior secondary general education as preliminary training (which takes 5 years). This is supported by the fact that nearly all participants aged 17 years or younger are enrolled in higher vocational education (see also table 2.2b).

Table 2.2b shows net enrolment rates in full-time higher education by gender and age, i.e. the number of students in each age group proportional to the total population in that age group. The highest enrolment rates for higher education are reported for the 18-21 year-olds: nearly a quarter of that age group participates in full-time higher education. The proportion of students that chooses vocational education is about twice as large as the proportion that chooses university education (16.5% against 8.2%). The share of 22-25 year-olds participating in higher education is 17.4%. As pointed out before, this lower share of this age group when compared to the previous age group is caused by less 22-25 year-olds participating in vocational education (16.5% compared to 9.9%); the proportion of 22-25 year-olds that participates in university education more or less is the same (8.2% compared to 7.5%).

Table 2.2b Net enrolment rates in full-time higher education by gender and age, academic year 1996/1997.

	Higher education[21]						
		Full-time higher vocational education			Full-time university education		
	Total	Total	Men	Women	Total	Men	Women
<= 17 years	3.1%	3.0%	2.2%	3.8%	0.1%	0.1%	0.1%
18-21 years	24.7%	16.5%	14.4%	18.7%	8.2%	8.3%	8.0%
22-25 years	17.4%	9.9%	11.2%	8.6%	7.5%	8.1%	6.9%
26-29 years	2.9%	1.1%	1.4%	0.9%	1.7%	2.0%	1.4%
>= 30 years	0.1%	..%	..%	..%	0.1%	0,1%	0.1%

Source: Calculations on the basis of data from CBS (data provided on request by the sector Population and by the sector Education).
..% means that the figure is smaller than 0.1%
The age of participants is defined as reference year minus year of birth (CBS 1997a, p.65). So someone who is born in 1979 is considered as 17 years old in the college year 1996/1997. For vocational college students the census date is 1 October 1996. For universities it is 1 December 1996. The census date for the population-figures is 1 January 1997. Net enrolment rates for each age-group are obtained by dividing the number of participants in each age-group by the total population in that age-group.

In the age category 26-29 participation rates are small, both for vocational education and for university education. In this respect the Netherlands exhibits behaviour at variance with for example the United States, Germany and the Scandinavian countries where the share of older students in higher education is much larger (OECD 1996, p.129). The Netherlands used to compensate low figures of full-time students in the age category 26-29 with high figures of part-time students, especially among higher vocational education students. But, as will be elaborated in the next subsection about part-time higher education, participation rates in part-time education have declined in recent years.

[21] The OECD category 'non-university tertiary education' does, at present, not exist in the Netherlands.

The age profile for women in vocational education is younger than for men. Net enrolment rates for women in the 18-21 age group are 18.7% against 14.4% for men; in the age group 22-25 these percentages have declined to 8.6% and 11.2% respectively. This younger age profile for women is not found when looking at university education. There, in all age groups we find net enrolment rates that are lower for women than for men.

2.1.2.2 Part-time education

Turning to part-time education, the primary target group for part-time higher education programmes are people who want to enrol in a higher education programme (and who possess the required preliminary training), but lack the opportunity or willingness to participate full-time, for example because of work- or care-obligations. In this respect part-time education was also supposed to have an emancipating effect, by stimulating the participation of disadvantaged groups (women, elderly). However, research conducted in 1991 (Lington et al, p.23), shows that 25% of the participants in part-time vocational education and 65% of the participants in university education already had a HBO-diploma. Furthermore, 25% of the participants in university education already had obtained a WO-diploma. When asked for their motives to participate, the most important motives were to further their own development and to enhance mobility, both in the current job as well as into other jobs (Lington et al 1991, p.25).

Lington et al. also provide information on participants' sources of income (Lington et al., 1991, p.26). Since part-time HBO and WO students more or less show the same pattern of income sources, they are treated together. The majority of part-time students combines their study with a paid job. 65% with a full time job, and 22% with a part-time job. Some participants own a company (2%), 2% is entitled to financial aid and 2% does not have own sources of income. The other participants can be divided into participants that are on welfare (2%), unemployed (4%), disabled (1%) or retired (1%).

The supply of part-time programmes in vocational education has risen in recent years. In 1991/1992, 356 programmes were offered both part-time and full-time, and 62 programmes only part-time (together 45% of total supply). In 1995/1996 this has increased to 439 programmes that are offered both part-time and full-time and 165 programmes offered only part-time (together 52% of total supply) (Huisman & Kaiser 1997, p.100). However, the demand for part-time programmes has declined enormously. The proportion of part-time students in the total population of higher vocational education was 16% in 1996/1997, in 1990/1991 this was 21% (CBS 1997a, p.16) while in the 1960s till the early 1980s this was around 35%, with outliers of 40% (OCW 1996a, p.11).

The supply of part-time programmes in university education has also risen in the past years, but not as fast as in higher vocational education. Before 1983 separate part-time programs did not exist in university education, although it was possible to participate part-time in most programs. With the restriction of the period of subscription in 1983 it became necessary to distinguish separately registered part-time programs (OCW 1996a, p.11). The number of part-time programmes offered in 1991/1992 was 52 (about 13% of total supply), in 1995/1996 this has increased to 79 programmes (about 17% of total supply). All programmes in university education but one, are offered both part-time and full-time (Huisman & Kaiser 1997, p.104). The share of part-time participants in the total population of university education was only 7% in 1996/1997, slightly less than the maximum of 8% in 1990/1991 (CBS 1997a, p.11).

Among other things, reasons for this decline in enrolment in part-time higher education can be found in the financial sphere. Tuition fees for part-time education have risen sharply in the last ten years. For example, tuition fees for part-time students in higher vocational education amounted to NLG 710 in 1987 (55% of what full-time students had to pay) whereas in 1990 part-time students had to pay nearly twice as much, NLG 1,325 (83% of full-time tuition fees). In university education the same pattern can be observed with, until 1991, higher tuition fees for university students. Starting in the academic year 1991/92, tuition fees are the same for university and vocational students. Today, institutions can decide themselves what amount to charge, with a minimum of NLG 1,250. Furthermore, from 1991 onwards

part-time students are not entitled anymore to student financial aid in the form of WSF (see chapter 3 & 4).

Another reason for the decline in participation in part-time higher education could be the diminishing importance of second-chance education. In the years to come it is expected that part-time education, both in university education and higher vocational education will continue to decline (OCW 1997f).

In the academic year 1996/1997, a total of 11,804 students participated in part-time university education. As can be seen in table 2.2c, 42% of these students is aged 26-34. Also, nearly one-third of the students is 40 years or older. In the same academic year, the number of students enrolled in part-time higher vocational education was 42,929. Nearly half of the students is aged 26-29 years. Thus, we can conclude that whereas the majority of students in full-time education is aged 18-25 years, the bulk of students in part-time education is aged 26-34. Furthermore, also in part-time education the age profile of students in vocational education is younger than the age profile of students in university education.

Table 2.2c The age-distribution of students in part-time higher education, academic year 1996/1997.

	<=21 years	22-25 years	26-29 years	30-34 years	35-39 years	>=40 years[2]
University education (N=11,804)	..%	10%	21%	21%	17%	30%
Higher vocational education (N=42,929)	2%	14%	25%	24%	16%	20%

Source: Calculations on the basis of data from CBS (data provided on request by the sector Education).
..% means that the figure is smaller than 1%

Participation in part-time higher education is an insignificant phenomenon in all age groups. Highest enrolment rates can be reported for the 26-29 age group, but even in this case we are only talking about 1.3% of the relevant age group. A detailed table with net enrolment rates in part-time education by gender and age can be found in appendix 1.

Before turning to higher distance education some attention has to be given to short higher education programmes. In the college year 1995/1996 eight short vocational programmes were registered in the Central Register of Higher Education Study Programmes (CROHO)[22], and only one short university programme (Huisman & Kaiser 1997, p.115). The short programmes take 2 years. Looking at net enrolments in short education programmes, both university and vocational, it is obvious that participation is insignificant in all age groups: net enrolment rates for the age group 18-21 years and for the age group 22-25 years are 0.1%, for the other age groups they are even smaller than 0.1%. Thus, we can say that short higher education programmes are negligible in quantitative terms.

Universities also provide post-graduate education, for example for accountancy and medicine. Apart from this, they also offer the possibility of contract education. For example, they offer employees the possibility to participate in one or more classes. In addition, universities also provide postgraduate courses such as teacher training and medical courses (for doctors, dentists, veterinarians, and pharmacists). These courses vary in length. As pointed out above, postgraduate students are included in the number of university students presented in tables 2.2a-2.2c. They make up about 3% of the population of university students (CBS, data provided on request). It almost entirely concerns full-time students. Two-third of the postgraduate students are aged 24 to 27.

After this outline of the participation of students in regular higher education, we turn to higher distance learning provided by the Open University.

[2] Unfortunately, CBS did not provide more detailed information on the age group 40 years and older in university education. For reasons of comparison the data on higher vocational education, which were more detailed, were adjusted.

[22] In Dutch: *Centraal Register Opleidingen Hoger Onderwijs.*

2.1.2.3. Higher distance education

In the academic year 1995/1996, about 28,000 students were enrolled at the Open University. About 25,000 students subscribed for at least one new course in that academic year. These students, 90% of the registered population, are defined as active students (Van der Heide 1996, p.37). Here we shall only comment on active students.

Table 2.2d shows the age distribution of students at the Open University. From the table it is clear that students at all ages participate in higher distance education, in particular in the age group 25 to 39. Less than a quarter of the students only want to participate in some courses with no intention of graduating. Almost half of the students has the intention of obtaining a diploma. However, in 1996 only 246 students graduated from the Open University (Open Universiteit 1997, p.24). There thus seems to be a discrepancy between intention and realisation.

Table 2.2d Distribution of active students at the Open University by gender, study intention,[23] and age, 1995/1996.

	18-25 years	25-29 years	30-34 years	35-39 years	40-49 years	>= 50 years
Total 1995/1996 (N=25,051)	6%	23%	23%	18%	20%	9%
Men (N=14,900)	5%	23%	24%	19%	19%	10%
Women (N=10,100)	8%	23%	22%	17%	22%	9%
Diploma-students (N=11,714)	6%	22%	25%	19%	20%	7%
Course-students (N=5,148)	7%	26%	23%	17%	18%	9%
Open (N=5,201)	5%	22%	22%	17%	21%	13%
Unknown (N=2,988)	9%	23%	19%	16%	23%	11%

Source: Van der Heide 1996, pp.38-39.
Data relate to the situation at the Open University on January the first, 1996.
Diploma students are those students that have the intention to obtain either a HBO diploma or a WO diploma. Course students are those students that do not have the intention of obtaining a HBO or a WO diploma, but want to participate in one or more courses (Van der Heide 1996, p.37).

Participants in higher distance education are an insignificant share of the total population in all age-groups. In the appendix to this chapter a detailed table is provided (table A2).

The Open University has two important target groups. First, so-called second-chance education, i.e. people who never had the opportunity to participate in higher education or never wanted to. Second, the second-road group, i.e. people who prefer an alternative or complementary path through higher education. A close look at the data in table 2.2e reveals that almost half of the active students already possesses a diploma at higher education level. This implies that only half of the students enrolled at the OU, uses the Open University as a second chance. One-third of the active students has had sufficient previous training to enrol in regular higher vocational training. At this moment only 9% of the active students lack the required previous training to enrol in higher vocational training; the percentage that lacks sufficient training to enrol in university education is higher.

[23] Study intention as indicated when first subscribing (Van der Heide 1996, p.37).

Table 2.2e Distribution of active students at the Open University by gender and highest preliminary training, 1995/1996; percentages (N=25,051).

	Total	men	women
Primary education	1%	1%	0%
Secondary education			
VBO	1%	1%	1%
MAVO	7%	6%	8%
MBO	12%	12%	10%
HAVO/VWO	20%	17%	25%
Higher education			
HBO	32%	33%	30%
WO	15%	17%	13%
Unknown	12%	13%	13%

Source: Van der Heide, 1996, pp.38-39.

In its annual report 1996, the Open University provides background information on their participants (Open Universiteit 1997, p.21). The majority of the students at the Open University (68%) combines their study with a paid job. The other students can be divided in participants that have care-obligations (6%), are unemployed (8%), disabled (8%), retired (2%) or consider studying their main activity (2%). The prime occupation of the rest of the students is unknown.

When asked for their motives for choosing the Open University, 54% answers the freedom of place, time and pace. Other motives are the contents of the educational material (5%), the fact that there are no entry requirements (7%) and the freedom to put together ones own study program (3%). Finally, 20% indicates that personal circumstances prevent them from studying at a regular educational institute.

For 40% of the participating students, the main reason for participating is that they want to increase their possibilities in their current job or in a new one. Another 22% indicates that their reason for studying is to perform better in their current function. Apart from or next to these reasons, participants indicate that they think studying is a good leisure activity (20%), that they want to develop their intellectual capacities (49%), function better socially or administrative (10%), enlarge their knowledge of a specific subject (14%) or to proceed in the scientific area in question (16%). These reasons are to some extent comparable to the ones Lington et al (1991) found for part-time students in higher education.

2.1.2.4. Work-based learning

One, still experimental, form of work-based learning in higher vocational education is co-operative education. After the first year of full-time education at an institute for higher vocational education, students alternate periods of study with periods of paid work, i.e. on the job training. Students have to work at least 16 months full-time during their period of study. The total length of the education is 4,5-5 years. In 1992/1993 co-operative education has started with about 250 students, mostly in economics. In 1995/1996 about 600 students were participating in co-op education (Huisman & Kaiser 1997, p.115). At this moment the proportion of co-op HBO to regular HBO is less than 1%. Another form of work-based learning is the SME-pathway, which will be discussed in chapter five. Furthermore, starting august 1997, two other new developments in work-based learning have taken place. First, a dual nursing programme has been introduced. Secondly, an experiment in teacher training for primary education has started, in which the teachertrainee will get the status of an employee with a mixed training/labour contract (OCW 1997a, p.33).

This concludes our overview of the participation in higher education in the Netherlands. The next section will turn to the participation in adult education.

2.1.3 Adult education

In this section we will deal with the participation in three types of adult education:
- education for poorly qualified adults (2.1.3.1.);
- training for the unemployed (2.1.3.2.);
- job-related training for the employed (2.1.3.3.).

2.1.3.1. Education for poorly qualified adults (not in the labour force)

Participants in all part-time adult education courses up to level ISCED 3 are shown in table 2.3a. These figures however include those in the labour force (the employed and the unemployed), next to those who are not in the labour force. All these courses have witnessed a sharp decline in the number of participants in recent years. In 1992 and 1993 there were around 260 thousand participants, about 50 thousand participants more than in 1996. It is likely that the pronounced recent decline is also caused by other factors like higher tuition fees.

In future years a further decrease is to be expected in part-time secondary education. Forecasts were made based on the number of participants in 1995. However, the number of participants has decreased so rapidly that in 1996 the level forecasted for 1998 has already been reached in the general track, and the level predicted for 2000 in the vocational track. Basic adult education was expected to remain stable compared with the level of 1994. However, instead of a recovery from the decrease in the number of participants in 1995, a further decline has taken place in 1996 (OCW 1997b, p.33,42).

Table 2.3a Number of participants (x1000) in part-time education for poorly qualified adults, 1992-1996

	1992	1993	1994	1995	1996
Basic adult education	134	145	138	125	118
Junior general secondary education[24]	48	27	25	23	19
Dutch as a second language	-	20	21	22	21
Transition class	-	3	2	2	2
Senior general secondary education	16	16	15	14	13
Pre-university education	14	12	11	9	8
Vocational upper secondary education:					
-Service and health	10	10	9	9	8
-Economic and administrative	27	23	21	19	13
-Technical	6	5	5	4	3
Total	255	261	248	227	206

Source: Data provided by CBS 1997, 1998.

[24] Dutch as a second language and Transition class were included in junior general secondary education before 1993.

After 1993 there has been a decline in the absolute number of people participating in basic adult education. However, because of an overall declining number of participants, the relative share has remained stable. In basic adult education there has been a gradual shift from an equal participation of natives and non-natives, to a larger share for non-natives (64% in 1996). The distribution of the participation of men and women has been quite stable, with women participating more often than men. When broken down by age we find that almost 50% of the participants are between ages 30 and 49, this proportion being virtually constant over the period under consideration. A vast majority of the people participating in basic adult education have at most some secondary schooling. Less than 20% has obtained a secondary education certificate. Furthermore in 1996 only 3% of the participants held an upper secondary education certificate (Janssen 1997, p.39 and data provided on request by CBS 1998).

The part-time courses in general secondary education offer day and evening-courses, as well as a combination of these. In 1991 in lower secondary education daycourses were slightly more popular than evening-courses, whereas in upper secondary education it was just the other way around. Participants can choose to follow one or more subjects, instead of a complete programme, and they have the possibility to obtain partial certificates. These partial certificates can be combined to a full exam (Crince le Roy & Lems 1993, p.4-5, 10, 13).

The number of participants who use the part-time courses in general education as a second road to a secondary education certificate is increasing. For example the number of 16 and 17 year olds as a percentage of all participants in 1996 was 15% in lower and 8% in upper secondary general education. Until now they could participate by permission of the education inspectorate but from 1998 part-time courses are only accessible for those aged 18 years or over (OCW 1997c). The ministry intends to take additional measures to prevent dropout in initial education and limit the use of adult education as a second road.

The number of participants in lower secondary education has gone down after 1993. This was mainly due to a sharp decline in junior general secondary education. Women make up around two thirds of participants in junior general secondary education, although their majority was even larger in the past. This type of education was called 'MotherMAVO' because most participants were mothers. Next to the already mentioned higher level of education, the higher labour market participation of women may have contributed to the decrease in participation, by creaming of the reservoir of talented elderly women, (CBS 1997).

Furthermore it should be noted that in recent years around half of the participants in lower secondary adult education is taking courses in Dutch as a second language. These courses are not subject to a decline. On the contrary the Dutch language courses in basic adult education as well as in lower secondary education are confronted with waitinglists. Since 1994 the number of people on the waitinglists is declining, but still around 12,000 people were on these lists in 1995. Most of them (95%) have to wait over 2 months for a course (Huisman 1996, p.103). Transition classes are dealing with a small but continuing decrease in the number of participants. However, these transition programmes to higher or vocational education are only of minor importance with around 2,000 participants.

At the upper secondary level also a serious decline in the number of participants has taken place, but differences exist between types of courses. Pre-university education and the technical and economic and administrative sectors in vocational secondary education have lost half of their participants, whereas participation in service and health courses has only slowly decreased.

Table 2.3b shows the participants in part-time adult education (up to level ISCED 3), and the estimated number of participants who are not in the labour force. Because training of employed and unemployed is discussed separately in this study, attention is now focussed at people who are not in the labour force. To prevent participants from these groups to be counted twice we have attempted to estimate the number of participants in these adult education programmes who are not in the labour force.

Because no precise figures exist on these numbers, we use estimates from Lington (1991). These estimates are not very recent and therefore have to be interpreted with care, however no recent figures are available. One third of the participants in basic adult education in 1988 had a paid job (Lington 1991, p.8). This leads to a rough estimate of 70% not being in the labour force. Those out of the labour force can be supposed to be the target group of basic adult education since this kind of education should provide participants with basic skills which are a prerequisite for having a paid job.

The other part-time courses have a wider scope of participants, with the number of those who are not in the labour force decreasing with the level of education. In 1991 around 35% of the participants in lower secondary education indicated doing unpaid work, whether or not in the household. In upper secondary education this figure was around 20% (general) or 10% (vocational)(Lington 1991, p.39)[25].

Table 2.3b Estimated number of participants in part-time education for poorly qualified adults who are not in the labour force, 1996

	Total number of participants in 1996	Percentage of participants who are not in the labour force	Number of participants who are not in the labour force
Basiseducatie (Basic adult education)	117,648	70	82,400
MAVO/NT-2 (General lower secondary education), part-time	42,887	35	15,000
HAVO/VWO (General upper secondary education), part-time[26]	21,003	20	4,200
MBO (Vocational upper secondary education), part-time[27]	24,916	10	2,500
Total	206,454		104,100

Source: Number of participants provided by CBS 1997. Percentages of participants estimated not to be in the labour force based on Lington 1991 and CBS 1997d (Onderwijsvolgenden 1996). Further explanation in text.

In 1996 more than 3 million people in the Netherlands had an educational attainment level below ISCED3. This is 37% of the population between 25 and 64, as can be seen from table 2.3c. The educational attainment of younger generations is considerably higher than that of older generations. More than half of the population between 55 and 64 years of age has no ISCED3 certificate, compared to 28% of the 25-34 age group. On the basis of these figures, the demand for basic adult education can be expected to decline in future years.

[25] These estimated shares based on Lington are more or less confirmed by somewhat less precise information on the share of participants who are not in the labour force, in all kinds of education up to level ISCED3. In 1996, of those persons aged between 25 and 54 participating in education at the lower secondary level 37% is not in the labour force. At the upper secondary level this share is around 10% (CBS 1997d, adapted).

[26] Only participants at upper secondary level as far as classes 4-6 concerned.

[27] 24,813 participants in part-time vocational upper secondary education in 1996 (under the responsibility of the Ministry of Education, Culture and Science) and 103 participants in part-time agricultural upper secondary education in 1995 (under the responsibility of the Ministry of Agriculture, Nature Management and Fisheries; LNV , 1997).

Table 2.3c Characteristics and labour force status of adults with low levels of educational attainment, 1996

			In the labour force			Not in labour force
Population with less than ISCED 3 (25-64)	Total (number) (x1000)	As Percent of total population (25-64)	Total (number)	Employed (percent)	Unem-ployed (percent)	Total (number)
Total	3,205	37	1,641	90	10	1,565
25-34 years	732	28	509	89	11	223
35-44 years	799	33	509	90	10	290
45-54 years	906	43	480	91	9	426
55-64 years	769	53	144	93	7	625

Source: Data provided on request by CBS 1997a.

Table 2.4a shows that the proportion of low educated adults not in the labour force participating in adult education sharply declines with age. Moreover, the younger age groups are much smaller, as a result of the higher level of educational attainment and the higher participation rate of younger generations.

Table 2.4a Proportion of adults not in the labour force, with low educational attainment level (below ISCED 3), participating in adult education programmes (below ISCED 3), 1995/6

	Population (25-64 years) not in the labour force, with less than ISCED 3, 1996 (x1000)	Participation in adult education, 1995 (25-64 years)[a)]	
		Number (x1000)	As a percentage of population with less than ISCED 3
Total	1,565	104	6.7
25-34 years	223	34	15.3
35-44 years	290	25	8.6
45-54 years	426	21	4.9
55-64 years	625	24	3.9

Source: Data provided on request by CBS 1997, 1998.

a) The number of adults not in the labour force who participate in basic adult education and part-time lower secondary education is estimated in table 2.3b. The numbers for the different age-groups are calculated by multiplying this figure (110) with the relative share of the age-groups for all adults (not in the labourforce) participating in part-time education (up to level ISCED 3) (data provided by CBS 1997d; Onderwijsvolgenden 1995-1996). These relative shares are 32.8% (25-34), 24% (35-44), 20% (45-54) and 23.2% (55-64). These relative shares by age largely coincide with those for participants in basic adult education, the only course for which participation by age is known and in which adults who are not part of the labour force dominate. It should be noted however that the age-group 55-64 contains a lot of pre-pensioners. Calculations based on data provided by CBS (1997d; Onderwijsvolgenden 1995-96).

After this overview of the participation in basic adult education, we will continue with considering the participation in training of the unemployed.

2.1.3.2. Training for unemployed persons[28]

Table 2.4b contains information about both the size and the composition of the trainee group. Up to 1993 we have information about the number of participants for each training instrument. For 1994 only estimates are available. The definitions underlying the figures are not always that clear. However, normally they refer to those in the measures at the start of the year plus new trainees during the year. The figures show that the total number of trainees went up from slightly more than 40 thousand to 130 thousand in the early nineties. There is a decline in 1994 due to a budget cut for the PES[29]. The figures for the centres for female vocational training are included in the figures for the general training scheme. Moreover, the figures for the latter scheme include cases in which the other centres provide the training. This applies to the adult apprenticeship training scheme too. The latter measure does not exist anymore, but was quite important in the period under consideration.

Table 2.4b Number of participants in the various training schemes for the unemployed, 1985-1994 (*1.000 persons)

	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994[a)]
Centre for Vocational training	6.9	10.5	11.9	12.1	12.6	16.1	16.2	16.2	16.9	16.0
Centre for basic training	3.0	3.2	3.4	3.8	4.0	4.2	4.2	4.2	5.0	6.0
General training scheme, including the centres for female vocational training[b)]	25.7	28.7	58.5	59.0	62.3	71.0	78.2	81.3	80.5	46.5
Adult apprenticeship training (PBVE)	7.3	3.2	10.8	16.5	18.1	18.7	16.8	21.4	20.5	-
Sectoral training scheme (BBSW)	-	-	-	-	0.7	3.1	5.1	4.0	4.2	3.5
Other	-	4.6	6.6	4.5	5.6	6.3	7.6	9.6	10.1	10.0
Total number of trainees	42.9	50.2	91.2	99.9	103.4	119.4	128.1	136.7	137.2	72.0

a) Estimates. Source: Public Employment Service. Also included in De Koning (1998).
b)The centres for female vocational training constitute only a minor part. For 1993 the number of participants is about 1,000.

These numbers of participants in training instruments mean very little unless we compare them with the number of unemployed. Therefore, the number of unemployed, measured in several ways, is presented in table 2.4c. There are several definitions of unemployment in use in the Netherlands, but we used the 'unemployed labour force' definition, which is used by the International Labour Organisation, as the stock definition. As the PES uses a wider definition to compute the unemployment inflow figure (namely, all who subscribe as unemployed at the PES offices), the stock and flow figures may not be fully comparable.

[28] This subsection makes use of De Koning (1998).

[29] The figures for 1994 are an estimate. Since 1993, there is less accurate information on training participation. This is even more true for the most recent years.

Training participation in the year 1993 is chosen, because for this year the data provision on training participation was the best. However, we should keep in mind that participation in training has dropped afterwards, but we lack exact figures for recent years.

Table 2.4c Training participation of unemployed related to target group (more indicators), 1993

Target group	Number in target group	participants in training	Participation-ratio
Unemployment inflow 1993 (everyone who has ever been unemployed in 1993)	1,100,000[a]	137,200	12
Unemployed Labour Force stock 1993 (everyone who is unemployed at a specific date)	480,000[b]	137,200	29
Long-term unemployment stock 1993	221,000[c]	58,700[d]	27

a) Source: Public Employment Service, 1996 key data provided on request.
b) CBS-definition of unemployed (e.g. actively looking for work is no criterion).
c) For the registered unemployed, we know the proportion of long term unemployed (>1 year), namely 45% (CBS figures of registered unemployed). This proportion is multiplied with the number of unemployed according to the 'Unemployed Labour Force' definition. Registered unemployment can as well be taken as the base for the number in the target group. In that case the participation ratio would increase, and the gap would become smaller, because the number of registered unemployed is lower. However, because the participation is already high due to the choice of 1993 as base year, a definition is chosen which does not even further increase the participation.
d) This is calculated by multiplying information about the proportion of long term unemployed in the several training measures by the total participation in these measures.

Total participation in training measures using total unemployed as a target group varies from 12% to 28%, depending on using flow or stock figures, see table 2.4c. One could argue that it is wrong to compare the number of trainees, which is a flow variable, with the stock of unemployment. We should take the stock at the beginning of the year and add the total inflow in unemployment during the year (first mentioned indicator in table 2.4c). However, a considerable proportion of the people flowing into unemployment is after a short while flowing out again. It is not likely that this group will engage in training. Therefore, we should probably exclude people with an unemployment duration of less than, say, three months. Unfortunately, only limited information about unemployment flows is available. Because of this, it is probably better to compare training participation with the stock of unemployment than with the sum total of this stock and the inflow[30].

In the case of long term unemployed, it is even harder to get information on the flows, because it concerns a specific group. Moreover, the discrepancy between stock and flow will be lower than in the case of total unemployed. Therefore in this case, we only use the stock figure. Comparing this stock figure with a participation figure for this group, we come to a participation rate in training of 27% in 1993.

There are no detailed data about the composition of the trainee groups that participate in training measures for the unemployed. On the basis of information of several ad-hoc training evaluation studies we can only give a rough estimate of the representation in training for the long term unemployed and the lower-educated unemployed (table 2.4d).

Table 2.4d Estimations for training participation of certain groups of unemployed (compared to stock figures of that target group), 1993.

Target group within unemployed	Share (%) of total[a)]	Participation in

30 Suppose, that expected unemployment duration is equal to one year. If unemployment duration follows a exponential distribution and the inflow into unemployment is constant through time, then assuming that each unemployed becomes eligible for training after 3 months, the total number of people eligible for training during a year is equal to 1,32 times the stock of unemployed.

	unemployment	Training (%)[b)]
All unemployed	100	28
Long term unemployed	45	27
Lower educated unemployed (max. lower secondary)	53	13

[a)]Source: CBS, 1993
[b)]Source: estimation on the basis of the overview of representation of target groups in various training measures (De Koning et al., 1995).

The table shows that the rate of participation varies strongly. The older unemployed have a relative good score, while the lower educated have a very low score. This is all the more serious because this group represents more than half of all unemployed. However, the representation of specific groups varies significantly according to the training measures. The poorly educated generally have a very low participation rate in the general training scheme. On the other hand, older unemployed persons are clearly overrepresented in the general training scheme. The relative representation of the low educated is highest in the centres for vocational training. The long-term unemployed are more or less represented in proportion to their group in all training measures.

Now that participation in the various kinds of training of the unemployed has been described, the last subsection turns to participation in job-related training for the employed.

2.1.3.3. Job-related training for the employed

In dealing with job-related training for employees, we will first discuss sectoral employer surveys on job-related training. These surveys relate to employer sponsored training of employees in the private sector, training of self-employed, training of employees in the administrative central government and training of education personnel. Because of the fact that there are no such surveys on the rest of the public sector, a complete review of the public sector is not possible. Furthermore these employer surveys do not contain all possible kinds of job-related training. Employees may follow job-related training outside working-hours on their own expenses, like the already mentioned courses in part-time education. However, there are also other forms of adult education which will therefore be briefly discussed.

At the end of this subsection on job-related training for employed, employee surveys are discussed, like the International Adult Literacy Survey (IALS), the OSA labourmarket survey and the Eurostat Labour Force Survey. These employee surveys provide information on the training participation of the total working population. The IALS will be used in section 2.2 to calculate participation gaps.

Private sector

Table 2.4e shows the participation of employees (of firms with at least 5 workers) in internal and external courses which are sponsored by employers. These courses are off-the-job and can take place in a class room or training centre, as well as on-site (inside the firm) and off-site (outside the firm). Internal courses are only accessible to own staff of the enterprise. External courses can also be attended by other persons (open enrolment) (CBS 1995a, p.69).

The mean participation rate in these training courses in 1993 was 25%; that is: one out of four workers participated in any form of job-related training during the 12 month period. Men participated more often than women (26% versus 22%) (CBS 1995a, p.38).

From table 2.4e it can be seen that participation as a percentage of employees rises sharply with firm size. In enterprises with between 5 and 19 employees only 10% of workers took part in courses that year, while in establishments with 1000 employees or more the participation rate is 38%. The mean number of courses per employee is 0.35, which is much higher than in 1986 (0.25) and slightly higher than in 1990 (0.33) (CBS 1995a, p.55).

When internal and external courses are looked at separately, it turns out that internal courses are responsible for a large part of this difference in participation. Employees of large firms participate in internal courses ten times as often as do employees in small firms. Participation in external courses on the other hand increases only slightly with firm size. This pattern is however not completely monotonic.

These findings seem to suggest that small firms have more difficulties organising internal training courses, which is probably related to economies of scale. This is confirmed by the fact that large enterprises provide their own training more often, whereas small firms have to rely more on private institutes and sectoral organisations (CBS 1995a, p.52). Internal courses are mostly provided by the own enterprise (59%) or a private institute (26%), whereas external courses are seldom provided by the own enterprise (2%) but mostly by a private institute (52%) or a sectoral organisation (23%) (CBS 1995a, p.45).

Another remarkable feature of internal and external courses is their respective duration. The mean duration of internal courses is 4.2 days. External courses usually last longer with a mean duration of 9.5 days. This explains why the number of training days per employee is lower in the largest firms, where most training takes place through internal courses. However, there is a tendency for both internal and external courses to get shorter. The duration of internal courses used to be 5 days in 1990, whereas the duration of external courses in 1990 even was 10.8 days (CBS 1995a, p.55).

Table 2.4e Participation of employees in internal and external courses, by size of enterprise, in 1993

	Internal/external courses				Internal courses	External Courses
	Participation (percent of employees)	Number of days per employee	Number of Courses (x1000)	Number of courses per employee	Number of courses per employee	
Total	25	2.08	1244.6	0.35	0.24	0.11
By size of enterprise in number of employees:						
5-19	10	1.35	84.5	0.13	0.04	0.09
20-49	14	1.74	107.6	0.21	0.11	0.10
50-99	18	1.77	84.9	0.25	0.14	0.11
100-199	24	2.29	108.2	0.34	0.21	0.13
200-499	30	2.48	174.5	0.45	0.30	0.15
500-999	29	2.62	115.9	0.45	0.29	0.16
1000-	38	2.45	569.1	0.53	0.42	0.11

Source: CBS 1995a, p.42-43 (last 2 columns are adapted).

Most of the internal and external training courses seem to be on the upper secondary level. The majority of the courses (71%) is at the upper secondary level, while 20% is at lower secondary and 9% is at tertiary level (CBS 1995a, p.47).

Finally large differences exist between various sectors of economic activity. The sectors of financial intermediation (45%), transport and communication (43%), electricity, gas and water (37%) have participation rates above average. The sectors of agriculture and fishery (8%) and hotels and restaurants (12%) show relatively low participation rates (CBS 1995a, p.37,70). For more details see table A4 in the appendix.

A further finding of the surveys on employer sponsored training is that in 1993, 12% of the employees participated in training in the work situation. This type of training takes place with the usual tools of work either at the immediate place of work or in an environment that closely resembles the normal workstation. Participation in training in the work situation increases with firm size as well. The mean number of days that employees follow this type of training is 4.6 days. The mean length is however lower (3.3 days) in firms with 500 employees or more (CBS 1995a, p.57,69-70).

Participation in other forms of training is of minor importance. Only 6% of employees take part in instruction at conferences, workshops, lectures or seminars, 3% participate in planned learning through job rotation, exchanges and quality circles and another 6% engage in self planned learning (CBS 1995a, p.57,69-70).

In 1995 of the total number of persons in employment 7.4% are self-employed with no employees. Self-employed persons especially work in agriculture, sales, hotels and restaurants and other services. Self-employed are less likely to participate in training than employees, which is explained by the fact that it is difficult for them to take time off for training. Another factor may be the costs associated with training. Participation in training of self-employed persons increases with their level of educational attainment (European Commission 1997, p.103-107).

Public sector

In the administrative central government the number of training courses in 1990 was 92,000 on a total number of employees of 102,000, which means that the number of courses per employee was 0.9 (CBS 1992, p.10). This is a much higher figure than that of employees in the private sector (0.35 in 1993), even when compared to the participation rate in large firms. With a mean duration of courses of 6 days, the average number of days per employee was 5.4. The duration of internal courses, which accounted for 63% of all courses, was slightly higher (6.3) and for external courses consequently slightly lower (5.4) (CBS 1992, p.11). This is a remarkable difference with the private sector, where the duration of external courses is much higher than the duration of internal courses.

Participation in training courses by education personnel in primary, secondary and vocational and adult education was 47% in 1994/1995. Between sectors this varied from 39% in vocational and adult education to 55% in primary education. Occupational differences showed a larger variance in participation; respectively 75% of management, 49% of teachers and 22% of supporting employees participated in training (CBS 1996c, p.21). The mean duration of courses was 2,5 days (20 hours), which is relatively short. Almost all courses were external. The average number of courses per employee was 0.67 (CBS 1996c, p.22-23). This score is lower compared to the central government, but still substantially higher than for the private sector. When supporting employees were excluded the average number of courses per employee was 0.74, which was twice as high as the 1990/1991 figure (CBS 1996c, p.25).

Relationship of training of the employed with other forms of adult education

Besides the above mentioned forms of job-related training, two other forms of adult training in which employees participate, are of interest: recognised distance education and post school face-to-face education. In 1996, 167,124 persons participated in recognised distance education, whereas 142,269 persons followed post school face-to-face education (CBS 1997). However, these figures not only include employees but also other participants. Furthermore, it is not clear which part of these courses is

followed as work-related training. Moreover, part of these courses will also be counted as employer sponsored training courses.

Participants in distance education and post school face-to-face education follow courses at recognised private institutions. Entrepreneurial training (68.000 participants in 1993) is also included in the privately funded distance and face-to-face education (CBS 1995b, p.24), but receives a public subsidy of NLG 0.6 million in 1997 (Westerhuis & Hendriks 1997, p.44). This entrepreneurial training leads to a general entrepreneurial training diploma, which is compulsory for setting up an enterprise in several business sectors. Sometimes this diploma must be supplemented with a vocational diploma (Westerhuis & Hendriks 1997, p.9).

Just like the number of students in part-time education, participation in distance education and face-to-face education has declined in recent years. The number of participants in recognised distance education has fallen from 216.000 in 1993 to about 167.000 in 1996. In face-to-face education the number of participants declined from 208.000 in 1993 to 142.000 in 1996 (CBS 1997c, p.4). This decline in privately funded distance education has mainly occurred at the lower and upper secondary level of education, whereas the number of participants in higher education has stayed rather constant.

Next to the already mentioned rise in educational attainment the decline seems also to be due to the increased competition from regular educational institutes. The regional trainingcentres (ROC's) offer an increasing number of mostly short training courses for individuals and firms. For a large part these short courses belong to the increasing number of employer sponsored training courses. On the other hand increased competition also enhances possibilities for privately funded education in the sense that they are able to offer complete courses in higher education (Wolthekker 1997).

Participation in job-related training of the total working population: surveys of individuals

The data mentioned before for training of employees are based on surveys among companies. Besides these sources, there are also surveys of individuals which give participation data. The advantage of these data is that they give more background information of the individual characteristics of the participants.

Employee-surveys (like the International Adult Literacy Survey (IALS), the OSA labourmarket survey and the Eurostat Labour Force Survey) give information on the participation in training of all employees in the public and private sector. Direct comparisons with the employer-surveys discussed above are however not possible as a result of differences in the definition of training.

In table 2.4f information is given on the participation in training of employees by level of educational attainment. According to the IALS, participation increases with educational attainment. This result is confirmed by both the OSA-data (de Grip et al. 1997a, p.59) and the Eurostat data (Eurostat 1997, p.6)[31]. The participation rate of IALS is higher than that of employer sponsored training of CBS (1995a, p.37), which might be explained by the fact that employees also participate in other forms of job or career related training, like part-time education paid by themselves.

[31] According to the Dutch labour force survey 1996, on the date of survey 12% of all employed persons aged 30 years and over were following training. This figure cannot directly be compared to the IALS and OSA-data because of the different reference period. However, participation in this survey again increases with educational attainment; from 7% of employees with low educational attainment (less than ISCED3) participating in training to 16% of higher educated employees (ISCED5-7).

Table 2.4f Participation in job or career related training by level of educational attainment, 1994

	Participation of employees in job or career related training in 1994 (as a percentage of employees aged 25-64)		
Level of educational attainment	Total	Men	Women
Total	33	34	31
Primary education	14	16	12
Lower secondary (vocational, VBO)	16	17	15
Lower secondary (general, MAVO)	29	31	27
Upper secondary (vocational, MBO)	34	37	31
Upper secondary (general, HAVO/VWO)	33	34	32
Higher (vocational, HBO)	43	44	41
Higher (university, WO)	48	48	49

Source: IALS 1994

Another feature that comes to the front when considering employee participation in training, is that employee participation in training is declining with age, see table 2.4g which shows the data of the IALS survey[32]. This result holds when other employee-characteristics are accounted for (Leuven & Oosterbeek 1997, p.11; table 4). Groot & Maassen van den Brink (1997a, p.42-43) find that the lower participation in training of older workers can almost entirely be explained by the different treatment of older workers instead of to other characteristics.

Table 2.4g Participation in job or career related training by age, 1994

	Participation in job or career related training in 1994 (as a percentage of employees, aged 25-64)		
Age-group	Total	Men	Women
Total	33	34	31
25-34 years	38	40	35
34-45 years	35	36	32
45-54 years	28	30	25
55-64 years	15	13	20

Source: IALS 1994

Now that we have given an overview of past and current participation in the different forms of education, the last subsection will comment upon some likely future developments in the various kinds of education.

[32] Kunnen & de Voogd-Hamelink (1997, p.55-56) and Eurostat (1997, p.4) also observe a lower degree of participation by older workers. According to the Eurostat labour force survey 1996, participation in training of employed adults (at the date of survey) was 16% for employees aged between 30 and 39, 10% for workers between 40 and 49, 6% for employees between 50 and 59 and only 2% for workers above 60 years of age.

2.1.4 Developments in the next decade

Whereas the previous section dealt with current participation in the various kinds of education, in this section some remarks will be made about the developments of the demand and supply of education in the next decade in the different kinds of education. Before describing the demand for and provision of education, we have to remark that it is possible to consider the demand and supply for education in various ways: one could look at the labour market perspectives (demand by employers vs. supply of schoolleavers), but also on the demand of individuals who want to participate versus the supply of courses. Moreover, in the latter case one could make a distinction in the absolute number of enrolments, the participation rates (this could be expressed in age-groups, but also in social groups: ethnic minorities, women), the inflow, the time spent in education, the outflow (with or without a certificate) and the transfer to other educational programs (SCP 1996, p.6). Because of lack of space not all dimensions will be dealt with in this section. The different kinds of education will be discussed in the same order as in the previous section. This means that we will start with foundation learning.

2.1.4.1. Foundation learning

As was already said in section 2.1.1, participation in upper secondary education has increased in recent years. Will this growth lead to a decline in labour market perspectives in the near future? If this is the case, then participation could become less attractive. To determine the labour market perspectives of secondary education both the supply of secondary education graduates and the demand from employers for these graduates have to be analysed. In considering the supply of and demand for secondary education graduates no distinction is made between senior vocational education and apprenticeship[33]. The different educational sectors for both forms of secondary education are taken together in determining future developments in demand and supply.

Coming first to the demand for upper general secondary education, the prospects for this kind of education are classified as being on average. Relative demand (expansion demand and replacement demand of firms and institutions taken together) for upper general secondary education is expected to be 3.3% a year of all working people with this specific educational background. The prospects for senior vocational education and apprenticeship on the whole are somewhat better with a projected demand of 3.6% of all working people with an upper vocational educational background. However, the demand pattern in senior vocational education and apprenticeship depends to a large extent on the particular educational sector concerned. Whereas the prospect for the police and defense sector is rather promising with demand being characterised as high[34], demand in other educational sectors stays behind, like the agricultural, recreational, secretarial and social-cultural sector.

Against the demand for the various forms of upper secondary education, the supply or inflow to the labour market is also important for the labour market perspectives of the different kinds of secondary education. The anticipated labour market inflow of school graduates of upper general secondary level is characterised to be on average. Overall inflow in the labour market of upper secondary vocational graduates is also projected to be on average. However, again quite different projections can be distinguished in the different educational sectors. A high inflow of school graduates is expected in the administrative, nursing, recreational and social-cultural sector. On the other hand there are some sectors in upper vocational secondary education that are anticipated to have a low inflow of new students into the labour market, whereby the administrative and juridical sector stands out with a very low expected inflow (0.7% of all working people with this educational background). Other sectors with a low anticipated inflow are the catering industry, the medical laboratory sector and several technical sectors.

[33] ROA (1996).

[34] Average demand is anticipated to be 5.9% a year of all working people with this specific educational background.

Combining the demand and supply for secondary education it is possible to say something about the labour market perspectives of the various kinds of secondary education. The prospects for upper general secondary education are not that favourable, labour market perspectives for this kind of education being typified as moderate. The perspectives for vocational secondary education for a large extent depend on the particular vocational sector concerned. The study courses police and defence, nursing and various technical sectors are expected to have favourable labour market perspectives, mainly as a result of the comparatively high demand for graduates from these educational sectors. The perspectives for the administrative and juridical sector also looks promising, for a large part because of the very low inflow of students in the labour market. The sectors with an unfavourable development in demand, combined with a relatively high inflow of new graduates, like the social-cultural and recreational sectors offer less opportunities on the labour market.

Concluding we can say that the labour market perspectives for upper secondary education are rather moderate. However, in vocational secondary education much depends on the particular educational sector concerned.

Another way of using the concepts of demand and supply is the development of participants (demand by individuals) versus the developments relating to the educational institutes themselves (supply).

According to the projections of the number of students in upper secondary education of the Ministry of Education[35], the declining trend of the number of students in upper general secondary education during the last few years comes to an end within the coming three years. From 2000/2001 onwards, it is expected that the number of students enrolled in upper general secondary education will steadily increase. In 1996/1997 about 194,000 students attended upper general secondary education. This number is expected to have risen to approximately 245,000 students in 2010/2011[36].

The number of students in full-time senior vocational education shows a similar pattern as the development in the number of students enrolled in upper general secondary education. In the first few years a decrease in the number of students in senior vocational education is projected, from about 269,000 in 1996 to 264,000 in 2001[37]. From 2000/20001 it is expected that this number will again show an upward trend, to 289,000 students in 2010/2011. Considering the more detailed developments in the different educational sectors in senior vocational education, it becomes clear that the projected development in the number of students in the various sectors rather diverges. Whereas in both the technical and the social services and health care sector over the whole period the number of students steadily increases, the economical sector has to cope with a constant decline in the number of students enrolled.

The development in the number of students in apprenticeship over the whole period shows a continuing decline. Whereas the number of trainees in 1996 amounted to about 120,000, the projection for 2001 and 2010 respectively is 115,000 and 113,000.

Concerning the developments at educational institutes it has to be noticed that during the 1990s quite drastic changes have taken place on the supply side of education. Since the early 1990s a mergerwave has come over the general secondary education sector, sharply reducing the number of educational

35 OCW 1997b.

36 Last year the number of students that was enrolled in both lower and upper general secondary education was about 832,000. In 2010/2011 this number is anticipated to be some 890,000.

37 In interpreting the number of students provided by the Ministry of Education, it has to be bared in mind that the data exclude students enrolled in agricultural education, because these students fall under the responsibility of the Ministry of Agriculture. This means that the total number of students in both senior vocational education (MBO) and apprenticeship (LLW) is systematically underreported, since these two kinds of education include an agricultural sector. In 1995 16,832 students were enrolled in agricultural MBO, whereas in LLW this number was almost 8,200. In a total of 288,694 students enrolled in MBO this comes down to about 5.8%. In apprenticeship this percentage equalled 6.4% (8,180/127,557).

institutes. In 1993 there were as many as 1,250 institutes offering general secondary education, at the moment some 800 institutes remain with on average 1,200 pupils/students[38].

Since 1996, with the introduction of the new Adult and Vocational Education Act, a similar process is going on in the vocational education sector[39]. In this sector, institutes of vocational education and adult education have been brought together to create large Regional Education Centres (ROC's). Whereas in 1992 about 400 institutes existed, in 1998 it is expected that only 60 of them still remain, of which 45 are ROC's. On average more than 10,000 students will be enrolled in each of these institutes.

Considering these recent concentration processes in the secondary education sector, it is likely that in the years to come, there will not be too many changes on the supply side of educational institutes. Although the mergerwave has not come to an end yet, the most drastic changes on the supply side have been pulled through by now. Also in terms of the supply of the various courses, quite recently a new qualification structure has been developed for secondary vocational education (including apprenticeship). However, lately a new development on the supply side of secondary education has come to force. This concerns the legal possibilitiues for private suppliers of education to offer courses at the MBO-level. Little is known about the quantative impact of these private suppliers in secondary education. Nevertheless, it may be expected that, given the high costs of offering technical courses at MBO-level, the emphais of these private suppliers will be on the less costly administrative and economical courses.

After this brief description of the likely developments in upper secondary education, the developments in the next decade in higher education will be discussed.

2.1.4.2 Higher education

In the field of higher education more factors will have a potential influence on the demand for and provision of education than is the case in foundation learning. This is so because for a part secondary education takes place in the compulsory age range. The development in the demand for and provision of higher education in the next decade mainly depends on three factors. Firstly on the size and composition of the population. Secondly, it depends on the growth of the economy and the labour market. Finally, it depends on government policy (Hers 1997, p.56). It is important to realise that these factors do not operate apart from each other but instead affect each other.

The size and the composition of the population have a direct effect on the number of participants. The larger the relevant age groups, the more students, given fixed participation rates, one can expect. Since 1992, higher education is confronted with a demographic decrease. At short notice, demographic decrease in the direct inflow is expected to end, demographic decrease in the indirect inflow is expected to continue until 2000. From 2005 onwards, higher education will be confronted with demographic growth (Bronneman-Helmers & Kuhry 1996, p.8). However, the effect this will have on participation is not as strong as in compulsory education, were it is one-to-one in theory.

What effect does the size of the age-cohort have on participation rates in higher education? It is imaginable that when age-cohorts are larger, more people participate in higher education, because they expect competition in the labour market. On the other side, it is also imaginable that smaller age-cohorts result in larger participation rates, since admission requirements may be less strict in that case. Empirical support for either of these positions lacks; the influence of the size of age-cohorts probably highly depends on developments in the labour market (Bronneman-Helmers & Kuhry 1996, p.9).

Another factor which is important for the participation in higher education is the ethnic composition of the population. This ethnic composition of the population will change in the next decade: in secondary education the proportion of minorities has increased already from 3.8% in 1988 to 6.6% in 1994

[38] Stuurgroep Profiel Tweede Fase Voortgezet Onderwijs, 1997.

[39] This process of concentration had already started in 1990-1992 with the SVM-operation.

(Bronneman-Helmers & Kuhry 1996, p.9). The ethnic composition of the population is important since, according to a national newspaper, only 3% to 4% of the current students in higher education is a minority (*Volkskrant* of 1 October 1997, p.15). If the percentage of minorities in the relevant age groups rises, this may affect participation rates. However, Bronnemans-Helmers & Kuhry estimate that the proportion of ethnic youth will not rise above 10% (1996, p.9), thus the scope of the effect will not be very large.

Also important is the level of education of parents. Oosterbeek and Webbink (1995) have investigated the determinants of higher education enrolment in the Netherlands. When comparing enrolment in two years, 1982 and 1991, they conclude that different enrolment patterns in the selected years can be attributed for a large part to a rising level of parental education (Oosterbeek & Webbink 1995, p.376).

Income is another factor that influences participation in education. The growth of income in general has a positive effect on participation in education (Hers 1997, p.56). Among other things, via the financial possibilities of families and the government and via employment. If economic growth and prosperity is operationalised as the rise in national income per capita, then recent calculations by SCP show an income elasticity of higher education in the range of 0,75-2,0 (Bronneman-Helmers & Kuhry 1996, p.10). One has to keep in mind however that there is a saturation point: at a certain point all those with a talent for higher education, participate in it.

The labour market perspectives for almost all sorts of training at HBO-level and WO-level are good to excellent for the period till 2002, although with different causes (Borghans et al 1997, p.811).[40] Excellent perspectives for university studies such as computer science and information management are caused by large expansion demand. In contrary, good perspectives for the university study theology are caused by a high replacement demand in combination with low numbers of students.

The last decade has shown growing participation by women in higher education. At this moment participation by men and women does not differ much. It is expected that the growth of participation by women will reach a saturation point in the near future (Bronneman-Helmers & Kuhry 1996, p.11). Differences in the choice of subject remain more persistent. This is notwithstanding governmental attempts to stimulate the choice of women in more technical studies with slogans as ‘Make a choice for a technical subject!’ (*Kies exact*!).

The government has recently introduced new measures in the area of higher education, that will influence the demand for and provision of higher education. First of all, starting 1998, institutions for higher vocational education will get the same compensation for part-time students, for full-time students and for students participating in work-based learning. At least, this is the content of a bill with which the cabinet council has agreed (OCW 10-10-97). Up until now, the compensation for part-time students was 80% of the compensation for full-time students. The equalisation of the funding of all three categories of students will not influence the total budget available for institutes in higher vocational education. It will only influence the distribution of the money supply. If this bill passes, the participation of students in part-time education and in work-based learning is expected to rise.

In order to stimulate participation in work-based learning the government has also created a tax facility for work-based learning in higher vocational education programs (OCW 1997c).[41] An employer hiring an 'employee-student' may deduct a maximum of NLG 4,500 a year of the income tax and social security contributions. Although there are no specific requirements to the type of higher vocational education in which the student participates, at present the arrangement applies only to the technical-commercial branch. The governments aim is that from the year 2000 onwards, about 10,000 students (cumulative) will participate in this fiscal measure (TK 1996-1997, p.41). Starting 1 January 1998, the tax facility will be expanded to nursing programs (OCW 1997a: 33). Furthermore, students that have claimed an interest

[40] Perspectives for higher vocational studies as environment science, food technology and personnel and for art studies in university education are bad to moderate.

[41] More attention to this tax facility will be given in chapter 4.

bearing loan do not have to pay interest during the period of work, if they participate in work-based learning (OCW 26-05-97). This also will stimulate participation.

Another measure is that from September 1998 on, students with a senior secondary vocational education diploma will be able to complete a higher vocational education program in three years instead of four years, provided the HBO-program is related to the MBO-program attended previously (OCW 1997a, p.23). In order to achieve this, the MBO students get exemption for the equivalent of one study year. In accordance, students will get student financial aid for the period of three years, in stead of four years. Students that participate in this program will get the same diploma as regular HBO-students. The impact of this measure depends of course highly upon the willingness of institutions to create three-year curricula. Contrary to earlier plans, students with pre-university education will still have to follow the regular four-year program. Institutes for higher vocational education shall try to lead them quicker through the program. It is expected that these measures will reduce the number of students in higher vocational education.
At this moment a debate is going on about a new system of student financial aid. The committee-Hermans has made a proposal for a new system (1997), but this proposal has attracted a lot of criticism. Recent changes in student financial aid will influence the demand for higher education. For those students that started in 1996/1997, the length of time they receive money is reduced from the formal duration of the study plus one year to the formal duration of the study only. Furthermore in order for a loan to be converted in a grant (see chapter 4), students have to graduate within six years. This will influence not only the choice between university education and higher vocational education, since the latter has a lower actual study duration (4,5 years instead of 6 years). It will also have the effect that students spend less time in higher education. Moreover, before, certified higher vocational education students had the possibility to participate in an abridged university training, with conservation of the right to student financial aid. As this is no longer the case, it is expected that this will influence the indirect inflow in university education, and as a consequence participation in university education.

Furthermore, the government has agreed to a step-level rise in the level of tuition fees. The tuition fees for regular full-time students will rise from NLG 2,400 in 1996/1997 to NLG 2,575 in 1997/1998 to NLG 2,750 in 19989/1999 per year (OCW 1997b, p.131)[42]. The tuition fees for full-time students that are no longer eligible for student financial aid (in general this is after six years of full-time education), are determined by the institutions themselves, and can thus vary widely. Also tuition fees for part-time students and for extramural students are determined by the institutions themselves; however for part-time students there is a minimum of NLG 1,250 (IBG 1997b, p.17).

As a last measure it must be noted that the government has made it possible for non-state funded private institutions to offer higher vocational education. Thus, a rise in the supply of higher education provided by non-state funded institutions can be expected. Although at this point the scope of this development can not yet be estimated.

All in all it is expected that the total number of students in higher vocational education will rise slightly in the years to come[43]. At the turn of the century, the total number of students is expected to decline quite suddenly because of a shortening of the course duration. In 2005/2006 the total number of students more or less equals the total number of students in 1994/1995, and from that time on the total number of students is expected to rise again to 280,000 in 2007/2008. The total number of students in university education will decline steadily in the next decade. In the period 2003/2004 till 2007/2008 a new equilibrium is expected to be found at about 143,000 students.

Now that we have presented the current enrolments in the various kinds of education, the next section will turn to the estimation of the increases in participation that are necessary to bring participation in line with the needs implied by lifelong learning.

[42] Provided universities and institutions for higher vocational education improve the quality of their programs sufficiently.

[43] This paragraph is based upon OCW 1997f, p.151. Data are for students in higher education funded by the Ministry of Education Culture and Science and by the Ministry of Agriculture, Nature Management and Fisheries.

2.2 Estimates of participation gaps

The concept of lifelong learning implies that the participation in the different forms of education should meet a certain standard, which can be seen as a target rate. The increases in participation deemed necessary to fulfil the needs implied by lifelong learning, should be based on the difference between the actual current participation rates in the various forms of education and the target rates. The OECD has set different target rates for different kinds of education. However, as will become clear not all of these targets can be applied to the educational situation in the Netherlands, because the precise targets depend much on the country-specific priorities and context within which lifelong learning has to be realised. In some cases alternative targets will therefore be presented, which better reflect the specific educational situation in the Netherlands. But still, even if the targets are adapted to the situation of the Netherlands the size of the targets remains to a certain extent arbitrary. The main goal is to have a basis to work out the (financial) consequences of the concept of life long learning. So the outcomes are not to be used as absolute figures, but rather as more rough ideas about size. The various forms of education are presented in the same order as in section 2.1. This means that we start with foundation learning followed by higher education which again will be followed by adult education.

2.2.1 Foundation learning

The OECD target rate presented in the *Guidelines for National Reports on the Affordability and Financing of Lifelong Learning* is that 90 per cent of 18 year olds is to have completed upper secondary education or apprenticeship training. However, in the Dutch educational system it is not possible to already successfully have completed all types of upper secondary education at the age of 18. For example, inflow into senior vocational education generally starts at about sixteen or seventeen and outflow at about nineteen/twenty/twenty-one. Therefore the age at which this 90% target rate has to be achieved is set at 27. Thus, 90 percent of all persons aged 27 years or older must have attained upper secondary education. Because data on the current educational level of the population are only available for 5-year cohorts of the population, we use the situation of 25-29 year olds to determine the number of persons of age 27 who have not yet completed upper secondary education. The age of 27 thus being the mean age in this cohort.

This target rate of 90 percent corresponds to the national policy aim of getting (almost) everyone at the so called “starting qualification”. This starting qualification means having reached a diploma HAVO/VWO or MBO/apprenticeship (at least level 2). In this national policy a target rate of 85-90 percent is chosen and not 100 percent, because international agreement exists about the fact that approximately 10-15 percent of each year-cohort does not possess the abilities necessary to complete upper secondary education[44]. So increasing the participation rate up to 100 percent is not a realistic proposal.

Table 2.6a presents the relative shares of the population aged 27 that has levels below upper secondary: basic education, junior general secondary education (MAVO) or junior vocational training (VBO) as the highest qualification level. As can be seen in table 2.6a, of all persons aged 27 in 1996, 26.35 per cent or 67,660 persons do not have a "starting qualification". However in interpreting this number we have to notice that persons who have not attained a formal starting qualification, in practice may have attained this level in an informal way, such as learning on the job. One of the important factors behind this 26 percent that does not possess a starting qualification is that the internal rates of return for certain types of upper secondary education are quite low (see also chapter 4). Even if everyone participated in upper secondary education, the target percentage of 90 percent that successfully has completed secondary

[44] See WRR, 1993, p.78.

education at age 18 would not be achieved. The internal rate of return in apprenticeship for example is about 50 percent and in senior vocational education it is approximately 60 percent[45].

Correcting for the 10 percent which is not assumed to be able to reach that level, the total participation gap comes down to 41,960 persons. This number has to be divided over their present level of basic education, junior general secondary education and junior vocational training. This division, however, is in our calculations assumed to be disproportional in the sense that among those with only basic education, the "10 percent" are relatively overrepresented, and among those with MAVO, on the other hand, the "10 percent" are relatively underrepresented. We therefore assume that 60 percent of those with only basic education belong to the "less able", whereas for MAVO and VBO these numbers are 17.5 and 35 percent, respectively.

Table 2.6a Participation gap in secondary education, 1996 data

Educational levels below upper secondary	Percent of population aged 27[a]	Population aged 27 at these levels	Target (reduction to)	Gap
Basic education	7.46%	19,160	11,500	7,660
MAVO	6.22%	15,970	2,800	13,170
VBO	12.67%	32,530	11,400	21,130
Total	26.35%[b]	67,660	25,700[c]	41,960

a) Total population aged 27 is 256,883 in 1996. Source: Statistics Netherlands, *Monthly Statistics of the Population, 1996/8; CBS, 1993;* and data on request by the sector Population (CBS).
b) This is an overestimation of the number below upper secondary education, because these figure includes part of those who have attained an apprenticeship diploma. However, more exact figures excluding all those with apprenticeship training do not exist.
c) 10% of total population aged 27.

In order to attain the Dutch target rate these persons have to return to the educational system to obtain the Dutch "starting qualification". This qualification can be reached in several ways depending on the highest educational level completed and the individual abilities of the student. In section 2.3, we will specify the different educational paths that each of the various groups are assumed to follow to obtain a starting qualification. Because these educational paths differ, the public costs associated with each path will differ. More will be said about this in section 2.3.
Further it is important to notice that the participation gap presented here applies to each year-cohort, and is therefore a yearly repeating phenomenon. This means that educational efforts must be annually increased with the participation gap in order to attain the targets on a structural basis[46]. Finally, as indicated in section 1.4, it should be noted that the completion gap is overstated because the cohortsize of younger generations is much smaller than the number of current 30-year olds used to calculate the gap. At the end of section 2.3.1 an additional calculation of the public costs adjusted for the cohort-size is given. We will now turn to the participation gap in higher education.

2.2.2 Higher education

The target rate for higher education in the *Guidelines for National Reports on the Affordability and Financing of Lifelong Learning* is presented as follows: the percentage of 30 year olds which is to have completed a non-university tertiary programme (25%), a university short (30%) or long (13%) first degree programme. As pointed out before, there are some short higher education programmes in the Netherlands, but they cannot be compared in numbers to the short higher education programmes in some

45 See Gelderblom and Dölle, 1997. The data in this study are based on Smets and Noordermeer, 1995a, 1995b, and for apprenticeship Ganga, 1992. However, many of those who do not end the type of education they initially enter, flow into other fields. This means that at the end a larger part than the mentioned 50 - 60 percent ends up with a certificate.

46 Due to the fact that more appropriate data are not available, the gap is measured at age 27, and thus with a slight delay. As the average educational level of the Dutch population is rising, a decrease of the participation gap might be expected for future cohorts.

of the other OECD countries. Moreover, at present non-university tertiary education does not exist in the Netherlands. Therefore it is more realistic to adapt the target rate. We propose a target rate between 13% and 38% (i.e. 13% + 25%), or a target rate of 30%. In addition we will estimate the associated costs of realising a more moderate target rate of 25%.

According to CBS (1997b), the proportion of 25-29 year olds which has completed higher education was 25% in 1996[47]. The proportion of 30-34 year olds which has completed higher education was also 25% in that year. In both age-groups about two-thirds were in the possession of a higher vocational education diploma, and one-third was in the possession of a university diploma. Therefore, it is safe to assume that the proportion of 30-year olds that has completed higher education is about 25%. Thus, the completion rate is 5%-point less than the 30%-target rate. Below we will calculate the costs associated with closing the completion gap of 5%, assuming constant marginal costs and constant drop-out rates. With a target rate of 25% there is no gap to be closed.

In 1996, there were 264,065 30-year olds in the Netherlands[48]. Applying the completion gap of 5% to the population of 30 year-olds (264,065) comes down to 13,203 say 13,200 persons. However, to realise another 13,200 persons that have completed higher education, you would need more than 13,200 first year students, because not all students finally graduate; some drop out.

The percentage of first-year students in higher vocational education that eventually graduates is about 67% (OCW 1996a, p.20-21). Most of them graduate in the field in which they have started in the first year, a small group graduates in a different field (together 65%) and an even smaller group gets its diploma in a different part of the educational system (2%). For university education, the VSNU in corporation with CBS have recently calculated graduation rates. Of those students that started in 1988 in university education, 62% received a WO-diploma after eight years and an additional 7% received a HBO-diploma (Van der Heide & Janssen 1997)[49],[50].

Since graduation rates are not 100%, you would need more first year students than 13,200 in order to achieve the target. At present higher vocational education has about twice as many students as university education. In addition to this, both in the age-category 25-29 years and in the age-category 30-34 years the distribution of HBO:WO diplomas is 2:1, thus our starting point for determining the enrolment gap will also be a ratio of 2:1. This comes down on 8,800 students extra that have completed higher vocational education and 4,400 students extra that have completed university education.

Furthermore we will consider only full-time students. There are several reasons for concentrating on full-time students at present. First, the participation in part-time programs is very small when compared to participation in full-time higher education. In university education the ratio of part-time students to full-time students is 1:13 and in higher vocational education this ratio is 1:5. In addition, as already mentioned in section 2.1, the participation in part-time programs is expected to decline. A final reason is the large number of drop-outs in part-time education. Of all part-time students that started in university education in 1991, 48% has left higher education after four years (Van der Heide & Janssen 1997). Of all

47 Unfortunately, as already mentioned in 2.2.1, CBS can only provide these data in five-year intervals.

48 Situation on 1 January 1996, data provided on request by the sector Population of CBS.

49 Graduation rates differ widely among different branches of study, both in university and in vocational education. Some fields have very high graduation rates, other fields lower rates. To give some extremes, in university education graduation rates are highest in the fields of medicine and agriculture (81%, 79% after eight years) and lowest in the fields of law and language and culture (54%, 55% after eight years) (Van der Heide & Janssen 1997). Furthermore, the graduation rate of women, both in university and in vocational education, is on average higher than that of men (Gordijn & Janssen 1996, p.25; Van der Heide & Janssen, 1997). These facts have to be kept in mind, when interpreting the expenditure needed to enlarge the number of (wo)men with an higher education diploma in section 2.3.

50 There is some critique to graduation rates. According to an article a Dutch national newspaper, the *NRC Handelsblad*, graduation rates provided by the schools / universities are unreliable, because different schools / universities use different calculation methods. The VSNU has drafted a calculation directive, but not all faculties use this standard. At HBO-level there does not even exist a calculation directive (*NRC Handelsblad* 25 September 1997, p.35).

part-time students that started in higher vocational education in 1991, 45% has left after four years (Gordijn & Janssen 1996, p.25).

With a graduation rate in higher vocational education of about 67% in HBO, some 13,150 first year students in higher vocational education will result in 8,550 additional persons with a HBO diploma and another 260 students that end up somewhere else in the system[51]. With a graduation rate in university education of about 69% after eight years, 6,400 first year students in university education will result in 4000 additional persons with a WO diploma and 440 persons[52] with a HBO diploma[53]. So in total you would need 19,550 more students in the first year of higher education to reach the target rate of 30%.

Table 2.6b gives an overview of the calculated enrolment gaps in higher education. As was the case with foundation learning, it is good to mention that the participation gap is an effort which has to be repeated annually to increase the educational level of the population on a structural basis. On the other hand, again as in secondary education the completion gap is overstated because the cohortsize of younger generations is much smaller than the number of current 30-year olds used to calculate the gap. At the end of section 2.3.2 an additional calculation of the public costs is given with a correction for the cohort-size.

Table 2.6b Completion gaps by sector

Sectors	Population (number)	Percent with diploma	Target (percent)	Completion gap (number)
Tertiary	264,065	25%	30%	13,200
Tertiary	264,065	25%	25%	0

Source: CBS (1997b) and data provided on request by the sector Population (CBS).
First column shows size cohort 30-year olds at 1 January 1996. Fourth column shows the actual gap; to fill 5% gap between 25% and 30% you need 19,550 first year students (13,150 in HBO and 6,400 in WO).

After having calculated the completion gap in higher education, we finally turn to the participation gaps in adult education.

2.2.3 Adult education

For adult education different target rates have been set by the OECD to the participation in the various forms of adult education. Also in these cases we will formulate alternative target rates which better fit the Dutch context or which reflect different policy options. We begin this section with reviewing the participation gap for poorly qualified persons, after which we turn to the enrolment gap of unemployed persons which in turn will be followed by estimating the participation gap for employed persons (job-related training).

2.2.3.1. Poorly qualified adults

According to the OECD, during the year 20% of poorly qualified adults (adults with educational attainment of ISCED2 or below) have to participate in basic adult education. In the Netherlands, for poorly qualified adults who are not in the labour force a distinction can be made between younger and older generations. Younger generations tend to be better educated and therefore the group in need of basic adult education is smaller. Furthermore the participation rate of younger generations is already

[51] In addition we assume that another 300 students will get a higher education diploma after 9 years. For simplicity in the calculations the 250 students that end up somewhere else in the system are counted as students with HBO-unit costs.

[52] These numbers are calculated as follows: 65% of 13,150 students will get a HBO diploma which comes down to about 8,550, 2% of 13,150 that ends up somewhere else equals 260 students. In WO 62% of 6,400 gets a WO diploma which comes down to 4,000 students and 7% of 6,400 obtains a HBO diploma which equals 450 persons.

[53] In addition we assume that another 150 students will get a higher education diploma after 9 years. For simplicity in the calculations the 450 students that start in university education but get a HBO diploma will be counted as students with WO-unit costs.

higher than for older people, so a relatively small group has to participate in order to reach the target. Even a more ambitious target rate of 30% might be set for those under 45.

On the other hand when demographic developments are taken into account it might be most effective to prepare those generations out of the labour force whose return to the labour market seems most needed. In the near future the labour market will be in need of those out of the labour force. In 2010, the babyboom-generation retires, a shortage of skilled labour is expected. Most persons currently above 45 will then be in retirement. Therefore it would seem more effective to start with training the younger generations (under age 45) who are currently out of the labour force.

As can be seen in table 2.6c, the percentage of adults not in the labour force with an educational attainment of less than ISCED3 that participates in adult education courses during the year, is only 6,7%. The target rate of 20% is far from being reached. Therefore, substantial efforts have to be made, especially for the group who faces functional literacy problems.

When looked at different age-groups, differences in participation are revealed. As far as those persons aged 45 and over are concerned, less than 5% is participating in adult education. Furthermore this group is twice as large as the low educated persons between 25 and 44 who are out of the labour force, of which almost 12% is participating in adult education. So, the higher level of educational attainment of younger generations will help closing part of the gap in the future.

2.2.3.2. Training for the unemployed

The OECD target rate for unemployed persons is set at a participation rate in retraining programmes during the year of long term unemployed workers of 100%. In the Netherlands, each year, over one million Dutch citizens become unemployed (see table 2.4c). Most of these persons find a new job very soon, and therefore they are not in need of training to be provided by the PES, because other instruments such as counselling will do for them. This is the reason why the target is concentrated on longterm unemployed.

As table 2.4d showed, long-term unemployed were almost equally represented among the unemployed persons who received training in 1993. Actual participation was 27 per cent. Comparing this to the OECD target rate for training participation of 100 per cent of all long-term unemployed, this results in a substantial participation gap[54]. We therefore present an alternative target rate of 50 per cent, next to the 100 per cent target rate. The 50% target reflects that there are various other ways to improve someone's labour market position in a structural sense, such as intensive intermediation and work-experience (measures). However, with respect to the former target rate, a second scenario is assessed, in which the lower-educated (lower secondary education or less) are equally represented in training. As table 2.4d shows, the lower educated are strongly overrepresented in long term unemployment (a share of 46 per cent, whereas their share in the total labour force is approximately 31 per cent (CBS, 1993 data). However, in training they are underrepresented: 13 per cent of lower educated unemployed participated in training in 1993, whereas this number was 27 per cent for all unemployed.

When the target rate of 100% is considered, the participation gap in training for unemployed amounts to 161,500 persons. The more modest/realistic target of 50% still results in a participation gap of 51,000 persons. If attention is given to an equal representation of low-educated persons in training measures, an enrolment gap of 37,700 low-educated persons results.

[54] In more recent years the gap would have been considerably higher, because training participation has decreased. However, for 1993 the data provision is better.

2.2.3.3. Training for the employed

For employed persons the target rate is set at 40% of the labour force that has to participate in job-related training courses during the year. Note that participation differs from enrolment in the sense that in initial education it is the qualification that counts, whereas for workers participation suffices to reach the targets. As can be seen in table 2.6c this target rate for employed persons has almost been reached by those at or above the educational level of ISCED3. On the other hand only 21% of the lower educated employees participate in training. Moreover, as was shown in table 2.4f, participation differs widely depending on the level of educational attainment; participation rates range from 14% for those employees with only primary education to 48% for those with a university-degree. We therefore present a more modest target rate of 30%, besides the target rate of 40%, for poorly qualified employees, which might be a more realistic short-term objective.

Based upon these findings, the strategy to close the participation gap in employee training seems to be twofold. First, to close the existing gap, efforts targeted at the training of lower educated employees are needed. Second, a higher level of initial education may prevent participation gaps in the future.

Table 2.6c Attainment gaps by all relevant sectors within adult education. The rows printed boldly correspond to the first chosen target rates. The other rows correspond to some alternative targets.

Sectors	Population (x1000)	Percent served	Target (percent)	Participation gap (number)
Adult education for poorly qualified (below ISCED 3)				
- Not in the labour force (25-44)	**513**	**11,5**	**20**	**43,600**
- Not in the labour force (45-64)	**1,051**	**4,3**	**20**	**165,000**
- Not in the labour force (25-44)	513	11,5	30	94,900
- Not in the labour force (45-64)	1,051	4,3	10	59,900
Long-term unemployed [a)]				
All long-term Unemployed	**221**	**27**	**100**	**162,000**
All long-term Unemployed	221	27	50	51,000
- Of which lower educated - Others	102 119	13 39	50 50	38,000 13,000
Job-related training				
- Job-related training (25-64), below ISCED3	**1,481**	**20.8**	**40**	**284,400**
- Job-related training (25-64), below ISCED3	1,481	20,8	30	136,300
Other employees (at or above ISCED 3) following job-related training (25-64)	**3,922**	**39.0**	**40**	**39,200**

Source: Data provided on request, CBS 1997a; Janssen 1997, p.39.; IALS 1994.
a) On the basis of the Statistics Netherlands definition of unemployed. If the definition 'registered unemployed' would have been used, the number of long-term unemployed would have been lower and participation higher. Therefore the gaps would be lower, too.

This section has given an overview of the different enrolment gaps in foundation learning, higher education and adult education. In the next section a first estimate will be made of the public costs associated with closing these calculated participation gaps in the Netherlands.

2.3 Estimates of costs of closing the participation gap

The calculated enrolment gaps in the various forms of education in the last section, are an indicator of the size of effort that has to be made to fill in the concept of life long learning in terms of increasing the number of students in all discussed kinds of education. A next step is to translate this participation gap in costs. Expenditures will have to be incurred to close the enrolment gaps in education. In order to provide educational services to the number of students that do not yet have completed a specific kind of education, but should do so to close the enrolment gap, public costs will have to be made, such as costs for educational tools and costs associated with staff. This section will in turn estimate the public costs in secondary education (section 2.3.1), higher education (2.3.2) and adult education (2.3.3).

2.3.1 Foundation learning

The enrolment gap in secondary education calculated in section 2.2.1, referred to the number of 27 year old persons who have not yet obtained a formal starting qualification. Among these persons three groups can be distinguished, differentiated by the highest level of educational attainment: persons with only basic education, persons with junior/lower general secondary education (MAVO) and persons with junior (pre-) vocational education (VBO).

In order to estimate the public costs that are associated with bringing these persons to a starting qualification, we first have to specify the different educational paths which the different groups have to follow.

We assume that because of the fact that the persons with only basic education have often dropped out of the educational system, they are likely to be more successful in a more job-oriented or vocational educational path. Therefore, these persons are assumed to follow a more practically oriented path of junior vocational training followed by an apprenticeship.

For those who dropped out after completing junior general secondary education a more theoretical path (senior vocational education at level II, which normally takes 2-3 years) is assumed, as is usual for most of those with this type of education who continue learning. Finally those persons who have completed junior vocational training are assumed to follow an apprenticeship path.

We make no explicit correction for (renewed) drop-outs; all students returning to education are assumed to graduate finally. However, differentiations have been made in the length of the educational paths to follow, in order to give enough breath to those who are in need of it. In this way, we assume that drop-out is prevented. All paths have been lengthened by one year for 50 (40 for MAVO completed) per cent of all students, and by two years for the other 50 (60 per cent for MAVO completed) per cent[55].

The total public costs of closing the gap in secondary education, or in other words the costs of bringing 90 percent of all 27 year olds up to a starting qualification are presented in table 2.7a. In this table the participation gap for the different completed educational levels is taken from table 2.6a[56]. For

[55] These proportions roughly correspond to drop-outrates in Ganga, 1992, and Onstenk and Hövels, 1995.

[56] In interpreting these costs of closing the participation gap, it has to be bared in mind that these costs are very likely to represent an overestimation of real costs. This is the case first of all because the proposed educational paths are relatively long. Second, because no account is taken of the fact that persons can gain experience outside the educational system (training on-the-job). When this is the case these persons in reality will have approached the starting qualification more than their educational diplomas or certificates show. Finally these costs are likely an overestimation because some of them already participated in apprenticeship training.

each of these groups the different educational paths are given. The public costs per student (unit costs) are based on the amounts in table 3.1, which gives an overview of the public expenditures per student in the various educational types. To these costs the public expenditures per student for study grants (MBO) and the contribution towards cost of studying (VBO) have to be added (NLG 395 million per year) to come to the total public unit costs for the different groups.

Table 2.7a Estimated public costs of closing the participation gap in secondary education 1996, in Dutch guilders

Current Educational level	Participation Gap	Educational paths		Unit costs	Unit costs Contribution study costs/study grants	Total costs (NLG million)
		number of students	Specific path in years			
Basic education	7,660	3,830	3*VBO + 3*apprenticeship	39,000	3,200	161.6
		3,830	3*VBO + 4*apprenticeship	43,000	3,200	177.0
MAVO	13,170	5,270	3*MBO	26,400	17,400	230.8
		7,900	4*MBO	35,200	23,200	461.4
VBO	21,130	10,570	3*apprenticeship	12,000	-	126.8
		10,560	4*apprenticeship	16,000	-	169.0
Total	41,960					1,326.6

Sources: Table 2.6a for enrolment gap numbers, table 3.1 for unit costs. The used unit costs here however relate to current expenditures in 1996 and not to the 1996 expenditures expressed in 1994 guilders as is the case in table 3.1. The unit costs used for table 2.7a in 1996 are NLG 8,700 for pre-vocational secondary education, NLG 7,200 for senior vocational education and NLG 4,000 for apprenticeship training.
Unit costs of study grants/allowances based on average amount per student in 1994 (for VBO NLG 1,067 per year and for MBO NLG 5,800 per year).Source: CBS, 1997e.

The total public costs of bringing 90 percent of the population up to a starting qualification are thus estimated to amount to NLG 1,326.6 million, annually. Expressed as a percentage of total current public expenditures (the central governments budget corrected for outlays for debt relief NLG 188.9 billion in 1998), this comes down to about 0.70 percent of current public expenditures in 1998. To adjust for the cohort-size (see section 1.4), the costs of closing the gap should be reduced by a quarter, resulting in public costs of NLG 995 million or 0.52% of current public expenditure.
However, we have to bear in mind that some of the persons who do not possess a formal starting qualification, actually may have attained this educational level in an informal way. If these informally acquired competences would be recognised, the public costs of reaching the targeted number of people with a starting qualification would be lower. In that sense the presented public costs are an overestimation. On the other hand, some of those who have a formal starting qualification could in case of a competnce assessment turn out ton function on a lower level.

In addition to these public costs, private costs have to be made. According to the data in table 2.7, 28,790 new apprenticeships have to be created to bring all persons to a starting qualification. As appears from table 2.8, private expenditures are attached to these apprenticeships. However, as these costs vary greatly, depending on the costs of materials in the sector concerned, the degree of productive labour of the apprentice and supervising intensity, indications of the private costs in relation to the new apprenticeship places can not be given. In section 2.4 the available information on private costs will be presented in more detail.

All in all these findings suggest that substantial expenditures have to be made in order to reach the goal of providing everyone with a starting qualification. After this estimation of public costs in secondary education, the next subsection turns to the estimation of the public costs associated with the participation gap in higher education.

2.3.2 Higher education

The participation gap in higher education was estimated to be 19,550 students of which 13,150 in higher vocational education and 6,400 in university education. In estimating the amount of public costs that is needed to close this enrolment gap, the first question is, how much time it takes for students to graduate. For this we have to rely on cohort data. One important disadvantage of these data is that whenever a student goes abroad, or decides to work a year in between, that student, when re-entering the next year, will be counted as being part of the cohort with students starting that year, and thus will be lost for his previous cohort.

As said before, the formal study duration in the Netherlands is in general 4 years, both for higher vocational programmes and for university programmes. The actual average study duration however is higher, notably for university education. For vocational programmes this is 4.5 years (OCW 1996, p.24). For university programmes the actual average study duration was nearly 6 years for those graduated in 1993/1994; those graduating in 1995/1996 needed on average two months less (Van der Heide & Janssen 1997), i.e. 5.8 years[57].

The second fact we need to know to estimate the public costs, is how much time students that eventually drop out spend in higher education. Of all full-time students in university education that started in 1988, 21% has left higher education without a diploma after seven years[58]. Most students drop out in the first year.[59] Unfortunately, concerning higher vocational education we only have data on the cohort that started in 1991. There, the drop out rate is also highest in the first year: about 15% leaves higher education[60].

The unit costs for closing the enrolment gap in higher education are taken from table 3.4a[61]. In 1994, the average expenditure for HBO-students was NLG 10,890 and the average expenditure for WO-students was NLG 11,471. 8,800 first year HBO students will graduate in on average 4.5 years. The associated required expenditure equals NLG 432 million. Furthermore, 4,400 first year university students will graduate in on average 5.8 years, which comes down to a required expenditure of NLG 294 million. In addition public costs are incurred for those students that start in higher education, but eventually drop out.

Finally there are costs of student financial aid. Students that have started after 1 September 1996 receive an achievement related grant, in the form of a loan. As will be explained in more detail in chapter 4,

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57 It must be emphasised though that these are average study durations. Between the different fields, one can find large differences both in university education and in vocational education. In university education for example those students that graduated in 1995/1996 in the field of agriculture needed on average 65 months whereas law students needed 76 months (ibid.). Furthermore, women graduate, both in university education and in vocational education, on average quicker than men (Gordijn & Janssen 1996, p.25; Van der Heide & Janssen, 1997). Finally it is expected that because of recent developments in the area of student financial aid, students will on average graduate quicker in the years to come. These facts have to be kept in mind, when interpreting the expenditure needed to enlarge the number of (wo)men with a higher education diploma in table 2.7.

58 For part-time students this is more dramatically, of all part-time students that started in university education in 1988, 47% has left higher education after seven years (Van der Heide & Janssen 1997).

59 From those who started in 1992, 10% has dropped out of higher education within one year. In the second year the drop out rate is 4% and in the third year it is 3% (Van der Heide & Janssen 1997). For the fourth up to and including the seventh year we can rely on drop-out data from the 1988-cohort. For the years that follow there upon we have to make an estimation.

60 In the second year another 6% leaves; in both the third and the fourth year this is 2% (Gordijn & Janssen 1996, pp.24-25).[60] Thus, after four years the drop out rate is 25%. We have to make assumptions on how the drop out rate will develop in the years afterwards: we assume that each year 1% will drop out and that after 9 years an additional 500 will graduate.

61 In imitation of the OECD (1996, p.231) we have to emphasise that there are drawbacks in using unit costs as a measure and that using them provides only a first approximation of costs.

students' achievement is measured two times: students have to pass half of the study program in their first year and they have to graduate in six years[62]. If they fulfil these criteria, the loan is converted into a grant. In general, students receive the achievement related grant during four years.

As a first approximation of these additional public costs we will assume that all students that graduate, will graduate within six years. Furthermore, we will assume that half of the students that drop out in their first year pass half of the study program and thus do not have to pay back their grant. Students that drop out afterwards do have to pay back their loan. For simplicity we will assume that all students do pay back their loan, in which case there are no costs to the government[63].

On the basis of the drop out rates and the assumptions made in relation to student financial aid, table 3A in appendix 3 gives the complete calculation of the public costs of completing the participation gap in higher education. In order to close the 5% completion gap, a total amount of NLG 1.19 billion is needed. With the target rate of 25% no gap exists, and therefore no costs apply. Table 2.7b provides the estimated costs of closing the completion gap in higher education. As can be seen the costs come down to 0.63% of current public expenditure which is slightly less than the costs associated with closing the enrolment gap in secondary education (0.7% of current public expenditure). In order to make a comparison, the results for upper secondary education are also included.
To adjust for the fact that the cohort of 30-year olds is much larger than younger cohorts (as mentioned in section 1.4) one should reduce public costs in higher education with a quarter, as in secondary education. Doing so means that the costs of closing the gap are reduced to NLG 890 million in higher education. As a percentage of current public expenditure this comes down to 0.47%.

Table 2.7b Estimated costs of closing the completion gap in upper secondary and higher education[64].

Sectors	Participation gap	Unit costs	Cost of closing the gap	As a percent of current public expenditure
Upper secondary education	41,960	See calculation table 2.7a	NLG 1.33 billion	0.70%
Higher education	13,200 (target 30%)	See calculation table A3 in appendix.	NLG 1.19 billion	0.63%
Higher education	- (target 25%)	See calculation table A3 in appendix.	-	-
Current public expenditure budget for central government in 1998 (219.3 billion) minus outlays for debt relief (30.4 billion) equals NLG 188,9 billion (Miljoenennota 1998).				

Now that the public costs in both secondary and tertiary education have been estimated, the last subsection will deal with the costs associated with the enrolment gaps in adult education.

62 There are some exceptions to this, but we will overlook these for simplicity of calculations.

63 We will use the following (historical) data: the percentage full-time students in university education that receives student financial aid is about 80% and in higher vocational education this is about 90%. In 1994, 16% of the students in university education lived with their parents, in higher vocational education this is about 41% (OCW 1996a, p.44). Students living with their parents receive *f*1,500 per year, students who do not live with their parents receive *f*5,100 per year (IBG 1997c). In 1995 24% of university students and 38% of higher vocational education students received a supplementary grant (calculations based upon Bruggert & Spee 1996, pp.60-62). For those students that are eligible for a supplementary grant, the actual amount they get, depends on their parents' income. In 1995 the average supplementary grant for university students was *f*2,353 and for higher vocational education *f*2,922 grant (calculations based upon Bruggert & Spee 1996, p.62).

64 This is a slight underestimation because the costs of closing the gap refer to previous years and are not corrected for inflation.

2.3.3 Adult education

The public costs associated with the participation gaps in adult education are presented in table 2.7c. The different targets of section 2.2.3 are once again used to reflect the costs of different policy options. The participation gaps come from table 2.6c.

Table 2.7c Estimated public costs of closing the enrolments gaps in the relevant types of adult education. The rows printed boldly correspond to the first chosen targets. The other rows correspond to the alternative targets.

Sectors	**Target (percent)**	**Partici-pation gap (num-ber)**	**Unit costs**	**Cost of Closing the gap (x1000)**	**As a percent of current public Expenditure[a)]**
Adult education for poorly qualified (below ISCED 3)					
- Not in the labour force (25-44)	**20**	**43,600**	**2,070**	**90,252**	**0.05%**
- Not in the labour force (45-64)	**20**	**165,000**	**2,070**	**341,550**	**0.18%**
- Not in the labour force (25-44)	30	94,900	2,070	196,443	0.10%
- Not in the labour force (45-64)	10	59,900	2,070	123,993	0.07%
Long-term unemployed					
All long-term unemployed	**100**	**162,000**	**5,900**	**956,000**	**0.50%**
All long-term unemployed	50	51,000	5,900	301,000	0.16%
Job-related training					
- Job-related training (below ISCED3) (25-64)	**40**	**284,400**	**1,413**	**401,857**	**0.21%**
- Job-related training (below ISCED3) (25-64)	30	136,300	1,413	192,592	0.10%
Other adult employees (at or above ISCED 3) following job-related training (25-64)	**40**	**39,200**	**1,413**	**55,390**	**0.03%**
Total		**694,200**		**1,845,049**	**0.98%**
Total under alternative targets		381,300		869,418	0.46%

Source: data provided on request, CBS 1997; Janssen 1997, p.39; Bronneman-Helmers 1992, p.87; IALS 1994; CBS 1995a, p.37,59; De Koning et al., 1994; data provided on request, Arbeidsvoorziening 1996; Ministerie van Financiën 1997 (Miljoenennota 1998).
a) Current public expenditure budget for central government in 1998 minus outlays for debt relief (NLG 188.9 billion)
Source: De Koning et al. (1993), and Public Employment Service, for unit costs and participation numbers; CBS, Statistical Yearbook 1996 for Central Government expenditures, 1993.

2.3.3.1. Poorly qualified adults

The public unit costs for education of poorly qualified adults refer to the central government subsidies laid down for 1996, weighted according to the participation in the different courses in 1996 (1995 for basic adult education), which results in an amount of NLG 2,070, see section 3.1.3. When compared to the younger generation of poorly qualified adults not in the labour force, the costs of reaching the target appear to be high for the group aged 45 and over, which is a result of the high number of old persons out of the labour force with a low educational attainment. However, as discussed in section 2.2.3 it may be more effective to start training of those persons out of the labour force who are under 45. Because this represents a smaller group it will cost less to increase participation in this group. This can be seen by considering the costs of the alternative target rates of respectively younger generations (30%) and older generations (10%), see table 2.7c.

In contrast to the calculated costs of closing the gap in initial education, the costs presented here are to a certain extent non-recurring, because the target is not related to a specific age-cohort, but to all age groups.

2.3.3.2. Training for the unemployed

Concerning the unit costs of the training measures for unemployed persons, it has to be noted (see also chapter 3) that very little detailed information is available about the cost of the various training schemes. Therefore, in order to indicate the costs of closing the participation gap for unemployed workers, some assumptions have been made. First, estimates of the unit costs of various measures has to be translated into overall unit costs. On the basis of some ad hoc evaluation studies, the various kinds of training headed under the general training scheme (60 per cent of all training) are assumed to cost NLG 4,000 on average. The costs per participant for the centres for vocational training, the CBB and the female vocational training are those reported in table 3.7d. For the BBSW, support per year-participant has a maximum of NLG 10,000, including some counselling costs. Using the shares in total training of the several instruments, these figures resulted in an average cost of NLG 5,900 per training application. One of the scenarios involves an extra participation of lower-educated. On the basis of the division of lower educated over the various measures, there is no urgent need to make use of other unit costs in this case. The lower-educated participate substantially more in the CBB and CVT, relative to the whole population of long-term unemployed. On the other hand, they participate much less than average in CVA and the General Training scheme (KRS). Average training costs, however, hardly change.

A second assumption is that the shares of the different training instruments in total training, needed to close the participation gap, remain constant. The costs of closing the participation gap are then strongly related to the 1993 actual training costs. Further, part of the long-term unemployed are counted twice in calculating the participation gaps; they also belong to the drop-outs of secondary education.

A final assumption is that the group of long-term unemployed, which did initially not participate in training, but after filling the participation gap will do, is comparable to the initial group with respect to enrolment time. However, it is likely that some 'creaming' occurs with respect to training: those long-term unemployed with the highest probability of finding a job are the first to be eligible for training. This might imply that filling the participation gap for the whole target group requires much more efforts in terms of training length and intensity. Moreover, drop-out rates can be expected to be higher in that case. Holding these assumptions in mind, the total costs of closing the enrolment gap in training for unemployed workers ranges from about NLG 301 million to NLG 956 million.

When considering the public costs of closing the participation rates in adult education, these costs expressed as a percentage of current public expenditure range from 0.03% of current expenditure for

higher educated workers, to about 0.50% of current public expenditure for the longterm unemployed[65]. The latter costs can for a large part be considered as additional recurrent costs, because substantial in- and outflow in and from the stock of unemployed takes place. Moreover, some of the long-term unemployed probably need more than one training.

2.3.3.3. Job related training for the employed

The public unit costs used for job-related training are the public costs related to employer sponsored training in the private sector (as calculated in section 3.1.3.3). This figure is chosen because of the fact that participation in the private sector is lower than in the public sector. The gap to be closed therefore refers mainly to the private sector. As is shown in table 2.7c the costs for increasing the participation of low educated employees are more than seven times higher than the costs for increasing enrolment in training of highly educated employees. Even if the more realistic target rate of 30% for workers with a low educational attainment is taken into account, substantial public costs have to be made.

It has to be beard in mind however, that these public costs in table 2.7c are indirect costs (lower corporate tax receipts) that follow from increased job-related training in firms. This is to say; if firms in the past would have decided to reach the targets used here, these indirect costs would have occurred. It is not clear which incentives are necessary to make firms increase their training efforts. The impact of recent subsidies and tax facilities is to be assessed in the coming years. In evaluating these incentive-based measures special attention should be given to the effects of these measures on the participation of low educated employees.

2.3.4 Total costs of closing the participation gap

In sections 2.3.1 to 2.3.3 the total costs of closing the participation gap have been assessed. Table 2.7d gives an overview for the different educational sectors. The costs of closing the gap obviously depend strongly on the target rates used. It must further be beard in mind that the costs of closing the participation gap in adult education can not be fully compared to the costs in secondary and higher education. The latter are costs per year, whereas for some of the types of adult education the costs mentioned in table 2.7c do not reappear annually. Job-related training and training of the unemployed are more or less recurrent activities, whereas adult education for poorly qualified outside the labour force is likely to be an investment made once, which also covers an important part of the gap in the coming years.

Table 2.7d Summary of public costs of closing the participation gap for all relevant sectors

Sector	Participation gap (number)	Total costs per year (in NLG billions)	Costs as percentage of government expenditures
Secondary education	41,960	1.33	0.70
Higher education	13,150	1.19	0.63
Adult education	694,200	1.85	0.98
Total	749,310	4.37	2.31
Source: tables 2.7a-c			

After this first approximation of the public costs associated with the needs implied by lifelong learning, it is good to realise that there are also private costs associated with increasing the participation rates in the

[65] It must be noted, however, that the costs of closing the participation gap strongly depend on the size of the gap, which is in turn related to the number of unemployed. If the unemployment figures of the PES are used, total costs of closing the gap at least double.

various kinds of education. Persons who first not participated in education, but now will participate in education, are confronted with private costs when they enrol in education. These private costs will be the subject of section 2.4.

2.4 Non-public costs

Besides the public costs of closing the participation gaps implied by lifelong learning there are also direct and indirect private costs associated with closing these gaps in the different forms of education. Direct private costs consist of tuition fees and other direct costs of studying, whereas indirect costs relate to such aspects as foregone earnings/production. In this section these private costs will be approximated for all educational sectors, again starting with foundation learning.

2.4.1 Foundation learning

In determining the private direct and indirect costs of foundation learning it is necessary to distinguish between the various types of secondary education. This is the case because the private costs with respect to general and vocational secondary education relate to the students themselves, whereas the private costs of apprenticeship to a large extent are born by the firms and enterprises, which offer the workingplaces for apprenticeship. The categorisation of costs will therefore be separated for these kinds of education.

In particular this means that the division of costs between direct private costs like tuition fees and costs of studying, indirect private costs (foregone earnings or production) and other indirect private costs like travelling expenses etc. is difficult to apply to apprenticeship. For example, foregone earnings do not apply in this situation because students who participate in apprenticeship receive a wage instead of missing a wage because of being in school. These students therefore do not have an opportunity cost in the form of foregone earnings. This is the reason to put all costs that firms have to make in order to offer apprenticeship places together in the category of other indirect private costs. The private costs associated with each type of secondary education are presented in table 2.8a, at the end of this section.

Before discussing the private costs of apprenticeship training, we will first describe the costs of general secondary education and senior vocational education. Total direct private costs in these two cases consist of both tuition fees and costs of study materials, like costs of books and other materials. These two different cost components are presented separately in brackets.

The indirect private costs of upper general secondary education and senior vocational education refer to foregone earnings. Foregone earnings are the opportunity costs for attending school or following educational courses instead of having a paid job. In other words foregone earnings present gross income that a student of a particular age and with a particular educational level could have earned in that year if he/she had worked instead of attended school. It has to be made clear at the beginning that these foregone earnings presented in table 2.8a are only rough estimates.
They are based on the wages earned (including holiday allowance and other benefits) by all workers under age 25, differentiated by various educational levels. However, under the Dutch Minimum Wage Act, 17 or 18 year old workers earn considerably less than their 24-year old counterparts. Therefore, the foregone earnings presented here may overestimate real foregone earnings for that age category.

It is important to bear in mind in determining the opportunity costs of the various educational levels that for students attending a particular educational level, the last successfully completed level of education presents foregone earnings. This is so because students who are enrolled (and thus not yet have completed this educational level) in for example upper general secondary education, when they choose to go working instead of attending school, could earn the income that persons receive who successfully completed the next lower educational level. In particular this means that we have assumed that for both students enrolled in upper secondary education and for students enrolled in senior vocational education, the wages earned by students who have completed junior/lower general secondary education have to be seen as an estimation of foregone earnings. In 1995 these wages equalled NLG 28,700 a year.

However, foregone earnings based on gross wages in fact represent the societal opportunity costs of studying and not really the individual opportunity costs, because students would receive only net earnings instead of gross earnings, when working. Therefore, to estimate the individual opportunity costs of studying, gross earnings were converted into net earnings[66], which are presented in table 2.8a.

Moreover in estimating the foregone earnings of secondary education two other aspects are important: child allowance and contribution towards study costs/study grants. These categories can more or less be seen as partial compensation of foregone earnings and are therefore extracted from the foregone earnings in table 2.8a. As can be seen in the table, these categories are estimated for students aged 16-18 and for students older than 18 years. Students living with their parents receive a child allowance until the age of 18. Moreover, students enrolled in upper general secondary education and senior vocational education receive either a contribution towards study costs (for those aged 16-18) or a study grant (for those aged 18 years or over).

For students between 16 and 18 years old, the contribution towards study costs depends on the income of the parents. For parents with a considerable income no contribution is made, whereas for children of parents with a rather low income, the maximum contribution amounts to NLG 1,811 per year for students attending upper general secondary education and NLG 2,285 for students enrolled in senior vocational education. When taking these amounts into account, foregone earnings for students under age 18 range from about NLG 16,594 to about 18,405. For students in senior vocational education the maximum contribution towards study costs amounts to NLG 2,285. This means that foregone earnings in this case range form NLG 16,120 to NLG 18,405.

As already said students aged 18 years or older receive a study grant. All students receive a basic amount of study grants whereas for students of low-income parents an additional income dependent grant is available[67]. These basic and additional study grants are the same for both students in general secondary education and in senior vocational education. When we take into account the minimum basic grant and the maximum income dependent additional grant, the foregone earnings for students aged 18 years or older range from NLG 14,361 to NLG 19,413 in both general secondary education and in senior vocational education.

Besides the direct private costs and the indirect private costs in the form of foregone earnings, the most important category of other direct private costs associated with being in school with respect to secondary education is travelling expenses. Little information about travelling expenses is available. In estimating travelling expenses, we assume that the majority of students in upper general secondary education is under age 18 and most students in senior vocational education are over age 18[68]. For students under 18 then, NIBUD data as presented in the NEI-study (see notes in table 2.8a), are used. For students in senior vocational training, travelling expenses are set equal to zero, because students aged 18 or older receive free public transport ("OV-kaart") as part of their study grant.

When the three categories of costs are taken together, it becomes clear that the total private costs of education range form about NLG 16,655 to 21,698 for secondary education, depending on age, eligibility for income-dependent support and type of education. As can be seen in the table, foregone earnings represent the far most largest component of total non-public costs.

After this outline of the private costs in general secondary education and senior vocational education, we turn to apprenticeships. Tuition fees in this case refer to the fees that the educational institutes receive. Also in this case child allowance for students under age 18 has to be deducted from the private costs.

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66 This is done by making use of the Microtax model of the Central Planning Board (CPB). This model enables us to convert gross amounts into net amounts.

67 Students who are not living with their parents receive a higher basic grant than those that (still) do live with their parents. For simplicity we have only presented grants for students who still live at home.

68 About 70% of all students in senior vocational education is aged 18 years or older.

The costs that firms have to make are presented in the last column. It first of all is important to remark that in the Netherlands there is very little information available on the costs of apprenticeship to private firms[69]. The data concerning costs of apprenticeship therefore have to be interpreted with extreme care. The total costs of apprenticeship for firms (taken together in the last column of table 2.8a) consist of various kinds of costs:

* contributions of firms to the training funds of an industry[70];
* direct costs[71];
* costs of coaching;
* material and infrastructural costs (including also administrative expenses).

Because the data are based on firms in just six branches of industry and the costs of apprenticeship between the various branches differed widely, the branches with the lowest and highest overall costs are presented in table 2.8a, as respectively a minimum amount and a maximum amount. These costs refer to both the costs of primary students in apprenticeship and to the costs of secondary or advanced students in apprenticeship. To come to overall costs in a particular branch, the costs of both types of students are weighed by the share of both primary and advanced apprentices in the total number of apprenticeship students in that particular branch. Furthermore, in interpreting the costs of firms it is important to note that the costs of firms in table 2.8a refer to net costs. This means that these costs are calculated as the total gross costs of firms minus the received subsidies and the estimated production of pupils in apprenticeship. They therefore represent what it costs for a firm to place a pupil. As can be seen in table 2.8a, the costs of firms lie between NLG 1,957 and NLG 38,698. This is a rather broad range, pointing to the variation in costs between the different sectors. The tuition fees received by the educational institutions only represent a very small part of the costs of apprenticeship.

Because the range of real costs of apprenticeship is very broad, it is difficult to compare these costs with those of general and vocational education. However, on the basis of the data in table 2.8a, we can say that in most cases the private costs of apprenticeship will be lower than the private costs for general and vocational education. This can be explained by the fact that against the costs that firms have to bear in offering apprenticeship places, they in turn receive a benefit in the form of the production of their apprentices. This reduces total costs of apprenticeship to private firms to a considerable extent.

So far, the discussion of private costs in secondary education. The next subsection deals with the costs associated with closing the gap in higher education.

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69 As far as is known only two studies have been performed in this field. The data in this report are based on one study, which is the most detailed study: OSA, 1993. This study has analysed the apprenticeship programme in 31 firms in six different branches. Because this study is limited to a relatively small number of firms, the results are not representative for the costs of all firms in the Netherlands which offer apprenticeship places.

70 Trainingfunds exist in most industries in the Netherlands are financed by the employers and employees in the industry concerned. These funds refer to various educational programmes, but in the study the contributions of firms that are devoted to apprenticeship are estimated, so that the costs in table 2.8a represent the contributions of firms to the educational and development fund for apprenticeship. More information on trainingfunds can be found in the sections 4.3 an 5.3.

71 The main component of these costs is the wage which firms have to pay to their apprentices. The direct costs also include travelling expenses and payment expenses of pupils.

Table 2.8a Direct and indirect private costs per year for foundation learning and higher education, 1994[i], in Dutch guilders[ii]

	Direct private costs a) tuition fees b) costs of study materials	Other private costs c) travelling expenses d) gross costs of apprentices for employer)	Indirect private costs: e) net foregone earnings	Private benefits related to education [iii] : (16 to 18 years old) f) child allowance [iv] g) contribution towards study cots	Private benefits related to education: [iv] (> 18 years old) h) study grants
* Upper general secondary education	1,350 (a) 461 (b)	483 (c)	20,853	2,448 (f) between 0 and 1,811 (g)	between 1,440 and 6,492
* Senior vocational secondary education	1,364 (a) 921 (b)	0 (c)	20,853	2,448 (f) between 0 and 2,285 (g)	between 1,440 and 6,492
* Apprenticeship training	437 (a) ? (b)	between 1,957 and 38,698 (d)	0	0(f) 0 (g)	0
* Higher education	2,150 (a) 1,053 (b)	between 0 and 1,157 (d)	20,534		between 0 and 10,416

i) The data concerning apprenticeship training relate to 1992 instead of 1994. More recent data on the costs of apprenticeships are lacking (see earlier footnotes).
ii) All costs relate to total costs per year.
iii) These benefits serve as a sort of compensation for foregone earnings.
iv) The amount of child allowance is based upon a child who is part of a four-member family.
Source: for tuition fees and costs of study materials, as well as study grants and contribution towards study costs for upper general, senior vocational education and university: IBG (1994); for child allowance: Elsevier (1994); for foregone earnings: CBS (1995d); for other indirect private costs: De Koning et al. (1996a); for private costs of apprenticeships: OSA, (1993); for tertiary education: IBG (1997), and OCW (1997b, p.131).

2.4.2 Higher education

The categorisation of costs in the case of higher education is more or less the same as in secondary education. Students' direct costs consist of tuition fees and the purchase of books and other educational appliances. In the academic year 1994/1995 tuition fees for regular students amounted to NLG 2,150 (OCW 1993b, p.72,76). Both students in higher vocational education and students in university education have to pay the same amount of tuition fees. Tuition fees for full-time students that are no longer eligible for student financial aid (in general this is after six years of full-time education) are set at NLG 1,240. The tuition fees presented for higher education in table 2.8a thus only serve as an indication.

Today, tuition fees for full-time students that are no longer eligible for student financial aid determined by the institutions themselves, and can thus vary. Also tuition fees for part-time students and extramural

students[72] are determined by the institutes themselves; the only restriction is a minimum of NLG 1,250 for part-time students (IBG 1997b, p.17) [73]

Besides tuition fees, students incur college expenses. According to the IBG (1994) students should spend NLG 88 per month or NLG 1,053 per year on books and other educational appliances. Thus, NLG 2,150 + NLG 1,053 equals NLG 3,203 for direct private costs of higher education. Just as in foundation learning the indirect private costs of higher education consist of foregone earnings. We once again have to remark that it is difficult to measure these earnings, since earnings typically differ with age, experience, branch, specific characteristics et cetera and that this has to be kept in mind when interpreting these costs. In this case we have used average gross wages of someone who has completed senior general secondary education or pre-university education in the age-category 18-24 as foregone earnings for students in higher education. According to CBS, average gross annual earnings were NLG 28,100 in 1995. This results in a net income of NLG 20,534.

From these foregone earnings, the basic grant and in some cases the supplementary grant have to be subtracted. A problem here is that not all full-time students in higher education receive student financial aid. According to OCW (1996, p.44), the percentage full-time students in university education that receive student financial aid is about 80% and in higher vocational education this is about 90%. Furhter, because of their lower costs of living students living with their parents receive a lower basic grant than students who do not live with their parents: NLG 2,700 per year versus NLG 6,720 per year (IBG 1994). In 1994, 16% of the students in university education lived with their parents, in higher vocational education this is about 41% (OCW 1996, p.44).

To make things even more complicated, only part of the students that receive a basic grant are eligible for a supplementary grant. In 1995 this is the case for 24% of university students and for 38% of higher vocational education students (calculations based upon Bruggert & Spee 1996, pp.60-62). For those students that are eligible for a supplementary grant, the actual amount they get, depends on the income of their parents. The maximum supplementary grant students in higher education can receive is NLG 3,696[74]. Thus, the lower boundary that has to be subtracted is NLG 0, since not all students are entitled to student financial aid. The upper boundary that has to be subtracted is NLG 6,720 + NLG 3,696 = NLG 10,416.

In addition to the costs of foregone earnings, which is net income, there are also the costs of foregone production. Just as the costs of apprenticeships are private costs for firms, the costs in terms of foregone production are also private in the sense that they are incurred by firms. As an indication for foregone production the difference between gross income and net income can be taken, which in this case comes down to an amount of NLG 7,566.

Other indirect private costs of education consist of travelling expenses. Students that are eligible for a basic grant do not have travelling expenses, since they also receive free public transport. Students that study abroad, for example in an exchange program, receive a monthly compensation of NLG 96 instead of free public transport (IBG 1997). On yearly basis the compensation equals NLG 1,157. We will use this as an indicator of travelling expenses for those students that are not entitled to student financial aid. This results in a lower boundary of NLG 0 and an upper boundary of NLG 1,157.

Part-time students in higher education in general are not eligible for student financial aid[75]. The foregone earnings of part-time students are significantly lower than those of full-time students because most part-

[72] an extramural student can only take exams, and is not allowed to participate in classes.

[73] As an example, the University of Amsterdam (UvA), the largest university in the Netherlands, has set the following tuition fees for non-regular students: part-time students have to pay tuition fees in the range between *f*1,925 and *f*3,475; full-time students that are no longer eligible for student financial aid have to pay *f*3,475 and extramural students have to pay *f*1,625 (UvA 1997, pp.10-11).

[74] This is what students, who do not live with their parents and who are privately insured, receive.

[75] Part-time students in teacher training can under certain conditions claim an allowance, but the proportion of students that is eligible for this allowance is negligible.

time students combine their study with a tenure. According to Lington et al (1991), 65% of all part-time students in higher education has a full-time job, 22% has a part-time job and 9% gets a benefit (social assistance, unemployment, disability or pension). Therefore, only the foregone earnings of full-time students are taken into account in table 2.8a.

Now that the private costs in regular initial education have been estimated, we finally turn to the private costs associated with adult education.

2.4.4. Adult education

Table 2.8b Adult education and training private unit costs

Subsection	Direct private costs	Indirect private costs[76]
Adult basic education	125 tuition fees 75 books	120 travel expenses
Dutch as a second language	100 tuition fees[77] 75 books	120 travel expenses
General secondary education[78]	588 tuition fees[79] 75 contribution to schoolfund 175 books	120 travel expenses
Vocational secondary education	600 tuition fees 175 books	120 travel expenses
Training of unemployed	125 tuition fees and books (maximum)	0 travel expenses and foregone earnings (assumption)
Job-related training	605 training departments and staff 1695 fees of training institutes, compensation of study fees, travelling and lodging expenses	1735 foregone production

Source: Adapted from information provided by CBS; OCW; institutions for adult education; OCW 1995; Janssen 1997, p.39; Bronneman-Helmers 1992, p.87; CBS 1995a, p.37, 64. For more detailed information see text.

2.4.4.1. Poorly qualified adults

The private direct and indirect costs of part-time education for poorly qualified adults not in the labour force are relatively low because almost 90% of courses are cheap courses of short duration in basic adult education and Dutch as a second language. Courses in secondary education are much more expensive. The private unit costs associated with the different programmes of adult education are taken from table 2.8b, which gives more detailed information on the unit costs in adult education.

Other indirect private costs for part-time education relate to travel expenses, which are a rough estimate of the minimal costs of public transport. Costs of childcare may also be of importance with respect to those out of the labour force participating in training. However, little information is available on the number of participants in need of childcare. Furthermore, private costs of childcare may also differ

[76] Except for job-related training, the opportunity costs of training time are assumed to be zero.

[77] Maximum tuition fee; 10 courses a week, 40 weeks a year, at a rate of NLG 0.25 per course hour (.25*10*40= NLG 100).

[78] Except Dutch as a second language, which is treated separately in the table.

[79] Estimated mean course hours (14) times fee per weekly course hour (NLG 42). Assuming equal proportions of day and evening students and assuming that day students on average follow 6 subjects (24 hours) and evening students only 1 subject (4 hours). Based on information in section 2.1.3.

greatly between participants, depending on public subsidies and the availability of alternatives like informal childcare. Private as well as public costs of childcare are therefore neglected.

The private costs associated with adult education for poorly qualified adults are tuition fees, the costs of books, travelling and other related expenses and the opportunity costs of trainingtime. Tuition fees in adult basic education are generally quite small, but they are locally established and may differ from institution to institution. They seem to vary from NLG 70 to 360 a year, depending on the kind of course. Mostly, however fees are not higher than NLG 125 a year. People with a minimum income can appeal to social assistance for retribution of tuition fees. The costs of books are estimated at a maximum of NLG 75 a year. Travel expenses usually are quite low because of the local provision of basic literacy and are therefore not accounted for in the unit costs. Direct private unit costs therefore are estimated at NLG 200 (125 tuition fee and 75 costs of books).

Tuition fees for courses in Dutch as a second language differ from the fees for other courses in part-time general secondary education. For one course hour (45 minutes) of Dutch as a second language, participants have to pay a fee of NLG 0.25. The normative fee per year is NLG 100, which is based on 40 weeks of 10 course hours (OCW 1997e). This amount does not seem to differ that much from the locally established fees in adult basic education. With regard to the fact that the average number of courses in adult basic education is much lower, Dutch as a second language tends to be cheaper per coursehour. However no information is available on actual course hours in Dutch as a second language and eventual additional payments to institutions. The costs of books are estimated to be the same as in adult basic education.

Tuition fees in part-time general secondary education depend on the number of courses taken, but are set at NLG 42 a year per weekly coursehour (45 minutes) in 1997. The minimum number of coursehours is 4 a week (one subject), which gives a minimum fee of NLG 168. At most 7 courses can be taken which lead to a maximum fee of 1176. Next to this 5 hours a week of educational assistance can be obtained, at the same rate, which adds NLG 210. In addition, independent of the number of courses participants are asked for a (voluntary) contribution to the schoolfund, an amount which typically is NLG 75 or NLG 100. Therefore total fees may range from NLG 243 to NLG 1486. For day students it is common to follow 6 subjects, with a total fee of NLG 1083[80]. The annual fee is NLG 420 according to the normative number of course hours (40 weeks of 10 hours), with a fee per course hour of NLG 1,05 (OCW 1997e).

Further direct private costs consist of the costs of books which are estimated to be around NLG 300-400 a year (with a complete programme of 6 subjects). However schools often offer the possibility to hire books, in that way costs of books can be reduced to around NLG 100. In table 2.9 a conservative estimate of NLG 175 is chosen[81].

Tuition fees in part-time vocational education were NLG 420 until August 1997. However, under the new Adult and Vocational Education Act (WEB) part-time vocational courses are integrated with full-time vocational courses. A lower tuition fee of NLG 350 will apply to the former short track vocational courses (now called basic vocational course) and a higher fee of NLG 850 to the former long track vocational courses (now called intermediary executive course; in Dutch: *middenkaderopleiding*) (Staatsblad 1997, p.7). Assuming an equal distribution over both programmes gives an estimated tuition fee of NLG 600[82].

Costs of books depend on the type of course followed. In the economic and administrative courses the costs of books will be approximately the same as in general education. For other types, like technical

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[80] 6 subjects* 4 coursehours* 42 guilders+75 guilders (schoolfund)= NLG 1083.

[81] Estimated average costs of books NLG 300 for 6 subjects, with half of participants being daystudents (6 subjects) and other half eveningstudents (1 subject); .5*300 + .5*50 = NLG 175. Based on information in section 2.1.3.

[82] .5*350 guilders +.5*850 guilders = NLG 600.

courses the costs of books seem to be somewhat lower. On the other hand the costs of technical study material are likely to be higher. For the sake of clearness costs of books are set equal to general education.

Adult education typically takes place during evening hours of in other periods outside normal working time. In addition, it often involves substantial amounts of self-study (home work) which are also in evening hours. Therefore in this section foregone earnings are assumed to be zero. In Annex B, however, a rough estimate is presented of foregone earnings, under the assumption that education and training take place during working time.

Other indirect private costs are costs of transportation and the costs of childcare. These costs however are difficult to estimate for the different programs, because little information is available on the need of childcare and of average distance to schools.

At least in densely populated areas courses in part-time adult education will be available in the neighbourhood of the participant, which means that travel expenses in general tend to be low. Assuming that participants go to a course by bus once a week this leads to a rough estimate of NLG 120 travel expenses[83].

Some institutions offer childcare facilities, with a only small contribution by participants. For example one institution for basic adult education offers child care for participants with children beneath 4 years of age for NLG 2.80 per period of 4 hours. On the other hand this requires the childcare to be publicly subsidised. Further investigation in this matter seems to go beyond the scope of this study, therefore the costs of childcare are neglected in calculating other indirect private costs.

2.4.4.2. Training for the unemployed

Considering the private costs of training of the unemployed, we first have to remark that this type of training is predominantly financed by the PES. In recent years to an increasing extent, funding shifts away towards the European Social Fund (ESF), which co-finances about half of all training-courses for the unemployed. In some sectors, employers or sectoral training and development funds take a share in training costs. That means that all employers within a sector pay a certain share of the wage bill to a training fund, in order to provide a more efficient amount of training.

Unemployed persons who participate are obliged to pay tuition costs in only a few types of training, and even then up to a maximum of NLG 125 for the whole training (Lisv, 1997). Other private costs of training involve costs of transportation and childcare (indirect private costs), as well as opportunity costs. Because of the fact that distances to training centres are relatively small in the Netherlands and child care facilities are available in most centres for female vocational training, these costs are not expected to be very high compared to the public costs. Opportunity costs arise when unemployed persons would face job opportunities if they would not have participated in training or when participants are offered a job during their training. In the latter case trainees often quit training in favour of taking the job offer. We therefore assume that these types of opportunity costs are zero. The only way in which we could speak of opportunity costs, then, is in terms of foregone leisuretime. However, we will not go so far to express this kind of opportunity cost in money terms. All in all we can say that the private costs of training for the unemployed are not very high.

[83] Calculated by multiplying the price of a returnticket for public transport on the shortest possible distance (which will be sufficient within most towns) by the number of schoolweeks: NLG 3*40.

2.4.4.3. Job-related training

Just like the public costs in section 2.3.3.3, the private unit costs used for job-related training refer to the private costs related to employer sponsored training in the private sector. The indirect private costs of training the lower educated will be lower, as a consequence of their lower wagecosts. Other indirect private costs like travel expenses are included in the direct private costs, of which no further breakdown exists.

The mean private costs for employers were NLG 4,036 per employee, participating in internal or external courses in 1993 (CBS 1995a, p.37,59). The costs per course attended were NLG 2,820 (CBS 1995a, p.61). These costs differ between firms with a small or medium size and large firms. The mean costs of courses are around NLG 2,100 in firms with no more than 500 employees and NLG 3,400 in larger firms. However, it should be noted that there are big differences between sectors. For example in Construction cost of courses are relatively low and for large firms even lower, whereas the costs of courses in Transport and Communication are relatively high due to the fact that the costs of courses in large firms are twice as high as in smaller firms.
By components almost half of the costs of courses (43%) are lost labour hours. Costs of training departments and staff are 15% of costs and 42% are other costs like fees of training institutes and compensation of study fees, travelling and lodging expenses (CBS 1995a, p.37,64).

The expenditure on training in the private sector can be compared with former surveys on employer sponsored training in 1986 and 1990. Expenditure on courses as a percentage of labour costs remained stable since 1990 (1.7%), but were slightly lower in 1986 (1.5%). However, changes have occurred in some sectors between 1990 and 1993 (CBS 1995a, p.65).
The marginal costs of job-related training for employers might be reduced by a higher participation of low educated (and low wage) employees in the future. Indirect costs of training are boosted by the current 'overparticipation' of highly educated (high wage) employees.

With respect to employees making their own contribution in spare time and money, no exact figures however are available on the amount of these private contributions. Grünewald & Moraal (1996, p.187) mention an estimate of NLG 2.2 billion for the direct and indirect costs of training. Private distance-courses account for NLG 1 billion of these costs, but a further breakdown is lacking. Groot & Maassen van den Brink (1997a, p.123) mention the fact that these costs are only partly deductible of taxes. As far as employees accept a lower wage to share in the costs training these foregone earnings are not deductible of taxes at all. This concludes our section about the private costs associated with the different forms of education.

2.5 Dynamic evaluation of the costs of lifelong learning

The estimated costs of closing the participation gaps in the various forms of education in section 2.3 and 2.4 essentially are static, presenting estimates of closing the gaps at a single point in time, on the basis of past costs. Also no account has been taken of competences that are acquired in an informal way. Moreover no attention has been paid yet to the interaction between the different forms of education. In this section some remarks will be made about the likely future developments in the public costs of lifelong learning. We start with some remarks on interactions and some further remarks will be made with regard to possible future developments for training of the unemployed.

Interactions and dynamic evaluation
As appeared in section 2.1.1 participation in upper secondary education has increased during recent years. If this trend continues and the higher participation rate is coupled with a rise in the number of students that completes secondary education this implies that the educational level of the population will increase over time. This rise in the educational level will influence participation in other forms of education.

First of all, a rise in the educational level may result in a higher participation rate in higher education, because more persons will be qualified to attend this form of education. However, there is a boundary in the sense that not all people are equally equipped for higher education. At a certain participation rate all those with enough talent and capabilities participate in higher education.
Second, a higher enrolment and completion rate in secondary education means that less persons will have to attend basic adult education. The demand for this kind of education is therefore be expected to fall.
Third, a higher level of initial education may cause a higher participation of employees in job-related training. This because of the fact that higher educated employees tend to participate more often in job-related training.
In general there will be a growing need for continuing education because of the fact that knowledge and capabilities will become obsolete in a shorter period of time.

Training of unemployed

Unemployment rates show a general downward trend. Overall Dutch unemployment fell from about 8.5 per cent in 1994 towards 6.0 per cent to be expected in 1998 (CPB, 1997). The group of long-term unemployed hardly benefits from this improvement. The number of long term-term unemployed remained quite stable, with a consequence that their proportion in total unemployment has risen to 53 per cent in 1997, while this was 45 per cent in 1993. As a result of moderate wage increases and the overall good state of the economy, unemployment is not expected to increase after 1998. However, whether the long-term unemployed will profit much is doubtful. This means that on the one hand the future costs are expected to stabilise or go down because of the fall of overall unemployment. On the other hand, the group for which training needs are probably highest (long term unemployed) does not decrease, so the expected decrease will be at least limited.

As will also be described in paragraph 4.2.3, the changes in the funding arrangements for training for the unemployed, which are in progress, may affect training density. First, the shift towards a model, in which funding of the PES is dependent on the number of placements, may shift attention away from the most difficult groups. Intermediation for this group is relatively hard and expensive, and therefore less attractive. PES targets with respect to the number of long-term unemployed returning to the labour market have proven hard to meet.

Second, increasing cost-awareness can lead to preferences towards other instruments, such as intensive intermediation. Long-term unemployed, however, in general possess less and less valuable skills, and therefore are often in need of upgrading through training.
In recent years, the PES special training budgets have been severely cut, which led to a major reduction in training of (long-term) unemployed. Among others (see for example Esser 1997a) the Social Economic Council (SER), an influential tripartite advisory council, in a recent report (SER, 1997b) criticised these budget cuts, and instead proposed to create a training and work experience track for every long-term unemployed person. This proposal has much in common with the OECD target of 100 percent, but defines training broader. Training is not only intended to learn instrumental skills, but also social (normative) skills. Work experience at least promotes achievements with respect to these social skills, apart from the improvement of technical or instrumental skills.

2.6 Characterisation of lifelong learning needs by worker type

In this last section of chapter two we will investigate the implications of lifelong learning for four different types of reference groups. For all of these groups training is necessary to improve their situation. The four reference groups which will be discussed are:

- employed skilled or professional workers in need of new skills, competences or knowledge in order to retain their current job;
- older workers;
- long-term unemployed persons;
- women returning to the labour force after an extended absence in need of refreshing earlier qualifications;

In all four cases we will assess what might be done to improve the access to lifelong learning opportunities and to increase their motivation to participate in these educational opportunities.

Employed skilled or professional workers in need of new skills, competences or knowledge in order to retain their current job.

As was already observed in section 2.1.3 participation in job-related training is rising with educational attainment. Employees with a high level of initial education in need of training, therefore seem to face lower barriers than lower educated employees. Furthermore, on the basis of the 1994 IALS survey, Leuven & Oosterbeek (1997, p.7) find that more than 90% of the training courses initiated by the firm is also (partly) financed by the employer. Dutch employers even (partly) finance 74% of the courses initiated by workers (Leuven & Oosterbeek 1997, p.7).

A further outcome of the IALS survey is that 22% of workers claim that they are restricted in following training, which is a lower percentage than in other countries in this survey. However, these constrained workers are not less likely to participate in training than their non-restricted counterparts. The training duration on the other hand is lower for rationed workers. This may be explained by the fact that 60% of rationed workers indicate lack of time or busy at work as the most important reason for not following the training they want. 13% indicates that training is too expensive whereas only 6% mentions a lack of firm support. Barriers like lack of time for rationed workers can be lifted by employers, by providing employees with time for job-related training (Leuven & Oosterbeek 1997, p.13-14).

With respect to the characteristics of those workers being rationed it is found that women, full-time employees and higher educated employees have a higher probability of being constrained, whereas older workers have a lower probability to feel constrained in their training choices. Further analysis reveals that lower training levels for women can be attributed to the preferences of firms, whereas higher participation in training by higher educated employees is due to preferences of the workers. The lower participation rate of older workers can be attributed to the preferences of both employers and workers (Leuven & Oosterbeek 1997, p.15-16). This means for instance that to increase female training levels, instruments should be used that stimulate firms to train women.

Older workers

The participation of older people on the labour market is very low in the Netherlands. Until recently early retirement (between 55 and 65 years of age) has been a very common feature of the Dutch labour market. As already noted in section 2.1.3, participation in training of older workers is also very low. Part of this can be attributed to the lower educational attainment of older workers which implies that their participation can be expected to rise in the future. Nevertheless even when the level of education is taken into account, the participation of older workers is significantly lower than that of younger workers (Leuven & Oosterbeek 1997, p.11).

Firms have an interest in renewing and upgrading the skills of their workforce as long as current workers are not replaced by new workers. In this respect the demographic changes that increase the need of

higher participation of older workers may also increase their participation in training. Training of older workers may play an important role in prolonging their working life.

Not only demographic developments have increased the importance of older workers. Another factor is that firms now have less possibilities to expel these workers into generous social security arrangements. Both for the older workers themselves and for employers, the financial consequences of expulsion have increased. Social security arrangements deliberately have shifted part of the costs to these parties in order to give incentives to prevent expulsion of older workers.

One of the reasons for expelling older workers is the unfavourable ratio of productivity to wages for this group. Wages tend to keep rising with tenure and age, while productivity often tends to decline after some period. Training often has more substantial effects on productivity than on wages, which means an improvement of this ratio for older workers, thereby diminishing the need for expulsion (Gelderblom and De Koning, 1992).

This potential positive role of training for older workers is confirmed by other studies as well. Almost 60% of enterprises sees training as an instrument to keep older workers longer employed in their firm (Groot & Maassen van den Brink 1997a, p.53). Older workers who are unemployed or in early retirement in 1994 less often followed job related training between 1990 and 1992 than those who are still in employment. Moreover, employees who have recently followed job-related training expect less often to get unemployed or to quit their job than those who have not followed a course (Groot & Maassen van den Brink 1997a, p.76-78). Of those employees who have followed job-related training in the last two years, older workers are more able to accomplish different tasks than younger workers. In contrast to older workers, participation in training of younger workers does not seem to make a difference for their ability to accomplish different tasks. If ability to accomplish different tasks is related to productivity, this means that job-related training increases the productivity of older workers more than that of younger workers (Groot & Maassen van den Brink 1997a, p.86-87).

Although participation in training of older workers is relatively low, Leuven & Oosterbeek (1997, p.15-16) find that older workers are less often rationed than younger workers. As said before, further analysis reveals that both firm and worker preferences contribute to the lower participation of older workers. Instruments to stimulate training of older workers therefore should affect the preferences of both firms and workers.

In section 3.1.3 recent policy measures are discussed directed at both these groups. The creation of a tax facility for employee training, with an extra deduction for the training of older workers, should stimulate firms to provide training for older workers. A leave scheme may stimulate individual workers to take a training leave. Groot & Maassen van den Brink (1997, p.123) suggest a training leave scheme depending on tenure, which would favour older workers. The proposed arrangements for employees to save part of their wage for training purposes and to borrow at favourable conditions, can lower financial barriers to training.

Long term unemployed

The fact that training is useful for employers and unemployed persons does not necessarily imply that government money should be spent on it. Why could it not be arranged by the employers and the unemployed persons involved? If the training is beneficial to the employer or the unemployed person, or to both, why would they not want to invest in training themselves? There are a number of reasons.

First, the return of training to the unemployed person will be uncertain. He has no guarantee of finding a job and even if he does, the initial pay may be relatively low. If he is risk-averse, he might not engage in training, even if there is a positive expected return on training (Kodde, 1987; Ritzen, 1989).

Another difficulty is that training costs are high, implying that most people would have to borrow the money. However, it is hard to imagine that banks would lend money to an unemployed person. The costs

would even enormously increase if the unemployed person would face the risk of loosing a benefit because of training participation. When following training, unemployment benefit receivers are expected to be available for a job. Following training - especially in day-time - carries the danger of loosing the unemployment benefit, because the availability for a job is doubted. This is a bottleneck for private initiatives in the field of training for the unemployed.

Finally, for some people private returns to training may be negative (or too small), but the social returns may be positive. Without training the unemployed persons involved may remain unemployed, society having to pay an unemployment benefit. The limited private returns are especially important to older long term unemployed, for whom the expected pay-off period of course is small combined with a low expectancy rate of finding a job at that age.

All of the factors above refer to economic factors for the individual. However, also non-economic barriers exist. Especially the long-term unemployed are often lower educated persons. This group often has a negative experience with (initial) education which makes participation in training unattractive, because of the negative associations with class-room activities.

If unemployed persons are unable to invest in training, employers may take over this responsibility. However, in case of general training[4] poaching practices of some firms may refrain other companies from investing. If one company invests, another company may have the benefits. Only in case of firm-specific training this will not apply. However, in that case the difficulty may be that employers are reluctant to hire certain categories of unemployed persons. Of course, this problem is also relevant in the case of general training. Employers may fear that unemployed persons do not meet minimum standards with respect to motivation and capabilities. The simple fact that people are unemployed is often seen by them as an indication in that direction. Both statistical and racial discrimination occur in practice. If an unemployed person is trained before applying to the employer or if the employer gets a training subsidy, that might persuade him to hire the unemployed person involved. Therefore, training can play a role in creating more equal opportunities.

But even if employers and/or unemployed persons were inclined to invest in training, it would still be questionable whether an adequate supply of training courses would exist. This applies mainly to the type of training for which large investments in equipment is necessary i.e. technical training. What we observe is that the demand for training in technical professions is relatively specialised, refers to relatively small numbers, is subject to business cycle fluctuations and is very costly. Supplying technical training on a commercial basis may be a very uncertain activity.

So, we can conclude that there is point for the PES to subsidise training for the unemployed. Otherwise, underinvestment may occur and mismatch and unequal opportunities may persist. Sometimes subsidising training to prevent or diminish mismatch may go hand in hand with creating more equal opportunities. This is the case when someone without any prospects of finding a job is trained (and placed) in an occupation in which shortages exist. Training may also be subsidised with the sole purpose of creating more equal opportunities or preventing/diminishing mismatch. There may even be a tension between the two objectives[84].

[4] General training is defined here (Becker, 1964) as training which produces knowledge that can be used in a number of firms. One of the problems may be that individuals (and companies) are uncertain about the general character of training and therefore uncertain about the potential benefits outside a given firm.

[84] However, even when training has the sole purpose of creating equal opportunities, it may have some positive economic side effects on long term. If the people involved received no job offers anymore from employers and training leads to renewed job offers, effective labour supply will increase. This may affect wage formation and have positive effects on employment. This is basically the mechanism described by Layard, Nickell and Jackman (1991).

Women returning to the labour force

All of the traditional economic barriers for training paid by the individual also exist in the case of re-entering women, like uncertainty of benefits (uncertainty about finding a job and the corresponding wage) and the problem of financing training costs. However, specifically for this group some of these problems are even greater. Banks will prefer working people if investment in training by individuals would be financed anyhow. Moreover, the expected pay-off time is smaller because most re-entering women are not very young anymore. Many of them will try to find a part-time job, which will limit their potential benefits in the future and often limit their career possibilities.

Other less economic bottlenecks are the fact that a training course will often have to be combined with caring activities. In practice this means that women have certain restrictions in the times in which the training can be followed. Child care facilities to cover this problem will often bring additional costs. Moreover, women often have work experience and are educated in the past in certain fields which have less job opportunities (e.g. care). Finally, training for jobs with a lot of job opportunities (e.g. technical jobs) are sometimes dominated by men. This male environment in the training itself and the jobs to be found afterwards, can mean a real obstacle to choose these types of training courses.

For unemployed, the financial problems can be overcome because of payments by the PES. However, this is less the case when speaking of re-entering women. Many re-entering women are not registered at the PES. However, the problem of reaching this group is partly overcome by the Vocational Schools for Women (VVS), which receive their funds mainly from the PES, but often have their own channels of recruiting trainees. Entry qualifications are set low, or are easily overruled by strong motivation of candidates for training. By 1993, nine vocational schools for women have together some 1,000 students, with a yearly inflow of about 400 students. The VVS applies educational methods directed towards women. Through female teachers, group learning, and psycho-social training drop-out rates are kept low. Most women's vocational schools have training schedules which make the combination with child-care possible. Often, childcare facilities are available within the vocational schools. Although this approach seems to lower barriers to training, in practice it sometimes merely shifts the barrier ahead. Employers often expect a different attitude towards working time and temporal flexibility. Recent labour market developments give more room to part-time work, thereby favouring the integration of women within the work-force.

Appendices to chapter 2

Table A1 Net enrolment rates in part-time higher education by gender and age, college year 1996/1997.

		University-level education[2]					
		Part-time higher vocational education			Part-time university education		
	Total	Total	Men	Women	Total	Men	Women
<= 17 years	..%	..%	..%	-	-	-	-
18-21 years	0.1%	0.1%	0.1%	0.1%	..%	..%	..%
22-25 years	0.8%	0.7%	0.6%	0.8%	0.1%	0.1%	0.1%
26-29 years	1.3%	1.0%	1.1%	1.0%	0.2%	0.2%	0.3%
30-34 years	1.0%	0.8%	0.8%	0.7%	0.2%	0.2%	0.2%
35-39 years	0.7%	0.6%	0.6%	0.6%	0.2%	0.1%	0.2%
40-44 years	n.a.	0.4%	0.3%	0.5%	>=40 years: 0.1%	>=40 years: 0.1%	>=40 years: 0.1%
45-49 years	n.a.	0.2%	0.2%	0.3%			
>= 50 years	n.a.	..%	..%	..%			

Source: Calculations on the basis of data from CBS (data provided on request by the sector Population and by the sector Education).
..% means that figure is smaller than 0.1%.
The age of participants is defined as reference year minus year of birth (Pocketbook educational statistics 1997, p.65). So someone who is born in 1979 is considered as 17 years old in the college year 1996/1997. For vocational college students the census date is 1 October 1996. For universities it is 1 December 1996. The census date for the population-figures is 1 January 1997. Net enrolment rates for each age-group are obtained by dividing the number of participants in each age-group by the total population in that age-group.

Table A2 Net enrolment rates in higher distance education by age, college year 1995/1996.

	18-25 years	25-29 years	30-34 years	35-39 years	40-45 years	45-49 years	>= 50 years
Open university	0.1%	0.4%	0.4%	0.4%	0.3%	0.2%	0.l%

Source: Calculations on the basis of data from CBS (data provided on request by the sector Education and the sector Population).

Data relate to the situation at the Open University on January the first, 1996. The census date for the population figures is 1 January 1996. Net enrolment figures are obtained by dividing the number of participants in each age-group by the total population in that age-group.

Table A3 Calculation of the costs of closing the completion gap in higher education: in NLG million.

HBO: 13,150 students			**WO: 6,400 students**		
Students that graduate	67%*ƒ10890*4.5	431.758553	Students that graduate	69%*ƒ11471*5.8	293.804429
	67%*41%*90%*ƒ1,500*4	19.506447		69%*16%*80%*ƒ1,500*4	3.391488
	67%*59%*90%*ƒ5,100*4	95.438860		69%*84%*80%*ƒ5,100*4	60.538061
	67%*38%*90%*ƒ2,922*4	35.218176		69%*24%*80%*ƒ2,353*4	7.980171
Drop out first year	15%*ƒ10890*1	21.480525	Drop out first year	10%*ƒ11471*1	7.341440
	15%*41%*50%*ƒ1,500*1	0.606544		10%*16%*50%*ƒ1,500*1	0.076800
	15%*59%*50%*ƒ5,100*1	2.967626		10%*84%*50%*ƒ5,100*1	1.370880
	15%*38%*50%*ƒ2,922*1	1.095093		10%*24%*50%*ƒ2,353*1	0.180710
Drop out second year	6%*ƒ10890*2	17.184420	Drop out second year	4%*ƒ11471*2	5.873152
Drop out third year	2%*ƒ10890*3	8.592210	Drop out third year	3%*ƒ11471*3	6.607296
Drop out fourth year	2%*ƒ10890*4	11.456280	Drop out fourth year	1%*ƒ11471*4	2.936576
Drop out fifth year	2%*ƒ10890*5	14.320350	Drop out fifth year	1%*ƒ11471*5	3.670720
Drop out sixth year	1%*ƒ10890*6	8.592210	Drop out sixth year	2%*ƒ11471*6	8.809728
Drop out seventh year	1%*ƒ10890*7	10.024245	Drop out seventh year	2%*ƒ11471*7	10.278016
Drop out eight year	1%*ƒ10890*8	11.456280	Drop out eight year	2%*ƒ11471*8	11.746304
Drop out ninth year	1%*ƒ10890*9	12.888315	Drop out ninth year	2%*ƒ11471*9	13.214592
Graduates after 9 years	2%*ƒ10890*9	25.776630	Graduates after 9 years	4%*ƒ11471*9	26.429184
Total		**728.362764**			**464.249547**

First percentage of each calculation always refers to number of students (e.g. 67%= .67*13,150= 8,810.5).

Table A4 Participation of employees in internal and external courses, by sector of economic activity, 1993.

Sector of economic activity	Participation in internal and external courses as a percentage of employees in sector
Agriculture and fishing	8
Hotels and restaurants	12
Wholesale and retail trade	20
Business activities, culture and other service activities	20
Construction	22
Manufacturing	23
Electricity, gas and water	37
Transport and communication	43
Financial intermediation	45
Source: CBS 1995a, p.37	

Chapter 3 Raising the return to lifelong learning

Whereas chapter two examined the costs, both private and public, implied by the needs for lifelong learning, this chapter will try to assess how these costs associated with the provision of lifelong learning can be reduced and how the benefits of these investments can be increased. Therefore, the first section will identify the principal components of public costs in the different types of education. Moreover, we will examine how these costs have developed over time and analyse ways of how these costs may be reduced. Furthermore, for each educational sector, the public costs will be broken down in various cost categories, like direct costs associated with staff and costs of schoolbuildings etc. Finally, in section 3.2 we will turn to the identification of ways to increase the benefits.

3.1 Costs and benefits of lifelong learning

Education requires that public costs are being made in order to provide educational services. These costs include among other things, costs associated with staff (teaching and other), school buildings and educational tools. The importance of each of these different costs will vary across different educational sectors. In this section, the public costs relating to each kind of education will be examined. We start once again with upper secondary education (section 3.1.1), then we turn to higher education (section 3.1.2) and finally we will deal with adult education (section 3.1.3). In section 3.1.4 other factors than described in the first three subsections that affect public costs will be discussed.

3.1.1 Foundation learning

Per student expenditures

Public expenditures on education can be presented as total public expenditures on education, but also as public expenditures per student. Table 3.1 gives real gross public expenditure per student for educational services in secondary education (table b1 of appendix 2 gives the index figures used for calculating real expenditure, with 1994 as base year). Public expenditures per student are calculated by dividing total public expenditures by the number of students per calendar year[85].

Table 3.1 Real gross public expenditure on educational services per student in foundation learning[a)], in 1994 guilders [b)]

Years	Gross public expenditures per student by kind of education, in Dutch guilders		
	General secondary education[c)]	Senior vocational secondary education	Apprenticeship[d)]
1993	8,300	7,900	3,900
1994	8,400	7,900	4,200
1995	8,500	8,300	3,800
1996	8,600	8,400	3,800

a) The data in the table only refer to students that fall under the responsibility of the Ministry of Education. These data therefore exclude students enrolled in the agricultural sectors of vocational education and apprenticeship, because these students fall under the responsibility of the Ministry of Agriculture. In 1995 16,832 students were enrolled in agricultural senior vocational education (MBO), whereas in (LLW) apprenticeship this number was almost 8,200. In a total of 288,694 students enrolled in MBO this comes down to about 5.8%. In apprenticeship this percentage equalled 6.4% (8,180/127,557)..
Gross refers to public costs including tuition fees. Housing expenditures are included. Apparatus costs (e.g., civil servants at the central ministry) are not incorporated in these figures.
b) The expenditures are corrected for the price changes in the educational sector, see appendix b1.
c) The data in this column refer to general secondary education and to pre-vocational secondary education.
d) The data for apprenticeship refer to net public costs; so tuition fees are not included.
Sources: OCW, *Financial key data on education, 1997*; OCW, *The education budget 1995, 1997*.

[85] To this end the number of students per schoolyear is converted to the number of students per calendaryear.

The data in table 3.1 give an overview of public expenditure per student over the last 4 years[86]. It is important to note that expenditures per student in the four different senior vocational educational sectors vary widely. In 1989, expenditures per student varied from NLG 4,700 in economics to NLG 6,540 in the technical sector. More recent data are however lacking, but it is very likely that few changes have occurred in relative expenditures between the four sectors.

In interpreting expenditures per student in apprenticeship it is important to remark that in contrast to the expenditures per student in general secondary education and vocational education these expenditures in the case of apprenticeship do not relate to full-time students. Normally students participating in apprenticeship training only spend about one third of the time of normal full-time students in school[87]. Public expenditures in column 3 refer to both the theoretical (educational) part of apprenticeship and the public expenditures of practical coaching. The costs of subsidies and tax reductions linked to employing trainees in companies are not included. However it is good to mention that the cost advantage of apprenticeship compared to senior vocational secondary education would be much smaller when these costs would be taken into account. The most important difference would in that case be that apprentices do not receive a grant. However, the subjects of grants will be dealt with later.

As can be seen in the table, expenditures per student in general secondary education show a modest increase per year during the period under consideration[88]. Looking at public expenditures per student in senior vocational education and apprenticeship in the last two years, a slowdown in expenditures per student can be identified. Whereas in the earlier years[89] expenditures per student in both kinds of secondary education showed a smooth increase over the years, recently they more or less have stabilised.

This more or less stabilisation of the expenditures per student in senior vocational education and apprenticeship may be a result of the changes which have been implemented in these kinds of secondary education. The most important change in this respect has been the introduction of the new Adult and Vocational Education Act[90] which has induced the creation of Regional Education Centres (ROC's). These ROC's have come into being as a result of the mergers between educational institutions in secondary vocational education, apprenticeship and adult education. In these centres different kinds of education are integrated; adult education, apprenticeship and senior vocational education. This development alone may result in a decline of the costs per student, because of the fact that to a considerable extent the same schoolbuildings, classrooms and educational tools can be used for the different kinds of education.

Another possible explanation for the recent stabilisation of expenditures per student in apprenticeship could be the fact that the ratio of students to teaching staff in apprenticeship in the last two years sharply has increased (see further down in the text). This is a consequence of the ending in 1995 of the freeze on the number of personnel. Because of the ongoing decline in the overall number of students in apprenticeship, in 1995 finally major cuts in the number of personnel were carried through, leading to a considerable drop in the number of personnel in apprenticeship.

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[86] The reason why only expenditures per student over the last four years are given, is that data concerning public expenditures per student in secondary education in earlier years are not completely comparable with the data presented in table 3.1. The data covering the last ten years refer to two various sources that use different definitions and classifications, in such a way that it is not possible to come to a continuous time series.

[87] OCW, *Financial key data on education 1994*.

[88] This smooth growth pattern in per student expenditures in general secondary education is a continuation of a similar development in the earlier years.

[89] Also in the years before 1993, expenditures per student in both senior vocational education and apprenticeship displayed a gradual increase per year.

[90] This act came into force on the first of January 1996 and has the intention to harmonise the various forms of adult and vocational education.

Total expenditure

Not only expenditures per student are relevant when considering the public costs of education, but also of interest is the division of total expenditures between current and capital costs. Capital expenditures are incurred in providing school buildings and facilities, whereas current expenditures relate financial outlays that are used each year in the operation of schools. Table 3.2 gives the development of current and capital expenditures over the period 1986 to 1994 expressed as a percentage of real total expenditures. The table also gives an overview of the division of current expenditures between compensation of staff and other current expenditure, again expressed as a percentage of total current expenditure.
Other current expenditure includes expenditure on contracted and purchased services (for example support services) and rents paid for school buildings and other facilities.

Table 3.2 Gross public expenditure by resource category in foundation learning[a)]

Years	Total gross expenditures	Percentage of total expenditure		Distribution of current expenditure	
	(in millions of guilders)	current	Capital	compensation of staff	other current expenditure
1986	10,916	96.6%	3.4%	82.2%	17.8%
1987	10,830	96.1%	3.9%	83.5%	16.5%
1988	10,575	95.7%	4.3%	83.4%	16.6%
1989	10,298	96.4%	3.6%	81.9%	18.1%
1990	10,010	94.4%	5.6%	83.6%	16.4%
1991	9,945	94.6%	5.4%	84.2%	15.8%
1992[b)]	10,519	94.9%	5,1%	81.0%	19.0%
1993	10,425	95.6%	4.4%	81.1%	18.9%
1994	10,640	95.8%	4.2%	80.0%	20.0%

a) Educational expenditures in this table refer to general secondary education and to pre- and senior vocational secondary education.
b) From 1992 expenditures for secondary education include expenditures for adult secondary education. In the preceding years expenditures for this kind of education where reported separately. It has to be noted that expenditures for adult education are very low when compared with expenditures for secondary education (in 1994 they formed 4.8% of total expenditures for secondary education).
Source: CBS, *Statistics of government's expenditures on education, 1987 to 1994*

Discussing first of all the development of both current and capital expenditures, it can be seen that over the whole period under consideration, capital expenditures expressed as a percentage of total expenditures have slightly increased from 3.4% in 1987 to 4.2% in 1994. It has to be noted however that capital expenditures reached a peak in 1990 in which year 5.6% of total expenditures was classified as capital expenditures. Since then the share of capital expenditures in total expenditures has decreased with more than 1%, amounting as already mentioned to 4.2% in 1994.

An explanation for the recent small decline in the share of capital expenditures in total expenditures might be the concentration or merger wave which started more or less in 1990. Since that year a lot of schools in general secondary education have merged with other schools to form comprehensive schools which combine different educational levels in one institute. It might be the case that because of the newly formed large comprehensive schools, space and equipment can be used more efficiently, resulting in a decline in capital expenditures. With respect to senior vocational education, the already mentioned merging of schools may also account for a relative decline in capital expenditures in this kind of secondary education.

Besides these above mentioned expenditures, the public expenditures on financial aid to students in secondary education are also relevant in determining the public costs of education. These expenditures are presented in table 3.4b, together with the expenditures on student financial aid in higher education.

As can be seen in the table, expenditures on student financial aid in secondary education have been cut down in recent years. From 1991 on, the eligibility for study grants has declined in favour of the scheme for the contribution towards study costs. The amount of study grant per student has been reduced by 30 per cent or more in real terms. To secure access to secondary education for students of parents with a low income, at the same time the criteria for the supplementary grant have been loosened, such that the number of students eligible for this grant sharply increased. More will be said about the scheme of student financial aid in the section relating to higher education. This because student financial aid is much more important in this educational sector than it is in secondary education.

When coming to the breakdown of the earlier mentioned current expenditures in compensation of staff and other current expenditures, it can be seen from table 3.2. that since 1991, the part of current expenditures that is devoted to compensation of staff compared to other current expenditures shows a small decrease. Compensation of staff as a percentage of total current expenditures decreased in this period from around 84% in 1991 to 80.0% in 1994. Consequently the share of other current expenditures has increased to about one-fifth of total current expenditures. In the earlier years under consideration compensation of staff steadily became a larger share of total current expenditures. Despite the recent small decrease in the proportion of total current expenditures that is devoted to compensation of staff, the bulk of current educational outlays remains to be spend on compensation of staff.

Because the changes in the part of current expenditures that is devoted to compensation of staff are rather small, it is safe to conclude that the share of compensation of staff in current expenditures is more or less stable.

Staffing

Teachers' salaries typically represent the major component of compensation of staff. It is therefore instructive to look at the development of teachers' salaries in the last ten years to see whether this to a certain extent can explain the development in the share of compensation of staff in total current expenditures. Moreover, teachers' salaries are one of the most important aspects that determine the attractiveness of the teaching profession. Since the improvement of educational quality is a major aim of the Ministry of Education and good teachers are a key to improving educational quality, the quality and availability of teachers are a major concern. However, as becoming a teacher is only one of the possible career options, quality and availability are strongly related to the attractiveness of becoming a teacher, and thus to the salaries in the educational sector[91]. Table 3.3a gives the development of teachers' salaries in secondary education over the period 1987-1996.

In this table teachers' salaries are compared to both average workers' salaries and per capita GDP. In the period 1987-1996, teachers' salaries more or less stabilised when compared to average workers' salaries and strongly deteriorated when compared to per capita GDP. However, it must be emphasised that this deterioration of teachers' salaries with respect to per capita GDP could reflect several developments. For example per capita GDP can grow because of higher labour market participation of women. Moreover, per GDP is not only made up of wages but also of interest, rent and profit. Finally, the growth of GDP also reflects an increasing importance of positions for which higher education is required. The conclusions concerning the relative development of teachers' salaries in relation to per capita GDP therefore have to be interpreted with caution.

[91] However, it has to be noted that traditionally the educational sector is known for its extensive fringe benefits, especially the long holidays. Salaries are thus not the only indicator of the attractiveness of the teaching profession.

Table 3.3a Average full-time employee salaries in secondary education[a)], in Dutch guilders

Year	Average nominal gross earned income of full-time teachers' in secondary education	Average nominal earned income of full-time employees in all sectors	Ratio of teachers' salary to average earned income in all sectors	Per capita GDP	Ratio of average teachers' salary to per capita GDP
1987	55,600	45,800	1,21	30,050	1.85
1988	55,600	46,500	1.20	30,990	1.79
1989	58,400	47,400	1.23	32,650	1.79
1990	60,100	50,400	1.19	34,650	1.73
1991	63,900	52,600	1.21	35,960	1.78
1992	66,900	55,100	1.21	37,100	1.80
1993	68,500	57,100	1.20	37,560	1.82
1994	69,400	58,700	1.18	39,560	1.76
1995	71,100	60,200	1.18	41,450	1.71
1996	72,900	62,100	1.17	43,520	1,68

a) Included in the average teacher salaries are the salaries of teachers in general secondary education, junior and senior vocational education and apprenticeship.
Source: for GDP: CBS, *Statistical Yearbook*, 1997; for teachers' salaries: CBS, 1997e; for average workers' salaries: CBS, data provided on request.

The moderate development in teachers' salaries was mainly a consequence of the cutbacks in public expenditures which for a large part came down on the educational sector. One of the measures which was implemented was the so-called 1985 Educational Salaries Restructuring Act (HOS-wet). This act implied new career patterns with substantially lower starting salaries for new teachers. However, since 1991 increases in starting salaries of teachers in secondary education have been carried through[92], in response to the increasing difficulties of attracting new teachers. The result of this has been a rise in and smoothening of most salary-profiles. This smoothening implies that the average salary-increase over the 1991-1997 period decreases with seniority. Whereas contractual salaries in the educational sector have risen some 13 per cent in the 1991-1997 period, due to the changes in the lower ends of the pay-scales in 1991, 1994 and 1997, starting salaries in secondary education have gone up by 29.3 to 44.1 per cent, depending on the salary-scale[93].

The repairs in the starting salaries of teachers are difficult to recognise in the development of average teachers' salaries given in table 3.3a. Because of the rather low inflow of young teachers in secondary education, the changes in the starting salaries may not yet be completely reflected in average salaries. All in all the moderate salary increases correspond to a more or less stable or even a little bit declining proportion of staff costs in total expenditures (table 3.2).

In this respect it is important to remark that teachers in secondary education are ageing, as can be seen from table 3.3b. A majority of all teachers is over age 45. The proportion of this group increased from 30 to 53 percent during the period 1988-1996. Keeping in mind this strong ageing process means that the conclusion above that salaries have had a very moderate development is even more true. In general, ageing means higher wage costs because salaries rise with age (and tenure). In spite of this development, the average salary cost increased only moderately. As table 3.3b also suggests, inflow of young teachers is very limited. Recently graduated teachers often have to wait several years before they succeed in finding a full-time tenure. Until that time they have to do with part-time jobs, mostly

[92] These increases in starting salaries predominantly serve as 'repairs' of the aforementioned 1985 Educational Salaries Restructuring Act (HOS-Wet).

[93] See *"Uitleg OenW-Regelingen"*, June 28, 1989; June 12, 1991 and December 22, 1993. *"Uitleg Gele katern"*, May 23, 1997 and Van Vliet, 1997.

at two or even more schools, under short-term labour contracts[94]. The need for higher wages for starters also arises from the need to compensate teachers for this relatively unattractive feature of the educational sector.

Table 3.3b The development in the average age of teachers in secondary education

year age	1988	1989	1990	1991	1992	1993	1994	1995	1996
< 24	3%	3%	3%	3%	3%	3%	3%	2%	1%
25-44	67%	64%	60%	61%	56%	52%	51%	47%	45%
>= 45	30%	33%	37%	37%	42%	45%	46%	51%	53%
Total	100%	100%	100%	100%	100%	100%	100%	100%	100%
Source: Statistics Netherlands, 1997d.									

One indication of the fact that becoming a teacher seems not really attractive, is that in secondary education shortages of teachers exist in several subjects being taught and that these shortages are projected to become worse over the coming years. For a large part, these shortages are due to insufficient enrolment in university (for example, German language) and to the limited attractiveness of becoming a teacher compared to other career options (such as in economics).

Besides teachers' salaries, student/teaching staff ratios and teaching time influence the financial resources which governments have to devote to education. At the same time teaching time and the number of students per teacher are also important elements of the working conditions of teachers.

Table 3.3c gives the ratio of students to teaching staff in the various educational programmes. The ratio of students to teaching staff is calculated by dividing the total number of students per calendaryear[95] by the total number of teaching staff expressed in full-time equivalents.

Table 3.3c: Ratio of students to teaching staff in secondary and higher education[a)]

Year	General secondary and pre-vocational education	Senior vocational education	Apprenticeship	Higher vocational education	University
1992	17.3	19.3	29.6	19.3	17.1
1993	17.7	19.5	33.0	19.5	17.0
1994	16.9	20.2	30.4	19.8	17.1
1995	16.6	19.9	37.3	20.3	17.4
1996	16.8	19.8	35.6	21.2	..

a) Data do only refer to education provided by the Ministry of Education, Culture and Science. This means that agricultural education is excluded. We assume that the ratio of students to teaching staff would not alter that much when including these sectors. Furthermore the Open University is excluded.
Source: OCW, *Key data on education 1998*.

[94] These problems with respect to finding a full-time tenure are for a large part a result of the unemployment-insurance scheme for the educational sector. Teachers who have been fired or have become redundant, do not receive a normal unemployment benefit, but instead they receive reduced pay (*wachtgeld*). Part of this scheme, which is financially more attractive than the normal insurance scheme, is that teachers with reduced pay always have first rights when a vacancy occurs. In practice this means that schools have to check teachers with reduced pay first on their availability before they can attract a young graduate, which is a very time-consuming activity.

[95] The number of students per calendaryear is calculated by 7/12 times the number of students in schoolyear t-1 plus 5/12 times the number of students in schoolyear t.

Considering the number of students per teacher in general and pre-vocational secondary education, it can be seen that this ratio has been rather stable at about 17 students per teacher. In the same time the ratio of students to teaching staff in senior vocational education has fluctuated at about 20 students to one teacher. In contrast the number of students per teacher in apprenticeship has sharply increased from less than 30 in 1992 to more than 35 students per teacher in 1996. The number of students per teacher in apprenticeship is more than two times the ratio in general secondary education. However, it has to be kept in mind that the ratio of students to teaching staff can not be seen as an indicator of class size. Especially with respect to apprenticeship, it has to be noted that these students only receive part-time education, which means that there is less class education. Compared to the situation in other European countries the ratios of students to teaching staff in upper secondary education are relatively high (OECD 1996d).

Besides the ratio of students to teaching staff, teaching time is also an indicator of the working conditions of teachers. The statutory number of hours per year a full-time teacher is required to teach according to formal rules, for years has been 954 hours per year in both lower and upper general secondary education. Teaching time is defined here as the total number of hours per year (1 hour is 60 minutes) during which a classroom teacher is responsible for teaching a class of students. Teaching hours per year are calculated on the basis of average teaching hours per week multiplied by the number of weeks per year that the school is open for teaching[96]. Since 1995 teaching hours have declined because of the reduction in working time of teachers. This has led to a reduction in teaching hours per year from 954 hours in 1994 to 912 hours nowadays[97]. The reduction in working time of teachers for a part may explain the relative decline in teachers' salaries in recent years. However, it has to be remarked that despite the fact that teaching hours have declined, actual work load of teachers has risen considerably. Besides teaching, teachers have to perform a lot of other tasks, which consume an increasing share of their working time.

All in all we can conclude that stabilising or class-size, reduction of teaching hours and moderate wage increases, have led to the stable pattern of the share of compensation of staff in current expenditures. The working conditions of teachers remain an important point for attention in the future. Moderate wage increases, uncertainty over contracts, and the work pressure can diminish the attractiveness of the teacher profession. Moreover, ageing plays an important role in the sector. Continuing training of teachers and stimulating mobility can help to raise the attractiveness of the profession and to prevent the possibility of burn-out of (older) teachers.

After this outline of the public costs associated with secondary education, we go on with the costs in higher education.

3.1.2 Higher education

Per student expenditures

Per student expenditures in higher education can be divided into two main categories. Firstly, public expenditure on the respective type of education, in this case public expenditure on higher vocational education and university education. The principal funder is the Ministry of Education Culture and

[96] In 1994 average teaching time per week was 23.85 classroom hours a week. A teacher in this year had a yearly task of 1789 hours. This is divided by the number of weeks that a teacher has to perform educational tasks, in particular 45 weeks, to come to the weekly work load of 39.75 hours a week. 60% of this workload has to be filled in by teaching. This comes down to 23.85 teaching hours a week (expressed in classroom hours this equals 28.62 class hours). Finally this has to be multiplied by the number of teaching weeks per year which equals 40. This gives a total of 954 teaching hours per year. Source: OECD, 1996d.

[97] Today a teacher has a yearly task of 1710 hours. Divided by 45 weeks this gives a working week of 38 hours. Again 60% of working time has to be devoted to teaching, which comes down to 22.80 hours a week (in classroom hours this equals 27.36 hours a week). Multiplied by 40 hours per year in which the school is open for teaching, total teaching hours per year equal 912 hours. Source: SCWO, 1996.

Science; agricultural education is funded by the Ministry of Agriculture, Nature Management and Fisheries. Total expenditure for the respective type of education divided by the number of students in that type of education results in per student expenditures[1],[98]. The second main category is expenditure on student financial aid.

There are three problems with the first category. First, public expenditure on university education also comprises expenses on research and health. This does not seem to be a good measure for expenditure per student, since what you really would like to know is how much extra it will cost to enlarge the number of students in higher education. Whether or not enlarging the student population will influence the budget on research and health depends on the size of the change. For one extra student, research and health remain constant, but this is less realistic for, say, doubling the student population. We therefore present expenditure per university student inclusive as well as exclusive research and health.

A problem related to the latter is that starting the budget year 1993 a different calculation method is used for the distribution of university expenditure into expenses on education and on research and health. The consequence is a break in series between 1992 and 1993[99].

The second problem is that the presented figures are average gross expenditures. One must keep in mind however that the actual data can differ widely between different branches. Sciences for example are known to be much more expensive than languages or humanities. For example, Jongbloed et al (1994), estimate the average gross public current expenditure per university student in 1990 at NLG 13,600. They estimate average expenditure per Science-student at NLG 26,200 and, in contrast, average expenditure per humanity-student at NLG 6,900 and per language-student at NLG 7,700. This difference in costs is not only caused by higher material expenditure but also by a lower ratio of students to teaching staff in Sciences. Thus enlarging the student population in the first category will entail higher costs than enlarging the student population in the latter two categories.

The last problem refers to the fact that the total budget for university education and higher vocational education is tied to a ceiling and that expenditure per student declines when the number of students rises, unless the budget is adapted.

Having made these remarks, real per student expenditures on HBO- and WO-students are presented in table 3.4a. Expenditures are gross expenditures, i.e. inclusive tuition fees. As was the case with per student expenditures in secondary education, constant guilders are used, with 1994 as base year. From the table it is clear that average expenditure on university students is higher than average expenditure on higher vocational education students. For a large part this can be explained by the additional expenses on research and health at universities (second row in table 3.4a). However, even when these expenses are excluded, as in the last row in table 3.4a, average expenditure on university students remains higher. An explanation could be a different ratio of students to teaching staff in higher vocational education and in university education (table 3.3c). The difference is smaller though, using the 1993-calculation method for the distribution of money in university education.

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[1] Data are based upon the definition of gross expenditure as used by Statistics Netherlands. This definition is different from the definition used by the Ministry of Culture, Education and Science. Among other things, Statistic Netherlands also counts educational expenditures made by other ministries (notably expenditure on agricultural education by the Ministry of Agriculture, Nature Management and Fisheries), and municipal contributions. A consequence may be that data deviate from the data in Education at a Glance. An important reason for not using the data from Education at a Glance is that we would like to make a distinction between vocational and university education.

[98] Not all public expenditure on education can be allocated to specific types of education. Some public expenditure cannot be allocated to a level, there are general administration costs and additional expenditure of a social nature. When these costs are also counted, per student costs would be somewhat higher.

[99] According to the old method, the gross expenditure per WO-student exclusive research and health would have been ƒ14,352; according to the new method, it is ƒ11,290 (data are provided on request by CBS; data not corrected for inflation). When summed over all WO-students the difference between the two calculation methods is 543 million guilders in 1993 (not corrected for inflation).

In the period under investigation, real per student expenditure in higher vocational education as well as in university education, inclusive research and health, has risen with 10%. Per student expenditure exclusive research and health has risen with 10% in the period up to and including 1992, after which per student expenditure declines heavily.

Table 3.4a Real average gross public current expenditure per student in public and private institutes, higher education, 1985-1994; expenditure in guilders; 1994 is base year.

	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994
HBO	9,864	10,717	11,125	11,895	11,634	11,489	11,247	10,888	10,923	10,890
WO[a]	26,678	27,468	27,553	27,730	29,395	30,050	29,718	29,332	29,151	29,298
WO[b]	13,253	13,677	13,851	13,840	14,656	14,923	14,790	14,607	*11,579*	*11,471*

Source: calculations based upon CBS, data provided on request by the sector Education (October 1997). Index figures used are presented in appendix I.
a) Inclusive research and health.
b) Exclusive research and health, break in series between 1992 and 1993.
Amounts are current expenditure inclusive interest and redemption, but exclusive investment. Current expenditure on university education do not contain capital liabilities, since expenditure on capital is financed a fonds perdu. Amounts relate to gross expenditure, i.e. inclusive tuition fees. Finally, expenditure on student financial aid, and in higher vocational education some social arrangements are not comprised.
Students are converted to calendar year: (7/12 * number of students college year t-1/t) + (5/12 * number of students college year t/t+1).

As was said before, the second main cost category is student financial aid. In 1986 a new system of student financial aid was introduced, the Student Finance Act (WSF). According to this act full-time students are entitled to a basic grant, the size of which depends on whether or not the student is living at home; it is independent of parental income. It must be emphasised though that not all students receive a basic grant[100]. Depending on their parents' income, students may be allowed to claim a supplementary grant on top of the basic grant. Those students that have parents with too high an income to be eligible for a supplementary grant have to ask this supplement from their parents or have to take a part-time job. Finally, students can claim an interest-bearing loan which has to be repaid after completion of the study. This last component of student financial aid will not be discussed here; in table b2 of the appendix expenditure and number of students are presented[101].

Apart from WSF, there is also the Allowance College Expenses Part-time Students (TSD18+). This concerns part-time students and full-time students, who are older than 27 years, in those teaching subjects in which there exists a shortage of teachers. In order to be eligible, they have to meet some requirements[102]. The number of participants in higher education that uses this arrangement is very small and expenditure is low. In 1996 total expenditure on TSD18+ for higher education was NLG 0,8 million (OCW 1997b, p.129).

When introduced, the WSF was budgetary neutral[103], but because of subsequent cuts in the basic grant[104], the largest occurring in 1994 and 1995, per student expenditures in the current system are

[100] According to OCW (1996a, p.44) about 80% of all full-time students in university education receive student financial aid. In higher vocational education this is about 90% (ibid.). There are several reasons why full-time students do not receive a basic grant. For example, income may be too high and students older than 27 are excluded.

[101] Originally, students did not have to pay interest during their study. Starting 1992, this has changed: students have to pay interest rates in conformity with the market, also while they are studying. Because of this, loans do not count for the budget deficit relevant for policymaking (in Dutch: beleidsmatig relevant financieringstekort) and the government economises about NLG 500 million yearly (Bruggert & Spee 1996, p.56).

[102] Before, students in higher education younger than 18 years had to apply for the Allowance Study Costs (TS). However starting 1996/1997, there is no minimum age anymore for students in higher education to be eligible for WSF.

[103] The WSF replaced a system of three complementary arrangements.

[104] Until the end of 1990 almost no changes were made in this Act. In the period from 1991 onwards, in order to cut down expenditure, one change after the other has been made. Firstly, free public transport was introduced, coupled with a cut

lower than the per student expenditures in the system before 1986 (OCW 1996, p.44). The nominal basic grant for students not living with their parents declined with 30% in the period 1987-1996. The nominal basic grant for students living with their parents declined with 53% even more steeply in the same period (in table B2 in the appendix to this chapter an overview is given of the actual amounts).

From table 3.4b it can be seen that expenditure in university education is higher than expenditure in higher vocational education, while the number of students is lower. The reason for this is that in university education far more students live away from their parents (83% versus 55% in 1987; 84% versus 59% in 1994 (OCW 1996, p.46)) and thus receive a higher basic grant. As can be calculated from table 3.4b, the total number of students in higher education that is eligible for a basic grant rose in the period under investigation with 23%. It is obvious that this rise is mainly caused by a rise in the number of higher vocational education students, the rise in the number of eligible university students being much lower. Not withstanding the rise in eligible students, real expenditure on basic grants in HBO and in WO taken together, has declined with 23% in the years under investigation.

Table 3.4b Real expenditure (exp.) on contribution towards study costs, basic study grant and supplementary grant, and number of receiving students (stu.), 1987-1995; expenditure in NLG million, numbers in 1,000 students; 1994 is base year.

		1987	1988	1989	1990	1991	1992	1993	1994	1995
Secondary										
contribution towards study costs	exp.	..	..	..	..	315	280	255	220	..
	stu.	..	..	..	..	286	258	202	206	..
study grant	exp.	1,045	1,120	1,175	1,135	970	895	825	670	510
	stu.	247	256	262	257	257	257	257	256	255
supplementary grant	exp.	200	275	280	270	270	245	350	450	505
	stu.	92	109	112	109	109	102	109	114	118
HBO										
Study grant	exp.	890	945	1,006	1,078	996	999	1,026	980	806
	stu.	144	150	159	170	170	170	198	200	205
Supplementary grant	exp.	87	105	116	130	142	162	185	180	218
	stu.	56	63	64	68	73	73	75	70	77
University										
Study grant	exp.	1,029	1,062	1,035	1,050	935	926	918	850	670
	stu.	137	140	137	139	139	139	147	147	142
Supplementary grant	exp.	40	41	47	45	44	47	56	55	78
	stu.	33	38	36	36	33	32	33	31	34
Sources: calculations based upon Bruggert and Spee (1996) and CBS, 1997										

In the Dutch system, the amount of supplementary grant students can receive on top of the basic grant depends on actual parental income. The higher the parental income, the lower the supplementary grant, until the point were there is no supplementary grant; only a basic grant. During the whole period under investigation the maximum supplementary grant that students could receive increased (see table B2 in the appendix). Until 1995 students in higher vocational education were eligible for a higher maximum

in the allowance. After this, the basic grant was frozen and subsequently lowered. At the same time the supplementary grant was raised, thus leading to a shift of the financial burden from parents with low income to parents with a higher income. The period that students are eligible for student financial aid was shortened and the conditions under which student financial aid was given were sharpened. Today, the Minister of Education, Culture and Science wishes to discuss the long-term perspectives for student finance; this will be further discussed in chapter 4.

supplementary grant than university students; starting 1996 this is equalised. Also, until 1994, whether students lived with their parents or not had no influence on the grant. Starting 1995 distinction is made between students who live at home and students who do not live at home.

In the period 1987-1996, the nominal maximum supplementary grant university students, living with their parents, could receive rose with 138%. For students who lived away from their parents, the nominal maximum supplementary grant rose with 162%. The rise in the nominal maximum supplementary grant for higher vocational education students has been 71% and 89% respectively.

As can be calculated from table 3.4b, the number of students in higher education that is eligible for a supplementary grant rose with 25% and just as with the basic grant this increase is almost entirely caused by a rising number of eligible students in higher vocational education. Total real expenditure rose with 133% in the years under investigation. In spite of this increase, real expenditure in higher education on basic grants and supplementary grants together has declined with 13% between 1987 and 1995.

The major developments underlying these changes are to place higher weight on private financing of learning by reducing the study grants, but also to back up those students who without financial aid could not afford to study. Therefore, to secure access to secondary and higher education, eligibility criteria for supplementary grants have been loosened and the maximum supplementary grant has been increased.

Capital expenditure and current expenditure

Now that per student expenditures have been described in detail, we continue with considering total expenditure in higher education and the break down of total expenditure in current and capital costs. This division of total expenditure is given in table 3.5a which provides an overview of educational expenditure made by public and private state funded institutes for higher education during the period 1985-1994. At this point it must be emphasised that higher education is financed for the major part on a lump sum basis in the Netherlands, i.e. institutes can decide themselves how to actually spend most of their money. This means that we actually present the way money was spent[2].

From table 3.5a it can be seen that universities have a higher budget to spend than institutes for higher vocational education. During the whole period, the proportion between higher vocational education and universities is about 1:2. For the most part this difference can be explained by the fact that universities also receive a research-part. Furthermore, during the years under investigation, universities spent a larger proportion of their budget on capital expenditure than higher vocational education. For universities capital expenditure is about 7%-9% of the available budget, whereas for higher vocational education this is about 2%-point lower. This can also be attributed to the fact that universities have a research task to carry out.

In the period under investigation, real total expenditure in higher education rose with 26%. This rise can for a large part be explained by the rise in the number of students participating in higher vocational education. Until 1990, higher vocational education was financed according to an open-end arrangement, which meant that higher numbers of students resulted automatically in higher income. Also, risen tuition fees caused higher income in higher education. Finally, receipts from others in university education rose very fast in the period under consideration. It must be emphasised that the real government contribution on higher vocational education rose with 18%, while the number of full-time students rose with more than 50%. In university education real government contribution rose with 2%, while the number of full-time students rose with 12%.

[2] A consequence hereof is that all income is included, notably receipts from others.

Table 3.5a Total gross expenditure by resource category in public and private institutes, higher education, 1985-1994; total expenditure x million guilders; 1994 is base year.

	Total gross expenditure higher education			Total gross expenditure HBO, divided into current and capital expenditure		Total gross expenditure WO, divided into current and capital expenditure	
Years	Total expenditure	HBO	WO	Current expenditure	Capital expenditure	Current expenditure	Capital expenditure
1985	6,944.4	32%	68%	95%	5%	92%	8%
1986	7,387.2	32%	68%	95%	5%	91%	9%
1987	7,562.3	32%	68%	96%	4%	91%	9%
1988	7,335.2	30%	70%	96%	4%	93%	7%
1989	7,575.9	29%	71%	96%	4%	92%	8%
1990	7,977.5	29%	71%	94%	6%	91%	9%
1991	8,155.1	29%	71%	95%	5%	91%	9%
1992	8,581.0	32%	68%	96%	4%	92%	8%
1993	8,754.1	34%	66%	93%	7%	93%	7%
1994	8,728.7	34%	66%	94%	6%	93%	7%

Source: calculations based upon CBS, *Statistics of Government's Expenditures on Education*, 1987 to 1994 (CBS, several years).. Index figures used are presented in appendix I.
Gross expenditure higher vocational education refers to expenditure by both public and private education. Gross expenditure on university education refers only to expenditure on universities and other university institutions; it is exclusive expenditure on academic hospitals, affiliates and institutes.

When we take a closer look at current expenditures, we see that just as was the case in secondary education, staffing represents the major component of current costs, see table 3.5b. In higher vocational education about four-fifths of current expenditure is spent on personnel. This is slightly less than in secondary education. In university education a smaller proportion of current expenditure is spent on personnel: about two-thirds. Expenditure on personnel comprises not only salaries but also social liabilities in so far as accounted for by the two types of education. Salaries form the largest component of expenditure on personnel, the rest is spent on social liabilities, notably unemployment benefits.

As was noted in section 3.1.1, unemployed persons in the educational sector receive reduced pay (*wachtgeld*) as unemployment insurance. In 1990 the responsibility for expenditure on reduced pay was transferred from the Ministry of Home Affairs to the Ministry of Education, Research and Science. At that time the large expenditures, not only in higher education but in all educational sectors, became visible, and it was agreed upon that action was needed. In 1993 expenditure on reduced pay in higher vocational education was put as an item on the budget, with budgetary consequences if expenditure exceeded the norm. Starting 1996, expenditure on reduced pay is partly settled with the individual government contribution paid to institutions for higher vocational education. In universities, starting 1991, the benefits after discharge are budgeted for. Starting 1994, this is also the case for the Open University. The idea behind these measures is that as long as universities and institutions are not responsible for expenditure on reduced pay, they will face no incentive to lower expenditure, either by reducing inflow into reduced pay arrangements or by enlarging outflow.

One of the consequences of the measures taken is that universities and institutions for higher vocational education have become more unwilling to hire staff and instead rely more on temporary employees. For instance, in higher vocational education, expenditure on temporary employment more than doubled in the period 1992-1996. Expenditure in 1992 was NLG 44 million rising to NLG 92

million in 1996 (data provided by OCW). By substituting the hiring of personnel for temporary employees institutes certainly reduce the inflow into a reduced pay arrangement but only at the expense of job-security for employees.

Other current expenditure consists of expenditure on rent, maintenance of buildings, energy, water, cleaning, educational appliances, general and administration costs et cetera. Among these, the most important components are educational appliances and general and administration costs. In university education, these latter two costs have risen importantly in the last decade. Real expenditure on the two items together doubled, thereby increasing their joint relative importance from 14% in 1995 to 22% in 1994. Unfortunately, data on higher vocational education are not very detailed[105].

Table 3.5b Current expenditure divided into expenditure on personnel and other current expenditure, higher education, 1985-1994.

	HBO		WO	
Year	Expenditure on personnel	Other current expenditure	Expenditure on personnel	Other current expenditure
1985	80%	20%	74%	26%
1986	79%	21%	74%	26%
1987	79%	21%	72%	28%
1988	76%	24%	71%	29%
1989	76%	24%	71%	29%
1990	76%	24%	68%	32%
1991	75%	24%	66%	34%
1992	80%	20%	65%	35%
1993	77%	22%	66%	34%
1994	78%	22%	68%	32%

Source: CBS , *Statistics of Government's Expenditures on Education*, 1987-1994 (CBS, several years).
Current expenditure in higher vocational education refers to expenditure on both public and private education. Current expenditure on university education refers only to expenditure on universities and other university institutions; it is exclusive expenditure on academic hospitals, affiliates and institutes.

Staffing

In the years under investigation, real expenditure on salaries and social liabilities rose with 29% in higher vocational education and with 11% in university education. Since compensation of staff makes up a large part of current costs it is instructive to see how salaries for instructional staff and others have changed over the last 10 years, in real and relative terms.

Average yearly income as presented below in table 3.6a has one important drawback. When comparing average earned income in secondary education with average earned income in higher education, the difference in income is small. This can largely be explained by a different composition of staff in secondary education and higher education. In secondary education the majority of staff has an educational task, whereas in higher education a larger proportion of staff has a supporting task. On average people with a supportive task are in lower salary scales[3] (see table B3 in the appendix for an overview of the development in salary scales).

[105] That is, data on public higher vocational education are as detailed as university education, but data on private higher vocational education are only provided in three items. In 1994, 16% of current expenditure was spent in public institutions, the rest in private institutions.

[3] In higher vocational education, the majority of teaching staff is in salary scale 10 to 12 whereas supporting staff is in general in salary scale 6 to 9 (data for 1994: OCW 1996, p.35). University education shows the same picture (p.36). Teaching staff in universities can be divided into three ranks. In general, university teachers (UD) end up in salary scale 12, professors (hoogleraren) end up in salary scale 16 or 18. In between these ranks, universities have what is called an UHD. An UHD ends up in salary scale 14. In higher vocational education salary scales 12 to 14 are commonly used as end-level for teachers.

As can be seen in table 3.6a, nominal average gross income per job for people working full-time in higher education has risen with 20% in the years 1987-1995. In the same period inflation was about 16% cumulative. Between 1987 and 1989 nominal average yearly wages rose only slightly with 1,5%. An explanation for this phenomenon could be the introduction of the Trainee Research Assistant (AIO) at the university at the end of the 1980s. Trainee Research Assistants have a four-year appointment during which time they are expected to produce a PhD-thesis. Especially during the first years of a Trainee Research Assistantship wages are very low. After 1989, the rise in wages exceeded inflation every year.

In the last decade, personnel in higher education, just as staff in secondary education, has grown older on average. Whereas in 1987 about a quarter (28%) was older than 44 years, in 1995 this has risen to 36% (Hartgers 1996, see table B4 in the appendix). In addition to the compensation for inflation this could be an explanation for the rise in wages. In the Netherlands, civil servants receive yearly a periodical. Every year of experience leads to a higher salary scale-number, until one has reached the top of his/her scale. In general there are about 10 scale-numbers in one scale[106]. When one has reached the end of his scale, moving to a higher scale can only occur together with a change of job content, i.e. one has to move to another function. Thus, ageing in itself can lead to higher expenditure on wages if it takes a long time to reach the end of one's scale.

However, the rise in wages as a consequence of the ageing of personnel was compensated by lower starting salaries for new employees. From table 3.6a it is clear that the development in annual average earned income in higher education stayed behind the development in per capita GDP. The ratio of annual average earned income in higher education to per capita GDP was 2.03 in 1987 and declined to 1,69 in 1996. When comparing annual average earned income in higher education with annual average earned income in all sectors the picture has the same trend. From 1987 to 1996 the ratio of annual average earned income in higher education to annual average earned income in all sectors deteriorates from 1.33 to 1.19, showing the same trend, although more moderate, as the ratio to per capita GDP. The limitations in the comparison with per capita GDP have already been put together in section 3.1.1. The comparison with average earned income is more useful.

Table 3.6a Nominal annual average gross salary per job in higher education, per capita GDP and average earned income in all sectors, 1987-1995; income, salary and per capita GDP in guilders.

Year	Nominal average gross salary of full-timers in higher education[A]	Nominal per capita GDP	Ratio of salary to per capita GDP	Nominal average earned income of full-timers in all sectors[B]	Ratio of salary to average earned income in all sectors
1987	60,800	30,000	2.03	45,800	1.33
1988	60,900	31,000	1.96	46,500	1.31
1989	61,700	32,700	1.89	47,400	1.30
1990	63,600	34,700	1.83	50,400	1.26
1991	65,500	36,000	1.82	52,600	1.25
1992	66,900	37,100	1.80	55,100	1.21
1993	69,400	37,600	1.85	57,100	1.22
1994	71,000	39,600	1.79	58,700	1.21
1995	73,100	41,500	1.76	60,200	1.21
1996	73,700	43,500	1.69	62,100	1.19

Source: Hartgers (1996); CBS Arbeidsrekeningen (1987-1993); CBS Jaarlijks onderzoek naar werkgelegenheid en lonen 1994; CBS Enquete werkgelegenheid en lonen 1995. Per capita GDP (CBS, Statistical Yearbook, 1997). All data are rounded to hundreds of guilders.
[A]Wages are average gross wages per job per year, inclusive special rewards. Data for 1994 and 1995 are preliminary.
[B]Average year income of employees working full-time, part-time and flexible, year income inclusive special rewards.

[106] As an example of the difference between begin and end of a scale, January 1997, the beginning of salary scale 11.0 amounted NLG 5,215 per month and the end of scale 11, salary scale 11.11, amounted NLG 7,178 per month.

In addition to information on the developments in salaries, the ratio of students to teachers is also of interest. Rising salaries in combination with a higher ratio of students to teachers for example can very well result in declining costs. Table 3.3c presented in the previous section 3.1.1 also provides information on the ratio of students to teaching staff in both higher vocational education and university education in the period 1992 to 1996. From the data in table 3.3c it is clear that the ratio of students to teaching staff is lower in university education than in higher vocational education. Before, this was already mentioned as a reason why university students are more expensive on average than higher vocational education students. Again, however one must keep in mind that these are average ratios and that the actual number of students per teacher can fluctuate widely between different branches. During the years 1992 to 1996 the number of students per teacher in higher vocational education increased. In 1992 for every teacher there were 19,3 students, while in 1996 this has increased to 21,2 students per teacher. In university education there has also been an increase, but a smaller one.

Capital costs

The capital expenditures presented in table 3.5a, can be further divided into two main cost categories: purchase of buildings and rebuilding on the one side and furnishing and equipment on the other side. In the 1980s and beginning of the 1990s, housing in higher education was organised at the level of the central government. Since January 1994 the responsibility of housing in higher vocational education has been decentralised. This means that from 1994 onwards housing is a responsibility of the institutions themselves. The contribution for housing, about NLG 350 million yearly, is part of the lump sum contribution. The difference in accommodation between institutions was thought very large in 1994, some institutions were housed in old buildings whereas some other institutions were housed in fairly new ones. In order to give all institutions an equal starting position, each institution had to pay the central government in 1993 an adjusted financial compensation for the transfer of buildings and sites. January the first 1995 housing has also been decentralised in university education. The government did not ask a financial compensation in exchange for the transfer, because it was thought that the differences between accommodation were not large.

Table 3.6b Real capital expenditure in WO divided into purchase of buildings and furnishing and equipment.

	Total (in million guilders)	Purchase of new buildings and rebuilding	Furnishing and equipment
1986	431	50.9%	49.1%
1987	437	65.1%	34.9%
1988	378	59.9%	40.1%
1989	447	60.7%	39.3%
1990	483	63.1%	36.9%
1991	538	62.6%	37.4%
1992	448	58.2%	41.8%
1993	375	57.4%	42.6%
1994	410	63.2%	36.8%
1995	430	57.8%	42.2%

Source: calculations based upon CBS, data provided on request by the sector Government (October 1997). Index figures used are presented in appendix I.
Capital expenditure on university education refers only to expenditure on universities and other university institutions; it is exclusive expenditure on academic hospitals, affiliates and institutes.

In table 3.6b both total expenditure on capital and the proportional distribution over the two cost categories in university education is given[107]. From the table it can be seen that total real expenditure in university education stayed the same in the years under investigation.

Thus, the development in capital expenditures does not contribute much to the explanation of the developments in public expenditures in higher education. In the next subsection some other factors that might explain the development in public costs will be examined.

Other cost elements and factors that can explain the evolution of costs in higher education

The last decade the government has made numerous attempts to reduce costs in higher education. In what follows an overview is provided of some of the important measures taken.

In 1982 the Two Phases Structure Act came into force[4]. This Act was focused mainly on university education. As a consequence of this Act, university studies were divided into two phases and the course duration of the first phase was limited to four years[108]. The maximum duration of subsidised enrolment was set at six years. This act has had an important effect on the study duration of students from two angles. First, a formal study duration of four years meant that courses were shortened with respect to the situation before 1982. Second, students were given incentives to shorten their time spent in higher education.

In 1986 the Higher Vocational Education Act came into operation[109]. The course duration of higher vocational education studies was also set at four years. For a part it meant an extension of study duration, notably in the economic field (OCW 1989, p.112). Average actual study duration was 4,24 in higher vocational education (p.111), which meant that the cost reductions in higher vocational education from this angle were limited.

Under the 1983-operation Scaling-up, Division of tasks and Concentration (STC)[110], institutions for higher education were merged into large institutes. As a consequence, the number of institutions have been cut down from 432 institutions in 1985 to 67 institutions in 1995. In university education scaling-up was not necessary, because of the low number of universities in the Netherlands.

Furthermore, in pursuance of the coalition agreement of 1986 a number of courses were reorganised because of diminishing interest of students and in view of a better tuning to the needs of the labour market. At this moment the government, in accordance with the VSNU and the HBO-council are working on a rearrangement of the supply of courses. The aim is to recreate a supply of courses that is transparent and recognisable both to students and to employers.

In 1987 the measure of Selective Reduction and Growth was announced[111]. According to this measure NLG 130 million guilders had to be economised in universities and a comparable amount of money had to be bend within the universities.

In 1990 the Minister and the institutes for higher education signed the Agreement on Main Features[112]. In exchange for some efforts, the Minister promised that no major changes would take place. Furthermore the agreement contained ideas for more independence in higher education, in the area of labour agreements and housing.

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[107] Unfortunately, data on the capital costs in higher vocational education are not available.

[4] In Dutch: *Wet op de Twee Fasen Structuur.*

[108] In 1984 the second phase trainee course is exchanged for the Trainee Research Assistant.

[109] In Dutch: *Wet op het Hoger Beroepsonderwijs.*

[110] In Dutch: operatie Schaalvergroting, Taakverdeling en Concentratie.

[111] In Dutch: *Selectieve Krimp en Groei.*

[112] In Dutch: *Hoofdlijnenaccoord.*

In 1996 the government has reached an agreement with the HBO-council about the time senior secondary vocational education graduates and pre-university graduates would spend in higher vocational education, the Agreement on Study Duration[113]. According to this agreement, institutes for higher vocational education have to reduce the average study duration of graduates from senior secondary vocational education by means of exemptions. Moreover, they will have to try to reduce the average time spent by pre-university students and finally, they will have to get more students to study part-time or participate in a work-based learning program.

Since the 1980s the government has also attempted to cut down expenditure on higher education by asking higher contributions from students. In higher vocational education no nationally collected tuition fees had to be paid before 1981 (OCW 1996a, p.43). Before 1991 tuition fees in university education were higher than tuition fees in higher vocational education. In 1987 a full-time student in higher vocational education had to pay nominal tuition fees of NLG 1,292, whereas a university student had to pay NLG 1,604. Part-time students had to pay NLG 710. In 1991 tuition fees for HBO and WO were equalised. In ten years time tuition fees for full-time students have risen to NLG 2,575 in 1997.

With respect to possible cost reductions in the future, it is not expected that costs on personnel in higher education will decline in the near future. A number of measures such as parental leave, sabbatical leave and flexible pension arrangements et cetera are cost increasing. However, attempts have already been made and will be made in the future to reduce expenditure on reduced pay, costs of sick leave and disability.

Rather the reverse of cost reductions can be expected from branches of study chosen. It is thought of importance to the Dutch economy that a sufficient number of technically educated students graduate yearly (OCW 1997a, p.97). However, it is quite difficult to attract sufficient students to Science studies. These are the more expensive studies and efforts are required to make these studies more attractive. One possible solution is to reallocate students from medical studies to technical studies. Medical studies are expensive as well, but they are rather popular. It might be possible to ration access in medical studies by higher tuition fees rather than by lotteries. Though this is a defendable alternative, political support will be quite limited.

Universities and institutes for higher vocational education do not exploit their position on the market for adult education fully. The relations between institutes and their former graduates is weak so former graduates may take their later courses, as employees, from other suppliers as well. Furthermore, because of this weak relation, donations from former graduates are negligible.

One area in which cost reductions may be realised is in lowering the drop out rate. In table A4 in the appendix to chapter 2 it can be seen that high numbers of students drop out, even after seven or more years. By intensifying efforts in selecting and referring of students potential gains are possible.

After discussing the public costs of higher education, we next turn to adult education.

[113] In Dutch: *Verblijfsduuraccoord.*

3.1.3 Adult Education

3.1.3.1. Education for poorly qualified adults (not in the labour force)

The public unit costs of adult education for poorly qualified adults are the weighed average costs of the different programmes. Courses are weighed according to the estimated participation of those out of the labour force shown in table 2.3b[114]. The unit costs for the different courses are the amount of subsidy per student paid to educational institutes, laid down by the central government for 1996 (OCW 1995). This results in a weighted average public unit cost of NLG 2,070.

For each hour of adult basic education (dcu, participant contract hour) the institute is rewarded a general subsidy of NLG 19.24. Multiplied with the average number of course hours per person (99.2 in 1995), a public unit cost of NLG 1,926 results, see table 3.7a which gives an overview of the public costs of the various programmes. In part-time secondary education institutions receive a subsidy which varies according to the type of course, depending on the number of participants. The real number of students is translated to a number of fictions participants (dte's, part-time equivalencies) following 10 hours of course a week. Lacking precise information on the real costs per student, this subsidy per fictive participant is used as a proxy. For general secondary education this was set at NLG 2,592 in 1996, whereas in vocational secondary education this varied from NLG 2,284 in economic and administrative courses to NLG 4,317 for courses in service and health. The weighed average of the subsidies for part-time vocational education was NLG 3,132 (OCW 1995)[115].

Table 3.7a Adult education and training programme costs

Subsection	Public unit costs
Adult basic education	1,926 central government subsidy
Dutch as a second language	2,592 central government subsidy
General secondary education[116]	2,592 central government subsidy
Vocational secondary education	3,132 central government subsidy
Training of the unemployed	5,900 PES contribution
Job-related training	1,413 deduction of profit before corporate taxes

Source: Adapted from information provided by CBS; OCW; institutions for adult education; OCW 1995; Janssen 1997, p.39; Bronneman-Helmers 1992, p.87; CBS 1995a, p.37, 64. Training of unemployed: see section 3.1.3.2.

Comparing the costs of courses in basic adult education with the public costs of other part-time courses for adults, we see that the courses in basic adult education are relatively cheap. However, courses in basic adult education mostly are of a shorter duration and do not lead to a secondary education certificate.

Total public costs tend to be somewhat higher as a consequence of additional subsidies of municipalities. For basic adult education this was estimated at almost NLG 400 and for part-time general secondary education at almost NLG 150 per participant in 1995[117]. The central government budget for the operation of part-time education for poorly qualified adults was NLG 566.1 million in 1996. Related to the total number of participants in 1995 (227,000), this would give a much higher unit cost of NLG 2,494. However, this is likely to be an overestimation of the unit cost as the budget

[114] Relative shares for the different part-time courses for poorly qualified adults not in the labour force: Basic adult education .802; General lower secondary education .137; General upper secondary education .038; Vocational upper secondary education .023.

[115] Relative shares (and amount of subsidy per student) for the different courses in part-time vocational upper secondary education: Service and health .34 (*f*4317); Economic and administrative .53 (*f*2284); Technical .14 (*f*3240= .1*4132 (laboratory)+ .9*3141(other)). Estimates based on data provided by CBS 1997.

[116] Except Dutch as a second language, which is treated separately in the table.

[117] Local budget for basic adult education of *f*24 million for 62.000 participants in sample. Local budget for part-time general secondary education of 7 million for 49.000 participants in sample (Huisman 1996, p.26,30,42,44).

for 1996 will be based on a higher number of participants. As discussed in section 2.1.3 even the latest forecasts have not predicted the recent sharp decline in participation (OCW 1997b, p.33,42).

The 1996 budget of NLG 566 million consists of 155 million for basic adult education, 180 million for general secondary education, 110 million for vocational secondary education and 120 million for training of immigrants. The budget for the training of immigrants is divided between adult basic education and general secondary education (OCW 1995). This can be explained by the fact that both these programmes provide Dutch as a second language.

The main components of the costs for each of the adult education programmes are staff (94% in 1994). Inventory costs account for 2%, whereas other costs comprise 5%. These proportions were the same in 1992 and are expected to remain quite stable in 1998. Only operation costs are forecasted to decline with 1 percentage point in favour of other costs (OCW 1997d).

Adult basic education is by far the most important type of training for poorly qualified adults outside the labour force. Therefore we take a closer look at the evolution of public costs of basic adult education. The decline in the number of participants since 1993 has only resulted in a slowing down of the growth of public costs and consequently expenditures per person have steadily risen. Expenditures per course hour have only markedly risen in 1995.

Meanwhile as already said before, the number of institutions in 1995 was only half that of 1991 due to the creation of Regional Education Centres (ROC's). This has also involved a professionalisation of staff, in the sense that staff nowadays consists of more paid employees and less volunteers than before, which partly explains the growth of public costs in basic adult education.

3.1.3.2. Training for the unemployed

From the viewpoint of the Public Employment Service (PES), the cost of training the unemployed refer to costs involved for the PES, that is:
- the training subsidy;
- time spent by PES officials in planning, selecting trainees, monitoring training results, etc.

From a societal point of view a different concept of costs applies, however. For instance, if training is carried out by regular schools the subsidy will usually cover only part of the costs, the Ministry of Education paying for the remaining part.

So, the costs of training the unemployed consist of the direct costs made by the training agencies involved and the indirect costs associated with the design and implementation of training policy. In addition to the staff of the training centres coming under the Public Employment Service policy, advisors and counsellors spend time on training policy. Following the PES Annual Report, in 1996 approximately NLG 290 million was spent on training. This is considerably lower than in the early 1990s.

Costs will depend very much on reach and therefore on all implementation aspects determining reach. If one corrects for drop-out, this will also influence costs. The utilisation rate of training capacity is an important determining factor for training costs. Adjusting capacity to training needs is one way to avoid underutilisation, but diminishing absence rates and avoiding long time lags between one person completing training and the next one starting, are also important.

Training duration varies between the instruments, which partly explains differences in the costs between the instruments. Therefore one could also look at the training costs per training hour. It is also possible to make a correction for differences in completion rates and placement rates. In that case we would divide total (direct) training costs not by the total number of trainees but by the total number of trainees who completed training or the total number who found a job after training.

Koning et al (1993) tried to estimate the costs of a training place, that is the costs of training one person during one year in the Centre for Adult Vocational Training, the Centre for Basic Training and the Vocational Training Centre for Women. For the Adult Apprenticeship Training one could assume that the costs of the theory component are similar to the costs of initial vocational education. For the General Training Scheme less information is available.

The General Training Scheme (KRS) comprises a wide variety of (relatively short) courses. These are provided by private institutes, but participation is financed by the PES. Part of these courses are collective courses, such as training provided by a specific firm in co-operation with the PES. Other courses are on an individual basis, and suggested by the PES or an own initiative of the unemployed person. The costs of these courses differ widely. Therefore, it is impossible to give precise indications of the level and the structure of these costs. A rough estimate of average costs per participant of the courses under the scheme is NLG 4,000[118].

Taking into account the costs per participant for the CVT, CVA, CBB and VVS, as presented in table 3.7b and the relative shares of the different schemes (taken from table 2.4b, we derived a rough estimate of average cost per participant of all training schemes of NLG 5,500. These numbers are based on 1993, the last year for which accurate data on participation and cost are available.

Table 3.7b Cost-indicators of four training schemes for the unemployed

	CVT	CVA	CBB	VVS
Average training time in months	4.8	4.3	5.2	13
drop-out rate in percent	34	22	36	13
costs per participant	14	10	9	17
costs per successor	22	13	14	19
costs per year-participant	36	25	20	16

All costs in thousands of NLG.
Source: De Koning et al., 1993.

The data presented in table 3.7b are averages. Actually, large fluctuations in the costs per participant between different institutes occur, especially in the case of the CVT, CVA and CBB in the costs per participant. From a sample of training institutes, the standard deviation of the average was some 29 per cent (De Koning et al., 1993).

Housing costs on average make up about 18 per cent of total costs, whereas staff compromises 50 to 60 per cent of all costs. The remainder consists of depreciation and other costs (De Koning et al., 1993). Not included in this table are the PES selection and non-training-specific counselling costs. It is very hard to determine to what extent these costs are attributable to the various training measures. However, attribution is not expected to change the picture thoroughly.

Very little comparable data are available about the evolution of these costs. This is partly due to changes in training course characteristics. Even more important is that these kind of data were not collected systematically and registered periodically.

With respect to funding, private alternatives for the PES hardly exist. The commercial attractiveness of the provision of training for unemployed is limited, especially in the case of technical training, which requires high investment expenditures on machinery, thereby imposing providers to high risks due to uncertain benefits of training. Private provision of training is possible, depending on the minimum scale at which training activities have to take place in order to be cost-effective. In the field of administrative training, numerous private training institutions exist. In the field of technical training,

[118] In some studies for PES-regions the costs for KRS have been estimated. See for example an evaluation study for West-Utrecht (De Koning and others, 1993) and for South Limburg (Zandvliet and others, 1995).

the number of providers is smaller, due to the higher costs of equipment, which make intensive use necessary. The ROC's (Regional Education Centres) which function as part of the initial educational system, often have this machinery, but provide apprenticeship courses suited for normal students. Unemployed, however, are eligible for courses with a maximum length of one year, in order not to lose the unemployment benefit (Lisv, 1997), and require flexible starting time (De Koning et al., 1993). Unemployed who receive welfare can participate in training for two years without losing their welfare. Finally, many (long-term) unemployed are former drop-outs from initial education who faced negative experience with initial education. In this respect, the Centres for Vocational training are in a favourable position in the competition with the ROC's. On the other hand ROC's have the advantage of an available infrastructure which is also used for other purposes.

De Koning et al. (1993) compared the costs of CVT, CVA, CBB and VVS with relevant private in-firm training institutes (especially in the field of administrative vocational training) and similar courses in initial education, such as provided by the ROC's (technical training) or the basic education. When costs were corrected for the smaller group-size, compared to initial education, they appeared to be highly similar to private alternatives and the ROC's.

Whereas unit costs in initial education may be expected to be influenced by educational innovations such as distant learning, the use of computers and variable class size (see section 3.1.4), these innovations apply to the training of the unemployed to a less extent. According to the high drop-out rates, most trainees need intensive counselling during their training, which makes frequent contact with teachers very important. Further, the practical component of training is of major importance, and can be substituted for computerised learning to a limited extent, only.

As the comparison of De Koning et al. (1993) showed, cost-levels are generally competitive. Still, four channels are open to improve efficiency. The first is through more appropriate use of the available capacity. On the one hand, the great flexibility with respect to starting time of training courses is one of the strengths of the training schemes. On the other, a relatively great share of total capacity (up to 40 per cent) is not used. Through better planning, improved efficiency is possible.

The second channel consists of cost-control in the implementation of the training. As mentioned above, large differences between unit costs among the several institutes exist. Even if only a minor part of these differences can be attributed to inefficiency, significant gains are within reach of most training institutes. So more can be done in studying why certain institutes have relatively low, and other relatively high costs. The variation indicates that substantial potential for further cost reduction exists.

Bringing drop-out rates down is the criterion of the third channel. These rates, as table 3.7b shows, are high and therefore deserve serious attention. Bringing these down increases efficiency, and lowers the chance of becoming or remaining long-term unemployed. However, two types of drop-outs must be distinguished. Some trainees quit training because of having found a job, whereas others leave training because of ill motivation or other reasons. The latter category is much more a serious problem than the first one, although the first group is at risk, because people with unfinished training are more sensible for lay-off, and therefore face a higher chance of returning into unemployment (SER, 1997b). In case of temporary contracts, for example during economic booms, this problem is even more severe.
Reduction of course length is the fourth channel. By way of shorter courses, greater flexibility as well as lower drop-out rates can be achieved. The back of the medal is that reduction of training time has merely been achieved by increasing the specificity of training, which might increase chances for a particular job, but contributes little to general employability of the unemployed person under consideration. Moreover, many of the very short courses do not lead to an accredited qualification. It must be noted, that the drop-out rates for the female vocational training centres are substantially below those of the Centres for Vocational Training. This difference is not fully attributable to differences in the population aimed at. The counselling, and the frequent contacts with other students worked out stimulating in this respect (see De Koning et al., 1993), but have repercussions for (the counselling part of) costs.

3.1.3.3. Job-related training for employed workers

Most costs of job-related training are private in the sense that they are paid by employers and by employees. However, as far as the costs of job-related training are beard by employers, there are indirect public costs in the sense of lower public income from corporate taxes. Just like other costs of production, the costs of employee training can be deducted from the profits before corporate taxes. These costs were estimated at NLG 700 million a year in 1992, based on a training expenditure of NLG 2 billion at a corporate tax rate of 35% (Bronneman-Helmers 1992, p.87). A recalculation on the basis of the NLG 3.5 billion expenditures on training by private enterprises in 1993 suggests a higher hidden tax expenditure of more than NLG 1.2 billion. Per employee these costs amounted to NLG 1,413 (0.35 times NLG 4,036, which is the mean private costs for employers of job-related training, see section 2.4.3) (CBS 1995a, p.37,59). This figure is used as the public unit cost for work-related training in table 3.7a, because it is directly related to the participation in employer sponsored training. The other public costs of job-related training are dispersed over a number of arrangements, which are summarised in table 3.7c and comprehensively described below. For the sake of clearness these other public costs are neglected in calculating the unit costs for job-related training.

Table 3.7c Public costs of job-related training

Type of subsidy	Level of provision	Amount (mln *f*)
Deduction of training costs from profits before corporate taxes (1993)	Firm-Provider	1,225
Deduction of college-expenses from personal income tax (1994)	Individual-Learner	150
Deduction of expenses to keep professional knowledge up to date from personal income tax	Individual-Learner	?
Advantages related to employer sponsored training free of taxation	Individual-Learner	?
Allowance college-expenses part-time students (1997)	Individual-Learner	%*6
Subsidies of part-time regular education (1996)	Institution-Provider	270
VAT-exemption of vocational education and training	Institution-Provider	?
European subsidies on training (1995-1999)	Project-Provider	%*109
Extra deduction of training costs from profits before corporate taxes (1998)	Firm-Provider	235
Financing of careerinterruption (1998)	Individual-Learner	?
Expenditure on training of employees of administrative central government (1990)	Individual-Learner	400
Expenditure on training of employees in rest of public sector	Individual-Learner	?
Sources in text of paragraph.		

As far as employees spend money on training, there are also indirect public costs involved. College expenses are deductible from income-taxation for individual employees and their spouses under the condition that the training should improve career perspectives. Deductible costs are the costs of training courses, textbooks, travel expenses and depreciation of equipment. College expenses are only deductible starting from 2% of gross income (for income until NLG 40,000) or above NLG 800 (for income of NLG 40,000 and more) (Belastingdienst 1996, p.25-26)[119]. The public cost of the fiscal

[119] Small amounts of college expenses (below 2% of gross income or NLG 800) are not deductible, although it is proposed to lower the threshold.

deduction of college expenses were estimated by the Ministry of Finance at NLG 150 million in 1994 (OECD 1996a, p.107).
In addition expenses to keep professional knowledge up to date can be deducted as well. There is a general deduction of professional costs, which ranges from NLG 243 to NLG 2,507 (depending on gross labour income). Demonstrable plausible costs above this general deduction can be deducted as well like professional literature, courses and conferences. The first NLG 1,000 spent on courses and conferences is fully deductible and of the next NLG 3,000, 75% is deductible (Belastingdienst 1997). However, there is no estimate of the indirect public costs involved with the deduction of these work-related college expenses.

Furthermore, certain advantages resulting from employer sponsored training (e.g. income in kind) are free of taxation, however also in this case no estimation of indirect expenditure is available (OECD 1996a, p.107). In practice especially higher incomes (in most cases higher educated persons) will benefit from these deductions because of their higher marginal tax rate.

For part-time students (aged 18 or older), there is an allowance for college-expenses, which depends on income and the course followed. Net income may be no more than NLG 5,619 in a reference period of three months. The allowance is free of taxes and consists of an amount for tuition fees and an amount for other college-expenses. Depending on the course followed the amount ranges from NLG 120 (courses in Dutch as a second language) to NLG 1,872 a year (teacher training courses in subjects confronted with manpower-shortage) (IBG 1997). The estimated expenditure on this allowance in 1997 is NLG 6 million, of which NLG 4.5 million for part-time students in secondary education and NLG 1.5 million for part-time higher education (Tweede Kamer 1997, p.128).

Employees following part-time regular education also benefit from government subsidies. Bronneman-Helmers (1992, p.88) has estimated the subsidies for part-time secondary education at NLG 295 million and for part-time higher education (including Open University) at NLG 518 million. Except for the fact that these figures are outdated, they do not give any information on the share of these courses which is followed as work-related training.

As far as employees participate in part-time education for their job, these government subsidies are implicit subsidies for job-related training. According to Lington et al. (1991, p.41,67) in higher education for example 22% of part-time HBO-students and 11% of part-time university students were entirely paid for by their employer. Another 22% of part-time HBO-students and 12% of university students received a partial contribution from their employer. In secondary education 25% of part-time MBO-students (senior vocational education, except MEAO), 4% of part-time MEAO-students (senior economic and administrative education), 3% of part-time MAVO students (junior general education) and 5% of part-time HAVO/VWO-students (senior general education) were entirely paid by their employer. Some other part-time students received a partial contribution from their employer; MBO (21%), MEAO (6%), MAVO (6%), HAVO/VWO (3%).

When these figures are applied to the number of participants in part-time education and the public expenditure per student, an estimate of this implicit subsidy for job-related training is found. Table 3.7d shows the estimated implicit subsidy for 1996. It should be noted that the public expenditure per student in higher education is the average expenditure on full-time and part-time students alike, which might therefore give an overestimation of the implicit subsidy. On the other hand these figures do not count employees who finance part-time education themselves, although they are investing in their own career.

Moreover, it has to beard in mind that the number of part-time participants in 1996 is much lower than in 1991, which might imply different percentages of part-time students that are paid for by their employer. However, no recent figures are available for these percentages sponsored by their employer,

so that when we apply the same percentages as in 1991, an implicit subsidy of around NLG 270 million is found in 1996[120].

Table 3.7d Estimated implicit subsidies in part-time education for job-related training (1996)

Type of education	Part-time participants	Percentage receiving contribution of employer	Job-related participants	Public expenditure per student	Implicit subsidy (xf1000)
MAVO	42,887	9%	3,860	2,592	10,005
HAVO/VWO	21,003	8%	1,680	2,592	4,355
MBO*	11,775	46%	5,417	4,005	21,695
MEAO	13,038	10%	1,304	2,284	2,978
HBO	42,929	44%	18,889	10,280	194,179
WO	11,804	23%	2,715	13,518	36,701
Total	143,436		33,865		269,913

Sources: Estimate of percentage receiving contribution of employer based on Lington et al. (1991), data on total number of part-time participants provided on request by CBS (1997).
* excluding MEAO, agricultural education and short technical trainingcourses.

Another implicit public cost, is the fact that regular education and vocational training are exempted from Value Added Tax (VAT). The deduction of vocational training costs only applies under the condition that training should improve careerperspectives. Moreover, hobby-like courses are not exempted from VAT[121].

Since 1995 there is NLG 109 million European subsidy available each year for the training of employees and the development of industry and trade in the Netherlands (Ministerie van Sociale Zaken en Werkgelegenheid 1995). Of this subsidy NLG 55 million is to be spent each year under the heading of Objective 4 of the European Social Fund. This objective focuses on the adaptation of workers to industrial change. In the Netherlands the Objective 4 subsidy is mainly targeted at training of low educated workers in small and medium enterprises (SME's). The subsidies of Objective 4 maximally amount to 45% of programme costs, the remaining part has to be co-financed by a public organisation (including training funds, which are discussed further on) and trade and industry. Projects may last no longer than two years and the number of training days has to be at least five days per employee a year. An objective 4 subsidy can only be applied for by (large) individual firms if they have their own collective bargaining agreement. Sectoral requests for training however, whether or not united in a training fund, are preferred. Regional projects are also eligible for subsidies (Ministerie van Sociale Zaken en Werkgelegenheid 1995, p.3)[122].

Besides all these different kinds of public costs, recently the government has taken two other measures in order to stimulate lifelong learning. First, there is a law for the financing of career interruption. With this leave scheme employees are able to get an allowance when they are on leave for a period of 2 to 6 months. To get this allowance employees have to take a leave for at least half of their working hours. A further condition is that the employee on leave has to be replaced by an unemployed person. The purpose of the leave can freely be chosen, but it is supposed that this leave will especially be used for training or taking care of relatives or friends. The amount of the allowance depends on the number

[120] For a more precise estimate of the implicit subsidy we have to know to what extent current participants are sponsored by their employers.

[121] With the exception of music lessons until the age of 21. The tax inspection decides on the basis of course content whether a course is hobby like or not. No distinction is thereby made between public and private providers.

[122] Other European subsidies related to training are ADAPT (promoting better use of technology by SME's), Leonardo (promoting vocational education and training), Employment (targeting of disadvantaged groups) and MKB (promoting regional co-operation between SME's and expertcentres (Ministerie van Sociale Zaken en Werkgelegenheid 1995, p.4-6). All these European programmes are co-financed and have a limited duration, most of them run until then end of 1999 (European Union 1997).

of hours on leave. With a leave of 30 hours a week or more the allowance is NLG 960 a month. Between 20 and 30 hours it is NLG 480, between 10 and 20 hours NLG 160 and under 10 hours a week the allowance is NLG 80 a month (Tweede Kamer 1997).

Second, the government has recently decided to create a tax facility for the training of employees. Starting in 1998 a structural subsidy of NLG 235 million each year is available. This measure takes the form of an extra deduction of training expenditure on company profit liable to corporate taxation (Ministerie van Economische Zaken 1997a). 20% of the training costs of firms can be deducted in this way. Small firms with maximum total trainingcosts up to NLG 250,000 are allowed to deduct 40% of the first NLG 60,000 of training costs. In this way small and medium-sized firms should especially benefit from this subsidy. Furthermore, to stimulate the training of older workers, an extra deduction of 40% of the training costs for workers above the age of 40 is made possible. The total deduction of training costs may amount to a maximum of NLG 5 million (Ministerie van Financiën 1997b).

Recently the national program of action 'lifelong learning' has been presented. This program contains a wide range of proposals for the new government (elected in may 1998) to stimulate lifelong learning (OCW, 1998). For instance, in this report as well as in the national 'tax-plan for the 21st century' it is suggested to retain the possibility for individual employees to save part of their wage for training purposes free of taxation. In fact, this plan proposes to limit the existing possibility for employees to save part of their wages free of taxes, to some specific goals like training (Tweede Kamer 1997c, p.77).

Returning to the public costs of training in the public sector, total expenditure on training courses of its employees by the administrative central government has been estimated at NLG 252 million in 1990, which was 4.5% of direct labour costs. The mean training costs per attended course were NLG 2,752. By components more than half (53%) of total costs are lost labour costs. Costs of training departments and staff amount to 13% and direct training costs comprise the remaining 34%. When the Tax Administration is included total expenditure is estimated at NLG 400 million, coming down to 5.4% of labour costs (CBS 1992, p.10). This is around three times as high as in the private sector.

Expenditure on training in the educational sector in 1994/1995 amounted to 0.8% of direct labour costs, but this includes also expenditure on other training activities than internal and external courses. Furthermore the indirect labour costs of training are not included, so a direct comparison with the figures above is not possible. However, it is likely that total costs of courses (as a percentage of labour costs) will be lower than in the private sector where direct training costs are at the same level for internal and external courses. This might be explained by the fact that although participation in the educational sector is high, course duration is relatively short.

In the next sub-section other factors influencing public costs of education will be dealt with.

3.1.4 Other cross-cutting factors affecting costs

In this subsection we will discuss other factors in the various forms of education that can affect public costs. A distinction is made between factors relating to innovative learning technologies and practices, factors referring to incentives and enabling mechanisms and factors relating to the governance and co-ordination of lifelong learning sectors.

3.1.4.1 Innovative learning technologies and practices

Foundation learning

Recently, the structure of general secondary education has profoundly changed. The first three years of all levels of general secondary education (MAVO/HAVO/VWO) are now the same for all students in the sense that all students attend for a large part the same subject courses. These common three years are called the first phase or "basisvorming". The "basisvorming" has already been implemented in

lower general secondary education with the intention to promote a broad and general development of students. Several new subjects have been introduced such that students now attend more different subject courses than was the case before the introduction of the first phase in lower general secondary education.

With reference to the already implemented changes in lower general secondary education, changes are being carried through in upper general secondary education (HAVO/VWO) as well[123]. Moreover, several social developments necessitate a change in upper secondary education. Among these developments are the need for people who are broadly educated and possess the flexibility to change position and the increasing need of people who are highly educated and/or have attained a technical or science degree. One of the most important recent developments in upper general secondary education which has implications for lifelong learning is the implementation of the so-called second phase. The main purpose of the introduction of the second phase is to enhance or improve the connection between upper secondary education and tertiary education[124]. It is in this respect that the implementation of the second phase can facilitate the realisation of the societal need of lifelong learning, as will become clear further down in the text.

The implementation of the second phase concerns both changes in the contents of education and didactic and pedagogical changes. All changes however are based on one fundamental new concept of learning: active and autonomous learning, which is expected to result in a better absorption of the subject matter and more commitment to the learning process itself[125]. This new concept of learning is being shaped in the so-called "studiehuis" (study house). The purpose of the study house is to promote active and autonomous learning and a broad development of students and therefore to recognise and take into consideration the individual differences between students. Besides autonomous learning, pupils will also learn to work in teams. This is expected to lead to a higher rate of return to learning and to enhance the attractiveness of education to students. Moreover, it is expected to result in improved learning results and a decrease of drop-out rates.

The broad development of students and the improvement of the connection between secondary and tertiary education has to take place by the introduction of new subjects and the so-called 4 profiles. The new subjects relate to several general subjects concerning everyday practice, like technics and societal and cultural matters. These subjects in most cases combine two or more of the already existing subjects and as such can be seen as integrating subjects. The integration and coherence between different subjects will be made explicit in the second phase to promote that students learn to recognise and to see the connections and coherence between subjects. The 4 profiles[126] have the purpose to give access to a broad range of tertiary educational institutions and all consist of a relevant and coherent whole of subjects in which skills are systematically incorporated[127]. Besides knowledge and insights, general skills will take on an important role in the learning process of students. These skills are deemed necessary in the further development of students.

Besides the changes concerning the content of education, changes in didactic aspects have to lead to the enhancement of the flow out of secondary education into tertiary education. To improve this transition secondary education has to promote active and independent learning of students. In this respect secondary education also has to take more into account the differences that exist between

[123] Upper general secondary education in the Netherlands consists of the last two years of HAVO (classes 4 and 5) and the last three years of VWO (classes 4, 5 and 6).

[124] There are several factors that are indicative of some friction between upper secondary and tertiary education like: many drop-outs in higher education and complaints of institutions in tertiary education and universities about the small extent of independence in learning and the lack of general skills of new students.

[125] Sources used for this section about the second phase: Stuurgroep Profiel Tweede Fase Voortgezet Onderwijs, 1996. Procesmanagement Voortgezet Onderwijs (Processmanagement Secondary Education), 1997.

[126] The 4 profiles are: Culture and society, Economics and society, Nature and health and Nature and technical science.

[127] More precisely the 4 different profiles each are made up of a general part which is the same for all profiles, a profile specific part (compulsory for that particular profile) and a free part (which the student may choose him / herself).

students (differences in knowledge, abilities, interests and culture). Like already said, these aspects are incorporated in the concept of study house.

The study house implies that students not only attend classroom sessions but more than is now the case actively have to participate in the learning process in the sense that they have to learn to work and study independently. Firstly, this means that they have to practise general skills not only to analyse problems but also to cope with new knowledge and to adapt existing knowledge to new insights. Furthermore, students have to learn to plan their own study activities and to gather and organise available information. Finally, students have to learn to co-operate with each other and to learn to see the connections between the different subjects. The reasoning behind this last aspect is that if students study the connections between different subjects the probability that knowledge will be transformed in useful knowledge will be greater.

In the same way teachers also have to perform a broader range of tasks in the study house. Besides class-room teaching they first of all have to activate and promote the independent thinking and learning of students. This comes down to a coaching role, whereby the teacher has to use different learning methods and educational tools to cope with the differences between students. In this respect more use will have to be made of the possibilities of information technology. Besides teaching and coaching the teacher has to take care of the gathering of study materials, the writing and allocation of study assignments and tasks, he/she has to promote the co-operation between students and has to guide and control the progress in the learning process of students. Finally teachers are responsible for intake, study- and career counselling, recruitment and they keep in touch with firms offering internships (in the vocational sector).

The main elements of the study house (a broad development of students, active and independent learning of students and more individualised learning), have the intention to lead to students who are better prepared for attending tertiary education as well as for society as a whole. Implicitly these changes in upper secondary education facilitate the introduction of lifelong learning.

First of all, when the connection between upper secondary and tertiary education is improved, students are better prepared for this educational level. The likely result of this will be that less students drop out of tertiary education and the return on this kind of education will increase. Students will be better prepared for tertiary education in two respects. They have learned to practise general skills which are deemed necessary in successfully completing tertiary education. Moreover, because of the introduction of the 4 profiles in upper secondary education and the already existing broad general base in lower secondary education, students will be able to make a better and a more thoroughly choice between the different kinds and subjects of follow up education. They will therefore end up with a more appropriate kind of education than is now often the case.

Secondly, because students already in upper secondary education learn to practise general skills in order to learn to learn, during their lives they more easily absorb and know how to use and apply new insights, knowledge and developments. In this way they more implicitly continue to learn during their lives, one of the ideas behind lifelong learning.

Not only general secondary education is subject to profound changes, but also in senior vocational education (MBO) and apprenticeship training changes are being implemented which have the intention to improve the quality of education and the connections between the different levels of education. Traditionally senior vocational education has been a logical follow-up for students in lower vocational and lower general education by which students could obtain a vocational (professional) degree. Moreover after having completed senior vocational education it is possible to flow into higher vocational education (HBO). Senior vocational education thus performs a double function.

In principal senior vocational education has to lead to a vocational degree for all students that are enrolled in this kind of education. From now onwards all students with senior vocational education degree who follow through to higher education, will only receive a study grant for three years of

higher education, instead of four. This implies that higher education will have to shorten its educational programmes.

the follow through option in senior vocational education has to become more vocationally oriented than is now the case. In this respect we have to note that from August 1998 it also will be possible for students who have completed apprenticeship training, to follow through in higher vocational education[128].

The requirements which have to be set to the follow through option have to be derived from the inflow requirements of higher vocational education. Therefore, as is the case in upper general secondary education, in senior vocational education so-called follow through profiles are set up, which again contain a coherent whole of knowledge and skills. The inflow profiles of higher vocational education contain several requirements for all students that flow out of MBO with respect to the as important considered general subjects for the specific sector concerned. These requirements are similar to those set at the level of HAVO (senior general secondary education). Besides these requirements, per sector there are requirements concerning the specific vocational subjects.

All this has to lead to a better connection of senior vocational education with higher vocational education[129], just as the changes in general education also have to lead to a better follow through from upper general secondary education to tertiary education. The changes therefore are closely related and have the result of facilitating lifelong learning.

Also worth noting is the fact that the study house concept is also highly relevant in senior vocational education (MBO) or more in general in the whole adult and vocational sector. That is to say, the three already mentioned elements of the study house concept (a broad development of students, active and autonomous learning and more individualised learning) in upper general secondary education neatly fit with the recent developments in the adult and vocational educational sector. The combination of different kinds of adult and vocational education under the umbrella of a Regional Education Centre (ROC) is especially suited for offering individualised and differentiated training courses. Moreover, in the adult and vocational education sector several developments are taking place that shape, and at the same time are a result of the study house concept. Examples are among other things; open learning, study centres, problem based learning, multi-media programs, courses that can independently be followed, and so on.

In short we can say that besides improving the connection between secondary education and tertiary education, both in general secondary education and in vocational education, changes are taking place that have the intention to improve the quality of education.

However, it will be clear that all the above mentioned changes in secondary education are accompanied by a lot of changes on the organisational and financial side of secondary education. To make it possible for students to study in a more active and independent way it is necessary that the organisational structure of schools changes. New facilities have to be build or created that support the independent learning of students, like a multimedia library and multi-functional education rooms[130]. Another important aspect is the fact that the changing role of teachers from instructor to coach implies that most teachers will have to attend refreshing and retraining courses to be prepared and adapt to

[128] This follow through option will start in only a few sectors in apprenticeship like metal and electrical engineering.

[129] To improve the connection between MBO and HBO the government has made available a total of NLG 12 million guilders up to the year 2000. This amount comes on top of the NLG 12 million guilders that were made available to this end last year. See Staatscourant, September 1997.

[130] Education rooms have to be suitable for coaching and for teamworking in different subjects. Moreover, there will have to be general rooms for small groups of students and instruction rooms for large groups.

their new role[131]. The 3 pedagogical centres[132] and other retraining educational institutes offer support on both the pedagogical, didactic aspect and the aspect concerning the content of the different subjects. Lastly, new learning methods and study materials have to be developed.

All this means that schools have to invest a lot of financial funds to implement the changes in the second phase. For these new investments in the development phase the Ministry of Education has made available extra financial resources for general secondary schools. Until 1999 each school receives an amount of NLG 10,000 for schoolbound development activities. However, this amount bears no relation with the actual costs. Schools have insisted on extra financial resources to be made available for this purpose. Besides this amount, in 1995/1996 schools received an amount of NLG 130 per student to adapt the schoolbuilding to better suit independent learning. Moreover, the regular (incremented) budgets can also be used and are partly intended for the implementation of the second phase[133]. Finally, when buildings or equipment have to be renewed, they can be adapted to the new educational needs. The same is true for the use of new technology, like computers.

In relation to the changes in the so-called second phase, the introduction of information technology in secondary education represents another important new development in secondary education. The developments in secondary education, like the individualised and independent studying and learning of students more or less necessitate the more widespread use of information technology in secondary education. This is to say that information technology is very suitable to facilitate independent and individual learning which is characteristic in the study house. With the use of ICT study material can be individualised (differentiated) in such a way that students can learn in their own pace, on their own level and in their own way. In this way the use of ICT will also enable teachers to more effectively coach individual students. Moreover information technology will play an important role in the planning and controlling of the learning process of students. At the moment an interactive studyplanning- and registration system is being developed, by which different software systems can be linked to the by publishers developed educational tools. The main aim of the use of ICT in secondary education therefore is to increase the effectiveness of education in terms of improved learning results and decreased drop-out rates.

All this has led the Ministry of Education to promote the use of ICT in secondary education. To this end, financial resources have been made available in 1997. The precise amount that is intended for secondary education is not known. However, as a first step the government will put aside some extra NLG 178 million guilders to finance the investments in ICT in the entire educational sector: 78 million in 1997 and 100 million in 1998[134]. This amount covers all aspects of ICT: training of teachers, development of both educational tools and webs and purchase of computers. For the years 1997 and 1998 taken together in total about NLG 272 million guilders is available for ICT. In the year 1997/1998 about 39 million is available for the integration of ICT in the adult and vocational sector, and 36 million is reserved for general secondary education. Schools receive money for the purchase of hard- and software, training of teachers and get connected to a nation-wide network. The amount depends upon the size of the institution. Most institutions start with the integration of ICT in a particular sector which serves as an example for the rest of the institution[135].

The development of ICT in education also means, as already mentioned, that teachers will have to learn how to use ICT in education. This implies that teachers' skills in the field of ICT will have to be enhanced. We will elaborate on this program when discussing higher education in the following pages.

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[131] To this end the Ministry of Education has made available extra financial resources amounting to NLG 50 million guilders to prepare teachers for the secondary phase. See article in Staatscourant 190, Friday 3 October 1997. These 50 million guilders relate to the structural costs associated with the investment stimulus of 178 million guilders (sse further down in het text).

[132] The pedagogical centres are: APS, KPC and CPS.

[133] In 1998, NLG 40 million guilders are reserved for the implementation of the 4 profiles in the second phase.

[134] See Tweede Kamer 1997-1998, Rijksbegroting hoofdstuk VIII, nr. 2, p.31. According to this budget plan, an important part of new policy initiatives - like ICT - is financed by reshuffling of resources..

[135] OCW persbericht, 97-214.

In considering the above developments, it has to be kept in mind that after the additional financial resources put in use in the development phase, it is not the intention that the second phase will be more expensive than the existing educational structure in upper secondary education. Most new developments are expected to be implemented against the background of budget-neutrality.

With respect to ICT, uncertainties remain in the field of future costs, because it is not yet clear how many computers per student are needed, how much software is to become available, to what extent technological developments will require constant renewal of hard- and software, and whether qualified teachers will be available to teach in the use of ICT[136]. Several studies are being carried out by the end of 1997, but results are not yet available. For the moment, the aim of the Ministry of Education is to have available one computer per 10 students in both primary and secondary education by 2002. Moreover, by that time schools in secondary education are supposed to have an internal and external network.

Finally all teachers in general secondary education in the subjects Dutch, foreign languages and information science as well as the teachers in vocational training must have received additional training in the use of ICT[137]. Not only do teachers have to learn how to teach when using ICT themselves, but they also have to learn teachers how to deal with ICT.

All in all we can conclude that a lot of developments are taking place in the secondary educational sector which are likely to result in the improvement of the quality of education. As far as the costs associated with these educational innovations are concerned, the future is rather uncertain, because not all potential effects can be assessed at the moment.

Higher education

In higher education large investments are necessary in order to make higher vocational education and university education ready for the ICT-demands of the 21st century. In (HBO) teacher training extra initial investments of NLG 187 million have become available over a total period of seven years (OCW 1997b, p.95)[138]. These investments are contributed on top of regular material investment. Since teacher training makes up about one-fifth of the total student population in higher vocational education, it means that for higher vocational education together a sum of approximately one billion guilders is needed. This is exclusive the structural costs of using, maintaining and replacing materials.

It is decided to start with teacher training, among other things because when these students practice teaching in the future they will know how to use ICT didactically. The target is that ICT will be fully integrated in the curriculum of teacher training and that half of the time in school ICT is being used. For this to be realised a target of purchasing 15,500 computers in teacher training is set up, which would result in one computer per three students (OCW 28-04-97).

It is expected that future investments in high quality (technical) equipment in especially vocational oriented technical courses and sciences will rise very fast. On the one side this is caused by the short life-cycle of such equipment in society. In order to keep education up-to-date these short life-cycles imply high replacement needs. On the other side it is caused by high initial investment costs of such equipment.

The introduction of ICT could lead to more possibilities to provide education outside the educational institute, because students have more possibilities of independent learning. However, especially in universities, the degree to which education takes place outside the institute has largely increased in the

[136] This last aspect may become a bottleneck in the implementation of ICT in secondary education, because a lot of teachers still have reservations concerning the use and necessity of ICT in teaching.

[137] Source: Ministry of Education: http://www.min.ocw.nl 1997.

[138] The program is called PROMMIT, Programme on Multi Media in Teacher Training.

past decade and it is questionable whether education can be provided outside the university even to a larger extent.

Peer tutoring, where senior students are actively involved in the guidance and instruction of junior students, is not commonly being used in higher education. However, sometimes in university education senior students are hired to assist workgroups of junior students.

Distance learning is practised by the Open University. The OU has 18 regional study centres which provide students with information supervision and advice. The course materials are delivered directly to each students' home and are self-instructing. In general there are no compulsory group sessions. However, students who prefer more support can join a tuition group and attend scheduled tuition sessions. Examination sessions are organised at the regional study centres[139]. As already outlined before, the demand for distance education by the Open University has declined. The number of first-year students has halved from 22 thousand in the college year 1990/1991 to 11 thousand in the college year 1995/1996 (Van der Heide 1997, p.36).

In order to improve the quality of education and to stimulate innovative learning practices, the Ministry of Education, Culture and Science together with the HBO council, the Association of Co-operating Dutch Universities (VSNU) and two student organisations, set up the working programme 'Quality and Study Ease' (*Stuurgroep Kwaliteit en Studeerbaarheid*) at the beginning of 1995. At the beginning of July 1996 the 'Quality and Study Ease' bill was passed. According to the program, all institutes for higher education must guarantee their students that they can finish their study within the formal duration of the course[140]. Mutual obligations between the institutes and students are laid down in the 'Student By-Laws, New Style' (*Studenten Statuut Nieuwe Stijl*), which all students in higher education receive when subscribing.

In 1996 all institutes for higher education have developed a quality management plan. In this plan, all institutes formulate, on the basis of an evaluation of the functioning of the institute, priorities for the improvement of courses (OCW 1997a, p.68). Without a quality management plan, institutes have no right to draw money from the so-called 'study-ease enabling fund' (*studeerbaarheidsfonds*). This fund consists of NLG 500 million and is available in the period 1996-1998. The money flow from the 'study-ease enabling fund' comes on top of regular expenditures by the government. In order to draw money from the fund, institutes can in three rounds propose projects that improve the quality of education[141]. An independent committee advises the Minister of Education, Culture and Science and the Minister of Agriculture, Nature Management and Fisheries on the project proposals, after which the ministries take the actual decisions. Afterwards, the institutes must issue a report on the results of their efforts, in order to prevent them from spending the money on other projects.

The majority of the fund is paid for by the Ministry of Education, Culture and Science, a small part comes from the Ministry of Agriculture, Nature Management and Fishery. This year, in the second round, the universities submitted 400 projects, of which 356 (89%) got a positive advise. The institutes for higher vocational education submitted 690 projects, of which 567 (82%) got a positive advise. The projects submitted by universities and institutes for higher vocational education vary widely. Some examples are (OCW 10-07-97): enlarging the involvement and independence of students by introducing new learning technologies (project oriented education, student oriented education and combinations of learning and working); renewing the contents of educational programs; improving the time-table of different subjects and examinations; consolidate study-coaching (mentorate, tutor-

[139] In addition to the OU, non-state funded private institutions offer distance education through Internet or in the form of correspondence courses.

[140] Consequently, if students are unable to finish their study within the duration of the study because of barriers caused by institutions, they can hold the institutions responsible for the extra costs.

[141] The available amount of money per university or institution for higher vocational education is predetermined. For example, the universities of Nijmegen and Groningen got all money, available for them, in the first round (NRC, 25-09-97 on page 35). However, money is only granted for approved programs.

systems, provision of information); training of teachers, among other things in using ICT; developing and introducing ICT in education programs; decreasing the number of mass lectures; making technical training more attractive.

In this second round, the Ministry of Education, Culture and Science has granted about NLG 59 million to the universities and more than NLG 126 million to the institutes for higher vocational education (inclusive teacher education) (OCW 31-07-97). The Ministry of Agriculture, Nature Management and Fishery has granted about NLG 3 million in the second round (data provided on request, November 1997, by the Ministry). Since the first projects in connection with the 'study-ease enabling fund' have started only very recently, it is difficult to evaluate their effects at this point.

In addition to the above 'study-ease enabling fund', also some smaller funds exist in order to stimulate innovations. In higher vocational education the Renewal fund[142] makes contributions to projects that take place on the boundary between education and labour in higher vocational education and stimulates renewal in the initial phase. The budget available for 1998 amounts NLG 10.8 million (OCW 1997b, p.193). In order to give an extra impulse to the improvement of the correspondence between MBO and HBO, the total sum of NLG 12 million has been earmarked in the national budget 1997 for a period of four years. In the national budget 1998 the amount of another NLG 12 million has become available on top of this for the period up to and including 2000 (OCW 1997b, p.96).

The 'Innovation budget'[143], provides means to stimulate new developments in university education. For example renewal of Sciences, development of work-based learning in WO, improvement of the connection VWO-WO and the distribution of ICT. In the period up to 2001, a yearly amount of NLG 10 million is available.

The Open University has a two-fold task to carry out. Apart from providing (distance) education, it has the task to encourage and facilitate innovation in higher education. With a view to this mission, the Open University has systematically and actively devoted itself to pursuing innovation, both within its own system and in higher education in general. The expertise has been consolidated in OTEC, the Educational Technology Expertise Centre[144]. The centre elaborates and develops new didactic alternatives and explores how they can be used in education. This includes designing new teaching methods, constructing and testing prototypes and carrying out experiments.

Moreover, the Open University together with twelve universities and institutes for higher vocational education in the Netherlands and in Flanders, has established the Consortium for Innovation in Higher Education in 1996. In this consortium work is done on the basis of projects. Non-members of the consortium can join occasional projects. Partners have to bring in their own budget and capacity. The aim of the consortium is to contribute to innovation in higher education by systematically using ICT. Projects either lead to concrete application of ICT in the educational practice or to applied research for more insight into the possibilities of ICT in education. The advantage of the latter projects is that hereby it can be avoided that people at the same time, on different locations, are trying to solve the same problems. Finally, it is intended that the use of the projects' results is encouraged in the Netherlands and Flanders.

Adult education

Information- and communicationtechnology (ICT) will also be of growing importance in adult education. Not only will the use of ICT increase in regular training courses, but new technologies also make it possible to take training out of the classroom. Thus the use of ICT opens a wide range of possibilities for on-the job training. On the one hand the technology of the production process offers growing possibilities for educational use. In this respect one can think of electronic performance

[142] In Dutch: *Vernieuwingsfonds.*

[143] In Dutch: *Innovatiebudget WO.*

[144] In Dutch: *OnderwijsTechnologisch Expertise Centrum.*

support systems. This means that all kinds of help and information are available on-the-job. For example individual on-line access to manuals, coaching and support to make it possible for the employee to work independent, with a minimum of necessary intervention of others. An other example is learning by simulation of equipment and processes (Le Blansch et al. 1997, p.36-38). On the other hand educational technology can be used to make more structural forms of on-the-job training possible or to bring training inside the firm. The interactive possibilities of ICT can stimulate learning capacity and the readiness to learn. Again simulations offer a wide scope for possible use.

Until now however, most use of educational technology takes place on an ad hoc basis and simple applications are dominant. A bottleneck is the availability of adequate courseware, which has to do with high costs of development and a lack of specific competences at designing and editing the courseware. This area therefore offers possibilities for stimulation (Le Blansch et al. 1997, p.38-40).

In adult and vocational education (BVE) there are interesting developments in the field of the use of regional cablenetworks, internet web-sites and distance courses (BVE-2000; BVE-net), see also the part on secondary education (Le Blansch et al. 1997, p.40-41). BVE-net is an electronic information and communication system for adult and vocational education which works according to the principles of the internet and offers pedagogical support and administrative applications and services. Its purpose is to encourage institutes for vocational and adult education and the national trade sector bodies to make use of ICT. By the end of 1998 all institutes of vocational and adult education should be connected to this system (OECD 1996b, p.195,206). The aforementioned expert centre on educational technology (OTEC) however finds that ICT so far is hardly used in the primary process of adult and vocational education, in spite of a growing use of ICT (like e-mail and internet) in this sector (Sanou 1997, p.26).

In an advice on ICT, the Social and Economic Policy Council (SER), a tripartite advisory committee of the government, recommended the appointment of partly public sponsored training advisors for commerce and industry (SER 1997a).

Besides innovative learning technologies and practices, other factors which might influence the quality of education are of interest. These will be described in the next subsection.

3.1.4.2 Incentives and enabling mechanisms

This section sketches some of the incentives or mechanisms educational institutes face to improve the quality of education.

Secondary education
Educational institutions in general secondary education have the option to let so-called visitation committees ("visitatiecommissies") analyse the educational services offered to students. The purpose of this optional and voluntary arrangement is to improve the quality of education. When an institution has decided to rely upon the advise of a visitation committee, it first has to draw up a (self) report which describes the present situation with respect to the educational services provided by the institution. On the basis of this report the visitation committee investigates the educational institution itself. By means of the results found a visitation report is written, which contains an overview of possible areas for improvement and recommendations to improve these areas. However, it also points out those areas that are classified as being outstanding or of good practice. Based upon the recommendations in the visitation report, the institution itself can undertake action to improve the areas which were classified as being unsatisfactory or in need of improvement.

Although the calling in and the advise of a visitation committee are voluntarily in general secondary education, part of the educational institutions in secondary education makes us of them. However, in the area of visitation committees still substantial advantages can be realised. First by making the calling in of a visitation committee each year compulsory for each institution. Secondly, the advise of

the committee should be of a more obligatory character, in the sense that at least some of the recommendations have to be carried out by the educational institution.

A further new phenomenon in general secondary education is the publishing of a ranking of all general secondary educational schools in The Netherlands. This year such a list has been published for the first time, but the minister of Education has the intention to publish such a ranking for each year to come. Schools in this list are ranked according to several criteria. The most important criteria for each school in the publishing list for the coming years will probably be: the percentage of pupils that passes the final year, the results of these pupils for the final exams, the mean scores for the different subjects in the final year and the percentage of pupils that passes from one year to the following year.

The main aim of such a list is to facilitate and improve the school-choice of prospective pupils, by providing an overview of the scores of all general secondary education schools on rather objective performance-criteria. At the same time such a list is expected to act as an incentive for schools to improve their educational services offered. Thus besides influencing the school choice of pupils, the implicit objective is to improve the quality of secondary education.

A last development which intends to influence the quality of education is the fact that, with the introduction of the WEB, private educational institutions are given the opportunity to offer courses at MBO-level. These courses lead to recognised diplomas as in regular secondary education.

Higher education

In higher education, the available budget for higher vocational education and university education consists for the major part of a normative calculated government contribution which is distributed among the institutes according to certain mechanisms, the workings of which will be elaborated in chapter 4. These mechanisms result in the situation that institutes that perform better than others, are entitled to a larger proportion of the budget. As will be elaborated in chapter 4, institutes face relatively few incentives to ensure high quality provision.

Examples of good practice are not systematically disseminated to institutions. However, the 'higher education price' turned out to be an effective instrument to trace interesting educational activities and to inspire other institutions. In 1996 the twelve nominees of the 'higher education price' of 1995 were bundled in a booklet (VUGA 1996), thus making ideas available to everybody.

Adult education

The new Adult and Vocational Education Act (WEB) gives more freedom to the municipalities on how to spend the budget for adult basic education and adult general secondary education (see section 4.2.3.1). It is expected that the majority of contracts will be between local government and educational institutions in the same region. The local authorities are, however, free to enter into agreements with institutions outside their region, for example if a specific specialisation is unavailable. (OCW, 1995a & 1996a, p.41).

Adult basic education is already being financed through local government since 1987, but from 1997 the local authorities also receive the budget for secondary general adult education and Dutch as a second language (BVE Procescoördinatie 1997, p.21). Furthermore municipalities have the freedom how to divide the budget between these different forms of adult education. Changes in allocation however take place under the condition that no extra costs in the form of half-pay (special unemployment benefits for unemployed civil servants) occur for the central government (OCW, 1995). These changes should strengthen incentives to keep costs low and ensure high quality provision. Furthermore, as already noted a professionalisation of adult basic education has taken place, which is illustrated by the fact that the number of volunteers has decreased from around 2100 in 1991 to 1500 in 1995 (Janssen 1997, p.39).

In recent years extra money was assigned to educational institutes with long waiting lists for courses in Dutch as a second language. However no further monetary incentive was given to shorten these waiting lists. Although the number of those taking courses grew in 1993 and in 1994, as did the number of courses, the size of the waiting lists remained about the same. Developments in supply and demand play a role here. On the one hand, the available extra money is not only used for expanding the number of locations for several courses, but especially is used for an intensification and improvement of quality of the existing supply. On the other hand, the demand for courses from new arrivals and community pressure on other ethnic minorities to learn Dutch has grown. More money is being made available, from sources other than the national government, from municipalities and the public employment service (OCW 1996b).

However in the light of the remaining waiting lists it is rather strange that the number of participants has decreased in recent years. Rewarding of those institutes who are effective in reducing waiting lists might be suggested. Another option is competition between public and private institutions for Dutch as a second language. This has been rejected for the moment, but may be a solution, especially when the waiting lists at public institutions continue to exist.

The Centre for Educational Innovation in vocational and adult education (CINOP) supports educational institutions with research and development in vocational and adult education. Its most important goal is to enhance the link between education and vocation. It is subsidised by the Ministry of Education, Culture and Science, but also receives money from other (market) parties. For instance CINOP assists Regional training centres in developing plans for the implementation of ICT. Furthermore it develops and evaluates educational programs, provides training, information and advice. In this way knowledge on good practices in vocational and adult education should be effectively disseminated throughout the sector.

Another possible incentive to improve the quality of education is related to the central register of vocational study programmes (*CREBO*) that has been set up in which all training programmes from the qualifications structure are included (OCW 1996b). The institutions themselves should work on quality improvement. They must introduce a system of quality care and issue a quality report on it every two years. This report is a public account of the way they have attempted to provide the desired level of quality. They must also describe what they have done with the results of previous quality inspections and which improvements they have undertaken or plan to undertake (OCW 1996a, p.37).

In addition quality will be guaranteed by external accreditation of the examinations. The smallest possible majority of the partial qualifications needed to get a complete diploma and the examinations will be administered by an authority outside the educational institution itself. These examination authorities should be independent of the institution where the education is given (OCW 1996b).

If an educational institution does not meet the relevant quality criteria, it must take action on its own initiative. If an institution is repeatedly shown to fall short of the criteria, it will receive an official warning from the Ministries of Education, Culture and Science and of Agriculture, Nature Management and Fisheries. If there is no indication of improvement, the institution may lose its right to receive funding and will no longer be considered qualified to award recognised diplomas. General supervision is the responsibility of the Education and Agricultural Education Inspectorates. As in higher education the work of these inspectorates is restricted to general monitoring of the way in which educational institutions undertake quality assurance. Should it have reason to do so, the inspectorate may let a committee of external experts carry out an investigation for a second opinion (OCW 1996a, p.37-38).

For-profit education (not paid for by the government) can also offer training programmes under the *WEB* system, under the same conditions as funded education. This should result in a system in which funded and unfunded institutions can take part and compete with each other on an equal footing (OCW 1996b).

Competition between providers should also guarantee effectiveness of training courses for firms. The WEB gives the possibility for private institutions to offer courses which lead to the same recognised certificates as in regular education. Furthermore, firms can choose between different public institutions for their training programmes, although some of them will continue to have a regional monopoly-position. Local authorities however are still obliged to buy the training for their employees at a regional training centre (Wolthekker 1997).

3.1.4.3 Governance and co-ordination of lifelong learning sectors

Besides the different incentives educational institutions face, the degree of independence they enjoy is an important factor that influences how the public money these institutes receive is spent. Moreover the co-ordination of the various educational sectors also is an interesting factor.

Providers of education in both secondary and higher education can to a large extent decide themselves how to spend the money they receive: the majority of the money they receive from the government is lump sum. The idea is that institutes themselves can best decide how money is spend more effectively.

As discussed in section 3.1.4.2 local authorities have the freedom to divide the adult education budget between adult basic education and adult secondary education. However, so far no large changes in allocation between for example initial and post-initial education have taken place. One possible incentive in this direction is the equalisation of subsidies for full-time and part-time higher educational students.

With respect to training of the unemployed, in the current system, three independent organisations are involved with the unemployed, each in their own field: industrial insurance boards, municipalities' social services, and the Public Employment Service. The industrial insurance boards, known as the implementation offices (uvi's), are responsible for the management of the funds for unemployment benefits. Premiums are paid by workers and employers, and it is the task of the uvi's to spend these funds in the most efficient way.

However, the system provides some contradictory incentives. Individual employers who fire workers, thereby increasing the costs of total unemployment benefits, face only their share in total costs, which will only rise very little due to the firing policy of a single employer. The goal of the industrial insurance boards, however, is twofold. On the one hand their goal is to promote the profitability of the individual employer, by stimulating reductions in wage costs, when possible. On the other hand, their goal is to minimise the unemployment insurance premiums. This latter goal is to be reached through the blocking of firing-practices as well as through fast reemployment of the jobless.

The blocking of firing practices was hard to combine with the goal of promoting the profitability of employers. Reemployment of those, who are no longer eligible for unemployment benefits, had little priority for the industrial insurance boards, because further income support is provided by another source, namely the municipalities' social services. These social services have the goal of local implementation of the national social insurance scheme. Municipalities receive the social benefits directly from the state and from the municipalities fund (*Gemeentenfonds*) and only bear the implementation costs individually. Whereas reducing the number of people who receive social benefits affects implementation costs only slightly, these social services face relatively weak incentives to volume-reduction.

The third party involved is the Public Employment Service (PES), which is governed and financed by the central government. The aim of the PES is reemployment for the jobless. This goal is to be reached through training, counselling and intermediation practices. The strength of the PES lies in the good knowledge of the supply side of the labour market, especially the unemployed. Most instruments provided by the PES are relatively costly, especially training. Strong incentives to minimise cost of reemployment did not exist.

All three players are involved with the unemployed. These unemployed, however, have to do with three separated organisations basically involved with the same project: reemployment and the most effective use of the time needed to get a job again. This means filling in three independent entrance forms, and three independent continuation forms, again and again, which require roughly the same information about activities towards reemployment undertaken, and unemployment benefits received. The system thus creates bureaucracy and inefficiency.

Individually the three players in the 'market for reemployment' face weak incentives for improving efficiency along with minimising the volume of unemployment. Therefore proposals have been made for combining the strengths of the three players. To overcome the inefficiencies included in the existing system, by now a series of experiments with Centres for Work and Income (CWI's) is carried out. In these CWI's the activities of the uvi's, the social services and the PES are combined in one front-office. At the same time, the relationships between at the one hand the social services, and the uvi's, and at the other hand the PES, are formalised, as the former to an increasing extent buy their employment services at the PES, thus creating incentives for competition: if other suppliers of employment services are more efficient, demand for employment services may shift away from the PES. The functioning of both the CWI's and the competition policy are explained in more detail in chapter four.

3.1.5 Assessment of cost savings on affordability

The question whether cost reductions can be expected from innovations in secondary and higher education is hard to answer. Innovations such as work-based learning and ICT will reduce costs, for example because of a diminishing number of class room and contact hours and making less use of school buildings and lecture rooms. On the other hand these innovations will entail higher costs because new educational material has to be prepared, new equipment is needed and, in the case of work-based learning, the maintenance of a network with businesses in the region is needed.

The potential efficiency gains in adult education are difficult to estimate. The largest effect upon cost-reduction might be expected from increased competition between providers and local control on spending. New technology should not be regarded as cost-reducing in the first place, it usually offers new possibilities that tend to increase cost. Therefore effort should be directed at cost-control of new technologies.

3.2 Increasing the benefits of lifelong learning

Another potentially interesting perspective for facilitating life long learning is increasing the benefits of education and training. However, in contrast to the cost side, the availability of hard data on benefits is far more limited. As well as with costs, in this respect it is important to distinguish between different levels at which benefits could occur (table 3.8).

Table 3.8 Financial benefits of education and training at various levels

Level	Financial benefits
Individual	Higher wages
Companies	Higher productivity
Society	Higher national income

Measuring these benefits at the various levels suffers from a number of methodological problems. At the individual level one can look at the differences in the wage level of various educational groups. If the higher educated earn more, then this can be seen as a benefit. However, it is possible that differences in education are also an indicator of differences in personal abilities. In this line of reasoning, for employers education is at least partly a filter to determine which applicants are most talented, without education contributing a lot to these talents directly (screening theory). If the higher educated are also those with a higher IQ, health and motivation, then the income effect of education at

least partly reflects these other factors. Another problem is that the choice for education is not independent of the potential benefits which are expected from this choice. Those who have the best perspectives will choose longer educational paths ("self-selection").

However recent studies use IV techniques or twins data to correct for endogeneity, ability bias and measurement error. The overall conclusion from these studies is that OLS estimates underestimate the true returns to schooling; Ashenfelter et al. (1998) surveyed these studies and performed a meta analysis. This meta analysis however, gives evidence that the IV studies may suffer from some publication bias.

While for the individual an important benefit of education and training is a higher (net) income, for an employer this is productivity. However, productivity differences between employees with different educational attainments are not easy to measure. The measure most often used is gross income. However, the extent to which gross income differences really reflect productivity differences is open to discussion. Solutions for this problem used in studies are:

- using gross incomes of self-employed persons (see for example Cohn et al. 1987). In this approach it is expected that gross incomes of self-employed persons are less influenced by social institutions and therefore a more reliable approach to quality between gross incomes and productivity is not so easy to measure;
- using the overall productivity of a company (using value added) and relating this to the educational composition of the work force (see for an example Gelderblom and De Koning, 1992);
- using estimates of managers of the productivity of their subordinates (see for example Groot, 1994).

All these approaches also have their limitations which we will not discuss further into detail now.

At the level of a society as a whole, we want to look at the influence of human capital accumulation on national income or related indicators like overall labour productivity or total factor productivity. However, also in these types of analyses various problems occur[145]:

- using time series to link economic growth with an increasing educational level suffers from the problem that not only education but also other explaining factors (like capital) move trendwise, so that it is very difficult to distinguish between the various factors;
- it is very plausible that education not only influences national income, but that the causality is also vice versa. If the wealth of a country and individuals increase then the demand for education grows. In De Koning et al. (1990) a test on the causality is performed for Dutch data and it confirms the mutual dependency of both education and national income;
- how can human capital on a national level be measured in an appropriate way**?** This problem is very prominent if a cross-section over countries is a basis for the analysis. How to compare the educational background of people in various countries? An often used indicator is the average number of years spent in education. However, this is clearly a crude measure, because for example differences in quality are not taken into account[146].

Part of these problems for measuring the macro growth effect, can be overcome by using the sectoral level as unit of analysis. Sectors with the highest human capital and knowledge intensity have the highest growth potential. The income elasticity of the products and services of these sectors is higher than that of traditional sectors, such as food and clothing. Increasing the educational level of the labour force will induce a shift towards human capital intensive sectors and will therefore have a positive effect on overall growth. By using sectoral data, cross-section analysis within a country can be used, in this way overcoming the problems of time-series analyses and comparability of education data over

[145] Examples of overviews of the merits of these types of analyses are given in De Koning et al. (1990), Englander and Guerney (1994) and Gundlach (1997).

[146] The problem of international comparability of data also occurs in case of work-related training. Within the EU, more or less standardised data of Eurostat exist. Van der Burgh (1996) and others make use of these data to show a correlation between work-related training and GNP per capital. However, also in this case, the causality problem remains, as well as the problem of correction for the influence of other factors.

countries. However, the number of sectors for which the size of various educational groups can be distinguished has its limits, as well as information on other data at sectoral level which could have an important influence on sectoral productivity growth.

So it is clear that the measurement of benefits of education and training is not an easy task. What are the results of studies for the Netherlands who that made an attempt in spite of all the problems mentioned? At the individual level, so called private rates of return reflect the income gains positioned against the costs. Recent measurements find lower private returns than in the past (De Koning et al. 1996c, Van Ingen 1996). Most of the returns are still positive, but there are some exceptions. This is especially true for senior vocational edcuation and certain directions in higher vocational education (e.g. care) which have in some cases negative returns. However, if these measurements include the chances of finding a job, then the returns for senior vocational education greatly increase, because unemployment rates for this type of education are very low. Oosterbeek (1990) confirms that only part of the income differences (about half) can be contributed to educational attainment if factors like IQ and social background are taken into account. This again stresses the caution with which these types of analyses have to be interpreted.

Studies in the Netherlands which aim at measuring the productivity effects of educated and trained individuals mainly focus on the effects of job-related training. Both Gelderblom and De Koning (1992) and Groot (1994) come to significant positive effects of training on productivity. However, an important problem with these studies is that the duration of training is not measured.

At the macro level the results differ, also because the type of analysis that is used differs. Dronkers (1988) uses a Cobb-Douglas production function to explain the overall national income between 1960-1980. One of the explaining factors is the change in the educational level. He does not find a significant effect. Broer and Jansen (1989) on the other hand use another production function, incorporated in an economic behavioural model. They come to positive effects of education on economic growth. Gelderblom et al. (1994) use a production function with different types of education explaining the average labour productivity of different economic sectors in the Netherlands. They find evidence for productivity effects of especially higher education. Moreover, the positive effect of job-related training is confirmed in this analysis.

With respect to training of the unemployed De Koning (1998) shows that participation in training measures for unemployed does increase chances for unemployed to find a job. However, the effects are in general not large and depend on the type of participants. The most disadvantaged groups seem to profit most from training. The increase in chances of finding a job because of the training are the largest for them.

All in all, there seems to be sufficient evidence that education and training have positive economic effects. However, the methodological problems still make it difficult to make exact estimations of the benefits. Selectivity problems are probably more severe in the case of training than in the case of initial education. Moreover the Dutch studies on returns to training do not attempt to control for such factors as changes in organisational structure and use of physical capital.

For our study this means that we have less exact and less diversified data on the benefits of education than for the costs. If even the overall economic effect of education is uncertain, then the evidence about the effect of various policy options linked to education is even more difficult to determine. Therefore, in this respect we will look at certain issues which we expect to have a positive effect on the financial benefits of education, without having hard evidence about this. In this respect we can think of the following issues:

- well organised guidance, counselling and referral practices (section 3.2.1). According to the OECD format, in this section we will concentrate on adult education, but it is evident that also in initial education this element is important;
- mechanisms or processes for the assessment and recognition of skills and competences (3.2.2);
- changes in wage determination practices (3.2.3);

- changes in industrial relations systems (3.2.4);
- changes in tax policies (3.2.5).

In these subsections we will concentrate ourselves on the link with benefits of adult education.

3.2.1 Guidance, counselling and referral practices

Participants in Dutch as a second language are tested on their level before starting a course. According to the 1996 evaluation 'Beware of the Waiting Lists' (see also section 3.1.4.2) the campaign had strongly contributed to making the NT2 education an elementary, basic provision in a policy designed to improve the personal and social development opportunities of ethnic minorities. Students take more hours of education per week and are better placed by taking level tests. The report also urged more attention on the part of institutions for concluding study agreements and for better enrolment systems, as a means of improving the flow of information. There was a recommendation for developing a uniform enrolment system (OCW 1996).

According to Leuven & Oosterbeek (1997, p.16), to increase training levels of lower educated workers, instruments should be used that affect the training preferences of these workers. For future generations a higher initial level of education might take away part of this problem. For current low educated workers however no general public instruments for guidance exist so far. This might be a case for public policy. A recent proposal in this direction is to create a regional and sectoral network of training advisors with temporary subsidies (OCW 1998, p.5).

As far as skilled labour is readily available, firms are not in need of training their own low educated workers. On the other hand the forecasted shortages of skilled labour may induce firms to upgrade the skills of their low educated workers. As a consequence firms will look for instruments to make it more attractive for low educated workers to participate in training. This may also create vacancies for low skilled who are currently unemployed.

Some training funds however, already have arrangements which provide low educated workers on training with extra subsidy. These trainingfunds sometimes make use of European subsidies for these projects. The effectiveness of training depends to a large degree on the appropriateness to the need(s) for training. Good information on contents and level of the training, as well as good counselling and referral diminish the chance of choosing an inefficient training.

For the unemployed the Employment offices will play a role in both selection and placement. Therefore, if training is not successful, the training agency involved may not be or only partly to blame. The benefits will strongly depend on selection. If people with very little opportunities are selected for training in trades in which shortages exist, displacement is not likely to occur.

De Koning et al (1995) report that the regional boards have increasingly given attention to the foundation of the training policy. Several instruments are available to improve on the training policy:

- According to *"Hoe zoeken werkzoekenden*" yearly about 60-80 thousand unemployed with the help of the PES make use of counselling concerning the occupations and which studies are suitable[147]. This counselling is partly done by the so-called AOB's (advisory offices for training and professions). In the past, the AOB's were more integrated within the Public Employment Service organisation. Yearly funds were reserved to make use of the services of the AOB's. However, recently these fixed amounts reserved beforehand are not available anymore. The AOB's have to compete with others and with counselling practice at the employment offices internally. In an evaluation study of 1995, Verijdt and Hövels expect that this more market oriented relationship will lead to less counselling activities by AOB's, because there have been quite a lot of problems in co-operation between AOB's and

[147] In the context of life long learning, it is striking that only a third of these counselling refer to unemployed over 35. So these activities are often directed towards younger people.

employment offices in the past. Moreover, with the budget cuts, these kind of activities are not expected to have the highest priorities for the PES.

- Overviews of (future) labour market developments. Both at central and regional level, several studies have been carried out to make an inventory which occupations and sectors grow and have good job opportunities. Examples are the yearly "*Sectorinformatie voor scholingsplanning (Sectorinformation for training planning)*, carried out by EIM and regional labour market prognoses carried out by TNO.

- The central level has developed a method for training planning for the regional boards. According to De Koning et al (1995), most Regional Boards make use of this planning method, sometimes in somewhat adapted form.

The availability of these instruments does not automatically mean that all the trainees of training courses subsidised by the PES are in practice selected by the PES. One might be inclined to think that the employment offices select the trainees and help them finding a job after training. After all the employment service pays for the training. The facts are different, however. Table 3.9 gives the results of a survey among the regional boards. According to these results at the beginning of 1991 in a considerable number of regions most of the recruitment/selection of trainees was not done by the employment service.

It is very likely that this also means that they did not control recruitment and selection. At that time hardly any regional board possessed a monitoring system for the follow-up of training. Therefore, feedback must have been almost zero. By the end of 1994 the situation was improved. This is also due to the facts that in 1994 the number of trainees in adult apprenticeship training, a relatively 'autonomous' instrument, strongly declined. Recently, the number of trainees in another 'autonomous' instrument, the centre for female vocational training, declined due to budget cuts.

With respect to placement the numbers are even lower. Still in 1994 for only two-third of the boards placement of trainees of the centres for vocational training was mainly done by the employment offices. Therefore, we are bound to conclude that the control imposed by the regional boards on both the selection/recruitment and the placement of trainees is growing, but remains still limited. That may explain why the proportion of disadvantaged groups among the trainees is lower than one might expect, even when instruments are concerned which were deliberately founded for those groups. And this 'creaming' will have a negative effect on the overall net placement results, because quite a lot of persons are trained who could easily have found a job without training. From the studies of De Koning and Van Nes (1990) and Bavinck and Van den Burgh (1994), it can be concluded that training is most effective when applied to (relatively) underprivileged groups (lower educated, long-term unemployed and elderly).

Table 3.9 Number of regional boards in which recruitment/section of trainees and placement after training are mainly done by the public employment service (1991 and 1994)

	Recruitment/selection trainees mainly by employment offices		Placement after training mainly by employment offices	
	Beginning of 1991	End of 1994	Beginning of 1991	End of 1994
Centre for vocational training	26	26	15	18
Centre for basic training	12	19	16	19
Centre for female vocational training	2	5	4	8
General training scheme: individual applications	14	19	16	21
General training scheme: projects	23	28	18	20
Adult apprenticeship training	9	15	15	15
Total number of regional boards	28	28	28	28

Source: De Koning et al. (1995).

The most recent development concerning guidance and referral is that the registered unemployed are grouped into four categories, the so-called phases 1 to 4. The higher the phase, the larger is the distance to the labour market. Phase 1 unemployed have a relatively short distance to the labour market. With relatively little efforts a job can be found for them. Training is an important instrument for those in phase 2. Unemployed categorised in phase 3 are supposed to enter in longer lasting trajectories, in which more instruments are used, among which training can have its place. In the case of phase 4, the distance towards the labour market is considered so high, that the instruments of the PES are considered not valid to offer them opportunities to the labour market. No 'hard' criteria exist for this categorisation[148]. How this categorisation in practice works out for the selection of training, the distribution over specific groups and the results of the training is at this stage difficult to say. After 1995 relatively few studies have been carried out which evaluate training subsidised by the PES.

3.2.2 Mechanisms or processes for the assessment and recognition of skills and competences

No general system of assessment and recognition of skills has yet been realised. Nevertheless some projects are conducted on the recognition of acquired competences. In these recognition procedures the informal qualifications are assessed and compared to criteria derived from the national qualifications structure for vocational education. This recognition can result in the awarding of certificates or exemptions of part of a study program. It means that training can be more adapted to individual needs. This may lead to a shorter course duration, a lowering of training costs and a better chance of acquiring or keeping a job (CINOP 1997). In an experimental project for childcare supervisors the costs of recognition of acquired competences were calculated in two ways resulting in 18% or 78% of the costs of following a complete course. This suggests that recognition of acquired competences can be cost-efficient (Klarus & Idsardi 1997, p.15-17).

Arguments in favour of such a system are that to the extent that training is general, it is also useful in other firms. But these other firms will only reward a worker for her training if they can observe its contents. In many cases there may be imperfect information regarding these contents which may cause transaction costs to signal the outcomes of general training. This makes investments in non-specific training without the possibility of recognition less attractive for workers and may cause underinvestment (Oosterbeek 1997, p.4).

On the other hand Katz & Ziderman (1990, p.1147-1148) argue that employers are willing to share part of the costs of general training. This conclusion is based on the difference in information between the training firm and a competing firm. Potential recruiting firms do not possess much information on the extent and type of workers' on-the-job training. The informational asymmetry between a training and a recruiting firm reduces the net benefits that a worker with general training can obtain by moving to another firm, and therefore his willingness to share in the costs.

Certification, by reducing the extent of asymmetric information concerning workers' training may diminish the willingness of employers to pay for general training (Katz & Ziderman (1990, p.157). Furthermore a system of certification has to have a procedure for accrediting and discrediting programs. Given the established positions of the people involved the discrediting procedure is likely to be rather conservative. The instrument may also tend to being biased towards formal training and against informal training. Moreover, the system involves administrative efforts which may prove to be very costly (Oosterbeek 1997, p.9).

The recognition of skills is also an important attention point for the training of unemployed. The training courses provided by the educational institutes related to the Public Employment Service are increasingly embedded in the qualification structure of the new Adult Vocational Training Act (WEB). This Act structures the courses offered in regular vocational education (both apprenticeship as well as full-time vocational education). This act provides a more detailed qualification structure, which makes the

[148] The NEI is now constructing a scaling instrument which gives an indication of the distance to the labour market of unemployed, based on "hard" criteria.

contents and levels of training courses clearer. The fact that the courses for the unemployed are also more and more structured in this sense, means that for employers it should be more clear to position the training compared to the regular education. This reduces uncertainty for employers and therefore is expected to enhance the benefits. It further aims at improving competition between different providers of education and training.

3.2.3 Changes in wage determination practices

In many contracts wages are based on seniority instead of actual performance or productivity increases. Together with minimum wage legislation, social security income floors this may cause that skill wage differentials are too narrow (Oosterbeek 1997, p.6).

One third of all organisations with 5 or more employees used some kind of performance related pay in 1995. Flexible payment in 45 percent of these organisations is based on personal assessment, in 18 percent on objective criteria and in 25 percent on both. However, sharp differences exist between sectors. Only 10 percent in organisations in Education and Health makes use of performance related pay, in contrast with around 50 percent of government agencies and construction firms. Flexible payment in the public sector however relies mainly on personal assessment, whereas the private sector more often relies on objective criteria. However, in comparison with 1993 there seems to be a convergence of the use of performance related pay between sectors with high and low use of performance related pay (OSA 1996, p.58).

In a 1995 survey of the trade union FNV among its members 17% stated that part of their wage was related to performance. A survey among highly educated people in 1995 revealed comparable figures (Intermediair 1997). Performance related pay may increase the incentive to invest in training but its impact will be limited, because employees don't want to be too uncertain about their income. Moreover, employees are uncertain to what extent training really improves their performance. Furthermore, performance related pay often takes the form of a bonus, because downward adjustments of wages are rare in the Dutch system of industrial relations.

Empirical evidence of steel finishing lines shows that groups of complementary human resource management (HRM) practices have large effects on production workers' performance. On the other hand, changes in individual work practices have little or no effect on productivity. Worker performance is seen to be substantially better under incentive pay plans that are coupled with supporting innovative work practices than it is under more traditional work practices. Examples of innovative work practices are flexible job design, employee participation in problem-solving teams, training to provide workers with multiple skills, extensive screening and communication, and employment security (Ichniowski et al, 1997, pp.311-2). This indicates that performance related pay should be combined with other innovative work practices, like the provision of training.

3.2.4 Changes in industrial relations systems

There is a tendency in Dutch firms to create a more flexible workforce. More use is being made of hired in workers and workers on a temporary contract. Between 1986 and 1996 the share of workers on a permanent contract has fallen from 88% to 84.5% (OSA 1997, p.44). At the same time those permanent workers are assumed to be more able to perform different tasks. On the one hand this requires more continuing training of workers, on the other hand employers will be more reluctant to train workers whose future attachment to the firm is uncertain.

Internal mobility promotes the investment in human capital by firms, but external mobility makes it less interesting for firms to invest in training. High turnover of workers may be the cause of underinvestment in training, especially in the contexts of the mobile US and UK labour markets. Furthermore high turnover may frustrate investment in specific training as well (Oosterbeek 1997, p.4).

The sectoral trainingfunds may lift part of these problems, as discussed in section 4.3. In addition one can think of the proposal to stimulate workers to create individual training accounts, as mentioned in section 3.1.3.

3.2.5 Changes in tax policies

Next to the tax measures and subsidies that are already in place, one can think of further arrangements and modifications. In the first place a widening of wage differentials between skilled and unskilled workers may strengthen the incentives for individuals to invest in education and training. This can be done by reducing the progressivity of tax-system. However, this may have undesirable effects on earnings inequality.

Individuals may be provided with vouchers to buy training, which can induce people to invest in training. Eventually as part of a larger voucherscheme extra vouchers can be given to poorly qualified adults, to stimulate them in filling their educational gap.

Employers may be stimulated by fiscal facilities like the recently introduced extra deduction of training costs from profits before corporate taxes. This scheme could be modified to reach more employers or to target more specific groups.

3.2.6 Changes in financial accounting and reporting practices

It has been suggested to make investments in human capital visible on the balance sheet of firms. However, present measurement and valuation difficulties and accounting conventions limit the possibilities of complete human resource accounting. Nevertheless like the value of patents specific investments in human capital may be accountable. Investments in training of employees for instance could be activated, by making contracts on the conditions of repaying training costs when employees leave the firm within a certain period (KPMG BEA 1996, p.53). An example of this kind of training-contracts is given in the case study in section 5.4.

Furthermore, non-financial information on human resources can also be useful if presented in a more systematic way. In this respect one can think of alternatives for Human Resource Accounting like standard human resource management, human resource indicators in an appendix to the annual report or other publications that give insight to specific details of the investment in human capital by the firm (KPMG BEA 1996, p.53-54).

The reporting of human resource indicators may be stimulated by the following proposal. In the national program of action ‘lifelong learning’ it is suggested to introduce a hallmark for firms with a good practice in training their employees (OCW 1998, p.5). This proposal is inspired on the ‘Investor in People’-program in the United Kingdom. When employers in the United Kingdom satisfy the conditions of a national standard of employee training they can be certified as an Investor in People. Between 1991 and 1996 almost 25,000 enterprises (with a total of 5.8 million employees) have committed themselves to this national standard, of which 4,000 firms were certified (Department for Education and Employment, 1996, p.74). Because firms have to pay themselves for the costs of their assessment, public costs associated with this arrangement are relatively small.

Appendices to chapter 3

Appendix I to chapter 3

Below the index figures used in table 3.4a to 3.4c are presented. They are based upon price mutations in the section education (CPB, Macro Economische Verkenningen 1998, pp.148-149).

Index figures for prices in education sector 1985-1996 (1994=100).

Year	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996
Index	87.6	86.1	86.5	85.7	86.0	88.6	91.4	95.6	97.5	100.0	103.0	104.3

Appendix II to chapter 3

Below the nominal basic grant and the nominal supplementary grant for students in higher vocational education and students in university education for the period 1987 to 1996 are presented.

Nominal basic grant for students in WO and HBO, 1987-1996; guilders.

	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996
Not living with parents										
WO	605	605	605	620	570	570	563	560	470	425
HBO	605	605	605	620	570	570	563	560	470	425
Living with parents										
WO	266	266	266	273	235	228	235	225	158	125
HBO	266	266	266	273	235	228	235	225	158	125
Source: Bruggert & Spee (1996) Data are not corrected for inflation.										

Nominal supplementary grant for students in WO and HBO, 1987-1996; guilders.

	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996
Not living with parents										
WO	146	146	160	172	183	175	202	219	313	383
HBO	203	203	215	235	254	258	288	308	404	383
Living with parents										
WO	146	146	160	172	183	175	202	219	290	348
HBO	203	203	215	235	254	258	288	308	381	348
Source: Bruggert & Spee (1996) Data apply to students who are privately insured Data are not corrected for inflation.										

Until the academic year 1991/1992 only students eligible for a supplementary grant could borrow from the government. The first change was that all students could borrow the rise in tuition fees. Starting January 1995 all students can borrow money from the government (up to a certain amount, which is higher for those students that are not eligible for a supplementary grant). Also, students that are no longer eligible for the basic grant (because of their age or because the have consumed their maximum period of student financial aid) can claim an interest bearing loan. As a consequence the number of students with an interest bearing loan has more than doubled (from 170.000 to 352.000), as can be seen in table below. However, the corresponding growth of the expenditure on loans has been much smaller (from 300 million to 445 million guilders). So only part of the increased potential of loans has been used. Of all potential loans in higher education more than 3 billion guilders are left unused.

Expenditure on interest bearing loans and number of students that claim an interest bearing loan

		1987	1988	1989	1990	1991	1992	1993	1994	1995
HBO	Total expenditure (million guilders)	160	175	185	195	200	115	130	150	235
	Students (x 1000)	71	79	85	92	93	95	109	110	207
WO	Total expenditure (million guilders)	160	165	160	160	160	85	100	150	210
	Students (x 1000)	54	57	56	57	56	55	61	60	145

Source: Bruggert & Spee (1996).
Data on 1995 are preliminary.

Appendix III to chapter 3

Higher education, employment and wages in the period 1987-1995.

	1987	1988	1989	1990	1991	1992	1993	1994	1995
	X 1000								
Jobs	87	87	91	94	97	95	96	93	93
FTE	64	64	65	67	69	71	71	71	71
Yearly wage	44,7	44,3	44,1	45,3	47,1	50,0	51,4	53,8	55,3
- Men	50,6	50,4	51,3	53,1	54,7	58,9	61,2	62,2	63,5
- Women	31,4	30,8	29,0	29,7	31,1	33,8	34,9	38,3	39,7
	%								
- Men	67	68	67	66	66	63	62	64	64
- Women	33	32	33	34	34	37	383	36	36
< 24 years	10	10	11	10	9	11	7	8	5
25-44 years	63	60	59	59	63	57	59	57	59
> 45 years	28	29	31	31	28	33	34	35	36
< 12 hours	11	9	10	11	10	13	13	7	7
12-<20 hours	7	9	10	10	9	9	10	10	6
20-<30 hours	15	15	15	13	15	13	11	13	14
>= 30 hours	67	66	65	66	66	65	66	70	73
Teachers	39	41	41	44	44	41	44	43	47

Source: Hartgers (1996). Data are obtained from the Arbeidsrekeningen.
Data refer to all higher education funded by the central government.
FTE shows the number of jobs converted to full-time equivalents.
Wages are average gross wages per job per year, including special rewards.
Data for 1994 and 1995 are preliminary.
The total number of jobs in education refers to teaching staff and non-teaching staff, such as door-keepers, secretaries and cleaners. It also refers to scientists with no or only a small educational task.

Nominal monthly payment in salary scale 7.0 and 11.0, 1985-1987; salary in guilders.

	Salary scale 7.0	Salary scale 11.0
June 1985	2,643	4,346
September 1987	2,654	4,364
January 1989	2,672	4,394
April 1990	2,742	4,516
April 1991	2,835	4,670
April 1992	2,920	4,810
January 1993	2,949	4,858
October 1993	3,011	4,960
January 1995	3,142	5,087
October 1995	3,163	5,120
April 1996	3,198	5,176
January 1997	3,221	5,215

Source: Ministry of Education, Research and Science, based upon BBRA 1984
Monthly payments for full-time work; exclusive reductions and compensations.

Appendix IV to chapter 3

Reliable, comparable, data on staff in university education is available starting 1990, in higher vocational education it is available starting 1991.

Manpower development university education, 1990-1996; in persons.

	Total	Men		Women	
	Number	Number	Proportion	Number	Proportion
1990	52,129	35,084	67%	17,045	33%
1992	55,316	36,340	66%	18,976	34%
1994	53,629	34,795	65%	18,834	35%
1996	51,510	32,925	64%	18,585	36%
1990-1996	-/- 619	-/- 2,159		+ 1,540	

Source: VSNU (1997).
Data relate to situation at 31 December each year. Starting 31-12-92 data from the Open University are processed. Data are presented with two-year intervals.

Manpower development university education, 1990-1996; in full-time equivalent (fte).

	Total	Men		Women	
	Number	Number	Proportion	Number	Proportion
1990	42,732	30,308	71%	12,424	29%
1992	45,189	31,254	69%	13,935	31%
1994	44,502	30,498	69%	14,004	32%
1996	42,171	28,461	68%	13,710	33%
1990-1996	-/- 561	-/- 1,847		+ 1,286	

Source: VSNU (1997).
Data relate to situation at 31 December each year. Starting 31-12-92 data from the Open University are processed. Data are presented with two-year intervals.

Manpower development higher vocational education, by gender, 1991-1994; in persons.

	1991			1992			1993			1994		
	Total	M	W	Total	M	W	Total	M	W	Total	M	W
DOP	19,866	13,917	5,949	20,059	13,907	6,152	19,960	13,735	6,225	19,636	13,432	6,204
OBP	9,150	4,717	4,433	9,757	4,937	4,820	10,210	5,107	5,103	10,259	5,047	5,212
Total	28,960	18,594	10,366	29,771	18,809	10,962	30,132	18,814	11,318	29,886	18,468	11,418

Source: RAHO, copied from OCW (1995).
Some persons belong to both categories of personnel, therefor summing both categories can lead to a higher total. Totals are without double-counting.

Manpower development higher vocational education, by gender, 1991-1994; in fte.

	1991			1992			1993			1994		
	Total	M	W	Total	M	W	Total	M	W	Total	M	W
DOP	13,457	10,017	3,440	13,650	10,057	3,593	13,684	10,013	3,671	13,623	9,919	3,704
OBP	7,512	4,198	3,314	7,995	4,405	3,591	8,296	4,514	3,782	8,360	4,511	3,849
Total	20,969	14,215	6,754	21,646	14,462	7,184	21,981	14,529	7,452	22,000	14,442	7,559
Source: RAHO, copied from OCW (1995).												

Chapter 4 Mobilising resources for lifelong learning

4.1 Introduction: Funding arrangements by sector

In this chapter the funding arrangements for each sector are described. The following sections are concerned with the public and private origins of financing flows to providers and learners. The inefficiencies and inequities associated with funding arrangements are assessed for the different types of education and training. Next to the motivation of present financing arrangements future developments are also looked at.

In an appendix at the end of this chapter the funding arrangements are illustrated with a diagram for each sector (figure 4.1-4.5) which shows the most important financing flows, with rough estimates (if available) of the corresponding amounts of money (in NLG millions). Sources and more detailed information on the amounts can be found in the text of chapter 3 and 4.

Section 4.3 concludes the chapter with a description of a typical financing mechanism, training-funds and the associated training levies at an industry level. These training-funds financially stimulate the training of apprentices, employees and the unemployed in many sectors of economic activity.

4.2.1 Upper-secondary education (foundation learning)

Figure 4.1 provides an overview of the main financing flows in secondary education. However, inside secondary education the following sub-sectors should be distinguished:
- upper general secondary education, HAVO and VWO;
- senior secondary vocational education (MBO); and the
- apprenticeship system (LLW).

Since the introduction in January 1996 of the WEB, the Adult and Vocational Education Act, which is aimed at integrating different types of vocational education, MBO and LLW officially resort under the same legal structure. The two sub-sectors are currently in a process of merger into large-scale Regional Training Centres (*ROCs*) We will discuss these two sub-sectors as one, namely as vocational education, and discuss the sub-sectors individually where needed.

Financing of the provider

- Originating in the public sector

In principle, funding for all sub-sectors is entirely the responsibility of the central government. The exception to this rule are the occupationally-based training components in the apprenticeship system, which constitute an integral part of that type of education. Employers, i.e. the private sector, take the responsibility for the relevant costs.

Basically, financing of providers is done by means of lump sum grants provided by the central government. In general secondary education, this system is in use as of August 1996. In vocational secondary education lump sum grants were introduced in 1993. In both cases, the new system replaced a declaration-based system. The most important variable in lump sum financing is the number of pupils.

A distinction is made between funding for personnel costs and for material costs. For personnel costs a key factor is the GPL, i.e. average personnel costs. The GPL-model is used to transform normative number of posts into money. The normative number of posts is calculated by using fixed ratios between different types of personnel and the number of pupils. In summary, the allowance for personnel depends on the registered number of pupils, in the preceding year.

Lump sum financing for material costs has existed in both general secondary and secondary vocational education since January 1993. Funding takes place on the basis of the number of pupils and the number of square meters gross floor surface. In addition, there is a fixed amount per school, the height of which depends on the type and sector of the school involved. In general secondary education, it is scheduled that in August 1997 the current funding of actual square meters will be replaced by a system of norm square meters, which in fact comes down to a system based on funding per pupil.

As is clear from the above, the lump sum consists of different components. However, the schools are free to spend the funds as they like. That is, schools may underutilise one component in favour of another. Within the boundaries of the collective bargaining agreement of the sector schools are also entitled to negotiate terms of employment with the school personnel. These terms were formerly more strictly imposed by the central government. The school management may even decide to transfer funds from one school to another school with the same or different management without interference of the Ministry. The distinction between the components relating to type of costs has therefore become essentially redundant.

The implementation of lump-sum financing and decentralisation of terms of employment has several implications for schools in secondary education. The funding reform is aimed at increasing the spending freedom of schools, as the distinction between material costs and wages diminishes. In fact most of the expenditures cannot be changed easily, limiting the degree of spending freedom. Further, schools face stronger responsibilities for their finances, and the lump-sum they receive may be lower than the total of expenses paid under the previous system. First research by Van Bergen and Van der Ploeg (1997) indicates that the lump-sums for material costs paid out to schools are systematically below the minimum assumed necessary by school boards. The lump-sums for personnel are on average sufficient, although it is harder to manage the finances for schools with relatively aged personnel.

Special funds are available for accommodation, special projects, in-service training and policy agenda reform. With respect to accommodation a recent development in vocational education could be mentioned: Reversal of Financing of Capital Expenditure (*Omkering Kapitaalslast Financiering, OKF*). Ownership of accommodation is to be transferred in 1997 from government to the providers. The providers will take on full responsibility for renovation and the building of new premises. For this , all providers will receive an annual sum. A balancing operation will ensure equal starting positions for all providers.

In 1996 the government has created a fiscal measure to stimulate apprenticeships. Employers can receive a tax allowance of NLG 4,500 for an apprentice, under the condition that he or she does not earn more than 130 per cent of the minimum wage. The public costs of this tax facility in 1996 were NLG 240 million (CPB 1997, p.127).

The role of lower level governments including municipalities was rather limited until recently. Although municipalities did have funds to support education, their role in upper secondary education was small. Also, the Constitution tied their hands to some extent. The constitution lays down that public and private education be treated equally. When municipal authorities make extra money available for public schools, they are obliged to reserve the same amount for private schools. From January 1997, however, the role of the municipality has gained increasing importance as the financial flows for accommodation are channelled through the municipality.

- *Originating in the private sector*

Next to the central government lump sums, what other funds may educational institutes dispose of? We can distinguish between:

1. Family contributions
2. Contract activities
3. Other

The family contribution may be used in some schools for the purchase of specified items such as additional investment in inventory or copying costs. Other schools add the contributions to their general budget. Recently the non-obligatory character of this contribution received specific attention, which put pressure on the receipts in this category.

Schools, in particular vocational schools, can generate additional income by carrying out contract activities, such as courses for private sector clients. The rates should be such that the activities at least break even. Some schools have set up separate foundations, under which the contract activities are to be carried out. Proceeds of the contract activities will in that case not automatically flow to the schools budget. Other proceeds may arise from activities such as the rent of books, tools or space.

Families/students are required to pay tuition fees to the central government for learners aged 16 and older in full-time education, as a contribution to the costs of education. As such, the fees are not an additional source of funding for the schools.

In all, the role of the private sector is rather limited in view of the total school budget. See section D for details.

Financing of the learner

Learners or their parents can make use of a number of financial arrangements, the exact mix and extent of which depends on a number of factors, including age of learner, living environment (living at home or with one's parents) family income and type of school. We can distinguish between:

1. Family allowance, (*Kinderbijslag*) which is independent of family income.
2. Contribution towards study costs (*Tegemoetkoming Studiekosten*), which is in part dependent of family income.
3. Study grant (*Studiefinanciering*), which is in part dependent on family income. The basic grant, essentially a gift, is awarded independently of family income. Supplementary financial assistance, which is dependent on family income, exists in part in the form of an interest-bearing loan and in part in the form of a non-repayable supplementary grant.
4. Wage on the basis of an apprenticeship contract.
5. Internship allowance.

The first two arrangements apply for students in pre-vocational education, general secondary education and senior vocational training who are under age 18. Family allowance is about NLG 200 per month, depending on the number of children within the family, whereas the contribution toward study cost covers the costs to students from low-income families of tuition fees and other direct study expenses, such as the cost of books.

For students in general secondary education and senior vocational training over age 18 the study grant system applies (for students in general secondary education until 1997). This system consists of four parts: the basic grant, free public traffic (the *OV-studentenkaart*), an income-dependent supplementary grant, and an interest-bearing loan (until 1995 only for students with lower-income parents).

In 1990, the family income independent part of the grant amounted from NLG 620 per month for those students who live on their own and NLG 273 per month for those who live with their parents. Since than, the amounts have been reduced to NLG 391 (MBO) and NLG 333 (general secondary education) per month for those who live on their own, and NLG 91 per month for those who live with their parents. This decrease is compensated by an increase in the supplementary financial assistance. The maximum interest-bearing loan for which students are eligible has been increased by 25 to 33 per cent since 1990, whereas the non-repayable supplementary grant increased from NLG 269 (MBO) and NLG 277 (general secondary education) in 1990 up to NLG 539 (MBO) and NLG 603 (general secondary education) in 1996. Further, eligibility for supplementary financial assistance increased in 1997 through an increase in maximum family income for which the supplementary assistance applies (see IBG, 1997). This indicates

that the supplementary financial assistance, instead of the basic grant, has become the guarantee for accessibility of education for those students with lower-income parents (Bruggert and Spee, 1996).

From 1997 on, students over age 18 in general secondary education are no longer eligible for study grants, but receive a basic supplement and a contribution towards study-costs, in amounts comparable to the 1996 study grant level. Thus, they no longer receive free public traffic.

As was noted earlier, the Adult and Vocational Training Act (*WEB*) was introduced in 1996 with the intention to integrate different types of vocational education. The financing systems, however, are still separated. Study grants only apply to full-time MBO-students of the age between 18 and 27. Participants in apprenticeship training are not entitled to study grants, because they are not in full-time education. It could be mentioned, however, that in terms of income to the learner the apprenticeship system is still the most attractive, the wages being paid are much higher than the study grants for their MBO fellow learners.

Links and complementarities between public and private funding

Central government funds are meant to cover all costs of educational institutes. In practice, however, problems sometimes arise. Additional funds are needed to keep finances balanced for many schools. Even when the additional funding mentioned above is taken into account, arrays in maintenance and inventory replacement have been reported for educational institutes in secondary education (See e.g. Normeringscommissie, 1995 or Muizer & de Voogd 1994). In other words, non-obligatory family contributions, contract activities for vocational schools, and rent income have become important financial support

Relative shares of financial contributions

On the basis of a research of Moret, Ernst and Young in 1996 among 30 representative institutes in the vocational education sector the following unweighed averages and average shares have been calculated.

Table 4.1 Funding of secondary vocational education

Source of funding	Average	Share in per cent
Central government	7,133	90.50
Family contribution	189	2.40
Contract activities, i.e. private funding	146	1.85
Other private funding	414	5.25
Total	7,881	100.00

However, this research does not take into account costs for the occupationally-based training (*praktijkcomponent*) and the work training part in full-time senior vocational education, which are to a large extent paid for by employers. A 1993 study of the OSA is indicative in this respect. Occupationally-based training involves substantial costs, of which the most important include:

- fees and contributions;
- direct costs of learners (essentially wage costs);
- supervisory costs (*begeleidingskosten*).

OSA calculated net costs per learner for companies by subtracting benefits, such as subsidies and productivity, from gross costs. The real net costs vary substantially across sectors, and range in junior apprenticeships from NLG 400 - 45,600. In senior apprenticeships the costs range from NLG 8,300 - 28,600.

Other studies, such as Aalders (1994) and Van Zwol and Bots (1992), confirm these findings, although they have to be interpreted with caution, due to small sample numbers of learners and employers. The difference between direct (wage) costs and measured productivity is responsible for the largest share of the real costs to employers. Aalders (1994) reported an average productivity of primary level apprentices of between 50 and 65 percent of the productivity after finishing the apprenticeship. The supervisory costs vary between NLG 3,200 and NLG 13,400.

In order to obtain an indication of the size of the contribution of employers to the total costs of apprenticeship training, it is interesting to compare the figures above with the amounts that various contributors disburse to fund costs of educational institutes in vocational education. Clearly, the employers' contributions are substantial and in some expensive apprenticeship systems dwarf others' contributions. For the metal industry the employers' share is about two-third (Van Zwol and Bots, 1992). Even if only supervisory costs are taken into account, the contribution of employers remains significant.

In the general secondary education sub-sector NEI research of 1994 provides information. The research, which covered 50 schools in general secondary (and junior vocational) education focused on the material exploitation costs only. The following relative shares were reported (column 2).

Table 4.2 Funding of general secondary vocational education

Source of funding	Share in material exploitation costs in percent	Adjusted share in percent[a]
Central government, regular	68.70	94.52
Central government, additional	3.90	0.68
Rent	2.80	0.49
Family contribution	13.30	2.33
Other	11.30	1.98
Total	100.00	100.00

[a] Share in total costs under the assumption that personnel and capital costs are fully covered by the government.

We have no data on the share of central government on expenditure for personnel and capital expenditures. If we assume that only central government funds were utilised it is possible to estimate relative shares for all sources of funding for total expenditures. Roughly, material expenditures equal to some 17.5% of the total expenditures The adjusted relative shares are listed in column 3.

In summary, central government funding is very dominant both for providers in vocational education as for providers in general secondary education. Employers bear a significant share of the total costs of the apprenticeship system, as they take care of most costs for the occupationally-based training component.

Motivation of financing arrangements

Until recently, funding of institutes in secondary education could be described as an open-end arrangement at school level. Costs were reimbursed by the Ministry upon the receipt of declarations by the school, provided the declarations were in compliance with specified regulations. If compliance was ensured, the government would finance real costs. This implied that the government bore most budgetary risk. Further this system involved a substantial amount of bureaucracy.

However, the old system did not induce pro-active behaviour of schools. The Ministry is now pursuing a consistent policy that is aimed at increased independence and autonomy of the educational institutes. Important elements of the policy include:

- improve spending autonomy through lump sum financing;
- increase the operating scale of educational institutes and merge related training programmes;
- transfer of accommodation to providers (*OKF*), which has been scheduled for 1997;
- decentralisation of terms of employment to schools;
- introduction of a new funding mechanism after the year 2000, which will retain the principle of lump sum financing but which will introduce performance criteria.

Therefore, the introduction of lump-sum financing, although in itself a key element of current financial arrangements, should be viewed as part of a broader policy aimed at improving the internal returns to education through changes concerning both the effectiveness and efficiency of the educational system. The lump-sum financing already decentralises responsibilities for spending in both vocational and general secondary education. Measures in general, as well as vocational secondary education will be discussed here.

General secondary education

In general secondary education investigations have been made concerning the effects of output-financing, a system in which the amount of money schools receive is dependent on one or more output-variables, the so-called target parameters. Several variables can be chosen as target parameters with respect to output. First, the external return to education: the relative success of graduates in successive occupations or education. This relative success, however, mainly depends on individual characteristics and choices, such as effort and study choice, over which the educational institute has only limited control.

The internal return to education is probably a more appropriate, but also more ambiguous variable. It concerns both the effectiveness and the efficiency of education. The effectiveness of education is defined here as the ratio of the number of graduates and the number of pupils who started. The effectiveness of education improves when this ratio increases under constant educational quality. The efficiency of education is the ratio between the standard course length and the actual time spent in the course, of both graduates and drop-outs. Effectiveness and efficiency are only partly related to each other: an effectiveness improvement (lowering the drop-out rate) will generally increase actual course time, because of increased staying down or inefficient educational paths. This latter concept refers to the situation in which, for example, after graduating in MAVO one flows into HAVO-4. Even without staying down, one will still spend 6 years before graduating in HAVO, while 5 years is standard HAVO course length.

As a result of staying down and of inefficient educational paths, a relatively large share of students in general secondary education needs more than the standard course length in order to graduate. For example, average time spent in the last two years of HAVO was 2.4 years in 1990, whereas 2.0 years is standard time. Further, drop-out rates, although steadily declining, are substantial. Strategies therefore should aim at prevention of drop-out or leading the students back to education.

Drop-out can result from ill motivation of students (a result of low socio-economic status of the profession trained for, or bad labour market expectations), inefficiently functioning institutions (teaching methods, school-to-work transition) or cultural and economic circumstances (position of education in society as a whole). Not all of these factors can be influenced through efficiency improvements. The main roads towards improvements are those directed at the motivation of the students to participate in education, and those directed at schools to prevent drop-out, and more in general, to stimulate shorter educational paths.

Motivation of students can be influenced by increasing the external return to education. For example, in Rotterdam, a school makes agreements with its students on active participation of the student in return for a job guarantee after graduating (Keuzenkamp, 1997). Other measures aimed at increasing the

external return are those directed at improving the transition from school-to-work, which means provision of information about skill requirements in jobs, and as far as possible bridging the gap between the skills learned in school and those required in the labour market. Lowering the barriers for drop-outs to return to education is important in order to lead drop-outs back to the path towards a starting-qualification. This is to be arranged by means of flexible inflow (throughout the year), and changing the curriculum in such a way that the curriculum can be followed in a flexible order.

The second road towards improvements is the one directed at schools, and involves stimuli in the financial mechanisms. Basically, such stimuli award schools with relatively short educational paths and low drop-out rates, and punish those who have above-average rates. This means that the internal return to education has to increase.

The Institute for Research of Government Spending (IOO) assessed the effects of four alternative policies aimed at improving the internal return to education (Van der Bij et. al., 1993). The effects of these four alternatives on participation and costs are summarised in table 4.3.

Table 4.3 Student flows and budgetary effects of four alternative policies by the year 2000 relative to the base scenario (differences from base scenario in percentages).

	Time spent (in months)		Number of graduates (%)		Number of participants		Total number of students		Budgetary effects
	HAVO	VWO	HAVO	VWO	HBO	WO	HAVO/VWO	other	total
Scenario 1	1.4	1.1	18	16	4.6	10.1	9.1	0.9	2.8
Scenario 2	-4.8	-3.6	20	19	5.3	12.1	-5.5	1.0	2.4
Scenario 3	-2.4	-2.4	-13	-10	-3.2	-6.1	-7.0	-0.5	-1.7
Scenario 4	-1.7	-1.0	-11	-15	-3.6	-7.0	-12.2	-0.1	-0.9

Source: Van der Bij et. al., 1993.

The first alternative aims at replacing drop-out by an extra year of education (staying down), thereby extending the average time spent in education. This policy would lead to additional educational expenditures due to an increased number of students in (upper) secondary education, but also in higher education. Finally, more students will be eligible for study grants, which leads to a rise in expenditures on study grants of NLG 198 million by the year 2000.

The second alternative is the 'target' scenario, in which no staying down or drop-out occurs: all students graduate within official course time. Whereas the effect of the reduction in stay downs is much stronger than the effect of the drop-out reduction, total time spent in education, as well as the total number of students decreases, leading to lower spending in secondary education. On the other hand, the increase in the number of upper secondary graduates leads to a higher inflow into higher education, leading to NLG 240 million additional expenditures by the year 2000. The same applies for the expenditures on study grants.

The third alternative aims at sharper selection of students. In this scenario, 50 per cent of the students who have to stay down is instead of being stayed down referred to a lower educational level, a different kind of education, or out of education. This policy leads to decreasing participation in general upper secondary education, higher education and university, and to increasing participation in all other types of secondary education. More inefficient educational paths are expected to occur, and the total number of secondary education graduates decreases, due to a higher inflow into the labour market. Total expenditures on education will decrease after a few years, because of the lower inflow into higher education.

The fourth alternative concerns sharper selection at the entrance to general upper secondary education; more students are referred to other types of education. The assumption behind this scenario is that those in general upper secondary education will on average be better prepared, leading to a 50 per cent

reduction in staying down in upper HAVO and VWO, thereby decreasing average time spent in general upper secondary education. The effects are more or less similar to those of the third alternative, but are stronger, because selection takes place in an earlier stage of education.

A policy aimed at sharper selection (scenario 3 or 4) lowers the average educational level. This may result in more inefficient educational paths, because students may finally want to graduate at the level originally intended. Therefore, budgetary effects are rather moderate. The budgetary effects of the second alternative mainly reflect the increased participation in higher education. Operation costs of secondary education will decrease by 1.7 per cent. The application of sharper selection mechanisms (scenario 3 and 4) is easier for comprehensive schools than for categorical schools: sending students away from school lowers the total number of students, which again has financial implications, under the assumption of slightly increasing returns to scale.

A selection mechanism not discussed in Van der Bij et. al. (1993) is selection at the entrance of secondary education. Other groups with above average chances of drop-out and stay down may then be sorted out, which has direct implications for the accessibility of education. Further it must be noted that schools have only limited control over the performance of their students. The relative shares of minorities with above average risk profiles differ widely among schools. Therefore caution is needed in the application of inflow selection. More generally, on the one hand a system of output-financing is only effective in case of a relatively large degree of spending freedom and school discretion. On the other hand, when a school appears not to be able to handle an output-financing system, they can get involved in a downward trend of budget cuts, deteriorating quality, falling returns and even further budget cuts.

Another selection mechanism is self-selection through better provision of information about level and type of education, which improves the quality of school-choice. Finally, greater financial responsibility for wrong school choices may avoid drop-out and stay downs. Recent measures which increased the financial burden on students of delay in higher education, lowered inflow into universities in favour of higher vocational training, the latter being 'easier to enrol'. If such measures work out similarly in secondary education, more students may prefer MAVO and HAVO to VWO, thereby reducing the drop-out rate and the percentage of students who stay down. However, a tendency of choosing 'easier' types of education may have repercussions for the target rate with respect to the starting qualification.

Vocational training

In the vocational training sector it is especially the high drop-out rate which gives reasons for concern. In both the apprenticeship system and senior vocational training on average 55 per cent of those who started a course, finally graduates. This is partly due to drop-outs, but largely stems from the fact that most early school-leavers only change courses, but are not registered that way (Van Batenburg and Den Boer, 1996). The drop-out rate corrected for course changes is about 20 per cent in secondary vocational training. Similar research for apprenticeship drop-outs shows that on average half of the apprentices graduates. Nevertheless, large differences between sectors exist, the percentage apprentices graduating ranges at least from 30% to 70% (Hövels & van den Berg 1996, p.31). The Adult and Vocational Training Act stimulated the harmonisation of the theoretical parts of the apprenticeship training and the full-time senior vocational training, as part of an attempt to reduce the drop-out rate by increasing the flexibility of the educational system.

Further, in the vocational training sector measures aimed at reducing actual time spent in a course are in progress. Following recent proposals made by the Education Inspectorate of the Ministry of Education (Inspectie van het onderwijs, 1997), the solution to reduce average time spent in vocational training in seen to lay in the creation of more flexibility within the institutions to keep time wasted by switches and delays as limited as possible, combined with partial restitution of tuition fees. This is to be reached through flexible inflow and outflow, as well as the possibility to start a specific subject at more than one time a year and the possibility to make changes in the order of the courses. In that way students with above average ability can graduate earlier, whereas below average students can have just the extra time

they need to finish the training (Inspectie van het Onderwijs, 1997). This approach requires to drop the year group system in a way more or less similar to the university system.

In apprenticeships the Regional Training Centres (ROC's) which are responsible for the theoretical part (20 per cent of total time) have even more limited control over the performance of the students than is the case in general secondary education. Communication between the apprenticeship firm and the ROC is often quite limited (see for example Beereboom, 1991, and Simmelink and Heere, 1996), which can negatively affect the link between theory and practice. The apprentice is often the only link between the ROC and the firm. In general, improved transparency of the content of both the theoretical and the practical parts of the vocational training, as well as more effective co-operation and information diffusion between the parties involved, can lead to higher efficiency. (See section 5.3 for the role of the sectoral training and development fund in addressing this problem).

A further problem is that, because of the fact that students are four days a week with a firm, the way that specific firm operates to a large extent determines the attitude towards the sector, the training, and the job. Especially in the lowest level ('assistant') within the Adult Vocational Training Act in some sectors an apprenticeship qualification is deemed unnecessary by employers. Whenever such an attitude exists, motivational and transitional problems can hardly be expected to disappear (Van Batenburg and Den Boer, 1996).

Nevertheless, the main reason to leave the apprenticeship early is a wrong idea about the occupation or the vocational training (Van Batenburg and Den Boer, 1996). Although better informed students may have less chances of leaving early, and therefore improved counselling may relieve matters, the question arises whether a well-motivated switch to another training or occupation deserves the current negative attitude. In the German apprenticeship system a switch within the so-called probationary time during the first year of the apprenticeship is regarded as a proof of a well-functioning market for training.

Efficiency considerations

Vrancken and De Kemp (1996) concluded that with respect to internal efficiency (elimination of inefficiencies) the results for the Netherlands are positive. With respect to dynamical efficiency, that is, the initiation of learning innovations and adaptation of labour market developments such as shifts between sectors, the Dutch system functions deficiently. This can be concluded from the high unemployment rates for certain studies. Efficiency considerations have been a key factor in the policy initiatives outlined above. Improved financial and managerial autonomy as is embodied in the policy initiatives is expected to lead to substantial efficiency gains in the near future.

Equity considerations

In upper secondary education, a distinction can be made between public and private schools. Private education includes denominational schools (mostly based on Christian principles, and recently also based on Hindu and Moslem principles) and schools based on specific educational principles. Private education enjoys a large amount of autonomy within the statutory framework. The educational statutes contain provisions which private schools must satisfy in order to qualify for funding. Under the terms of the constitution all schools that qualify for funding, public and private, are funded equally and on the same basis. The distinction between public and private, therefore, does not alter the description of funding arrangements above.

In general, access to upper secondary education is guaranteed for all citizens. On the supply side, authorities have to ensure the availability of adequate numbers of publicly run establishments for each kind of schooling. On the demand side, various types of financial support are available, as discussed above, to ensure that learners encounter little financial barriers to access.

Inequities associated with financing arrangements

It appears from the discussion above that the state finances the vast share of costs for upper secondary education in the Netherlands. This type of education is part of foundation learning. It is regarded the government's task to provide adequate educational facilities and matching financial arrangements to ensure that no barriers exists for students to enter the desired type of upper secondary education. Government, i.e. society, pays for initial education of the youth. In time, the society may reap the benefits of a well-educated labour force in return.

Access is guaranteed for all citizens, and of all ages. Few of the education sub-sectors have arrangements that discriminate against age. However, study grants, available in MBO, are limited to learners aged 27 or below. There is a potential barrier to access here from the perspective of life-long learning. At present, participation of adults in full-time upper secondary education (general and vocational) is very limited.

Financial barriers to access are small for individuals. Tuition fees (around NLG 1500 annually) are reimbursed by the central government in the form of the contribution towards study costs. It is unclear yet whether access to this compensation payment is limited by age.

In case of senior vocational education, it should be noted that recent measurement of private rates of return show low scores, which means that from a financial investment point of view, such a choice is not very attractive (see for example De Koning et. al. 1996a and Van der Bij et. al. 1993).

Inefficiencies associated with financing arrangements

- At the level of the provider

Funding in upper secondary education is related to student demand in that the number of students determine the amount of lump sum financing available for the school. At this moment, funding is related to performance only to the extent that performance in terms of output and throughput has an impact on student demand with a certain time-lag. Current funding arrangements have not been designed to take historical levels of expenditure into account.

With greater spending autonomy that has come with the lump sum financing, authorities have a need for improved monitoring as well. Starting in 1994, providers in secondary vocational education are obliged to draw up an annual account according to a prescribed format. As much as possible, the model is structured along the same lines as annual accounts of commercial firms. The information captured in the annual accounts is of great importance to monitor spending and income patterns of the providers.

The education inspectorate is responsible for the inspection of education in public and private educational establishments on the authority of the Minister. There are various instruments to monitor and standards within schools including:

- School work plans and curricula;
- Annual reports;
- Plans for teaching practices and in-service training;
- Quality control systems, such as pupil monitoring systems.

The curricula of the providers are assessed on their contribution towards the achievement of attainment targets. These targets, in other words educational objectives have been specified for each type of upper-secondary education. As a result of the integration of MBO and the apprenticeship system, all secondary vocational courses now have a single structure of qualifications.

- *At the level of the learner*

In the Netherlands access to education is free to all with appropriate qualifications (in terms of school-leaving certificates). In upper-secondary education there are no exceptions to this principle. Entry examinations are non-existent.

Similarly, funding for the learner is not dependent on his performance. The variables that affect funding are described above. In higher education annual performance tests have been introduced for study grants. These tests however do not apply to those entitled to grants in upper-secondary education: full-time MBO students. Indirectly though, there is a relation with performance as the entitlement to study grants, and possibly to other individual financial support instruments as well, is limited to a maximum number of years.

- *At the system level*

Competition is an element not (yet) widely spread in the Dutch education system in general, and in upper-secondary education in particular. The policy initiatives towards increasing autonomy of providers have helped to provide a framework that enables and supports competition. Competition could take many forms: competition for the best teachers, which is increasingly possible because of the decentralisation of negotiations of terms of employment; competition for learners. Improved financial and managerial autonomy provide the basic conditions.; There are limits to competition as well. Learners in upper-secondary education have a strong tendency to attend an educational establishment nearby. Especially in the vocational sub-sector, the wave of mergers has created a limited number of super-providers with over 10,000 – 15,000 learners. (It is expected that the total number of integrated ROC's will be between 40 and 50.) As far as school choice is not dominated by distance, competition exists between the ROC's in the same region, and between ROC and schools for general upper secondary education.

Policy changes under consideration

One of the most pressing problems in vocational education is the high proportion of students who leave school without a certificate. Therefore measures to reduce the drop-out rate gain attention. However, as mentioned in section on the motivation of financing arrangements in general secondary education, incentives for reducing the drop-out rate may easily stimulate the use of inefficient by-ways, and students may even stay down more often than efficient and necessary.

Under the recently proposed *Funding Model Vocational Education 2000+* (*Bekostigingsmodel Beroepsonderwijs 2000+)* the differentiation in funding between different types of education will be increased. Essentially it is a combination of an inputmodel and an outputmodel. For each year-participant the ROC receives an input-benefit. This benefit will depend on the nominal course length, which is in turn dependent on which level within the Adult and Vocational Education Act the participant is educated (Rozema, 1998).

The model also involves a so-called 'certification-reward' which can be received when the student graduates. This is the output-part, which stimulates measures to avoid drop-out. The input-part, on the other hand, aims at reducing the real course-length as closely as possible to the nominal course-length, because ROC's do not receive funds for downstayers. The relative shares of the input- and the output-parts will lay between 15/85 and 25/75.

As Rozema (1998) describes, a further element of the Funding Model involves the more flexible treatment of part-time students. Whereas under the current scheme part-time studying is relatively unattractive (in a financial sense) for both students and ROC's, this separate treatment diminishes under the Funding Model. The current proposal will be introduced as an Order in Council in 1999, and will be followed by a new Act (*Wet op het Onderwijsnummer*) after 2000.

4.2.2 Higher education

An overview of the most important financing flows in higher education is given in figure 4.2. this section gives a more detailed description of the funding mechanisms for the different sub-sectors in higher education.

Financing of the provider

- *Originating in the public sector*

Three different providers of higher education can be distinguished: higher vocational education, university education and higher distance education. Since 1993, all three providers are covered by one single act, the Higher Education and Research Act (WHW). This act encompasses, among other things, provisions in the area of funding. According to the Dutch constitution government funded private education in the Netherlands is funded from public sources by the same standards as public education.

Higher vocational education and university education are financed mainly by the central government. Contributions made by the municipalities can be neglected. Financing by the central government is called the primary money flow. About 90% of the government contribution is paid lump sum, the rest are earmarked contributions.[149] This means that institutions can decide themselves to a large extent about the most appropriate way of spending their budget on personnel, material and accommodation. The idea behind lump sum funding is that institutions are best capable to target money in the most efficient way: they know better than the central government how to achieve internal efficiency in their organisation. The budget of higher vocational education and university education is tied to a ceiling. The budget yearly rises with an index for prices and wages, but it can only change when policy measures are taken.

- *Originating in the private sector*

Private funding of higher institutions takes mainly place in two forms, namely tuition fees paid by students and commercial activities. Tuition fees amounted ƒ2,575 in the college year 1997/1998. This is what regular full-time students, who are eligible for student financial aid have to pay in exchange for enrolment in universities or institutions for higher vocational education.[150] Students that are enrolled in more than one study, only have to pay tuition fees once; it does not matter whether the student participates in university education or in higher vocational education, or in a combination. Starting 1994, tuition fees are paid directly to the various institutions.

At the Open University students pay tuition fees per module. The price of one module is set at ƒ360 in the college year 1997/1998; students participate on average in six modules per year (internal information OU), which equals tuition fees of ƒ2,160. In order to graduate from the Open University, a student must pass 56 modules. Thus, graduation from the Open University costs ƒ20,160, twice the price of four years at the university (ƒ10,300). Students at the Open University who are less prosperous can claim a reduction in the course price. The reduction was 90% or 50% in 1996/1997. Nearly all reductions (95%) were at the 90%-level (Open Universiteit 1997, p.23). Starting September 1997 the upper reduction is lowered from 90% to 80%.

The second form of private funding consists of payment by companies, institutions and persons for provided commercial services: contract-research and -training and other services. This is called the tertiary money flow.[151] In the Netherlands universities have a longer tradition of commercial activities than

[149] Among these are benefits, and specific projects such as renewal, internationalisation and projects for the improvement of quality and study ease.

[150] Full-time students that are no longer eligible for student financial aid, part-time students and extramural students pay a different amount. The institutions can determine themselves how much this amount is. There is only a restriction for part-time students, namely that they have to pay a minimum of ƒ 1,250 (IBG, 1997b: 17).

[151] This leaves a secondary money flow: money for research allocated by intermediary institutions.

institutions for higher vocational education. In order to stimulate the latter to provide these activities as well, the government has supported initiatives in recent years, with the idea that they would eventually become self supporting.

Tertiary money flow activities at universities in the form of contract-research have reached a sizeable scope in the last fifteen years (OCW 1997h, p.40). Almost 30% of these commercial activities is financed by contributions of European funds and or contributions from Dutch government authorities. Contributions by Trade and Industry are only a small part of the third-money flow, around 11%. Mostly it concerns the financing of applied research (ibid.).

The provision of contract-training and advisory activities by universities and institutions of higher vocational education is part of their legal task (OCW 1997h, p.40). This task is modest compared the provision of initial education. In higher education, contract-training is mainly post-initial education. Apart from this, universities also provide courses for elderly (HOVO). In higher vocational education a broad variety of short and long courses at HBO and post-HBO level has emerged. At the moment contract-training is relatively modest in scope (ibid.). Unfortunately, we can only provide information on total income from commercial services.

Financing of the learner

Funding by the public sector of the learner takes place in the form of student financial aid as is laid down in the Student Finance Act (WSF) and the Allowance College Expenses Part-time Students (TSD). According to the Student Finance Act, full-time students, younger than 27 years are entitled to a basic grant. The size of this grant depends on the living situation of the student; the size is independent on the income earned by the parents. The grant is tax free. Depending on their parents' income, students may be able to claim a supplementary grant. If parental income is too high for students to be eligible for a supplementary grant, parents are expected to contribute a comparable sum. Finally, students can claim an interest-bearing loan which has to be repaid after completing the study. Students that participate in a work-based learning program in higher vocational education receive no student financial aid in the period they are working.

At this moment two types of student financial aid programs exist simultaneously. This is a consequence of the so-called cohort-guarantee: for every cohort of students all stipulations which apply during their study time are not allowed to change. Students, who started before 1 September 1996 are entitled to a time-related allowance (*tempobeurs).* They are yearly granted a conditional allowance. If a student performs according to the rule (passing half of the study program for that year), the conditional allowance is converted into a grant; if the student fails to meet this rule, the allowance for that year is converted into a loan. In general students are entitled to the time-related allowance for the period of five years, the regular duration of most studies plus one year (IBG, 1997b).

Students, who started after 1 September 1997 are entitled to an achievement-related allowance (*prestatiebeurs).* This means that students receive financial aid in the form of a loan. When students pass half of the study program in the first year and graduate in six years, the loan is converted into a grant. In general one can receive the achievement-related allowance during four years (IBG, 1997a), after which a loan is possible for a period of three years.

Time-related and achievement related elements in student financial aid are to a certain extent mirror images of each other (OCW 1996c). The important difference is the time-interval during which the students' performance is measured. With the time-related allowance, performance is measured every study-year and performance in one year has in general no influence on performance in another year.[152] Furthermore, whether someone graduates or not has no influence. With the achievement-related allowance, performance is measured at the end of the first year and at the end of the course. The fact

[152] See IBG (1997b: 9-10 for the exceptions).

whether or not the student graduates within six years serves as a measure for performance. It is not measured how a student performs in a certain academic year.

Apart from WSF, there is also an arrangement for part-time students and full-time students older than 27 years in teacher training, the Allowance Part-time College Expenses (TSD18+). For higher education, it only concerns teacher training in those fields in which there exists a shortage of teachers. The allowance consists of a compensation for tuition fees and a compensation for other study expenditure. The allowance is tax-free and does not have to be paid back. To be eligible, students have to be older than 18 years, and their net-income in the months May, June and July 1997 has to be below ƒ5,619. Students that satisfy these conditions
receive yearly ƒ1,250 as a compensation for tuition fees and ƒ622 as a compensation for other study expenditure (IBG 1997e)

Links and complementarities between public and private funding

Two links can be indicated between public and private funding. Firstly, included in the basic grant is a component for the payment of tuition fees. In this sense tuition fees paid by the student are an indirect form of public funding. Of course this indirect form of public funding only applies to students who are eligible for the basic grant. For those students that are not eligible, the tuition fees remain a private obligation. Secondly, as far as the government funds contract-training, -research or other services, expenses made by the government are counted by the provider of these services as third-money flow income, i.e. as income on commercial activities.

Private funding is in one respect complementary to public funding. As pointed out above, students with parents that earn an income below a certain income-boundary, receive a supplementary grant. Students with parents that earn an income above this boundary do not receive a supplementary grant. Their parents are expected to pay a 'parental contribution'.

Relative shares of the financial contributions

In table 4.4 the financial contributions of all the actors are presented. For the moment information is provided on the relative shares of financial contributions of institutions that are financed by the Ministry of Education, Culture and Science. Government contribution on higher vocational education equalled a total of NLG 2,490 million in 1995 (OCW 1997i, p.70). The amount that is paid to each separate institution varies with the size of the student population of each institution and graduation rates, and is calculated according to a funding mechanism, as will be elaborated below.

Government contribution to university education equalled NLG 4,173 million in 1995 (OCW 1997i, p.82). This is exclusive expenditure on academic hospitals (NLG 906 million).[153] The contribution that is paid to each of the thirteen universities is calculated using a calculation model; this will be elaborated below. In addition universities also receive income through the secondary money flow. This money is for research and will thus not be treated here.

The Ministry of Education Culture and Science also contributes some money to what are called 'other institutions of higher education'. In 1995, the Ministry spent NLG 231 million on other institutions (OCW 1997i, p.82). The most important is the Open University, which received NLG 76 million in that year (OCW 1997i, p.178).

Total income from tuition fees paid by students in university education was estimated at NLG 334 in 1995 for university education (OCW 1997i, p.82). Total income from tuition fees for higher vocational education were estimated at NLG 559 million (OCW 1997i, p.71). Tuition fees at the Open University amounted NLG 17 million (OU 1997, p.54).

[153] It is also exclusive unemployment benefits that are not intended for universities (NLG 13 million).

Furthermore, institutions receive income from commercial activities. Institutions for higher vocational education received NLG 449 million guilders in 1995 for activities for others. Universities received NLG 1420 million in the tertiary money flow (OCW 1997g). It must be emphasised though that these commercial activities are almost entirely research activities; only a small part of the commercial activities are educational activities.

Table 4.4 Relative shares of financial contributions towards provider, 1995; x NLG million.

	Higher voc. educ.		University	
Source of funding	Absolute	Percentage	Absolute	Percentage
Central Government	2,490	71%	4,173	70%
Tuition fees	559	16%	334	6%
Third money flow/ activities for others	449	13%	1,420	24%
Source: see text.				

Motivation of financing arrangements

- At the level of the learner

Before 1986, a system of three complementary arrangements was in place for the financing of education. Depending on the extent in which parents contributed to the living costs of their studying child they could receive family allowance. In addition, depending on parental income, an allowance in the college expenses was possible. As far as parents did not receive family allowance, they could deduct living costs of their studying child from their taxable income.

The central starting point of the Student Finance Act from 1986 was the guarantee of accessibility of education, independent of income. Financial independence of students with regard to their parents was thought unfeasible because of the expected costs involved. The financial dependency of students with respect to their parents was an expression of the principle that studying is an investment in one's future. Therefore, a contribution could be expected from students and/ or from their parents. With the introduction of the Student Finance Act in 1986, students received a private allowance, which increased their independence. With the reorientation of the Act in 1991, more emphasis was put on the nature of student financial aid as target benefit. Independence of parents was thought less important. Loans were becoming more important. Also, since cuts in the basic grant were compensated in the supplementary grant, the latter more and more became the guarantee for accessibility.

Before 1986, the allowance for college expenses (*Rijksstudietoelage*), contained a performance element. Continuation of the allowance depended on whether or not university students showed sufficient study progress. In 1986 it was decided that the fact that students were enrolled in an institution (university or higher vocational education) was a sufficient guarantee for study performance. In general students could claim student financial aid for a period of six years, two years more than the formal study duration. In 1991, the period was shortened to five years, in order to induce students to graduate faster. However, it was felt that students still did not have enough incentives to study faster. Therefore, in 1993 the time-related grant was introduced. When introduced, students had to pass 25% of the program each year, two years later this was raised to 50%. Students, who started after 1 September 1997 are entitled to a achievement-related allowance. Also, the length of period is further reduced to the formal duration of the study.

All in all the following conclusions with respect to student financial aid can be drawn. By lowering the basic grant and compensating only children from parents with low incomes, the system is focussing more and more on lower incomes. Furthermore, whereas student financial aid was some sort of right in the early days, today it has increasingly become a compensation for performance.

- *At the level of the provider*

Until recently, higher vocational education was financed according to an open-end arrangement; starting 1990 it is financed according to closed-end financing. Universities have been financed according to closed-end financing throughout the whole period. It is important for institutions that they have some certainty about the price per achievement. In an open-end arrangement there is a direct relationship between means and demand. If the funding foundation rises, so will the contribution. With closed-end financing this does not have to be the case; whether or not the contribution rises in accordance with the funding foundation depends on performance by the other institutions. An open-end arrangement provides a predictable means perspective for the institutions. A favourable aspect is that institutions are able to make long-term plans. For the government an open-end arrangement is less favourable, because the government faces uncertainty concerning the volume of expenditure.

The effect of an open-end arrangement could be negative on the internal efficiency of institutions (Ariaans 1995, p. 57). Since it concerns non-profit institutions, an open-end arrangement contains no incentive for larger internal efficiency in order to enlarge profits. With closed-end financing, competition between institutions provides an incentive for efficient behaviour.

Inequities associated with financing arrangements

The fact that participation by certain social groups is underrepresented in higher education is of major concern to the government. However, the important selection mechanisms are not in the transition to higher education but before: namely in primary education and in the transition to secondary education (Oosterbeek 1995).

Cohort data by CBS reveal that the underrepresentation by children from parents with low income has decreased in the past period, but that underrepresentation still exists (OCW 1997h, p.18). This is mainly caused by underrepresentation in secondary education. As an illustration of the underrepresentation: of every hundred pupils that left primary education in 1983, about ten pupils did go to the university after a period of six to ten years (Bosma 1994, pp.6-8). However, large differences occur when the educational level of the parents is taken in account. Of every hundred pupils with parents with primary education as highest training, about three went to the university. Contrasting, of pupils with parents with a university degree, about 37 out of every hundred went to the university; about eleven times as much. Furthermore, children from lower educated parents more often go to the university via higher vocational education, thus following a detour.

Participation by ethnic minorities in higher education is about 4% in higher vocational education and 2% in university education (OCW 1997h, p.19). According to CBS, 8% of those younger than 25 years belongs to an ethnic minority (SZW 1997, p.157).[154] The underrepresentation can be explained by the relatively low participation of ethnic minorities in HAVO and VWO (Voorthuis & De Jong 1997, see OCW 1997h, p.19). Participation by ethnic minorities is however rising in secondary education. Between 1992 and 1996 participation by ethnic minorities has risen with 4% in HAVO and with 2.6% in VWO. It could be expected that this will result in growing participation in higher education.

In 1991, student financial aid hardly played a role in the decision by pupils in secondary education whether or not to participate in higher education(SCO/SEO 1996). Since 1991, the financial conditions have changed. However, the changing conditions in the area of student financial aid still do not appear to play a role.

There does however exist a relationship between social background of pupils and concern about study debts. Graduates of VWO, HAVO and MBO from lower social background expect a higher debt, and

[154] One must be very carefully though interpreting these figures, because different definitions of ethnic minorities exist at the same time.

find a lower debt acceptable than graduates from higher social background (SCO/SEO 1996). This suggests that pupils from lower background in the face of rising study debts will sooner decide not to participate in higher education.

It is thought necessary to stimulate in particular the participation of women and ethnic minorities in higher education (OCW 1997h, p.21). In order to stimulate the participation of ethnic minorities, an expert centre for ethnic minorities in higher education has been established.[155] The task of this expert centre is to support institutions for higher education in furthering the inflow and throughflow of ethnic students in higher education. The centre has a yearly budget of NLG 4 million to spend (OCW 1997h, p.25).

In 1997 the Act proportional representation was passed.[156] This Act is focussed on enlarging the number of women in higher functions in the educational sector. This will provide female students with a positive roll-model. In higher vocational education the expert centre Woman and Management[157], the organisation Women in higher technical education[158] and the national base Emancipation are active, among other things, in the provision of courses, information, the conduct of research and the creation net-works. In universities research is being conducted after the throughflow of women in higher functions. The results will provide universities with starting-points for policies aimed at women. Finally, the Higher Education Emancipation-price is awarded yearly.

Inefficiencies associated with financing arrangements

- At the level of the provider

Lump sum funding systems consists in general of two elements, namely quantities and prices (Ariaans 1995, p.37). The quantities are referred to as funding foundations, the prices as funding rates. An example of a funding foundation is the number of students at an institution or the number of graduates. An example of a funding rate is the price an institution receives for a law student, or for a part-time student. It is possible to wield a basic amount, i.e. an amount independent of the funding foundation.

Higher vocational education and university education are funded according to different models. The HBO-model consists of a number of parameters. The central part is the so-called educational demand model, in operation since 1987. The educational demand model depends on five variables: the number of students, the number of graduates, the number of drop outs and the time spent in the system by graduates and drop outs. The key element is the graduation rate.

The STABEK-model in university education consists of three components, an educational component, a research component and a so-called interweaveness component. The relevant variables in the educational component are students and diploma's; there is a basic component. In the higher vocational education model and in the university model a distinction is made between students with a high funding level and students with a low funding level.

Institutions for higher vocational education are financed in a linear way. This means that they face in theory strong incentives to improve their output, i.e. more graduates. They also face an incentive to attract as many students as possible. Both incentives could also have negative effects however. Firstly, institutions could lower the quality of their educational programs in order to realise more graduates. Also, since competition between institutions takes mainly place in the battle for the student, it means that institutions to a certain extent have to obey the wishes of students, in order to stay attractive enough. In that sense one could say that students practice voting-by-feet. Finally, competition between institutions for students could have negative effects on the system level, as will be elaborated below.

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[155] In Dutch: *Expertise Centrum voor allochtonen in het Hoger Onderwijs* (ECHO).

[156] In Dutch: *Wet Evenredige Vertegenwoordiging* (WEV).

[157] In Dutch: *Vrouw en Management*.

[158] In Dutch: *Vrouwen in Hoger Technisch Onderwijs* (VHTO).

In practice, because of the lack of transparency of the educational demand model, the number of students enrolled is being put central, in combination with the time spent by graduates and drop outs, while the graduation rate is actually the key element (OCW 1997h, p.84).

Linear financing also means that institutions face an incentive to create economies of scale. In order to recapture the fixed costs, institutions have to realise a minimum scale. This minimum scale can apply to the total number of students at an institution or to the number of students in different branches of education.

University education is not financed linear. Universities receive a basic amount and on top of that an amount that depends upon performance. They thus face less incentives to create economies of scale. In the HOBEK system, introduced in 1993, funding was largely based upon the number of students per year. The inherent problem of this funding mechanism was that universities had an incentive to get as many students as possible, because every extra student would mean more money. Furthermore, students were financed during a period of four years. The idea was that universities would face an incentive to make sure that students would graduate in four years. However, this also meant that universities faced an incentive to keep drop-outs as long as possible in the university instead of restricting the time they spend at the university. Also, the number of diploma's had only a small influence on the budget. As a consequence, the system only entailed a minor incentive to enhance graduation rates. Finally, the funding mechanism hardly entailed incentives to improve the quality of education.

The funding mechanisms described above lack incentives to improve the quality of education, in contrary they may even contain incentives to lower the quality. Thus monitoring of quality is very important. Complementary to internal quality management, which is entirely the responsibility of the institutions themselves, Dutch institutions also face external quality controls. Starting 1988, the quality of university education is systematically judged, supervised by the Association of Co-operating Dutch Universities (VSNU). In 1990 the institutions for higher vocational education started with a comparable system, the co-ordination of which is the responsibility of the HBO-council.

External quality control takes place in the form of an obligatory periodical judgement of the quality of educational programs by a review committee, consisting of independent experts in the educational field under investigation. Each review committee judges one kind of program, provided by different universities or by different institutions for higher vocational education. In order to do this, the review committee receives beforehand a self-evaluation from each institution that they visit. The committee stays a few days at each institution and interviews delegations of it's members on the basis of the self evaluations.

In order to guarantee that the system of external quality management brings about actual improvements, The Minister of Education, Culture and Science wants, according to the Higher Education and Research Plan 1998 (OCW 1997h, p.77-81), to reach new agreements on what institutions will do with the results of the review committee and particularly how quickly institutions will respond. The procedures involving the responses by the institutions as well as the subsequent actions (ultimately the Minster can decide to close the program) are to be made shorter and institutions will have to justify in their annual reports what they have done with the results of the review. Furthermore the Minister proposes that review committees can supplement their public reports with confidential management letters, in which concrete and direct advise can be given to the institutions. Also it is proposed that the composition of review committees be expanded with members from outside the field or outside the academic environment and that the role of students and employers may be expanded.

The last question in this section that needs to be answered is whether or not there are sufficient places available. Both universities and institutions for higher vocational education have central-entry and lottery systems. In principal, everyone that applies for a study and possesses the required preliminary training is admitted. Most branches of study have central-entry systems. However for those branches

of study where there exist capacity problems and/ or where labour market considerations are important, intake restrictions are applied.[159] In the event that the number of first-year entrants is restricted to a maximum, lots are drawn.

- *At the level of the learner*

As is already elaborated above, funding of the student depends on his or her study performance. Access to higher education does not depend on the student's performance. To attend a university or an institution of higher vocational education, a student must have obtained the required previous training as described in chapter 2, but it does not matter how well he or she has performed.

An exception to this occurs in those branches of study in which a lottery system exists. There, lots are weighted with the average marks on the final school examination. However, the actual drawing of the lots is completely at random. A recent bill opens the possibility that universities and institutions for higher vocational can select a restricted number of students themselves on the basis of personal qualifications of the candidate. The rest of the students will be drawn via the lottery system. An advisory committee has given advise about conditions, criteria and procedures. Apart from this, the committee has also given advise about the introduction and evaluation of decentralised admission (OCW 30-09-97). If this bill passes performance will become more important in branches of study with a maximum of first-year entrants.

Because students are expected to graduate quicker and because it has become more expensive to switch studies it was felt necessary to improve the information towards potential students. In order to do so, every year, starting three years ago, the 'guidance in higher education' (*Keuzegids Hoger Onderwijs*) appears. This guide is subsidised by the Ministry of Education, Culture and Science. Using this guide, future students can compare universities and institutions for higher education. The guide is not intended to give judgement per se, rather it is intended to help students what sort of questions to ask at information days.

The selection guide contains actual information by branch of study. It gives report marks on different aspects: the content of the study program, the quality of teachers, the organisation of the study program, the quality of provisions such as library and computers et cetera. The marking for the selection guide 1997/1998 is, among other things, based upon a survey among 12,000 students. About 40 students per branch of science are questioned. Furthermore, the conclusions of review committees **(***visitatiecommissies*) are used. That way, the opinion of both users (students) and experts is gathered. Of course, to a certain extent they pay attention to different topics: students probably pay more attention to the dedication of teachers, the study burden, time-tables et cetera. Experts probably put more emphasis on the content of the program, and the correspondence with the actual practice.

In order to make the differences in quality between various programs even more clear to students and in that way help them to reach well-considered decisions, the Minister of Education, Culture and Science proposes in the Higher Education and Research Plan 1998 to draw up ranking lists showing various aspects of each institution. These aspects are: objectives/attainment targets, study ease, correspondence with the labour market, internal quality management, quality of staff, graduation rates et cetera (OCW 1997h, p.77). The task of drawing up the ranking lists should, according to the Minister, be given to an indepen-dent organisation.

- *At the level of the system*

The funding system does encourage competition between different types of providers. Competition could improve the efficiency of institutions, thereby reducing total expenditure. However, more competition could also mean that institutions will spend too big a proportion of their budget on

[159] At this moment six branches of study in university education and 22 branches of study in higher vocational education have restricted intake.

campaign activities. Or it could mean that institutions try to attract students with less talent for higher education.

Policy changes under consideration

At this moment discussion is going on about the existing system of student financial aid. The most important aim of student financial aid must remain the guarantee of access to higher education for everyone with the required entrance qualifications. According to the Ministry of Education, Culture and Science, the future system of student financial aid must meet the following general conditions (OCW 1996c, section 2.8). The system should stimulate adequate progress during the course; it should take into account the students' independence from their parents; it should promote studying abroad; the system should be transparent, workable and accountable; it should limit financial risk; it should take different lengths of courses into account and finally it should offer an adequate distribution of financial responsibilities between the state and the citizens, also in relation to the profit which citizens may have from their education.

At the end of 1997, the Committee Hermans has proposed a new system of student financial aid (commissie Hermans 1997). According to this proposal parents are obliged to support their children until they have reached the age of 21. After the age of 21 they are expected to continue their support, but are not obliged to. Parents are expected to contribute at least ƒ6,500 per year. Students from parents with low incomes can continue to claim a supplementary grant. Students are offered a vast amount of student financial aid from the government (ƒ20.400 for a course with a studyload of 4 years), from which they have drawing-rights during a period of ten years. They receive this amount in parts, depending on their study-performance. A condition is that students must have entered the study program before the age of 25.

The loan system will have to be made more attractive. The Committee proposes to adopt the system of loan redemption as used in Australia. In the Australian system the government claims a certain percentage of earned income (above a certain threshold) until the loan is repaid. Although the administration of student financial aid will continue be carried out centrally, the Committee proposes that the student and the institution will make 'educational agreements'. These agreements concern for example the study pace and the grant students receive. A new Dutch cabinet will decide on what to do with the recommendations made by the committee.

Oosterbeek (1998, p.27-28) argues that a decentralisation of study grants to universities is at odds with the condition of transparency of the system. Furthermore, the main rationale for setting up a financial aid scheme is related to capital market failure and equity considerations. Both pooling of risks and dealing with equity can best be handled at the highest level of aggregation. A further comment is that testing of parental income for supplementary grants has adverse effects on parent's labour market and savings decisions. Moreover with many parents being divorced, the administrative burden of these tests may be substantial. Finally it is not to be expected that the positive external effects of higher education are reasonably high to give grants to university students apart from a subsidy of tuition fees.

In the area of funding of providers, policy changes are imminent. A key element in a new funding system will be that the funds are distributed to the universities according to both quality and achievement. The Design Higher Education and Research Plan 1996 presented a new system to overcome the problems of the HOBEK system presented above. The educational budget of universities was, in the presented system, based on a predetermined, long-term intake capacity (the so called *capaciteitsfinanciering*). The intention was to introduce this capacity system in 1998. In the meantime a temporary system, STABEK, would be in place. But on second thought, the conclusion was that the capacity system would not entail enough incentives for the universities to improve quality and performance (OCW, 1997h, p.88). As a result, for 1998 the temporary system is prolonged, and the aim is now to introduce a new funding system in 1999, in which there are incentives for universities to improve quality of education and research and performance, but at the same time prevent strong fluctuations in government contributions for each university (OCW, 1997h, p.87). In the Design Higher Education and Research Plan 1998 the main features of this new funding system are introduced. At least half of the

educational budget of universities will be dependent upon the number of diploma's awarded. At least a quarter of the budget will be a permanent sum, to ensure the universities sufficient stability in funding and the remainder will be based upon the number of first-year students (OCW 1997h, p.93).

The intention of this new model is that students at the earliest possible stage of their study career will end up in the 'right place'. Universities get paid for all their first year students, and during this year have the opportunity for selection and referral. It is the responsibility of individual universities that their students, get their diploma. The university only receives money for students that do graduate. In order to avoid that universities lower their standards in order to produce more diploma's, a more intensive evaluation of the educational programs is needed, combined with more severe consequences if a program fails the required level.

Also in higher vocational education, a debate is going on about the design of the right funding foundation. The intended date of introduction of a new funding system is January the first, 2000. An important requirement of the new system is more transparency (OCW 1997h, p.84), resulting in a better functioning of the incentives. Furthermore, the system should not stand in the way of the establishment of work-based learning programs (HBO-raad 1997, p.14). The HBO-council has presented an alternative funding system. In this system, funding is based upon four variables: the number of students that flow into an institution, the number of students that pass half of the program (84 credits), the number of students that pass three-quarters of the program (126 credits) and the number of students that graduate. A consequence of this funding system is that students who do not graduate at an institution, but have consumed an important part of their study at that institution, will be taken along in the funding. The question remains whether this is desirable or not, both from a financial and from an educational viewpoint (OCW 1997h, p.85). In any case, the funding of intermediate moments should not lead to a diminishing incentive for institutions for higher vocational education to make sure that students successfully round off their study. In addition the incentive should remain that those students that will not graduate are selected and referred to other educational tracks by the institutions in the earliest stage possible.

Pending a new system, in 1998 some adjustments to the existing funding system will be introduced. The funding rate for full-time, part-time and work-based learning programs will be equalised. Before, part-time education was funded at 80% of the funding level of full-time education. As a consequence of this equalisation, an important simplification of the funding of housing can be realised. Based on historical grounds, the funding of housing distinguished between full-time and part-time education.

Also, government contribution by OCW will be lowered in the years to come in connection with a step-level rise in tuition fees in 1996, 1997 and 1998. Thus the reduction in public funding is compensated with an increase of private funding. It is a net increase in private funding, since student financial aid has not been nor will be raised.

4.2.3 Adult education

4.2.3.1 Education for poorly qualified adults

The main sources of funding in adult education for poorly qualified adults are shown in figure 4.3. More information on the indicated amounts can be found in section 3.1.3. This section deals with the a description of the underlying funding mechanisms.

Financing of the provider

- Originating in the public sector

From 1 January 1997 the local authorities will be responsible for funding adult education programmes. By entering into (one year) agreements with ROC's (Regional Training Centres), they will determine the target groups and the cost of adult education. Before 1 January 1998 all institutions of adult and vocational education must be brought under the umbrella of an ROC. Local government will receive a

sum from the state as funding. The overall budget in 1997 was determined by the number of course hours (dcu's) in 1996, so as to assure an equal number of course hours for each municipality. This budget is allocated to local governments according to a general allocation scheme, with consideration being given to the number of adult inhabitants (20% of the budget), their educational level (60% of the budget) and their ethnic origins (20% of the budget). In a few municipalities special circumstances influencing the composition of the population are taken into account, like the presence of a centre for asylum or a prison (OCW 1996c, p.33).

Adult basic education is already being financed through local government since 1987, but from 1997 the local authorities also receive the budget for secondary general adult education and Dutch as a second language (BVE Procescoördinatie 1997, p.21). The budget for general adult secondary education (VAVO) is based on the historically determined regional number of part-time equivalencies (dte's). These regional budgets are allocated to the local government, with consideration being given to the number of adult inhabitants (33%), their educational level (32%) and their ethnic origins (35%). These percentages are derived from the proportions participating in adult general upper secondary education, general lower secondary education and Dutch as a second language (OCW 1996c, p.31).

Furthermore municipalities are free in deciding how to divide the budget between these different forms of adult education. Changes in allocation however take place under the condition that no extra costs in the form of half-pay (special unemployment benefits for unemployed civil servants) occur for the central government (OCW 1995a). In addition most local authorities also contribute to adult basic education out of their own budget. As can be seen in table 4.# this constitutes around 12% of total expenditure on adult basic education.

Local governments have to use their budget for adult education to buy programmes from the public ROC's. It is expected that the majority of contracts will be between local government and public educational institutions in the same region. The local authorities are, however, free to enter into agreements with institutions outside their region, for example if a specific specialisation is unavailable (OCW 1995a & 1996a, p.41).

The ROC's are responsible for providing those adult education programmes. The local authorities sign a contract with such educational institutions which sets out the programmes to be implemented, the number of participants, the specific target groups, the period of time and the amount of money to be made available (OCW 1996a, p.22-23).

Most contracts between local government and ROC's are signed only for one year, as a consequence of the fact that the local budgets for adult education are adapted every year. This results in uncertainty for the educational institutions, who prefer contracts for a longer period of time. The central government also encourages municipalities to sign contracts with a longer duration; even though not all details can be specified. It is to be seen how this will work out in practice. On the other hand the uncertainty for educational institutions is reduced because local authorities are responsible for half-pay of lay-offs in adult education that result from a change of contract.

Local authorities are responsible for controlling the ROC's in fulfilling the requirements of the contracts. Local government has to account for the spending of their adult education budget to the central government. If part of the grant is not fully spent on adult education, this amount flows back to the government. When part of the budget is not spent as a result of an ROC not fulfilling its contract, the local authority may spend this amount in the following year (Uitleg 1997).

Part-time secondary vocational education is going to be part of the funding-regime of full-time secondary vocational education, and is subsidised directly by the Ministry (OCW 1996c, p.34).

- *Originating in the private sector*

Private funding of adult education takes the form of tuition fees and contract-activities. Contract-activities are referred to in section 4.2.3.3 on work-related training. Tuition fees are relatively small, so as to assure accessibility of adult education for poorly qualified adults.

A feature of the WEB is that institutions are allowed to keep the VAVO-tuition fees they receive. In the past the fees had to be passed to the central government, now they are deducted from the subsidy in advance (OCW 1996c, p.11). This change is merely administrative, because the levels of VAVO-tuition fees are still centrally decided. Nevertheless this change probably reduces administrative costs. Tuition fees in adult basic education are locally decided, which causes differences between the levels of tuition fees in different institutions.

Financing of the learner

Apart from an allowance for college expenses for low income participants, individual participants in adult education are not directly subsidised. Their own private contributions are next to a small tuition fee, the opportunity costs of working, the costs of books, travelling and other related expenses. An extensive overview with estimated amounts is shown in table 2.8b in chapter 2.

Links and complementarities between public and private funding

For low income participants a link exists between their tuition fees and the public allowance they receive. The amount of the allowance for college-expenses depends on the number of course-hours (of 45 minutes) a week. When 6 to 12 course-hours a week are followed the fees of 8 hours are returned, whereas the fees of 12 course-hours are returned with 12 weekly course-hours or more. The allowance however only applies to adult education courses in part-time secondary general education and Dutch as a second language (IBG 1997e). One subject in part-time secondary general education is equal to 4 course-hours, therefore in practice most people will follow a multiple of 4 course-hours.

Relative shares of financial contributions

Table 4.5 shows estimates for 1995 of the relative importance of different sources of finance for institutions providing adult basic education and adult general secondary education. It stands out that the role of central government is larger with respect to adult general secondary education. The relatively low contribution of others in general secondary education may possibly be due to the fact that tuition fees in general secondary education still had to be refunded to the government and therefore were not counted as a contribution.
Public Employment Services also buy courses at ROC's. As shown in table 4.5 this accounts for only a few percent of the budget of adult basic education and part-time secondary general education.

Table 4.5. Funding of adult education by source (percentage shares 1995)

	Adult basic education	Adult general secondary education
Central government (structural)	63%	85%
Central government (waiting-lists)	8%	6%
Local government	12%	4%
Public Employment Service	6%	3%
Other	11%	2%
Source: Huisman 1996, p.26,42.		

Motivation of financing arrangements

In the past adult education was planned by local authorities but institutions were paid by the central government according to the number of course-hours (dcu's) and part-time equivalencies (dte's) they provided. Part-time equivalencies are fictive participants following 10 course-hours a week. The

corresponding subsidy per part-time equivalence depends on the type of course followed, as discussed in section 3.1.3. At the moment dte's and dcu's are only used as a unit for calculating national and regional budgets. These budgets are divided over municipalities by objective criteria, and the local authorities then decide on which forms of adult education their budget is spent, as described above. This new funding arrangement is supposed to make adult education more responsive to local needs and local control.

This new way of financing is part of the new Adult and Vocational Education Act (WEB), which is to be introduced step by step between 1996 and 2000. This act is intended to harmonise the various forms of vocational and adult education in the Netherlands (OCW 1996a, p.13). Because adult education is in the middle of the transition period the results of the WEB are not yet clear.

Efficiency considerations have been the main driving force behind the creation of regional training centres. Goal was to create a relatively small number (around 50) of large institutions with extensive management responsibilities. The central government should only be left with supervisory control and decisions about the main policy issues. The resulting economies of scale and competition between ROC's are supposed to reduce costs.

Inequities associated with financing arrangements

In the process of creating ROC's the interests of participants may not have been the overriding issue. The opportunities of choice for participants may diminish as a consequence of a lower number of schools in their region. The ROC-process has been conducted, assuming that the system of actual provision will continue to exist. However, it can also be expected that ROC's will concentrate their activities to cut costs. This will reduce the accessibility for adults who are not living near an outlet of a regional training centre. Much will also depend on the willingness of municipalities to offer courses apart from Dutch as a second language and adult basic education. Part-time secondary education may diminish sharply or even disappear (SCP 1995, p.,135-136).

Inefficiencies associated with financing arrangements

Some kind of competition between ROC's is to expected to arise only in densely populated areas where different ROC's are located near each other. In other areas however competition will remain very limited, as long as municipalities are not allowed to buy courses from private providers.

Furthermore, differences in terms of employment may put an upward pressure on the costs of adult education. So far teachers in adult basic education were paid lower salaries, than those in part-time secondary general education. Teachers in adult basic education may demand an increase in their wages up to the level of their new colleagues. This may cause an upswing in the costs of adult basic education (SCP 1995, p.164).

4.2.3.2 Funding arrangements for the unemployed

The main financing flows of training for the unemployed are shown in figure 4.4. The position of training-funds is discussed in section 4.3 on the additional sources of finance. This section concentrates on the position and role of the Public Employment Service (PES). The PES is a rather complex institution, because it is not only a provider of training (the centres for vocational training belong to the PES but will be outsourced in the near future). The PES also 'buys' training from other training institutes (public or private), while its services (among which not only training, but also counselling and running work experience projects) are itself being bought by municipalities and "implementation offices" (called uvi's), the former industrial insurance boards.
The first two roles (training provider and training buyer) will be discussed first, whereas the broader institutional structure will be discussed in the second subsection which deals with the recent changes in the position of the PES.

Financing of the provider

The PES can subsidise training in three ways. First, it can subsidise training institutes that train unemployed persons. Second, it can refund the training costs for individual trainees to the trainees or the training institutes involved. Third, it can pay companies for the application of the training. All these variants exist in practice. Most of the subsidies are through either the second or the third channel.

From an economic point of view subsidising specific training institutes for the unemployed makes sense only if public schools and the private sector are not able or willing to offer the training, even if the PES is paying for a number of trainees, of if one school is in a monopoly position. If an adequate training supply exists, one should probably use it and not create new training institutes. In that case the PES could pay for the training. If companies are willing to train unemployed people, this might be a favourable choice, because it will often imply that the trainee will be hired by the company offering the training. Giving the subsidy to the trainee will usually require guidance by the employment service. Most trainees will not have the necessary knowledge and information to decide for themselves what type of training is most appropriate, and which training institutes best provide the training of their choice. However, recently some experiments are carried out with "personal reintegration budgets" which give more freedom to the unemployed person and decrease the efforts necessary to arrange training programmes.

Companies are often reluctant in providing training for the unemployed, whereas it is only profitable for them, when the trainee can fill an existing or future vacancy. However, due to stigmatisation of unemployed, arrangements between firms and the Public Employment Service are successful predominantly when a third party, often the industry's training fund (*O&O-fonds*) is involved which then intermediates between PES and the firm. Individual firms do not make substantial direct contributions in money terms to training of unemployed, because employing an unemployed person (practical component of training) is seen as their part in the training. Recently, new initiatives have been implemented in order to support this type of training through a special subsidy, the Contribution-scheme Sector-specific Training for Job-seekers (*Bijdrage regeling Bedrijfstakgewijze Scholing Werkzoekenden - BBSW*). The strength of this scheme lies in the direct relationship between the training and the demands of the firms involved. The working of the BBSW-scheme is already explained in more detail in section 2.0. Moreover, this measure is also an element of the case study of the training fund of the metalworking industry (section 5.3).

Financing of the learner

Although both the PES (improvement of labour supply) and the individual involved profit from training, the contributions of the latter are only limited, in order not to discourage participation in training. For a vast majority of training the private contribution to the training fee is NLG 125 at a maximum, eventually with an additional NLG 75 contribution to the costs of books (Lisv, 1997). The trainees can claim expenses above that threshold from the PES, including travelling costs (which are, due to the small distances to training centres, often neglectible).

As shown in figure 4.4 the unemployed sometimes receive a personal training reintegration budget apart from their unemployment benefit. The personal budget has to be spent on training, or some other form of guidance towards the labour market. This approach is meant to encourage the unemployed to make an optimal training choice. It also serves for those unemployed who, by their initial education, tend to work in sectors of which the PES has little knowledge.

Motivation of financing arrangements

Until recently the PES received a lump-sum budget from the central government. From this budget it financed, among their own activities such as guidance and counselling, the applications of training instruments. With respect to schemes as the General Training Scheme this was often on an individual basis (paying the tuition fee to the training institute involved). Other schemes, however, were merely

financed through a budget in order to maintain the whole institute or training centre. The most clear examples of this approach were the centres for vocational training, which were even part of the PES.

This funding system was not expected to create strong incentives towards efficiency improvements. Therefore some changes in the financing arrangement occurred. The most important change is that the PES buys training rather than capacity, which in fact comes down to a system of output financing. Competition is stimulated by inviting several training institutes, among which regular schools such as the ROC's, and private training providers, to submit proposals, of which the best is chosen. The centres for vocational training have a special position: in order to get them 'accustomed to the market' the PES has a predetermined purchase obligation at the centres for the period 1997-2000. After 2000 the PES will be free to buy that training elsewhere, when offers are perceived better. The degree to which real competition will occur will also be dependent on the stability of government funds in this direction. If there is uncertainty, the institutes will be reluctant to invest in a long-term structure for this type of training. Therefore the supply of training for the unemployed will in the purchasing model also depend on the extent to which training of the unemployed is in structure and organisation similar to the training of employees, or initial training within the ROC's. For the latter institutes, contract activities such as training for the unemployed are stimulated by the government. It appears, however, that they often offer their activities at below-profitable prices, thereby both injuring themselves, and distorting the market for training (Vrancken and De Kemp, 1996).

Inequities and inefficiencies associated with financing arrangements

As explained in the former subsection, measures to spend the training budget more efficiently have been taken. However, costs related to training for the unemployed amount to 25 - 30 percent of the total PES budget (Arbeidsvoorziening, 1997). In this subsection the training budget is viewed in relation to that total budget and in the light of the aims of the PES.

As explained in section 3.1.4.3, the current institutional arrangements provide some contradictory incentives. When firms fire employees, the latter receive unemployment benefits from the uvi's. These in turn receive their contributions from a levy on the wages of all employees (obligatory employee insurance). Because the expenditures on unemployment benefits determine the amount of the levy, a reduction in unemployment ultimately results in a lower levy. However, because the levies are shared with other employers the effect on the levy of an individual lay-off is very small. Therefore a firm has no incentive to prevent lay-offs.

For those unemployed who are no longer eligible for an unemployment benefit, and who therefore receive social assistance, roughly the same mechanism applies. The central government pays about 90 percent of the welfare, whereas municipalities contribute the remaining 10 percent out of the municipalities fund. Incentives for individual municipalities to reduce the stock of recipients are limited. Although the municipalities, which distribute the welfare, have detailed knowledge of the recipients personal situation, and would profit (although limitedly) from reemployment, their contact with the PES often involves no more than that one has to be registered at the PES in order to be eligible for social assistance.

The unemployed, and especially the long-term unemployed among them, are a relatively weak group in the labour market. Employers prefer other types of recruits. Therefore little efforts have been made in order to encourage co-financing of training by employers. In case of shortages in supply of labour, employers appear to be willing to participate in training of the unemployed. In branches where labour demand falls short, such arrangements are hard to realise.

Therefore in training of the unemployed one has to rely on the traditional financiers of unemployment benefits and welfare. In practice, however, industrial insurance boards had limited incentives in preventing unemployment, because the funds came from centralised funds, meaning that the number of unemployed in a sector had little bearing on the level of premiums. In recent years, however, this has changed. Moreover they have little incentives in caring for the long term unemployed, because the

unemployment benefits are only given for a certain period after losing the job. After that period the municipalities are responsible. On the other hand, individual municipalities receive money for social services from a central fund with limited incentives for reducing the number. Finally, the Public Employment Service felt responsible for the long term unemployed, but had until some years ago not always a fully developed cost-awareness, because funding was secured and stable, stemming from the Central government.

At the level of the individual unemployed person few incentive mechanisms are used. Access and funding are not dependent on the trainee's performance. Unemployment benefits can be temporarily cut back by the uvi's up to 30 per cent of the benefit in case the unemployed refuses to participate in training, whereas the social services can cut back social benefits by 10 per cent, temporarily. These measures are in practice not often used. They carry the danger that participants just participate to prevent cuttings in benefits. Because in that case the participants are less motivated, the results of training are expected to be poor.

On their path to reemployment the unemployed have to rely heavily on the PES. The limited transparency of the system of training provisions makes searching by the unemployed individual for a training that fits his specific needs hard. As in some sectors the sectoral training funds provide each worker with a training catalogue, a more active strategy towards training may stimulate the use of training as a path to reemployment. However, one must bear in mind that the major trend is one towards more intensive intermediation, which may lead to less efforts directed towards training.

The quality of training of the unemployed is not monitored systematically. Unlike secondary and higher education no independent organisations assess efficiency of the many training programmes for unemployed. Partly this is due to the specific situation unemployed are in. Large differences between unemployed exist with respect to ability, personal circumstances, and educational background. Therefore uniformity in training programmes is subordinate to flexibility of inflow and outflow. Actually, what is measured in some evaluation studies is effectiveness, thereby addressing the question whether one finds a job (due to the training). Whether the outcomes reveal a strategy in which the goal of training is merely to fit a job than to increase one's educational level in general, is not clear. However, the decreasing trend in course length during recent years points towards a choice in the first direction.

Policy changes under consideration

Until 1991 the three organisations involved, the Public Employment Service, the Social Services of the municipalities, and the implementation offices (uvi's), operated completely independent from each other. Within the framework of the 1991 Employment Service Act (*Arbeidsvoorzieningswet*) tripartisation and decentralisation strengthening the co-operation between PES, municipalities, and uvi's has been a major target. The foundation of that new structure was basically an answer tot the failure of the industrial insurance boards to reactivate the unemployed and partly disabled (Knol, 1997). Under the 1991 act, so-called bipartite intermediation (both on request of the unemployed and potential employers) has been demonopolised. It used to be a monopoly of the Public Employment Service. Unilateral intermediation, for which no legal provisions were in existence until 1991, now requires a licence.

The effects of this Employment Service Act have been assessed as limited, because the funding systems did not create enough incentives for strong co-operation (KPMG-KMC 1995). The relationship between the regional budgets, which were related to variables such as the regional unemployment rate, and the performance of the regional offices is very weak. Little incentives for regional PES offices to improve their results were thus provided.

In recent years, strengthening of the co-operation between employers (via the uvi's), PES, and government (social services of the municipalities) has become an important aim. By broadening the responsibilities for reemployment and income support a more efficient allocation of resources, as well as greater flexibility in adjustment to local labour market needs, and more appropriate service towards

clients (both employers and unemployed) were to be realised (Esser et al, 1997a). These efforts, headed under the 'Co-operation Work and Income' umbrella, resulted in a number of experimental Centres for Work and Income (CWIs), which are now continued in a post-experimental phase. The local Employment Service offices are being brought under one heading with the implementation offices and the governments' local social services. These CWIs are public authorities which function as integrated front-offices. The goal is to have founded 400 CWIs by the year 2000 (Esser et al, 1997b). Client administration systems are being connected. This connection is to result in improved administrative efficiency (a registering procedure once, instead of two or three separate procedures) and improved service towards the client.

This co-operation is a forerunner of a system, in which the two partners who are in a financial way responsible for reintegration of the unemployed, namely the uvi's for those who receive unemployment benefits, and the social services for those who receive welfare, determine the reintegration policy. This determination includes freedom to choose freely a provider of placement services. Although since 1991 the PES has no longer a formal monopoly on placement services, in fact the situation hardly changed. In the near future, however, the uvi's and municipalities will no longer be obliged to use the PES for their placement and training activities, but may as well hire a temporary work agency, for example. Incentives are thus created to improve effectiveness and efficiency, not only at the level of provision of training, but also with regard to the functioning of the employment service in general. By 1997, 25 municipalities have been funded already by the central government with money in order to buy placement services for special target groups at the PES, thereby slightly introducing the purchasing-model. By 1998, this arrangement has been extended with 61 municipalities (Staatscourant, 1998).

This structural change, however, means that the PES is both a partner in the tripartite SWI structure, and a 'client' of the uvi's and municipalities. In short, it plays a double role. It is not clear yet, to which extent frictions between the two functions of the PES will occur.

Equity considerations under the new structure

Until recently, decisions on the individual reemployment approaches were the responsibility of the PES. In the new CWI-structure this will change. Whereas training for the unemployed is relatively expensive, and merely seen as an investment, for which neither the uvi's nor the social services are directly responsible, a shift towards the more cheaper direct and intensive intermediation may result from this reshuffling of responsibilities (Esser et al., 1997a). It must be noted, then, that training is, among all instruments, a relatively expensive one. Whenever reemployment is thought to be possible without training, direct intermediation seems to be more attractive.

Additional budgets (for 1998 NLG 105.5 million, see Staatscourant 1998b) are available for labour supply reinforcement through buying training at the PES for those who are expected to find a new job within 12-36 months after intake. Strategies directed at improving the skill-level of the unemployed mainly have to rely on these budgets. Further funds can be attracted for special target groups such as ethnic minorities, female reentrants and long-term unemployed. However, labour supply reinforcement is a secondary goal. Volume reduction remains the prime goal, to which most efforts are directed (Esser et al., 1997a). Further, more and more unemployment benefit premiums have been made dependent on unemployment levels in a sector. Especially when the (financial) interest in reducing the number of unemployed increases, further integration of the activities of the different institutes is a logical step.

However, more responsibility and co-ordination in the policy towards curing (long term) unemployment does not automatically lead to more training activities and more effective training activities. Firstly as argued above, training is relatively expensive compared to other instruments. The increased cost awareness can lead to preferences towards the other instruments. However, to what extent these instruments achieve the same results can be doubted. This is especially the case for the longer term. Training will enhance chances on the labour market in the longer term than other instruments like mediation.

Another important issue in this respect is the selection process into training. There is a danger for a tendency towards selecting the less difficult-to-place groups. If the policy is towards a pure reduction in numbers of unemployed, then there can be a tendency towards selecting the more easy-to-place groups. Firstly because training is probably less intensive and therefore cheaper for these groups and secondly because these groups are expected to be placed in a job afterwards more easy.

An important step in the co-ordinated intermediation process is the administrative intake, which determines in which of the four 'phases' on the path to reemployment a client is. This classification is made according to the client's qualifications in terms of education and work experience, personal characteristics such as motivation and presentation skills, and barriers to work such as physical inability, and medical records. Last but not least, the situation in the local labour market plays a determining role. Whereas many of the personal characteristics are hard to measure, the CWI consultant strongly relies on the perception of these qualities during the administrative intake.

Clients in phase 1 are expected to find a job by themselves easily, without intermediation of the CWI. Clients in phase 4, on the other hand, are not expected to find a job within 3 years. The CWI core group is constituted by those in phase 2 and 3, who are to find a job between 6 and 36 months, with intensive intermediation and training provided by the CWI. Which approach to reemployment would be most appropriate is determined in the 'qualifying intake', but the uvi's and social services are to agree on the approach before it can be implemented and financed.

An administrative classification like the one described here is compatible with equity considerations when the placement of a client belonging to phase 3 or especially 4 is rewarded better than the placement of a client belonging to phase 1. This, in practice, does not happen, because such a goal does not directly follow from a cost-minimalisation strategy, which tend to be applied by the uvi's, and to a lesser extent by the social services.

However, as already mentioned in chapter 3, research shows that the effectiveness of training in terms of increasing chances of finding a job is highest among the most difficult groups. The more easy to place groups have already a quite high chance of finding a job and training improves this chance to only a very limited extent. So, "good value for money" means selectivity towards the most difficult groups and consequently often not very cheap training. To what extent the new policy in categorising unemployed in the four categories has consequences for selection into training will have to be researched in more detail in the future.

4.2.3.3 Work-related training

Figure 4.5 gives an overview of the financing flows of the employee training in the private sector. An extensive description of all public and private funding arrangements can be found in section 3.1.3, which also includes employee training in the public sector.

Financing of the provider

- Originating in the public sector

Although employee training is largely paid for by employers, training institutes providing employee training also benefit from some public arrangements. Public educational institutions receive national subsidies for part-time regular education and all training institutions benefit from the VAT-exemption of vocational education and training. Figure 4.5 however shows that these financing flows are relatively small. The amount associated with the VAT-exemption is unknown, but can be estimated at 17.5% of the fees spent on external courses. However, these are not to be mistaken for the amount of training fees shown in figure 4.5. This amount overstates the fees paid to institutions because it also includes other direct costs associated with training. European subsidies can also be regarded as public subsidies to providers, although they often pass through training-funds or groups of enterprises.

Furthermore enterprises, which are direct and indirect providers of training, can deduct their training costs (like other costs of production) from the profits before corporate taxes. Due to a recent arrangement they can even deduct their training costs twice, under certain conditions.

- *Originating in the private sector*

Employers are the most important source for the financing of employee training. They pay most of the fees of training institutes for their employees. As mentioned above the amount of training fees indicated in figure 4.5 overstates the real amount of fees paid. Training-courses sometimes are paid for by employees themselves. Although the amount of fees they pay is unknown, it is assumed to be considerably lower than the fees paid by employers.

Financing of the learner

- *Originating in the public sector*

Individual learners can, within certain limits, deduct college-expenses as well as expenses to keep professional knowledge up to date from their personal income tax. Furthermore, certain advantages for employees related to employer sponsored training are free of taxation. Recently a new arrangement for the financing of career interruption has been introduced, which gives income support to employee who take a leave, for instance to follow training.

Next to these general public arrangements the government of course finances the training of employees in the public sector. This applies to both the direct expenditure on training as well as the indirect costs related to foregone production. For the sake of clarity public sector employees are left out in figure 4.5.

- *Originating in the private sector*

When employees are on training during work-hours their wage is nearly always continued. The associated foregone production represent considerable indirect costs of training for employers. As noted in chapter 3 the expenditure of firms on internal and external courses was estimated at NLG 3.5 billion. Of this amount around NLG 1.5 billion was related to foregone earnings of the learners (CBS 1995a, p.59,64).

Links and complementarities between public and private funding

There is a link between the amount of money spent on training by firms and individuals and the corresponding tax deductions. As discussed in chapter 3 all kinds of employee training benefit directly or indirectly from public support. Furthermore training paid by firms may even function as a ‘pay in kind’, which may especially be interesting for (high income) employees with a high marginal tax rate. Next to the normal deduction of all costs firms can benefit from the aforementioned extra deduction arrangement for their training expenses. On the other hand individual employees can also deduct private college expenses from their individual income tax. Whether large differences exist between the net costs of training when paid by the firm and the net costs when paid by an individual employee may differ from case to case.

As a consequence of the WEB further competition between ROC’s and private institutions is to be expected, especially on the market for employee training. Regular educational institutions are allowed to earn up to 49% of their budget from commercial activities. Regional training centres are estimated to receive NLG 150-160 million from contract-activities, which is around 5% of their budget. This share has been quite stable in recent years and is not expected to grow much higher in the future. Only 14% of these contract-activities however, comes from private enterprises. In 1995 half of all contract-activities was bought by the public employment service, whereas 19% arose from contracts with local authorities and ESF-projects, other non-profit organisations were responsible for the remaining 3% (bve informatie 1996, p.30-31).

Relative shares of financial contributions

Figure 4.5 gives some indication of the relative shares of contribution to training of employees in the private sector. Financial flows however strongly depend on the type of industry, firmsize and worker characteristics. Chapter 3 and the rest of this section provide more information on the conditions of the different public arrangements. The role of training-funds is discussed in section 4.3 and 5.3.

Another important issue is the division of private contributions between employers and employees. According to the human capital theory a distinction should be made between general and specific training (Becker 1962, p.12). General training is useful in many firms in addition to the firm providing it, whereas completely specific training is only of use in the training firm. According to the theory an employer will not be prepared to pay for general training, because he is not certain that the trainee will stay in the firm. Other firms might poach the worker away from the training firm by offering him a higher wage. Therefore a worker has to pay for his own general training, and will also reap the benefits.

With complete specific training an employee can only cash the training in the training firm. Nevertheless the employer will not be prepared to pay all costs, because he cannot ensure himself of all the benefits. There is always the risk of the employee leaving before the firm has earned back the investment. On the other hand, the employee will not be prepared to pay the full costs either, because he risks being fired, having paid for a course without use outside the firm.

To minimise the likelihood of sub-optimal investment in specific training, the costs will be shared. The employee invests in specific training by accepting a lower wage (than his alternative wage in another firm without training). After the training, however, he will receive a higher wage than elsewhere. The employer invests in specific training by paying the trainee a higher wage than his marginal product during training. He earns his return on the investment by paying a wage below marginal productivity afterwards.

Leuven & Oosterbeek (1997, p.6-8) find that 74% of courses initiated by the worker receive financial assistance of the firm. Furthermore, courses provided outside the firm are very often financially supported by the firm as well. Although courses initiated by workers and provided outside the firm can in principle be firm-specific, this is not very likely. These results therefore strongly indicate that firms financially support general training, in contrast with Becker's theory mentioned above. Recent theoretical papers like Katz & Ziderman (1990) and Stevens (1994) try to explain this phenomenon.

Firms more often (91%) financially support training initiated by the firm, which is more likely to be specific training. Workers contribute to 23% of the courses initiated by themselves, and to only 4% of firm initiated courses. However, it is not certain whether workers always take implicit individual contributions in the form of a lower wage rate into account. Moreover, these percentages only relate to sources of finance indicated by employees. No information is collected on the amount of financial support.

Motivation of financing arrangements

Except for the low educated and the unemployed government intervention in the field of adult education and training has been rather small. Training of the employed has always been and still is regarded as a responsibility of employers and employees. Employees and employers together have organised arrangements to stimulate training, like the harmonising of training costs by means of an industrial levy system, which is discussed in section 4.3.

Nevertheless, government has recently increased the measures to stimulate training, as discussed in section 3.1.3. Public intervention in the field of employee training however remains restricted to relative small subsidies and tax facilities for users and providers. It has to be seen whether the recent measures can

boost the investment in the training of employees, especially of targeted groups, like older workers and employees of small firms.

Inequities and inefficiencies associated with financing arrangements

Because of the uncertainty of reaping the full return on investment in training, employers might only invest in training with a high expected return. This may lead to underinvestment in training. As noted in section 3.2 empirical evidence indeed suggests that returns to training are high. This may create a role for public intervention. However, the potential benefit of repairing a market failure should be weighed against the costs and also against possible failures associated with the government intervention. In addition negative side-effects should be taken into account. This is especially important if one realises that in practice it is often quite difficult to abandon an established program. Some programs are set out to be temporarily, but once the market failure disappears the program may still continue and have negative side-effects (Oosterbeek 1997, p.2). For instance as suggested in section 2.6 the underinvestment in training of older workers may disappear due to demographic changes in the years to come. However, the recently introduced tax facility for firms training older workers may then continue to exist.

Individual tax deductions largely have the same impact as individual subsidies, however tax deductions tend to favour higher incomes (and therefore higher educated citizens) as a result of the progressive income tax. Therefore the deduction of college-expenses from personal income tax and the deduction of expenses to keep professional knowledge up to date will mainly stimulate training of already higher educated. Furthermore, higher incomes benefit more from tax advantages related to employer sponsored training, as a consequence of their higher marginal tax rate.

On the other hand the allowance for college-expenses of part-time students is directed at lower incomes and therefore will reach mostly lower educated, although also some courses in higher education (e.g. teacher training) are eligible. Who benefits from government subsidies for part-time regular education, of course depends on the educational level of the course. The same applies to the VAT-exemption of vocational education and training courses. The European subsidies are targeted at disadvantaged groups like workers in risk of employment, who are mostly low educated.

All employees receiving employer sponsored training, benefit from the deduction of training costs from firm profits before corporate taxes. The recently introduced extra deduction favours older workers and employees of small firms. This extra deduction is welcomed from the side of employers, although they criticise the fact that it is limited to firms who pay corporate taxes. According to the employer-organisation non-profit establishments should also be able to benefit from this arrangement (VNO-NCW 1997). The government has recently stated that it should be examined whether this arrangement can be extended to the non-profit sector (OCW 1998, p.5).

A further comment on this scheme was that it would enlarge the skills-difference between unemployed and employed. Groot & Maassen van den Brink (1997b) argue therefore that this scheme should also give an extra deduction to firms who take on and train unemployed. Furthermore, the low participation of older workers in training (see section 2.6) might be a temporary problem in the sense that demographic changes increase the need for a higher participation of older workers. Recently in the national programme of action 'lifelong learning' it has been proposed to extend the tax facility to non-profit organisations and furthermore to favour the training of low educated employees (OCW 1998, p.5-6).

In principle all employees can also benefit from the new arrangement for the financing of career interruption. It is not clear which groups will make use of this arrangement. but the amount of the allowance cannot compensate for foregone earnings unless the employer continues to pay part of the wage. For a lot of employees therefore financial barriers to take a training leave will remain. Furthermore employees do not have a legal right to take a leave (as is the case in Sweden), so they can be thwarted by their employer.

4.3 Additional sources of finance

One possible policy to stimulate investment in training by firms is the use of a levy system. As a consequence of collective bargaining agreements on training at an industry level, in around 60 sectors of economic activity in the Netherlands levy systems are set up, These levies are allocated to sectoral training-funds (known as 'O&O-fondsen'), which subsidise the training of employees. In section 5.3 an extensive description is given of a sectoral training-fund in the metal-industry.

The basic idea behind the sectoral levy system is the harmonising of training costs between the different employers in a sector. By the levy, a compulsory payment to the training fund, all firms in a sector contribute to the training of employees. In this way the risk that trained workers are poached away by other firms who spend no money on training, can be eased.

Most sectoral training-funds have been founded in the eighties, and are financed by an impost on the wages (percentage of the wage-bill) of around 0.5%. These compulsory payments are so called 'employer contributions', but in some funds a small part of the levy is paid for by the employees. In practice collective bargaining agreements are often reached by exchanging training-facilities against lower wage increases. In that way the employee indirectly contributes to training-costs.

In their early years most of the funds have created a reserve capital, mainly because expenditures were low while the system of subsidising training still had to be set up. In most training-funds the reserve capital is declining lately. Nevertheless a lot of training funds have a reserve capital which is larger than their yearly budget.

The budget of the training funds, estimated at more than NLG 600 million a year, is allocated to training of employees and apprentices, but also to employment projects, childcare facilities, research, labour conditions and other things. Sometimes attention is paid to special groups (like lower educated, migrants, elderly and women) by means of employment projects or higher training-subsidies.

The training-funds spend a considerable amount on apprenticeship-training, which is estimated at more than NLG 250 million. Employee training also receives a large share of the training-funds, estimated at around NLG 200 million a year (Waterreus 1998, p.65). The amount spent on training of the unemployed is only some ten millions of guilders. In addition the training-funds make use of national and European subsidies for employment projects.

Almost half of the training-funds use so called 'trainingdays' for the training of employees. Mostly these trainingdays are collective in the sense that the employer decides who gets training, but in some cases workers have an individual right on 'trainingdays'.

All kinds of courses are subsidised by the training-funds. Many funds have a catalogue with all the courses that can be followed. However, tailor-made training is often also possible. The level of the training varies from lower secondary to tertiary training. The training funds almost always (partly) subsidise the direct costs of courses, half of the time they pay back the indirect costs of lost productivity and less than half of the time travel-expenses are compensated. Marginal costs of training are substantially lowered by these subsidies, which promotes investment in training. However, as far as training-funds do not fully cover all of the training costs, employers still have an incentive to look at cost effectiveness of courses.

The number of courses per 100 employees per year differs from 5 to 70, but is still increasing. Slight declines are only observed for training-funds which already exhibit a high training intensity. The participation of employees of small firms however, stays behind in relation to that of workers of large firms, in spite of attempts so far to reach small establishments, by means of for example training-consultants. As far as small firms make more use of informal training, which cannot be subsidised, a solution is not within reach.

Furthermore because of the sectoral link of the training-funds, they are not interested in the 'employability' of workers in other sectors. Workers who are mobile between sectors have to rely on the willingness of the receiving sector to be trained. With increased mobility between sectors the training-funds fall short. (Waterreus 1997, p.43-45).

Figure 4.1: Financing flows secondary education, in NLG millions (1994)

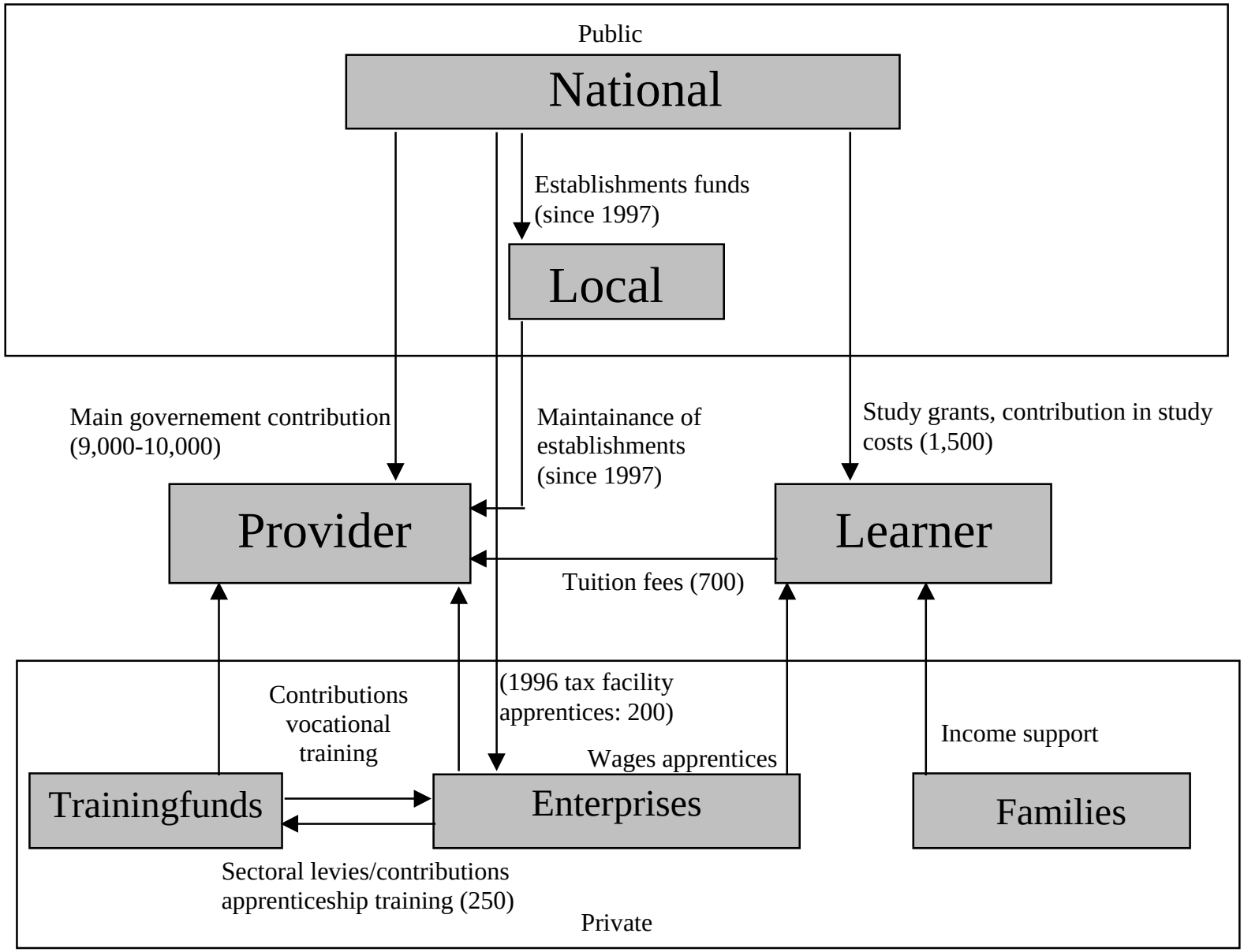


Figure 4.2: Financing flows higher education, in NLG millions (1994)

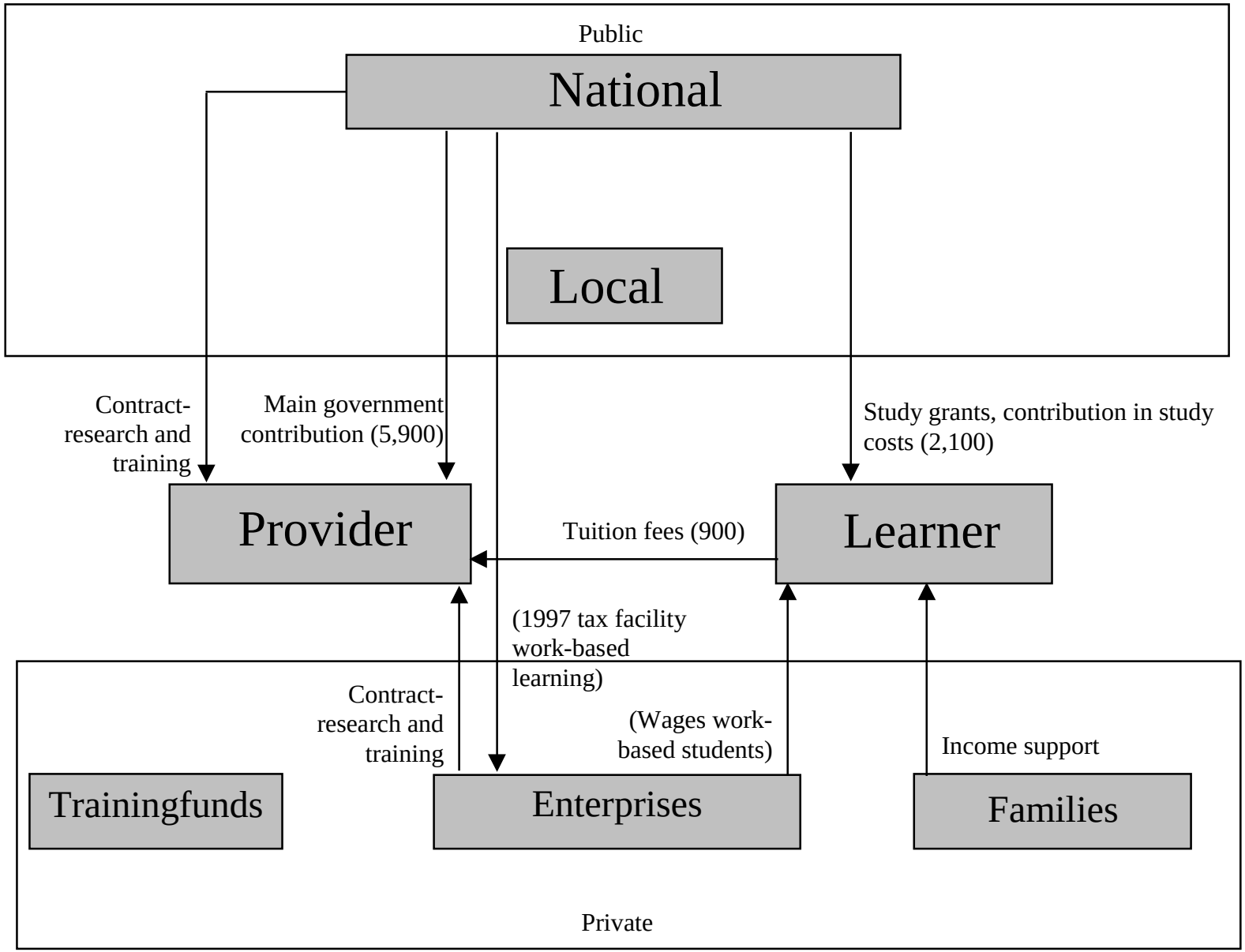


Figure 4.3: Financing flows adult education for poorly qualified adults (not in the labour force),
in NLG millions

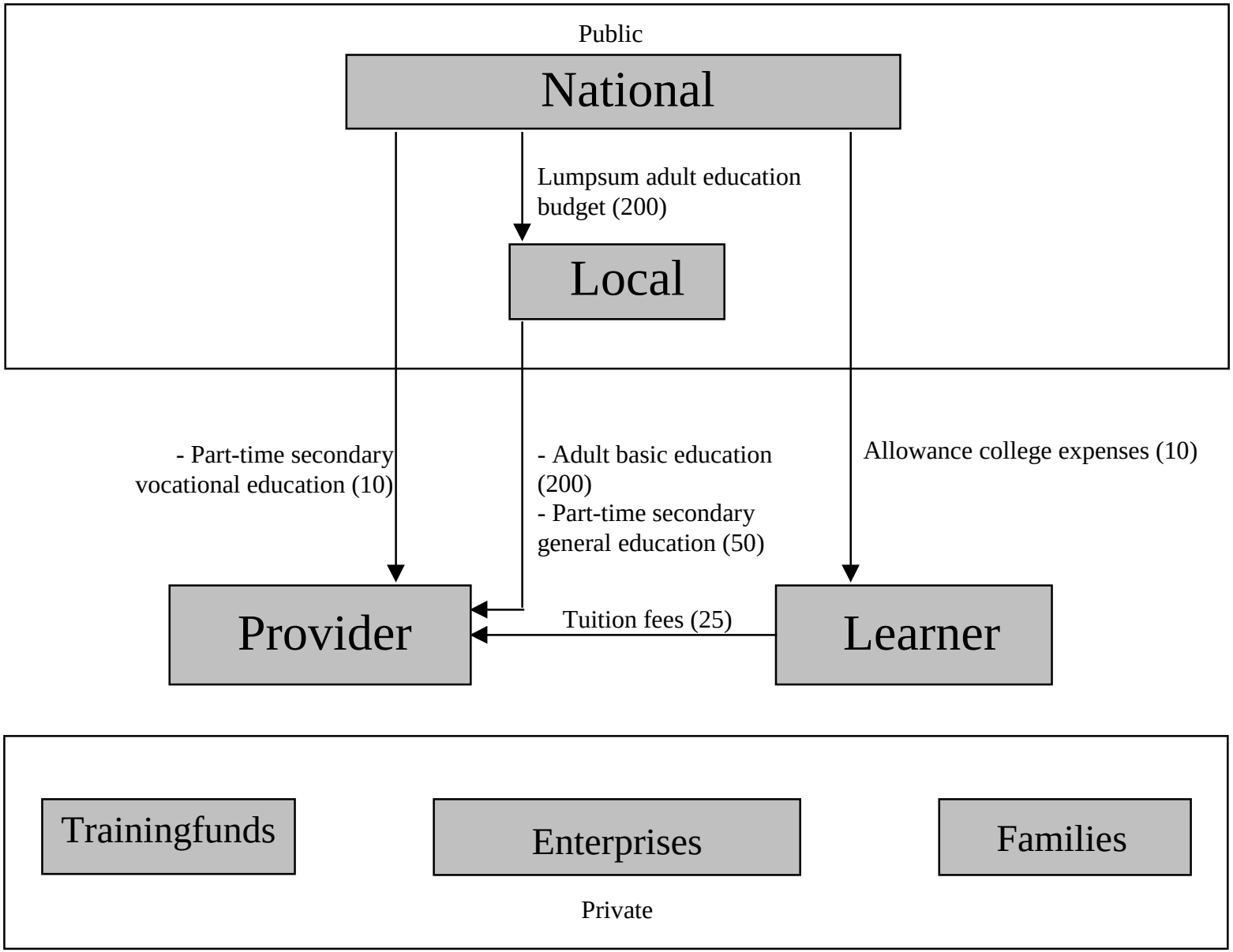


Figure 4.4: Financing flows training unemployed

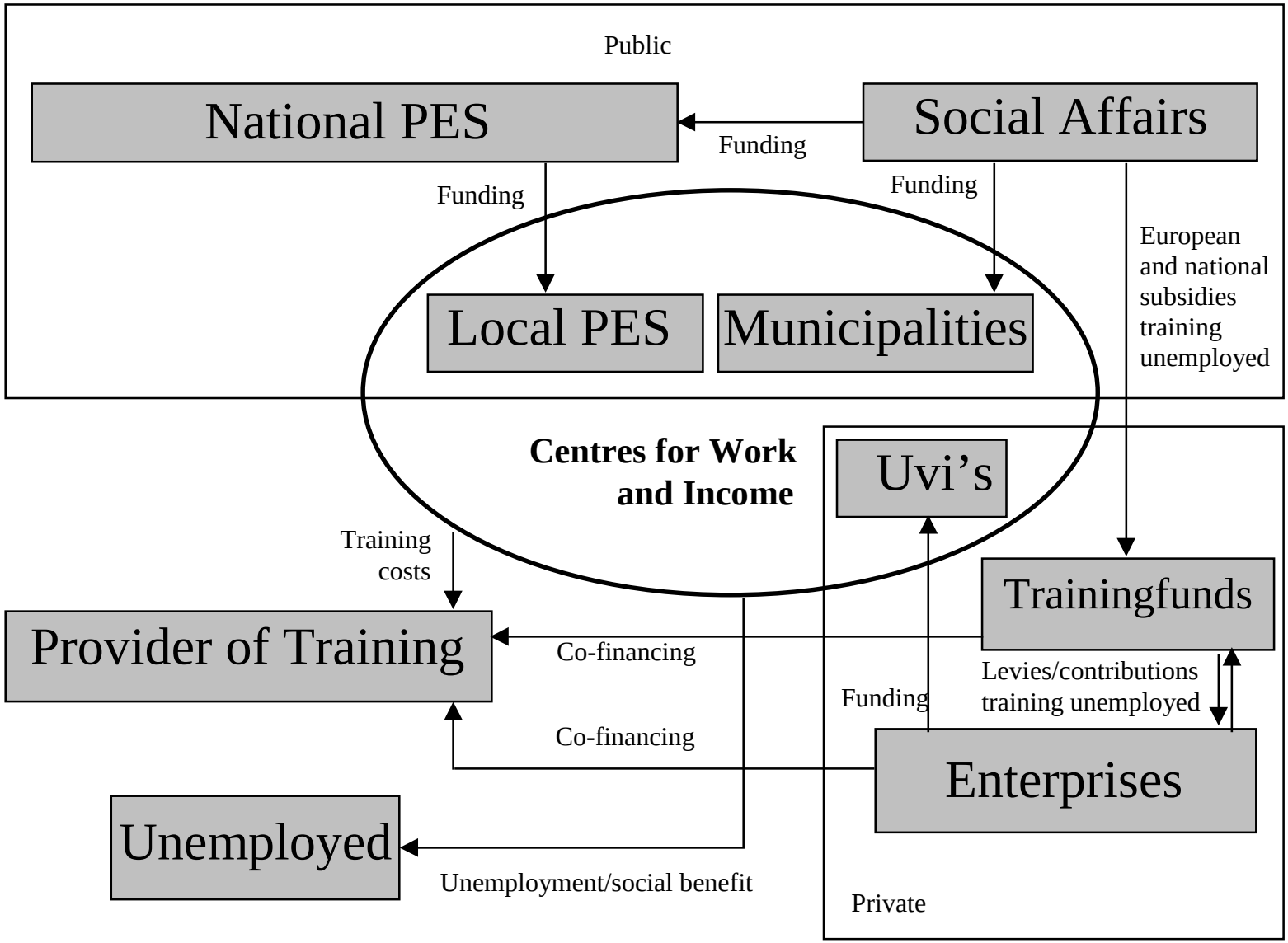
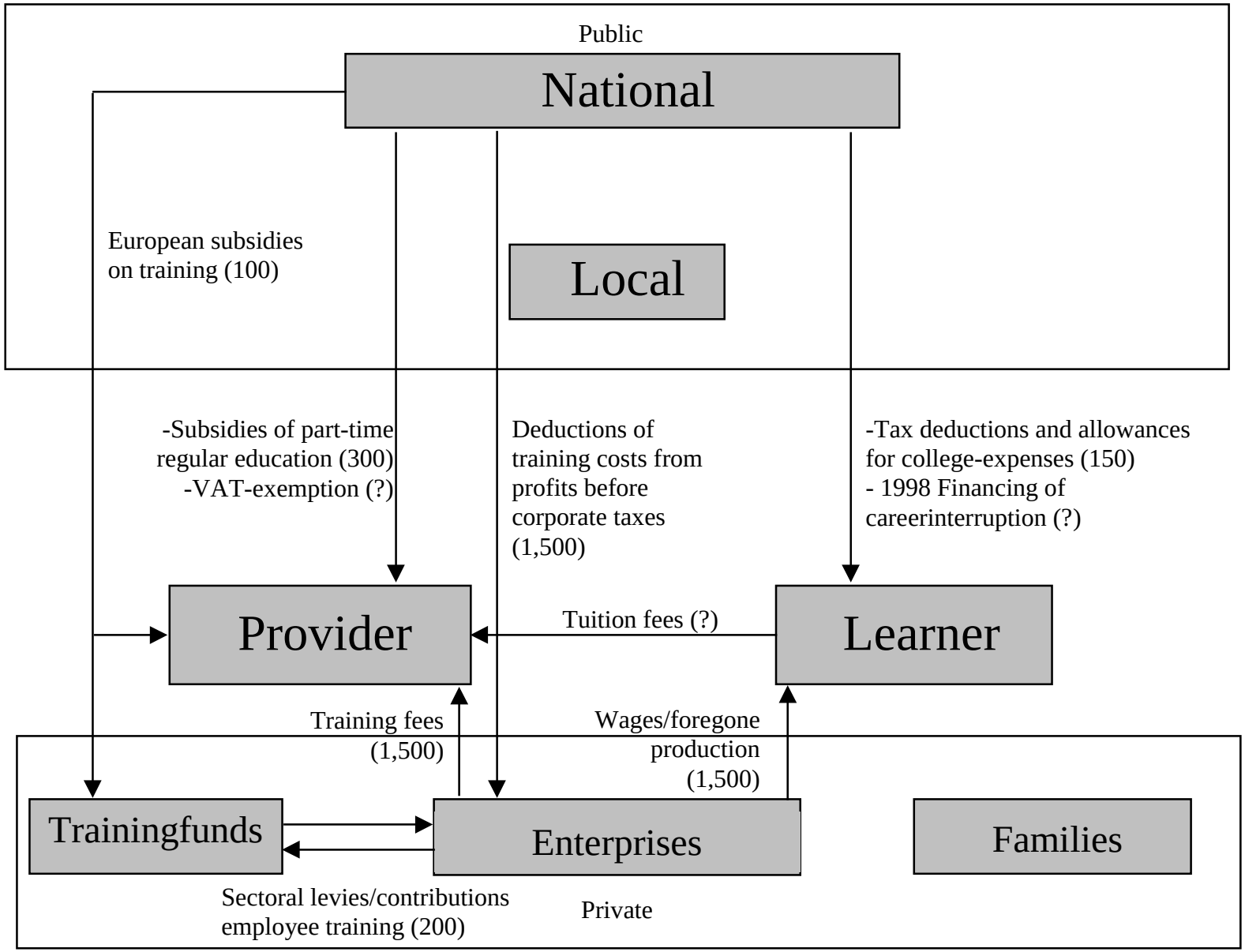


Figure 4.5: Financing flows training of private sector employees, in NLG millions



Chapter 5 Case studies of good practice

5.1 Introduction

In this chapter three case-studies of good practice are presented. These good practices give examples of innovative ways of increasing the rate of return or mobilising resources for lifelong learning.

In section 5.2 the SME-pathway is discussed as a good practice in raising the rate of return to lifelong learning. It is part of a larger program aimed at stimulating work-based learning, to improve the link between education and the labour market. The SME-pathway is a form of work-based learning in higher vocational education, which offers an alternative to the regular educational track. Furthermore it is to promote the innovative capacity of small and medium enterprises. Finally this practice shows an interesting mix of public and private funding of education.

The case-study of section 5.3 considers a first good practice of mobilising resources for lifelong learning. The training- and development fund in the metalworking industry (OOM) is an example of a sectoral trainingfund resulting from a collective bargaining agreement and financed by a levy on all firms in the sector. By giving subsidies the OOM stimulates the training of apprentices, employees and unemployed. As discussed in section 4.3 the sectoral trainingfunds can ease the risk of poaching. Furthermore especially small and mediumsized firms may need a trainingfund, therefore the OOM is interesting because it covers only small and mediumsized firms.

As a second good practice in mobilising resources a system of training provision for temp workers is considered. In this system a shared investment in training by an employee and the temp agency is laid down in a training contract. However, according to this contract the employee however only starts paying back his share when working after the training. Furthermore the temp agency also has an incentive to invest in the training.

5.2 Good practice in increasing the rate of return to lifelong learning: the SME-pathway

Small and medium sized enterprises (SME)[160] in the Netherlands include all private enterprises with less than a hundred employees. In general, enterprises in the agricultural sector, the semi-public sector and the public sector are not included in SME. Of all 476,000 private enterprises in the Netherlands, about 80% is small sized, i.e. with less than 10 employees (EIM 1993). About 18% is medium sized, having 10 to 100 employees. This means that only 2% of all private enterprises are large sized, i.e. with more than 100 employees.

At the moment about one in four graduates from higher vocational education finds employment in one of the small or medium sized enterprises in the Netherlands. The percentage employees in small or medium sized enterprises with a higher vocational education diploma is small, around 7%, but is unmistakable rising (MKB Nederland/HBO-raad 1995, p.2). Compared with the total work force, this percentage is rather low. Around 18% of all employees in the work force have a HBO-diploma (CBS 1997, table 23).

October 1995 the employers' federation for small and medium sized enterprises, MKB Nederland, and the representative organisation for higher vocational education, the HBO-council, have signed a covenant intended to improve the relationship between higher vocational education and small and medium sized enterprises (MKB Nederland/HBO-raad 1995). As a result of this covenant, an experiment in the area of work-based learning has started September 1996, the so-called SME-

[160] In Dutch: *Midden- en Kleinbedrijf* (MKB).

pathway (*MKB-route*). The participants in this pathway are the two mentioned organisations, some sectoral organisations[161] and a number of institutions for higher vocational education.

The SME-pathway, like other forms of work-based learning, is a variant of the regular educational path in higher vocational education. Therefore, institutions for higher vocational education must see to it that students participating in the SME-pathway obtain the same end-level as regular HBO-students. They will be awarded the same title and diploma. Since the work period is not a replacement for the trainingscomponent, students participating in the SME-pathway will, in general, face a longer study duration: one or two years longer than regular students.

The main purpose of the SME-pathway is to improve the connection between education and the labourmarket. This connection is directly improved since part of the educational program is geared to the knowledge and skills needed in the workplace. Also, because of the feed-back mechanism, teachers have insight in what is needed in enterprises and they can use this information to adapt the curriculum to new developments.

An additional advantage of the SME-pathway is that, mass education, with hundreds of graduates that have exactly the same qualifications, makes room for students that have the same basic knowledge and skills, but who each have, via individual educational paths, chosen their own specialities.

The first three years students participate in the regular educational program. The fourth, final, year is spent working in a small or medium sized enterprise. This fourth year has a minimum duration of one year and a maximum duration of three years. During this time students can not claim student financial aid, but instead they receive income through work.

It is mandatory that there is a coherent relationship between working and learning. Therefore, the employer, the student-employee and the institution for higher vocational education have to sign a mixed training/labour agreement. In this agreement attention is paid to issues such as:
- guidance by the institution for higher vocational education and in the work-place by the employer;
- the possibilities for student-employees to use the obtained knowledge and skills;
- the training facilities offered to the student-employee by the institution and employer;
- the employer's contribution to the curriculum and end-qualifications of the graduate;

In practice the SME-pathway only applies to students in sectors such as economics and technics. This is true because small and medium sized enterprises are, in general, not in need of social workers, teachers or nurses. In the college year 1996/1997, seven kinds of programs took part in the SME-pathway: accountancy, mechanical engineering, electrical engineering, installation engineering, food technology, computer science and architecture (Van Riel 1996, pp.15-17).

Employers have to pay the student-employee a starting salary of at least the Dutch minimum wage, or a salary according to the collective agreement that applies to their sector. Gross minimum wage equalled ƒ2,220 a month in 1997 (Voorlichtingscentrum Sociale Verzekering 1997, p.116)[162], on top of which social premiums have to be paid by the employer. Trainees, often also fourth-year students, receive on the other hand in general a remuneration of about ƒ500 per month on top of which no social premiums have to be paid.

In order to make the student-employee more attractive to hire, a tax facility has been introduced January 1997 (OCW 1997c). An employer hiring a employee-student may deduct a maximum of

[161] The sectoral organisations that participate are: AGF Detailhandel Nederland; Metaalunie, Organisatie van Ondernemers in het midden- en kleinbedrijf in de metaal; NovAA, Nederlandse Orde van Accountants-Administratieconsulenten; NVOB, Nederlands Verbond van Ondernemers in de Bouwnijverheid; UNETO, Unie van Elektrotechnische Ondernemers; VNI, Vereniging van Nederlandse Installatiebedrijven.

[162] Gross minimum wage for 23-year olds and older at January the first 1997. 22-year olds receive 85% of this, 21-year olds receive 72½% (Voorlichtingscentrum Sociale Verzekering 1997, p.116).

ƒ4,500 per year of the income tax and social security contributions.[163] In order to qualify for this arrangement some criteria have to be met. First, the employer, the student and the institution for higher vocational education must sign a mixed training/labour agreement as described above. The starting point of the arrangement is a working week of 32 hours, if the student-employee works less hours, the maximum deduction declines by ratio. Furthermore, the student-employee cannot earn a wage higher than 130% of the Dutch minimum wage. Also, the arrangement has a maximum duration of 24 months. This implies a maximum deduction of ƒ9,000 for the employer. Finally, the arrangement applies, at present, only to the technical-commercial sector of economic activity.

Work-based learning programs and more specifically the SME-pathway offer advantages to all three parties concerned. For employers student-employees have two advantages over trainees. First, student-employees can stay up to a period of three years, while traineeships often take only half a year. Often it takes some time before newcomers are settled and become productive. In the case of student-employees, enterprises can benefit for a longer period of time.

Secondly, contrary to the situation with trainees, employers can to a large extent influence the educational qualifications of their student-employees. Student-employees are still entitled to a substantial amount of subsidised education. As one of the actors, employers can co-determinate what students have to learn in order to meet the needs of the enterprise. In the event that the 'own' institution does not provides a subject that is needed, student-employees can also take lessons at other institutions for higher vocational education or at other institutes such as the Open University.

The SME-pathway may also encourage the post-initial training of employees in small and medium sized firms. As table 2.5a shows, the number of courses per employee in small and medium sized enterprises is much lower than in large sized enterprises. Small and medium sized enterprises, by participating in the SME-pathway, will obtain HBO-students that fit neatly within the enterprise. Continuation of engagement after graduation will then become attractive. Because higher educated employees more often take part in training (as shown in table 2.5b), this may directly lead to a higher participation of small firms in employee-training. Furthermore, as small firms get used to the SME-pathway, other employees in the same firm may also be encouraged to participate in training.

For students the advantage is that they have the possibility of obtaining work-experience. This will make the transition from school to the labour market easier and increases chances of finding employment after graduation. Also, chances are that students, after graduating, will be hired by the enterprise in which they have fulfilled the SME-pathway.

Institutions for higher vocational education also benefit from the SME-pathway. They build up a network of contacts with enterprises. This renders it possible to keep the content of the curriculum up-to-date. It will also enlarge the possibility that the enterprises will return to the institution, for example for future courses.

At the moment, the number of students that participate in the SME-pathway is rather low. One of the reasons could be the excellent labourmarket perspectives of students in the sectors of economic activity of interest for the SME-pathway. Because their labourmarket perspectives are very good, students face incentives to graduate as fast as possible. Since participating in the SME-pathway prolonges the duration of the study, it is a less attractive option. The low number of students could also be a result of the unfamiliarity with the arrangement, because the SME-pathway has only been in operation for two years.

[163] Two branche-organisations (VNI and Metaalunie) have introduced a supplementary arrangement. They contribute a maximum of ƒ5,000 for every employee-student an employer in their branche hires (OCW 1997c).

5.3 Good practice in mobilising resources for lifelong learning: the Training and Development Fund in the Metalworking Industry

In this paragraph a short outline of the structure and effects of the sectoral training and development fund in the metalworking industry will be given. The training and development fund in the metalworking industry is one of the oldest funds, and in its stage of development somewhat beyond most other training and development funds. The contribution to the fund closely approaches the average training and development fund contribution in the Netherlands. Moreover, the metalworking industry is a sector containing many small firms. Typically, in smaller firms training occurs on average less often than in the bigger ones.

First, a short outline of the history and the sectoral position of the Training and Development in the Metalworking Industry *(OOM)* will be given. Second, a quantitative and qualitative description of the activities of the OOM is given. Finally, its effects on training attitude and the functioning of the labour market are assessed.

5.3.1 History and position of the OOM

The metalworking industry is one of the major branches within the Dutch iron and steel industry, which covers small and medium sized firms. In the metalworking industry some 10,000 firms employ about 120,000 workers, which means an average of 12 workers per firm. About 50 per cent of the firms employs 10 or less workers. This is less than the iron and steel industry's average. About 75 per cent of all firms employs less than 50 workers. Especially in these small firms, a tradition of employee-training was hardly existent, and the awareness of its importance quite limited. Training of apprentices and continuing training were concentrated in the in-firm training institutes of the industry's larger firms. In times of recession, however, such in-firm training provisions were shut down easily. This situation occurred in the early 1980s and was thought to endanger the sector's long term supply of qualified labour. This was one main reason for the creation of an industry wide training scheme.

Further, actual training supply and demand were small, whereas specific shortages in supply of specialists often existed. This was partly due to the low net success rate of vocational training, resulting from relatively high drop-out rates and large shares of enrolled metalworking apprentices moving to other sectors. The metalworking industry faced this problem most severely. This situation required (following Coenegracht et.al., 1989) better cooperation between schools and firms within the sector and improvement of career perspectives in the sector, of which qualifications to acquire in continuous follow-up training had to be part. Further, the wage structure had to provide the right incentives to encourage training.

In 1984, and according to a collective agreement, the Foundation Training and Development Fund for the Metalworking Industry (*Stichting OOM*) was set up through cooperation between both employers and unions within the metalworking industry. Agreements under the OOM are laid down in a collective labour agreement separate from the branche's standard one defining hours of work and wages. This separate collective labour agreement specifies the aims of the OOM, contributions of employers, and the rules concerning eligibility for subsidy from the OOM. Similar to the standard collective wage agreement in the metalworking sector, the arrangements concerning the OOM apply to all firms within the sector, whether member of the representative organizations (employers' councils and unions) or not.

In the early years of its existence, when the use of the OOM updating training subvention scheme was quite limited, relatively large efforts have been made to the enhancement of apprenticeships in the metalworking industry, as well as training of unemployed. In recent years however, the use of the updating training subvention almost doubled. At the same time, a shortage in the supply of metalworkers arose, which again stressed the importance of the enhancement of the apprenticeship system and the training of unemployed. Therefore, no reductions could be made in the latter fields. In order not to eat into the savings too quickly, the subvention per training day was lowered by twenty percent. However, the OOM reserves are still decreasing.

5.3.2 The working of the OOM

The OOM scheme basically works as follows. The fund is governed on an equal footing by employers' respresentative organisations and unions, which both make contibutions. All employers within the sector are obliged to contribute 0.55 percent of the firm's total wage bill to the fund. This contribution is composed of 0.25 per cent in favour of the apprenticeship system, 0.2 per cent in favour of continuing training arrangements, and finally, 0.1 per cent is to promote employment schemes. Workers are under an hours reduction scheme (*Arbeidstijdverkorting*), which provides them with extra day-offs per year. In the past they contributed one of these days per year. The fund has an annual inflow of NLG 27 million from the wage bill levy.

Firms can receive subsidy from the fund for training courses for their employees provided by other firms or the metalindustry training foundation (SOM) which supplies a whole range of training-courses for apprenticeship students and workers within the metalindustry. The only way for a firm to receive money in return from the contributions made is thus to provide training.

The OOM fund is active in a wide field. Three areas of training are covered. The first is to stimulate the vocational education of apprentices in the metalworking industry. The second is to enhance continuing training activities of employees within the firm. The third is to contribute to reemployment of unemployed, in cooperation with the Public Employment Service.

The apprenticeship sytem

The first field is to stimulate the vocational education of apprentices in the metalworking industry, thereby lowering the net apprenticeship costs for both students and employers and in this way ensuring the industry a supply of qualified (future) employees. This is to be realised through three ways. First, the OOM tries to enhance the attractiveness of the metalworking industry through the provision of information and advertising campaigns at regular schools for (full-time) lower vocational education. OOM has three school-advisors who provide the OOM-information and have frequent contact with the schools.

Second, the OOM stimulates lower vocational schools to provide high quality in-school metal practical training through a convenant between the OOM and schools with a metal department. Such convenant involves assistance in curriculum restructuring, thereby improving the fit between lower vocational education and the apprenticeship training. It also involves a one-time stimulus to schools to maintain their metal department by contributing 20 percent (with a maximum of NLG 10,000) to the investment in new machinery. By 1997, already 197 out of 286 schools with a metal department have signed such convenant.

The activities mentioned above concentrate on the regular full-time vocational education, which is often the preparation for apprenticeship training. OOM also contributes to the apprenticeship training itself. In general employers can apply a fiscal measure from the government, which can result in a tax allowance of NLG 4,500 for an apprentice, under the condition that he or she does not earn more than 130 per cent of the minimum wage. On top of this governmental incentive OOM enlarges the attractiveness of an apprenticeship for individual employers through a subsidy per apprentice. Firms with an apprentice receive a subvention varying from NLG 2,500 for higher levels of training to NLG 5,000 for the initial professional training per apprentice per year. For some off-the-job training programmes even higher subsidies are available.

In recent years, annual inflow of apprentices is about 1,800. The OOM makes further resources available to promote the influx and guidance of minorities and disabled persons. In favour of this group of pupils a maximum of 150 per cent of the usual OOM-contribution is available. The influx of girls in the industry is stimulated by an additional payment to the employer of 2,000 per year. The subsidies mentioned above

all aim at the employer. There is also an incentive for the apprentices: they receive an OOM bonus of NLG 1,000 when after graduation.

In many specialised small-scale firms the diversity in the types of work is too limited to enable the firm to participate in an apprenticeship training course. Therefore initiatives for some 'pooling' system are under consideration, in which a small group of firms with different activities together employ an apprentice, thereby providing the required amount of diversity in training practice.

Under the new Adult Vocational Training Act (WEB), the national bodies in the industries and sectors are responsible for the provision of the in-firm part of the apprenticeship-training, the functioning of the qualification structure and in some cases the terms of the qualification criteria, whereas the Regional Training Centres (ROC's) are responsible for the counseling of the apprentices.

Employee Training

The second aim is to provide updating training for workers in the metalworking industry. Firms have a yearly subvention entitlement at the OOM to a number of training days equivalent to the number of employees. The OOM provides a training catalougue with some 300 different training courses relevant for metalindustry workers. Courses with a length between one and five days are eligible for OOM-subvention. In practice, courses are structured such as to comply with the OOM criteria. In 1996 approximately 60,000 training days have been paid, which is about half of the available number. The OOM subvention is now NLG 200 per trainee per day. The amount of the subvention has been cut back by 20 percent in 1996, due to the intensive use of it, which exceeded the resource inflow of the OOM. However taking only employee training into regard, the actual stimulus to firms is equal to the levy paid, regardless whether training is provided, or not, plus the subvention per training day.

Many firms have only poor knowledge of educational level and direction needed to perform specific tasks. This deficit leads to inefficient hiring practices (hiring someone with senior vocational training whereas a worker who did an apprenticeship would have fitted best, for example), and suboptimal training choices. The OOM gives much weight to training advice, and therefore employs seven training advisors who assist firms in developing a training policy.

To increase the quality of advice about training, an in-firm training planner for personal computers (BOP-PC) has been developed by the OOM. This planning-programme combines the human resources of the firm, and the goals and activities of the firm, in order to formulate the training needs and course advices. It further provides more detailed information about regional training possibilities. Courses can be planned and OOM-support can be requested with this programme. With special subsidy from the European Social Fund the system is already being implemented at 1,500 firms.

Reemployment

The third aim is to provide training for and (re) integration of the unemployed, in cooperation with the Public Employment Service (PES). Three instruments have been developed in order to contribute to the improvement of the influx of 'junior skilled craftsmen'. These are financed from the own finances of the OOM (0.1 per cent levy) and the Contribution-scheme Sector-specific Training for Persons looking for work *(Bijdrageregeling Bedrijfstakgewijze Scholing Werkzoekenden - BBSW).* In 1996 BBSW support of NLG 2.8 million was received by the OOM. The OOM receives the BBSW support from the PES headquarter, in order to implement the training convenants agreed with the regional offices of the PES. The OOM has, to a large extent via its advisors, accurate knowledge of the industry's training and employment demands, in addition to the PES knowledge of the supply side. Through cooperation between employers (via the OOM) and the regional employment services a fit between supply and demand can be realised.

The first training scheme is an invidual scheme, which takes at the most 26 weeks during which the trainee has a labour contract with the participating firm. The training takes place in a participating firm,

with a grant from the OOM. The trainee receives a bonus of on average NLG 2,000. Some 500 people participate in this scheme, annually.

The second scheme is a collective one. The trainees participate in the training programme without loss of the unemployment benefit. In most cases the training takes place in a Centre for Vocational Training (CVT). The job-seeker in the meantime gets acquainted with an enterprise by means of a practical. After succeeding the training the job-seeker is guaranteed a labour-contract of at least six months. For each job-seeker in the collective scheme a subvention of NLG 7,000 is available for training costs, which is paid from the BBSW. The OOM contracts the regional CVT to carry out the training and only pays for training when the trainee actually enrolls. Whereas due to drop-out actual costs for the CVT are higher, the CVT will apply for additional resources from the European Social Fund (ESF-3) or the ADAPT-funds. Some 500 people participate in this scheme annually, too.

The third training scheme is the structural training scheme. In this case OOM investigates the situation on the regional labour market beforehand through questionnaires among employers about training-needs and vacancies. The OOM advisors visit the interested enterprises, on the basis of the information from the questionnaires, and collect concrete declarations of intent. Subsequently OOM and the PES together develop concrete training activities to comply with the needs of the enterprises and the training demands of workers and unemployed. Through a convenant between the OOM and the regional Public Employment Services all activities concerning employment, vocational training and continuing training within the metalworking industry are brought in accordance with eachother. The scope of the structural scheme is therefore the widest of all schemes.

This structural scheme also fills a gap which resulted from the decline of the in-firm training institutes of the big firms, and the foundation of the OOM. The in-firm training institutes used to train annually a number of apprentices, more or less independent from actual demand for trained people. Nowadays, under the apprenticeship system only those apprentices receive training who have an apprentice-position in a firm. However, a firm will hire only as many apprentices as it expects to need workers in the near future. Unexpected shocks in the demand for (trained) workers therefore can create shortages of supply of skilled labour. Through the structural training scheme unemployed persons are trained, thereby creating some kind of a stock, which can fill the unexpected demand for skilled labour.

Table 5.3.1 Main activities of the OOM

Fields Activities	Apprenticeship Training	Continuing training of employees	Retraining of unemployed
Information	* 3 school advisors * advertising campaigns in schools * informing firm about theory part of apprenticeship training	* 7 training advisors * BOP-PC training programme * training catalogue	* advisors seek particpating firms * cooperation with PES to clearify industry's needs
Contribution in training costs	* annual subsidy per apprentice	training days subsidy for firms	* individual, collective and structural training scheme
Maintaining training facilities	* stimulus to maintain metal department in junior vocational training schools * Pooling system		* Use of Centres for Vocational Training (of the PES)

5.3.3 The effects of the OOM

At the time of foundation, the OOM was purely a fund with a governing board, without own personnel for implementation, which was carried out partly by the Administrative office for Social Schemes (ASR - *Administratie Sociale Regelingen*). But because of dissatisfaction about the degree of control over the implementation, the OOM soon founded an own office, thereby also paving the road for a broadening of activities. Currently the OOM has special consultants who provide information to both employers and workers about opportunities for training and help firms in developing training programmes. They also enhance the awareness of the importance and benefits of training and retraining. Recently the OOM initiated the development of special courses for older employees, in order to keep their productivity at high levels and to use their knowledge optimally.

These consultants also continuously keep in touch with the vocational schools, which they provide with information about the metalworking industry in general, retraining possibilities within the sector and advice about recent developments relevant for the courses in metalworking given in these schools. To a less extent the consultants clearify to the firm the content of the school courses. The consultants are a structural means of communication between firms and schools.

In 1997 research was carried out by the OOM itself in order to measure the reach of OOM and the demands for future activities (Risseeuw, 1997). In general, the OOM appeared to prove succesful. Knowledge of the OOM training-catalogue issued annually is good, and this catalogue is being seen as an effective instrument in deciding which training to choose. In this research it became also clear that some 45 per cent of all firms received support for training, whether from the OOM or not. Whereas the OOM is widely known, this result indicates that placing more weight on information about subsidies available can be productive. There is also a positive connection between firm-size and subsidy-use, which might indicate that the smaller firms, the harder it is for the OOM to reach them. However, a 100 per cent score will never be attained, because not all training courses are eligible for subsidizing.

Through the implementation of the Adult Vocational Education Act (WEB) the level of the vocational training and the importance of a qualification received after finishing them, and more clearity about the quality and fit of a certain training course can be reached, thereby improving both the willingness of employers to invest in training and the efficiency of the course.

The results described here are positive, but it must be noted that no OOM-independent evaluations have been carried out. Detailed research indicating the net effect of the OOM-subsidies (would the training have taken place had the OOM not subsidised?) is not available. Although not only employers, but also employees in the metalworking industry receive the OOM-training catalogue, employers are still the OOM target group with respect to employee-training (see for example the BOP-PC initiative). The activities of the consultants, which are mainly directed at employers, reflect this strategy. The rationale behind this strategy is that employers still have a dominant say in whether to train or not. Risseeuw (1997) also found that in 46 per cent of all training decisions, the initiative was from the firm, whereas only in 11 per cent from the employee. In 33 per cent co-decision occured.

With regard to the net effect of the OOM, it must be noticed that money is not the only variable explaining training behavior. This finding appears from the fact that the 20 per cent cut in the updating training subvention did not noticably decrease the number of training days. According to the OOM, training decisions are often the result of persuasive advices of the OOM consultants in favour of training. The same applies for the hiring of an apprentice or the participation in a reemployment project. It is mainly through the detailed knowledge of individual firms, collected by the consultants, that the OOM can perform the tasks it aims to perform.

Of course, the weight placed at training differs widely across firms in the metalworking industry. Whether due to self-selection or not, in fact the firms with apprentices prove to be more succesful in terms of wagebill growth, vacancies at higher levels, higher average skill-level, employee training and

use of financial support for training (Risseeuw, 1997). Although this conclusion may be subject to further questions, it indicates the importance of a learning environment within the firm.

5.4 Good practices in mobilising resources for lifelong learning: Training provision by a temp agency

The classic model developed by Gary Becker distinguishes between general and specific training. General training enhances skills which are valuable in a large number of different workplaces. Specific training on the other hand is only useful at the current employer, and has no value elsewhere. Based on this distinction, it is predicted that workers pay for general training as they will always be able to reap the full benefits. With specific training, this is differently. Once the investment has been made, staying together creates a rent (the benefits from specific training). How the parties split this rent is hard to predict. This will depend (among other things) on the negotiation rules and the parties' outside options.

In a number of recent theoretical studies it has been argued that under-investment in training is likely to occur. For example Acemoglu (1996) develops a model in which he assumes that there is an exogenous probability that workers leave their employer and that workers who switch to another firm will never receive a wage equal to their productivity. Given these assumptions, it can be shown that the level of investment in training is below the socially optimal level. Other authors have studied different mechanisms (see Stern and Ritzen 1991 and Booth and Snower 1997 for collections of papers dealing with this). A common feature of all these mechanisms is that neither the employer, nor the worker is the residual claimant of the investment. Before deciding on the investment, a party will always be aware of the possibility (danger) that the other party gets a share of his investment.

A possible cure to this so-called holdup problem is that the parties write a training contract which specifies what will happen if a party ends the relation. Such a contract could for instance specify a breach penalty which a worker has to pay when he quits after having received training. We do not know of a study which describes in a systematic way what actual training contracts look like, and whether they include conditions which anticipate this holdup problem. The present case study analyses the kind of training contracts used by the leading Dutch temp agency. An interesting feature of this case is that the conditions of these contracts seem to anticipate the holdup problem. Moreover, it is interesting to see that temp agencies invest in training of their employees. Finally, given the nature of the temp agency's services, the case applies to a broad range of industries, occupations and types of training. The description of the training contracts is based on an interview that we had with someone of the personnel department at the headquarters.

Some facts. Randstad is the largest temp agency in the Netherlands. In 1995, 750,000 persons worked for a temp agency. 300,000 of them worked for Randstad. In terms of its share in the total working population, the size of temp workers is about 3%. This percentage is higher than in any other European country. Temp workers have about the same levels of formal schooling as the entire Dutch labor force. 50% of the temp workers is male; about 70% is younger than 30 years. By broad occupational categories the division is: 31% administrative, 56% industrial, 10% technical and 3% medical.

In the past, Randstad (and other temp agencies) did not provide a lot of training to its temp workers. In recent years this has changed. The main rationale for providing training is that training bridges the gap between skills demanded by the clients and skills supplied by the temp workers. This makes it easier to fill temp vacancies, which is clearly important when competing with other temp agencies. But if Randstad provides training to its workers, it runs the risk that the temp workers stop working for Randstad and get a permanent contract elsewhere. Randstad's clients may also be interested in offering a trained temp worker a permanent contract; they save training costs and the temp agency's fee. Hence, poaching seems likely to occur. To protect itself against poaching, Randstad requires their temp workers to sign a training contract which stipulates the following conditions.

- Depending on how specific the training is, Randstad and the temp worker each pay (eventually)a share of the costs. The more specific the training, the larger the share paid by Randstad.
- In first instance, Randstad pays the training and the temp worker has a debt equal to her/his agreed share of the costs. If the temp workers starts working after the training, s/he repays one (1) Dutch guilders per hour worked.
- When the worker stops working for Randstad before the debt is repaid, this debt still has to be repaid. The same is true if the worker gets the training, but refuses Randstad's job offers.
- When Randstad cannot offer the worker a job related to the training, the worker does not have to repay the debt.

The conditions above guarantee that the worker pays his share of the costs. They do not, however, guarantee that Randstad earns enough to cover its own costs of the investment. A more subtle mechanism ensures this. The fee Randstad receives from its clients for its temp workers varies with a worker's qualifications. Hence, if a worker gets training this fee increases. Since the gain for Randstad varies in proportion with the fee, Randstad's gain rises with the worker's qualification level as well. This makes it profitable for Randstad to invest in training. For each hour that the temp worker is hired by a client, the training of the worker generates extra gains for Randstad. Whether the total number of hours is enough to cover Randstad's training costs, depends of course on how long the worker stays. In general the rule is that a temp worker is not allowed to switch from Randstad to a permanent contract with the client within three months. According to the person we interviewed, a period of three months is long enough to cover the training costs. Whether this is always true, depends of course on Randstad's training costs and its hourly gain from training.

The importance of this example is that it shows that proper training contracts can help overcome potential causes of under-investment in training.

5.5 National lessons from the case studies

The idea of work-based learning has a wide range of possible applications, although the SME-pathway has only a limited scope in terms of the number of study directions and firms it can reach. Nevertheless the SME-pathway may provide a stimulus to the number of people with higher vocational education working in small and medium sized firms. Thereby the innovative capacity of these firms can be boosted.

The overall benefits of the SME-pathway relate to an improvement in the link between school and work for students in higher education. This improvement works both ways. Furthermore the SME-pathway has started a discussion about the inflexibility of the system of student financial aid with regard to combining a study with a paid job (see f.e. Commissie-Hermans 1997). In this way it has contributed to the discussion about the future of student financial aid.

The SME-pathway also provides an interesting example of how public and private funding can be mixed. This kind of arrangements already existed at lower levels of education (apprenticeship system) but thus far not in higher education.

The latter two case-studies provide examples of solutions to potential causes of under-investment in training, like poaching.In fact both trainingfunds and trainingcontracts provide different answers to the same problem. Which of the two is best applied may depend on the type of sector and the firmsize.

In principle training contracts can be used by all firms investing in their own personnel. However, administrative costs associated with trainingcontracts for their own personnel may be prohibitive for small firms. Therefore trainingfunds may provide a useful solution for sectors with mostly small and medium sized firms. Especially when these firms show a low participation in training. By means of subsidies and advice from a trainingfund these firms may get more familiar with training. Most of the trainingfunds indeed seem to have contributed to a growth in the participation in training. Nevertheless

even in sectors with a trainingfund, for instance the metalworking industry, the smaller firms stay behind.

On the other hand, for larger firms training contracts may prove to be a solution for large firms to secure their investment in training, like it is for temp agencies. The necessary design and administration of training contracts can be dealt with by human resource departments. In this way some kind of human resource accounting could be set up. However, as pointed out for smaller firms, the administration of training costs only makes sense for firms if the administrative costs are smaller than the associated benefits.

Chapter 6 Conclusions

National education system and number of participants

The initial education system in the Netherlands is traditionally characterised by quite a lot of differentiations in types of secondary education. However, the various types have come closer together. In general education, the various types now have to a large extent a common curriculum in the first years. The full-time vocational education and apprenticeship system have also come closer together in a common legal framework. This process has been accompanied by a merging of schools. The situation in post-initial education and training is less transparent. This field is characterised by a large variety in types of education and training, in providers, duration and financing schemes. To give an idea about the relative importance of the various types, the number of participants in the various types are given in table 6.1. All types of post-initial education are covered in the three categories at the bottom part of the table. The only missing element is education and training for highly qualified adults not in the labour force. Not only the number of participants are presented, but also a rough recalculation of these numbers into full-time equivalents, so that the duration is also taken into account.

Table 6.1. Participation in various types of education

Type of education	year	Number of participants (thousands)	Participation in full-time equivalents
General upper secondary education, full-time (HAVO/VWO, classes 4, 5, 6)	1995	192	192
Senior vocational education (MBO), full-time	1995	289	289
Apprenticeship	1995	128	128
University education, full-time	1996/1997	154	154
Higher vocational education, full-time	1996/1997	233	233
Adult education for poorly qualified adults (not in the labour force)	1996	104	21 a)
Training of the unemployed	1993	133 b)	33 c)
Job-related training for employed	1994	1783 d)	135 e)

a) Based on a rough estimate of 1 courseday a week.
b) In more recent years this number has declined sharply. However, exact figures are not available.
c) Rough estimate of average duration is 3 months (see De Koning (1998).
d) 33% of employed population aged 25-64.
e) Estimates based on mean duration of 3.02 weeks per trained worker aged 16-65: (3.02/40)*1783 (Leuven & Oosterbeek, 1997).

As can be seen from table 6.1, the participation in the different types of post-initial education is dominated by job related training. Even compared to the types of initial education included in the table, the number of participants in job-related training is large. However, the duration of these courses is in general rather short (average is 3 weeks). So in terms of full-time equivalents, the dominance of job-related training is greatly reduced. In full-time terms, the chosen types of initial education clearly outnumber post-initial education.

The number of students in initial full-time upper secondary education and full-time higher education is also clearly higher than the number of (adult) participants in the part-time alternatives of these types of education. The latter make up about 10 to 20% of the total number. If the participation in part-time studies would be calculated in FTEs, their proportion would decrease even further.

People with low levels of initial education are clearly underrepresented in the various types of post-initial education and training. Both in training of the employed and the unemployed, the relative participation of the lower educated is about half of the average. Even in higher distance education, which was originally meant as a second chance type education, about half of the participants have already reached (another direction of) higher education. This means that post-initial education tends to increase existing differences in levels of education instead of reducing these.

In nearly all types of post-initial education the age group of 25-34 has the highest representation. Older age groups are clearly underrepresented. This is an important reason for concern, because the share of this group in the (working) population will grow and less chances will exist for companies for expulsion of older workers. This expulsion partly took place because of a discrepancy between high wage costs and decreasing productivity of older workers. Training is a means to diminish this discrepancy, but is evidently not often used.

Current Public expenditures and financing mechanisms

What expenditures are made to make the present participation figures possible? The gross public expenditures (including tuition fees) on secondary and higher education are together about 20 billion guilders, to which a few billion guilders for grants have to be added. For the education of poorly qualified adults, the public expenditures are somewhat more than half a billion. For the training of unemployed the maximum has been one billion, but is recently much lower. In case of the training of employees, public expenditures mostly take the form of a deduction of corporate taxes for training purposes and amounts to about 1,5 billion. Some other expenditures, like contributions in ESF-funds can be added to this, but still the total amount is far less compared to initial education.

Except for employee training, which is largely paid for by employers, government contributions are the primary source of funding for education and training. In secondary education schools are granted a lump sum from the government, mainly based on the number of pupils. Schools themselves have to decide how to divide the budget between the costs of personnel and material.

Regional Training Centres (ROC's) are responsible for the public provision of vocational education and training. As far as secondary education is concerned, they also receive a lumpsum based on the number of pupils. With respect to adult education, funding is channelled through the local authorities. Municipalities are free to buy training from the ROC of their choice. In this way some kind of competition is to arise, however this will be limited to densely populated areas where ROC's are located near each other.

The largest share of the public contribution to higher education also takes the form of a lump sum grant from the central government. In higher vocational education this grant largely depends on the number of graduates. Universities receive a basic amount and a further amount largely based on the number of students. However, this gives institutions the incentive to attract a high number of students, with only a minor incentive to enhance graduation rates. Therefore a new funding system is to be introduced in 1999, which gives most weight to the number of graduates, but also looks at the number of first-year students and has a basic component. For the moment a temporary funding mechanism is put in place giving more weight to the number graduates.

On the other hand in recent years a shift from public to private funding can be seen. Private contributions have risen to compensate for a reduction in public funding. Student financial aid has recently been related to performance. Furthermore it is more focused on students with low income parents.

Also in the case of training for the unemployed, shifts in funding have taken place. In the past the central government directly contributed to the Public Employment Service. This money was used to finance - among others - training. This training partly took place in institutions which were part of the Public Employment Service. In the future funding will partly be decentralised, which means that municipalities and sectoral implementation offices will become more responsible for the purchase of employment services, whether at the PES, or not. Services of the PES will not automatically be subsidised any more, but will be purchased on a market with other competitors. At the same time, a process of integration of efforts directed towards the unemployed will be implemented. The PES, municipalities and the sectoral implementation offices are jointly approaching the unemployed within a framework called the Centre for Work and Income (CWI).

Gaps to life long learning

Starting from the present situation, how far away are we then from a society in which life long learning is a reality, at least in volume terms? In order to give an answer to this question, targets for participation have to be set. These participation targets will always contain an important arbitrary element. In this study the targets to reach are partly inspired by rates which have been put forward by the OECD and by notions which can be found in national policy. Table 6.2 gives an overview of the targets chosen and the extra public finances per year which will be necessary to reach them. To calculate the volume of these extra funds, the current public expenditures per participant are multiplied by the number of extra participants necessary to reach the participation target. Because a specific target rate is always disputable and because in the calculation several assumptions have been used, it must be stressed that the results have to be seen as rough indications, rather than very accurate calculations of the funds needed. In the case of higher education and post-initial training, more than one target is chosen, which gives an idea of the sensitiveness of the financial burden for the target levels chosen. The overall gap by this sketchy calculation is about 2.2-4.4 billion guilders, which is about 1.2-2.3% of total public expenditures. When corrected for the larger cohortsize of the currently 27-year olds and 30-year olds (as explained in section 1.4) the costs amount NLG 1.9 to 3.7 billion, or 1-2% of public expenditure. Moreover, these figures only refer to formal qualifications and participation in formal training. Recognition of acquired competences may lower these costs somewhat further.

Table 6.2 Targets

Type of education	Target	Present situation	Yearly extra public funds necessary (in billions)
Upper secondary education	90% a starting qualification, which means that at 27 only 10% at a lower level than upper secondary	A quarter of 27 years old has no starting qualification a)	-1,33
Higher education	- 30% with diploma of those 30 years old - 25% with diploma of those 30 years old	25%	- 1.19 - 0
Job-related training	- 40% of all employees - 30% (until ISCED 3), 40% (other)	21% (below ISCED 3), 39% (other)	- 0.46 - 0.25
Education for poorly qualified adults (basic education and part-time secondary education)	- 20% of those not in the labour force - 30% (25-44), 10% (45-64) of those not in the labour force	12% (25-44), 4% (45-64)	- 0.43 - 0.32
Training of long term unemployed	- 50% - 100%	26% b)	- 0.30 - 0.96
a) Overestimation because of categorisation criteria in present statistics. b) 1993, the participation in more recent years is lower.			

A lot of the extra costs correspond to initial education. Although the gaps are also quite large in post-initial education, the extra costs are lower there because of smaller costs per participant (less course hours and/or involvement of private financing).

Reduce costs, increase returns?

The extra expenditures calculated above for bridging the gap to the targets are high. This makes it all the more interesting to look for ways to reduce the costs per participant and increase the return of education. The costs per participant in the recent decade have shown a quite stable pattern for upper secondary and higher education. The yearly real growth has been about 1-2%. At the same time expenditures on grants have declined. The merging processes and increased financial autonomy

probably have contributed to a moderation in the growth. What are the (further) possibilities to reduce the costs and increase the benefits?

Staffing is the most important element contributing to the cost in initial education, so it is logical to look at that in order to save costs. However, in the last decade, the average salary in education has already grown at a slower rate than average wages in other sectors. Two important remarks have to be made in this context. First, within the educational sector, a strong ageing process has taken place, and with the current salary systems this leads to higher wage costs. Secondly, the attractiveness of the teacher profession has to be safeguarded. From time to time it is difficult to find enough teachers for certain subjects. Therefore more attention to the functioning of the labour market within the educational sector (e.g. increasing mobility, reducing expulsion) seems to be more logical than cuts in general wage levels.

Another important issue is that the drop-out rates in initial education are high. However, quite a lot of these drop-outs start another study and eventually succeed in getting diplomas. But even in this case, more money is involved because the track towards the diploma has been longer and more complicated. A longer track means more public and private costs. The extra costs because of lost opportunities to earn an income in the extra years, constitute the most important element of private costs. Direct costs in general constitute a less substantial part. In case no diploma is attained at all, drop out is even more unfavourable, because benefits are limited. Research shows that the benefits of years spent in school without getting a diploma have a lower return than years in school that end up in a diploma.

Speaking about costs, the differences in costs between directions in vocational and university education are often striking. Some directions cost far more than others. For example studying economics is much cheaper than medicine. Moreover, the labour market perspectives of graduates do not necessarily parallel these cost differences, which means that by (moderate) shifts between numbers of pupils in directions, both the labour market could be supplied better and reductions in costs can be achieved. For both the reduction in drop-out and the choice of direction in education, counselling and the supply of (labour market) information can play an important role.

Another way of reducing public costs, would be the increased involvement of private financing. However, it must be said that in the case of secondary education, the private financial returns are already quite low. If the financial contributions of individuals to their education would be increased further, then the returns would diminish further, with the danger that individuals become less interested in investing in education.

Instead of a general increase in higher private contributions in initial education, a more differentiated approach can be followed. In that case only some sectors of education are confronted with higher private contributions. At this moment all regular full-time students in higher education pay the same amount of tuition fees, irrespective of their study direction or where they study. This means for example that students who participate in expensive study directions are paid a larger subsidy than students participating in cheaper study directions. Also labour market perspectives have in most cases little influence. So, criteria for larger differentiation could be the labour market perspectives or public costs made. However, also in this case the effects on study choice should not be so high that in the longer term large bottlenecks are generated on the labour market for the more expensive directions.

In the case of apprenticeship, the situation is different, because the most important private contributions come from firms employing trainees. A shift from full-time vocational education towards apprenticeship training would mean some saving of public funds. However, if public subsidies and tax deductions are included in cost comparisons, then the differences for the public purse are not that large. Moreover, experiences with various policies to stimulate apprenticeship training have shown that it is not so easy to enlarge the volume of this type of training. This is more or less confirmed by a recent initiative to create a work-based type of training in higher vocational education: the number of places and trainees is very limited until now.

What then about a shift towards further private funding in post-initial education? Also in this case the available possibilities are limited. If the public funds will decrease, then this will have a negative impact on the total number of participants. This will lead to an even further gap towards the targets. Probably this will be felt mostly by the participants who are already underrepresented, like the lower educated, because a lot of the public funds are specifically targeted towards these more difficult groups. In case of job-related training one could imagine that private funds will compensate, especially when one considers that research shows that the productivity effects of this type of training are high for companies. However, because of market imperfections (e.g. poaching) companies tend to underinvest in this type of training.

Initiatives at the sectoral level, like the sectoral training and development funds help to overcome these market imperfections. These trainingfunds are the result of agreements on training reached between organisations of employers and employees at an industry level. Funding of these trainingfunds takes place through a levy which is a percentage of a firm's wage-bill. These trainingfunds give subsidies to firms providing training to apprentices, employees or unemployed. The aim of the trainingfunds is to harmonise trainingcosts between firms in a sector. Moreover, like the case of the OOM-fund shows, these funds can also be helpful in a more professional training policy which can also increase its benefits. Especially for smaller companies, it is very difficult to develop a well-structured training policy. Another way of ensuring an adequate provision of training is the use of proper training contracts. Such a contract specifies the sharing of an investment in training by an employee and an employer, like in the case-study of a temp-agency.

Further, the public financing mechanisms themselves can create incentives or disincentives for decreasing costs and increasing benefits. In this respect, quite a lot of developments have already taken place. Schools have more freedom in the way they spend their money. Costs for unemployment benefits are more and more decentralised, so that financial flows to sectors and/or individual schools are directly affected by their policy in this respect. This emphasis on financing mechanisms to improve efficiency and make use of incentives is expected to continue in the future. In this respect for example a larger weight on output (less drop-out) is important. Moreover, specific groups like older workers will get more attention by extra fiscal advantages to companies for job related training to this group. Concerning the training of unemployed, the Public Employment Service has to compete more, not only with private alternatives, but also with other means of directing unemployed towards a job.

With respect to innovative learning technologies and practices, recently a lot of initiatives are taken in the different educational sectors. However the potential benefits of these practices, like the implementation of information and communication technology are unclear so far. In a recent advise on information and communication technology (ICT) the Onderwijsraad (1998) confirms that the effects of ICT are difficult to asses, Furthermore it concludes from foreign studies that when significant positive results are found these are rather moderate.

All in all one should not overestimate the possibilities for further cost reductions and increasing benefits. This does not mean that these possibilities do not exist. In the text above we have mentioned options like improving the functioning of the labour market in education, reducing drop-out, attention for shifts in volume of vocational directions, attention for apprenticeship training and sectoral initiatives to overcome market imperfections.

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