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No. 248

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Published in:

Wim J. Nijhof & Wil van Esch (eds), *Unravelling Policy, Power, Process and Performance: The Formative Evaluation of the Dutch Adult and Vocational Education Act*, CINOP, 's-Hertogenbosch, January 2004, pp. 79-98.

5 Promoting the macro-efficiency of vocational education?

LEX BORGHANS & HANS HEIJKE

The Dutch Adult and Vocational Education Act (WEB) states that vocational education courses should fill a social need, should provide qualified school-leavers and graduates with favourable perspectives in the labour market, while their contents should both contribute to the students' general education and provide them with sustained and broad occupational qualifications. The procedural aspects of this Act therefore pay explicit attention to macro-efficiency. This chapter presents a theoretical framework for the concept of macro-efficiency. The core element of this framework is the idea that the main objective of the Act cannot be to strive for the fulfilment of all the demands made by employers, but rather that decisions regarding the organisation of vocational education should always be based on a rational process of finding a useful balance between the available options. On the basis of this assumption, we shall discuss the way in which the ACOA (Advisory Body Education-Labour Market) functions in practice. Our main conclusions are that current legislation contains too many incentives for setting up narrow, specialist courses, and that schools should be given much greater responsibility for their study programmes. However, these institutions would then have to be accountable for the effects of their policies as a whole, rather than for a large number of decisions, as is the case at the moment. To be able to make this evaluation and to support the policies of the lead bodies and community colleges, we need a clear view of the objectives of vocational education and reliable labour market data.

5.1 Introduction

The Adult and Vocational Education Act regulates secondary vocational education and training (VET) and adult education in the Netherlands. The purpose of this Act is to ensure that vocational education courses fill a social need. Qualified school-leavers and graduates are provided with favourable perspectives in the labour market and the curriculum content both contributes to the students' general education and gives them sustained and broad occupational qualifications. However, the needs of society cannot be specified once and for all: the labour market is not static. Partly as a result of influential reports drafted by the *Commissie Wagner* (Wagner Commission) (1981) and the *Commissie Rauwenhoff* (Rauwenhoff Commission) (1990), legislation has refrained from fixing the content of vocational education in law. Instead, procedures have been developed to guarantee that the contents of study programmes can be continuously adapted and fine-tuned to developments in society.

Secondary vocational education is expected to achieve a number of explicit objectives, aimed at the immediate productivity of those involved. This broad objective is an important reason for government involvement. If the training of skilled workers were to be left to business and industry, there would be insufficient attention paid to the personal development of those involved or to their long-term development. The legislative procedures therefore explicitly concentrate on the *macro-efficiency* of the system, and any proposals for changes will be tested against the objectives formulated in the Act.

Five years have passed since the Act became effective in 1996. We can now ask the question whether this new legal framework meets the objectives, and hence whether the procedures in the Act, on the one hand ensure that vocational education adequately follows changes in the labour market and, on the other, provide young people with an education that is both useful for their careers as a whole and contributes to their personal development in areas that cannot directly be translated into labour market success[19].

In order to determine how the Act functions in practice, this chapter first presents a theoretical framework outlining the concept of macro-efficiency. The core element of this conceptual framework is the idea that the purpose of the Act cannot be to strive for the fulfilment of all the demands made by employers, but that decisions regarding the organisation of vocational education should always be based on a rational process of striking a balance between the available options: The "attainment targets" of a study programme cannot be separated from the capabilities of the students who enter the system; a truly broad education can only be achieved if the system is explicitly aware of the fact that students will continue to learn even after they have left school, etc.

The economic impact of the objectives of the Act serves as a frame of reference. We will present the control mechanisms that the Act intends to use to ensure that vocational education meets the needs of society and of the labour market. The major organisations involved in this control model are the lead bodies on vocational education (n=21), the *ACOA* (Advisory Body Education-Labour Market), and the community colleges. In three separate sections, we discuss the roles of these organisations within the control model. After this discussion of the way in which the Act functions in practice, this chapter will finish with a number of conclusions and recommendations. Our main conclusions are that current legislation contains too many incentives for setting up narrow, specialised study programmes. In addition, schools should be given much greater responsibility for their study programmes. However, these institutions would then have to be accountable for the effects of their policies as a whole, rather than for a large number of specific decisions, as is the case at the moment. To be able to make this evaluation and to support the policies of the lead bodies and the community colleges, we need a clear view of the objectives of vocational education and reliable labour market data.

19 In this chapter, we will answer this question for vocational education, ignoring adult education. We will base this on our contribution to a broad evaluation study that covered more themes than merely the macro-effectiveness of the *WEB* (Heijke, Borghans, and Smits, 2001). This chapter was published earlier in Dutch: Borghans and Heijke (2001).

5.2 Effective vocational education: some theoretical considerations

"Vocational education is aimed at theoretical and practical preparation for the pursuance of an occupation, but also promotes the general education and personal development of participants and contributes to their social performance" (*WEB*, Art. 1.2.1, first section). As a result of the knowledge and experience acquired by participants, education provides an added value, making it possible for individuals to expand the capabilities that they have. From the perspective of the individual, taking part in education will therefore have a certain value, both with regard to the labour market perspectives generated, and to that person's social functioning. Depending on one's initial capabilities, learning power and personal interests, investing a certain amount of time in a certain type of education will be able to improve one's career. As the surplus value of each additional year of education will be less than the previous one, and education requires time, effort and money – not to mention a loss of income – individuals will reach a point, after a number of years of education, when the returns from even more education no longer compensate for the costs involved. From the perspective of the individual, a certain investment in education will then be optimal, considering his or her career as a whole, both in and outside the labour market[20].

In principle, the returns from education are greatest when it takes place as early in an individual's life as possible. After all, this maximises the number of years that one can avail oneself of the knowledge and skills. Technological innovation, skill obsolescence, as well as the potentially valuable interaction between working and learning, constitute arguments for deviating from this traditional pattern of life. Thanks to the valuable interaction between working and learning, it may be useful – in particular at the end of the period of initial education – to introduce a transition, in which the study programme contains a decreasing number of scholastic elements, and learning takes place increasingly through work experience. Knowledge obsolescence will lead to patterns of lifelong learning, in order to keep the knowledge that one possesses up to date[21].

The value of education is not only dependent on the individual choices made. In our society, which has a far-reaching division of labour, we can distinguish a large number of occupational tasks. Only an adequate distribution of workers across these occupations enables society as a whole to make optimal use of the capabilities and interests of its individual members. It is by making sure that individuals can avail themselves of the education required to meet a wide variety of needs in the labour market that macro-efficiency of education can be achieved[22].

The task to be achieved by education in this respect is illustrated in Figure 5.1. The left-hand side of this figure shows the distribution of the diversity of students before they enter the education system; this diversity relates both to their capabilities and their interests. The other side of the figure shows the distribution of diversity of society's needs. This distribution can be regarded not only as diversities of level, but also of subject matter of the activities covered by the occupation. In actual fact, the distribution is a multidimensional one, rather than a one-dimensional situation as shown in the figure.

20 This is the core idea behind the human capital theory, as developed by Schultz (1961), Becker (1964), and Mincer (1974).

21 Ben-Porath (1967), Rosen (1976) and Weiss (1986) discuss the optimal positioning of learning activities in a person's lifecycle.

22 The importance of a successful allocation of people across jobs was first described in detail by Roy (1951), and later by Sattinger (1993).

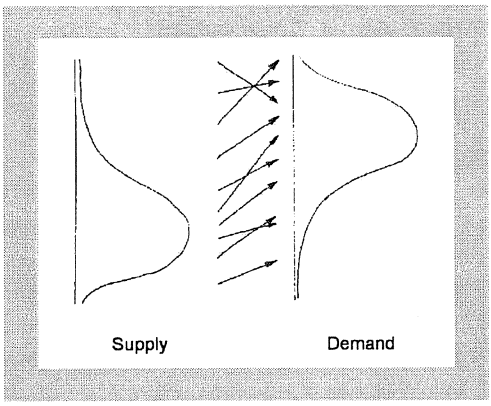

Figure 5.1: Students' capabilities (supply), learning process and society's needs (demand)

The changes with regard to the position of an individual are the result of a learning process. The arrows in the figure represent learning. This may be within the framework of study programmes, but individuals also expand their capabilities by means of life experience in general and work experience in particular. Learning purely from experience is free, but more specific types of learning will involve certain costs. These may be the direct costs of education, as well as loss of income, for example because a company allows an employee to carry out tasks in which he or she cannot yet be very productive, but which enable that employee to gain experience (see Killingsworth, 1982).

In principle, it is therefore possible to adapt supply to demand to a great extent. However, the greater the adaptations, the higher the costs will be. The optimal acquisition of knowledge and skills is determined, on the one hand, by the value of particular knowledge and skills for the labour market and the individual concerned, and on the other, by the initial capabilities that people have and their possibilities to adapt these by means of education.

If there is a discrepancy between the demand from employers and the supply of qualifications from education, this may have two causes. It may mean either that education is not fully able to optimally develop the available capabilities in the population, or that employers have expectations that education – given the limitations mentioned – cannot or does not want to meet. Conversely, not all shortcomings in the match between education and the labour market need result in discrepancies between supply and demand. If little is invested in the capabilities of a particular group of individuals, and employers offer these individuals low-paid jobs without many expectations of their potential, supply and demand may be balanced without their full potential being realised. In such a case, one speaks of a low-skill equilibrium (Finegold & Soskice, 1988).

Optimising investments in education, however, does not only mean that the best investment is sought for each individual. Education could take everyone to point A, as shown in Figure 5.2a. It is the diversity of capabilities that people have that is of great importance for a proper functioning of the labour market. After all, the high level of productivity in our western society is largely the result of specialisation and the division of tasks. Macro-efficiency therefore requires an adequate distribution of the available supply of students, according to the needs of the labour market. This is shown in Figure 5.2b. Education is successful in macro-efficient terms if all needs are met. However, to be efficient also requires that those individuals are led to a particular occupation for whom the distance is smallest. In other words, the total sum of distances in knowledge and skills to be bridged by education must be as

small as possible. Depending on the situation in the labour market and the interests and capabilities of the students, the latter will have to choose the type of education, level of education and learning pathway that suits them best.

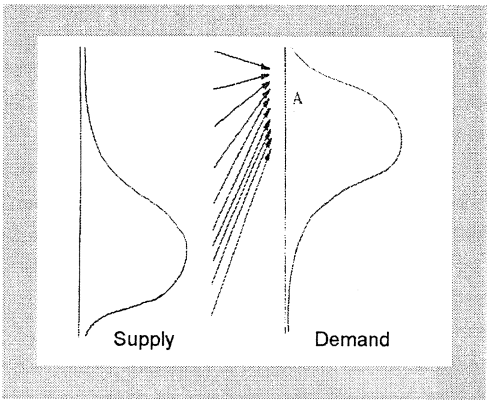

Figure 5.2a: One-sided educational objective

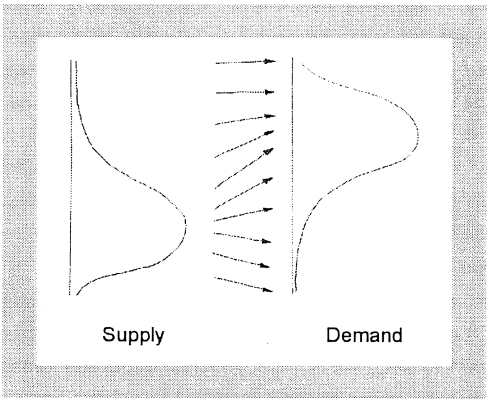

Figure 5.2b: Multifaceted educational objective

Clearly, social demand is subject to change. Technological changes, shifts in consumption patterns, and changing international competitiveness may have a serious impact on the distribution of the capabilities required. Education will have to adapt to this. As the exact composition of the demand will never be known, and this demand changes over time, education will not only have to ensure that everyone is guided to the most suitable location, but also that this is done in a way that guarantees a sufficient degree of flexibility to be able to adapt in time to any changes in the labour market. Broader study programmes, overlapping capabilities, and adaptation skills may promote such flexibility.

The broadness of a study programme refers to the diversity of jobs for which school-leavers and graduates are sufficiently qualified in order to function acceptably at their level. Broadness is then a labour market criterion, rather than a criterion based on the contents of the curriculum, which refers

to the diversity of topics offered. A broad study programme renders school-leavers and graduates less dependent on specific segments of the labour market, thus reducing the risks relating to developments in demand, and also to labour market uncertainty[23]. For students who have not yet decided what to do, a broad education that covers occupations within their field of interest may be of great value. For students who know exactly what they want, the value of this option is limited. From the demand side, such alternatives are of great value in markets that are subject to considerable fluctuations. In particular, if market developments are relatively independent of one another, the combination of a number of target occupations within a qualification has its advantages. For occupations with a fairly constant demand, the value of such an option would be less (see Heijke & Borghans, 1998).

This advantage of reduced risks is offset by the costs of a broader study programme. To provide access to a wider range of study programmes, the curriculum will need to deal with a greater number of issues. This means that the costs involved or the time required to complete the programme will increase, or that the study programme prepares its school-leavers and graduates less specifically for various occupations. An important aspect here is the degree to which the combination of jobs or occupations creates such costs. This is determined by the didactic options available to merge the study programmes for two different occupations. These options for combinations are obvious in the case of overlapping subqualifications or curriculum components. However, there may also be advantages to be gained from changing the structure of the curriculum.

The optimal broadness of a study programme is therefore determined, on the one hand, by the need to reduce risks and, on the other, by the possibility of achieving such a broadening in didactic terms. Both aspects may carry a different weight for each individual, and hence it is conceivable that broader programmes and specialist programmes exist side by side within a single occupational domain. From the macro-efficiency point of view, it may also be useful to have both a broad programme and a specialist programme for specific occupations within the same group of jobs. After all, uncertainty on the demand side will seldom imply that there is no longer any demand for individuals who are qualified for a certain job, only that demand for this job will fluctuate. Giving a limited group of participants a broader qualification may therefore cover a large part of the labour market risk, while enabling other participants to complete a simpler or cheaper education (Borghans & De Grip, 1999).

To achieve macro-efficiency in education, one always needs to take various considerations into account. These cannot merely be the requirements of employers, but should also consider the role different students with their individual capabilities and interests may play in this process. Education cannot deliver ready-made specialists, who need no further training during their careers, but choices need to be made with regard to what needs to be dealt with in the study programmes and what students should learn later. It cannot be determined a priori which occupation(s) a study programme should focus on, but a decision should be taken on the basis of subject-specific considerations as to the didactic possibilities of broadening a programme, and the desirability of widening the occupational domain of a study programme.

23 Dothan and Williams (1981) therefore speak of education as an option.

5.3 The control model

To evaluate such macro-efficiency considerations, the Act contains control mechanisms that should guarantee that vocational education provides the best possible match with society's needs and the labour market, and offers students opportunities for personal development and broad professional qualification. These are presented in their interrelationship in Figure 5.3.

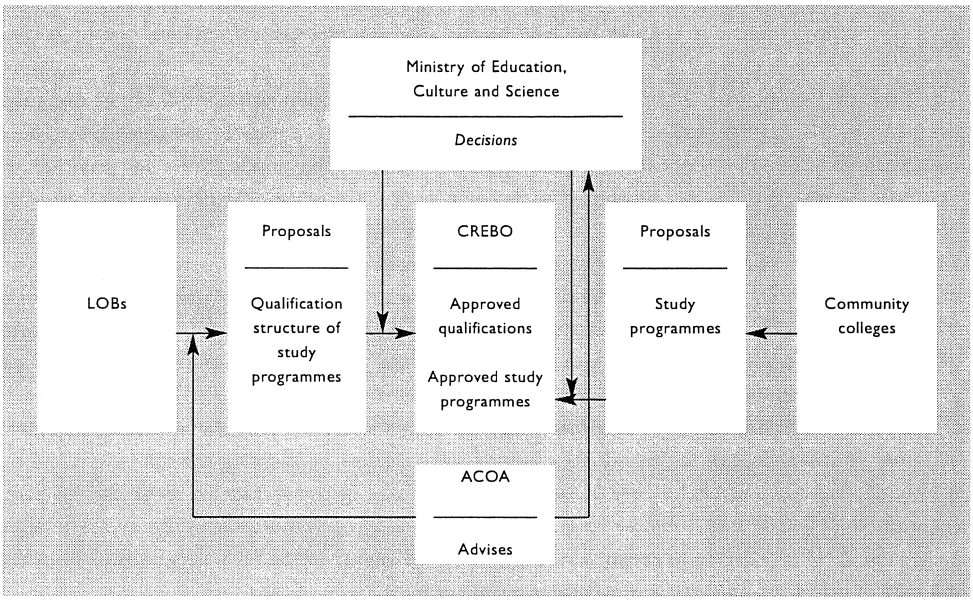

Figure 5.3: The control model for the match between vocational education on the one hand and society's needs and the labour market on the other

The lead bodies have more than one task within this control model. They are, first of all, responsible for the development and maintenance of the qualification structure of their trade or sector. This qualification structure determines which study programmes can be distinguished and what the contents of the study programmes should be. Decisions are based on occupational profiles, set up by the two sides of industry in the trade or occupational field concerned. Before the first of June every year, the lead bodies need to submit a proposal to the Minister of Education, specifying the attainment targets, the structure of these targets, their division into subtargets, their level (assistant, basic occupational, vocational, or specialist study programme), the learning pathways, and the occupation for which they prepare. Each proposal must be accompanied by a recommendation by the *ACOA*, stating that the proposed attainment targets contribute to the creation of a qualification structure that matches supply to society's needs, also in the light of labour market perspectives for school-leavers and graduates. The proposal should also take into account the link with *VMBO* (Preparatory Vocational Education) on the one hand, and with *HBO* (Higher Professional Education) on the other. This should become evident from consultations with the educational fields concerned. In addition, the proposals should pay attention to the efficient and effective deployment of public means and any relevant developments

within the international context. Although this is in principle a test with respect to content, the emphasis in practice is increasingly on formalities. There is a growing interest in finding out whether all aspects have been taken into account, without an evaluation of the contents of the lead bodies' proposals. On the basis of these proposals, the Minister will decide before September 1 on the attainment targets and the pathways of the new vocational education programme for the following study year.

In addition to these tasks relating to the qualification structure, the lead bodies are responsible for ensuring a sufficient number of apprenticeship places within companies and for monitoring the quality of these places. Within this context, the lead bodies also have the task of advising the educational institutions.

The fact that a study programme has been included in the qualification structure does not mean that every institute has to offer it. The community colleges may submit proposals for the study programmes they wish to offer. The proposals that are submitted need to be accompanied by proof of the programme's macro-efficiency and the availability of a sufficient number of apprenticeships. After the Minister's approval, the programme is entered in the *CREBO* (Central Register of Vocational Qualifications). These programmes are eligible for government funding. Decisions regarding funding are taken by the Minister, with due consideration to (1) society's need for this programme, and looking at the available offer by institutions that do not receive government funding, (2) the labour market perspectives of school-leavers and graduates, and (3) the degree to which the content of the programme contributes to sustainable and broad occupational qualifications.

In addition to giving advice on the proposed attainment targets, it is the task of the *ACOA* to assess the efficiency of the proposals for vocational education programmes, considering the full extent and the distribution across the field of vocational education. If a programme fails to meet the efficiency criterion, the Minister may withhold its entitlement to funding or withdraw it in the case of existing programmes. He may decide to consult the *ACOA*. The same applies to the Minister's decision regarding the type of learning pathways for a particular qualification.

5.4 Qualification development: the role of lead bodies

In our theoretical considerations, we have stated that shifts and innovations in the structure of a sector, in the relationship with technological and organisational changes in production processes, bring graduates from vocational education institutes face to face with the obsolescence of their knowledge during their careers and mobility to occupations outside their own domain. The uncertainty of these developments makes it impossible to anticipate fully in vocational education. In addition, the duration of study programmes is too short for students to acquire all the required knowledge and skills, and competencies that are lacking can often be acquired more efficiently during their later careers. It is therefore justifiable for the *ACOA*, in order to decide whether a proposed vocational education programme is eligible for government funding, to demand that its content contributes to sustainable and broad occupational qualifications (Art. 2.1.1).

The education plans drafted by the lead bodies and set down in so-called attainment target documents are based on occupational profiles. To this end, the lead bodies complete an extensive investigation of the content of a particular occupation and use this to analyse the subqualifications that need to be included in a study programme that targets this occupation. This approach fails to do sufficient justice to two essential issues. Firstly, the starting point of the analysis is a particular occupation or group of

occupations. This leaves unanswered the question of whether or not the study programme should address a wider group of occupations. Secondly, this approach avoids the issue of those aspects that can best be learned at school, versus those that can also be learned later during an individual's career. This means that no strategic choice is made as to what should be done during the initial phase, and what in the post-initial. It is true that sectors and their national bodies, as well as educational institutes, are paying more and more attention to these issues and trying to find their position, but what is lacking is a uniform view of the way in which this should be fitted into their traditional methodology. To promote the development of such a view, the Minister of Education should take the initiative. It is therefore disappointing to see that a recent policy memorandum on the vocational and adult education sector, called *Koers BVE* (*Ministerie van OC&W* (Ministry of Education), 2000), says nothing about the complementary relationship between initial and post-initial vocational education.

The lead bodies are set up along the lines of the economic sectors. This places them in a good position to detect any developments within the sector concerned that are relevant to those who work there, at an early stage and from an expert's point of view. These can then be translated into attainment targets for the study programmes. However, the sector-oriented structure contains a number of elements that may in themselves be obstacles to the creation of study programmes that are both broad and sustainable for professional careers and social functioning.

The sector-based subdivision of the lead bodies may prove an impediment to an adequate response to developments that transcend the sector and change the interrelationships. These include, for example, developments relating to ICT, multimedia, and quality of services. The lead bodies undoubtedly pay attention to these developments and will try to ensure that they are reflected in the content of the relevant qualification profiles. However, they need not all do this in the same way and may evaluate the developments differently. In particular, it is difficult to adequately and consistently include in the qualification structure any developments in occupational practice that lead to shifts or a blurring of sector limits. This is not only a technical matter; the sectors have interests in this field that the lead bodies cannot always ignore. By cooperating and matching their qualifications, or even developing common ones, such problems can be avoided. In practice, this only took place initially on a limited scale. Today, there are various collaborative structures[24]. The *ACOA*, however, includes no compulsion to do so.

A similar problem concerns the place allocated in the qualification structure to attainment targets, which constitute the key to mobility towards occupations outside a school-leaver or graduate's own sector, the ability to follow new developments within one's occupation in the long term, and one's social functioning. Insofar as this requires knowledge that transcends the sector, the question is again to what extent the lead bodies translate these in a uniform way into attainment targets for their respective sectors. That this problem is an obvious one is apparent from the initiative taken by the *COLO* (Umbrella Organisation for Expertise Centres Vocational Education-Labour Market) to set up a development plan to achieve a uniform implementation of core competencies (*COLO*, 2000a). Concretisation of the curriculum with respect to personal development and social functioning, however, still appears to be in a vacuum. This should be accomplished by the lead bodies when proposals for study programmes are drafted. As business and industry has such a great influence on the

24 See Brandsma (2001). Cases mentioned included the co-operation between *SH&M*, *SBW*, *SVS* and *Bouwradius*, between *VEV*, *Intechnium*, *SOM* and *VAPRO* (with regard to cross-sectoral qualification in technology) and between *VEV*, *ECABO* and *GOC* (with regard to ICT qualifications).

decision-making process in the lead bodies, this aspect often appears to receive too little attention in practice. The *ACOA* then tests the document that outlines the attainment targets, but this test primarily concerns the formal aspects. If the lead bodies indicate that they have also dealt with elements which are not directly related to labour market performance in the attainment targets, then the *ACOA* will refrain from any further content-related tests. There is a tendency to include elements in the curriculum that look at first like general content, while they have been included primarily because of their importance for job performance: an example is foreign languages. If personal development and social functioning were regarded equally as seriously by the *WEB* as professional training, then the concretisation of these elements would be better guaranteed.

The lead bodies compile reports on the labour market perspectives of study programmes and the availability of practical training places. These reports are collected by the *COLO*. In itself, it is, of course, a favourable development that national organisations make their knowledge widely available to interested parties, in particular to the community colleges. Having taken note of the respective reports, there is serious doubt as to the consistency and uniform quality of the labour market perspectives presented[25]. The forecasts are often of a rather arithmetic nature, leaving too little room for the dynamics of the labour market and any substitution or adjustment processes. This, in turn, raises questions with regard to the use of these data by the lead bodies themselves, for the purpose of finding support for the labour market relevance of the qualification structure that they themselves have developed. There is a latent danger that they will allow their views to be led too much by short-term developments within their own domain, paying insufficient attention to external developments. This makes it difficult to determine what the implications of future technological innovations and labour market fluctuations will be, in particular outside one's own domain, for the qualification profile to be set up. The *COLO* does, however, try to create greater uniformity in the setup of labour market forecasts, by developing a common format. Nevertheless, it will be some time before we can speak of uniform recognition and interpretation of common developments. And we are not even talking about taking interdependencies between the developments of occupations and sectors into account.

The strong institutional anchoring of the role of lead bodies may constitute an obstacle to the identification of and subsequent response to new developments in the labour market, which occur in sectors that are not yet organised as such and cannot join the lead bodies. Here too, we can refer to ICT developments, as well as to the cleaning sector. There is therefore a danger that blanks will emerge in the qualification structure, in particular in areas where shifts and innovations in labour market demand complement the qualification structure.

The lead bodies are related to sectors that have certain interests in the field of vocational education. It is, of course, good that these sectors ensure that topical information is made available, on the basis of which both broad and sustainable qualifications can be developed, which provide students with favourable perspectives in the labour market. These may be study programmes that were previously funded privately from within the sector. By including these study programmes in the qualification structure, government-funded institutions can now also offer such programmes. As a result, the costs of education will be shifted from the sector to government. This will generally meet with approval from the sectors, especially if the lead bodies allow them to continue to have a great influence on the study programme. After all, it is they who specify the occupational profiles and the attainment targets of the programme that are derived from these profiles. They may also be strongly involved in certification and

25 Cf. *COLO*, 2000b.

examination, and hence indirectly determine the choice of teaching materials, which may even be supplied by them. Lastly, they have an influence through the provision and quality control of practical training places. These influences may be contrary to society's needs to provide students with the best possible preparation for their careers. This is the case in particular if the coverage of occupational profiles is artificially restricted and the qualifications derived from them do not have a broad and sustainable character. The influences of the sectors listed above may also affect the social importance of free competition in markets. In discussions with lead bodies, this sometimes inordinate influence of the sectors is already being mentioned occasionally.

It is also possible that sectors sometimes deliberately keep study programmes outside the qualification structure. This is the case, for example, if sectors have a distinct education policy that supports the development of knowledge and career policies within the sector. By providing the study programmes themselves, they are able to select students and withhold knowledge from companies that are not members of the trade organisation. This constitutes a strategic competitive interest on the part of the sector. For vocational education, such 'monopolisation of knowledge' will lead to a situation in which certain qualifications are not included in the qualification structure, even though it would be socially desirable. We do not know, however, to what extent this is the case. It may also be more likely for courses at post-secondary VET level. Whatever the case may be, the Act offers no instruments to either detect or prevent such situations.

In conclusion, we can state that the role assigned by the Act to the lead bodies in the creation of the qualification structure is a good starting point for the development of vocational education programmes that match the needs of the various sectors in the labour market. The sector-oriented organisation of the lead bodies does, however, carry a number of potential dangers with regard to the effectiveness of the control mechanism created by the Act for the development of the qualification structure. Insofar as these dangers manifest themselves, they obstruct the creation of a qualification structure that ensures broad and sustainable qualification for occupational careers, as intended by the Act. The control mechanism can all too easily lead to great differentiation in study programmes and insufficient attention to new developments in the labour market that transcend the boundaries of the sector, key skills (or core competencies), and social development of the individual.

5.5 Macro-efficiency advice: The role of the *ACOA*

The Act is based on the idea that the concretisation of the study programme must be a dynamic process that continuously responds adequately to developments in society. For this reason, a large part of the responsibility for the concretisation of education has been assigned to such organisations as the lead bodies and the community colleges. Students also have great freedom of choice. As there is the possibility that the social interests of parties who make educational choices can be overlooked, the legislators decided that some control of the efficiency of education was necessary, in order to prevent unwanted situations (*Ministerie van OC&W*, 1996a). This test is generally referred to by the term 'macro-efficiency'. The concretisation and development of the concept of macro-efficiency can best be illustrated by the decisions granting permission to introduce new study programmes (newly offered courses) at institutes.

In July 1996, the Ministry of Education (*Ministerie van OC&W*, 1996b) announced that colleges would have to have their new courses tested for macro-efficiency. "The registration of new courses will be subject to great reserve. Any applications for new courses must always be elaborately motivated and

well documented." *Ministerie van OC&W* (1996b) stated the criteria for macro-efficiency as: "(1) the availability of a sufficient number of practical training places, (2) the labour market perspectives of school-leavers and graduates". At the time of application, institutes need to supply the material for the macro-efficiency test themselves (the onus of proof lying with them). This means that a community college that wishes to register a new study programme must "supply sufficient objective and reliable data that proves the efficiency of the study programme, in relation to existing programmes at other institutes." It is interesting to note that implicitly it is not only the labour market perspectives as such, but also the relationship with other colleges that appear to be a criterion. Institutes may prove their macro-efficiency on the basis of such information as advice from the lead bodies concerned, statements from important players in the regional and/or national labour market, studies in the field of regional, national or international labour market developments. The vague description of the labour market criterion suggests that the Ministry did not have a clear idea of the concretisation of the concept of macro-efficiency. This list also fails to make it clear how to regard the relationship with programmes offered by other institutes. Colleges also seem to have problems supporting the macro-efficiency of the study programmes that they want to offer and submit a wide variety of documentation to the Ministry. All colleges make new applications, varying from 3 to 958 study programmes. A comparison between the applications submitted and the forecasts for labour market developments, as published by the *ROA* (Research Centre for Education and the Labour Market) of Maastricht University (*ROA*, 1995), proves that there is no relationship between the development of the labour market perspectives of the various study programmes and the applications submitted. Institutes tend to apply for approval for study programmes that they lost at the time of the transition from the old situation to the *CREBO*, and for programmes that they had always wanted to have. A number of parties involved have indicated that the catering industry in particular is very popular with many community colleges, for reasons that have nothing to do with labour market developments.

In its allocation policy, the Ministry gives priority in particular to so-called complementary programmes. These are programmes that fit well into the existing range of a college – especially if the programme concerned is a complementary learning pathway or complementary to a programme in the same column offered at a lower level. The implicit reason for this is that the Ministry wishes to promote both the work-based pathway and, in particular, the school-based pathway. In addition to the formal demand criterion of favourable labour market perspectives, the supply criterion – providing for students who have a great chance of dropping out – also appears to be an important one. The prevailing practice at the Ministry therefore seems to be more in line with the framework outlined in Section 5.1 than the formal criteria stated in the legislation.

On the basis of the results from the first round, the *ACOA* (1996) concluded that the self-regulating power of the institutes was still insufficient and it therefore argued in favour of a stock-taking study to determine which data were needed for a proper macro-efficiency test. Commissioned by the *ACOA*, Romijn (1997) compiled a report on a procedure that could be used to test macro-efficiency. Again, there appears to be no clear picture of what exactly is meant by macro-efficiency. The recommendations made in the report are more concerned with the procedure, while, with respect to the concept of labour market relevance, remarks do not go beyond phrases like *"the study programme shall contribute to the reduction of an existing or expected shortage of workers in certain occupational groups"*.

The *ACOA* (1998a) indicated that colleges should indeed focus more on the demand for education in students than on the needs of the labour market, and that the distribution of study programmes is largely historically determined and not related to the demand in the labour market. To steer this in the

right direction, we need more and, in particular, more detailed data (*ACOA*, 1998b). Many applications for new study programmes appear to come from the hotel and catering and tourist sectors. The *ACOA* (1999b) published a special test report on macro-efficiency. It remarked that "it can be observed that education in the tourist and leisure sector enjoys a healthy interest from students. The committee therefore finds a certain discrepancy between the demand in the labour market and the number of students who wish to be trained in the tourist and leisure sector." The applications made by eight colleges were scrutinised in the light of the national figures available. In its report, the committee stated, however, that the available data constituted an inadequate basis for an unequivocal conclusion on labour market perspectives. It is difficult to compare the various sources and they seem to contradict one another. The assessment of the applications made by the colleges and the advice to the Minister were therefore determined largely by formal criteria. It is not the question whether there is a demand in the labour market, but the way in which the community college supports its application. That is the decisive factor for the advice.

The tendency to emphasise formal criteria in the procedure also appeared from the new 1999 guideline, in which the Minister indicated that the community college must prove that it has assessed the labour market situation, by referring to data from the relevant national organisation, by referring to *ROA* data, or in some other way. The conclusion drawn by the college on the basis of the data has not been tested." In 2000, the Vocational and Adult Education Council therefore reported to its members that the macro-efficiency test could be omitted. "According to the Minister, the community colleges are eminently capable of determining, on the basis of information available on the labour market, perspectives for school-leavers and graduates and the availability of practical training places in the region, which qualifications from the qualification structure they want to offer."

At the beginning of 1999, the *ACOA* (1999a) concluded that there was "no restraint whatsoever in institutes to apply for and/or to want to offer new programmes". It therefore advised supplying proper data on developments in the labour market, an adequate test afterwards by means of surveys among school-leavers and better rules to provide the community colleges and agricultural colleges with relevant information. The *ACOA* (1999a) therefore observed that it was not possible to achieve quantitative control within the legal framework.

Discussions have shown that in policy circles the failed attempts to implement a macro-efficiency policy have led to the conclusion that this can perhaps better be left to the colleges themselves. There is, however, little reason to believe that such a policy will lead to a desirable distribution of study programmes. Box (1991) shows that, even in higher education, such freedom for education institutes leads to a differentiation of programmes that fails to acknowledge what can be regarded as socially optimal. Reports by the ACO (Advisory Committee for Study Programmes in Higher Education (1995) also show that it is difficult to keep differentiation in higher education under control.

One may also ask whether the instruments of the Act are suitable to promote macro-efficiency. Firstly, it is remarkable that control of student flows only took place indirectly, by regulating the study programmes offered. In addition, regulations have failed to grasp good criteria with respect to macro-efficiency.

It is striking that the macro-efficiency test focuses strongly on individual study programmes, considering only the demand side of the labour market while ignoring the supply side, and developments in other training colleges in the region apparently not playing any role either. If we follow the logic of the rules, any college could offer a particular course if it had favourable perspectives. Macro-efficiency, however, would require coordination between the programmes. De Heer (1999) states that – because different

colleges can use a variety of sources – the same test would yield a positive result for one college, and a negative one for another. In addition, the macro-efficiency test fails to ask colleges to consider the consequences of a new study programme for its range of programmes as a whole. One study programme might therefore draw in students from another programme, while some students might find that a suitable study programme for them is lacking. It is therefore a natural step to ask colleges to take a close look at their entire range of study programmes. *ACOA* (1999d) indicated that "after three rounds of macro-efficiency tests, qualifications have been narrowed down to such an extent that a fourth round is almost superfluous. But is it? If all colleges are allowed to implement all the qualifications included in the qualification structure in both pathways, then an education marketing plan is very close."

The *AOC-raad* (Agricultural Training Centre Council) (1998) even indicated the format in which such business plans should be presented. Unfortunately, the form again appears to be more important than the content. Meanwhile, the Minister issued the *Koers BVE* memorandum, in which he indicated that he did indeed intend to give the community colleges more responsibility for the macro-efficiency of the programmes offered.

For more specialised programmes, which one cannot expect every college to offer, national coordination seems appropriate. If several colleges applied for permission to offer a particular programme, for which it is in itself desirable that the number of study places is increased, the *ACOA* could advise the Minister as to the college where such expansion could best be achieved, considering the distribution of programmes offered across the country. At this moment, colleges have the right to offer a programme anywhere they like. This possibility could stand in the way of geographical coordination by the *ACOA*.

5.6 The study programmes offered: the role of community colleges

Within the framework of the Act, the institutes for vocational education were able to develop into large regional colleges for vocational education. These have become veritable companies, in which a large staff of sometimes more than one thousand employees provide education for many thousands of students. Discussions with the boards of these community colleges have made it clear that they wish to fulfil a social function. They regard themselves as the providers of solutions to the regional educational needs and they are aware of their position as a strategic link in the development and maintenance of human capital in the region. Although they are able to give shape to their mission in their own way, they generally strive for a highly varied range of study programmes, from which students may choose what they think is most suitable and useful for themselves.

Although this development is very valuable in itself, it also hides a number of potential dangers. A situation has been created which can easily lead to more licences for study programmes than necessary being requested and underutilisation of those licences already obtained. This greater focus on the needs of students, companies and colleges may increase the desire for differentiation in study programmes and shift attention from the longer to the shorter term. The result is insufficient attention to the importance of a broad vocational preparation, social development, and the acquisition of key competencies in order to be able to follow future innovations in occupations and to shift to a different occupational domain.

This independent position of the community college as regional producers of education has received too little detailing in the Act. It concentrates on the creation of the qualification structure, the way in which this can be translated into a range of study programmes on offer, and their funding. There is less attention or none at all paid to the way in which the community college should meet the regional education needs among the population, businesses, and institutes, or how education should be organised. The distinct concept of efficiency in the Act, if we consider the concept as a whole and the distribution of programmes offered, appears not to apply to this aspect of the education offered. The training colleges appear to be regarded as the providers of the programmes enclosed in the qualification structure set up by the lead bodies and acknowledged by the authorities. This need not be a problem, because not everything has to be controlled by law. It is possible, however, that the Act – because it fails to specify the independent position of community colleges with regard to student potential – is creating bottlenecks in its attempts to develop this potential optimally. Discussions with community colleges have shown that there are nuances to be made. In the most favourable case, they regard the qualification structure as a point of reference for the development of a range of study programmes that are relevant to the regional labour market. Sometimes, the qualification structure is regarded as less relevant or oppressive, and they only provide an optical relationship with their own offer[26]. The balance in the Act appears to have tipped too far in favour of the creation of the qualification structure.

An important policy instrument to promote the 'labour market relevance' of study choices is study and career information. The Act pays hardly any attention to this; it only indicates that providing information on study and career choices is a task of the educational institutes (*WEB*, Art. 8.1.3.). This task includes, in principle, both the provision of information on labour market opportunities and personal guidance of students in the process of choosing a study. It is an understandable choice to leave personal guidance to the colleges, but it is striking that the task of providing information is also entrusted to the colleges. Firstly, providing objective information may be at odds with the interests of a college to attract students. Secondly, good labour market information is not specific to a particular college. Centralising this task of providing information may therefore increase reliability and quality, and reduce costs at the same time. We must add that the Ministry also considers the provision of study and career choice information on developments in the labour market as one of its tasks.

From the discussions that we have had, we can conclude that the personal guidance provided by colleges consists mainly of mapping the personal preferences and capabilities of the students. In practice, colleges appear to hardly ever point students in the direction of alternative study programmes that offer more favourable labour market perspectives. Insofar as the supply of students responds to developments in the labour market, this is therefore largely the result of adjustment behaviour on the part of students and their parents.

Article 8.1.1 of the *WEB* offers colleges the possibility of being selective in their admission of students. This selection option is primarily an instrument to test the students' aptitude. In practice, however, such an instrument could also be used – intentionally or unintentionally – to find a better balance between supply and demand. As has been mentioned above, however, schools appear not to pursue any explicit policy with regard to the intake of students. They often regard it as their duty to accept anyone

26 In principle, community colleges have the option of specifying 20% of the qualifications independently. In practice – says the *ACOA* – this opportunity is hardly seized.

who applies to study there. It is therefore even conceivable that the selection of students on the basis of their aptitude may be an impediment to a proper matching of supply and demand. This may be the case in particular when demand increases and hence the influx of students grows. After all, additional influx generally consists of students who will be less suitable for the occupation concerned than the "hard core", while the additional supply also makes strict selection easier.
As a result of the increase in scale that community colleges have undergone, they seem eminently suited to implement an education policy that respects the broader social relevance within the context of available education as a whole. In practice, however, training colleges appear to have to give account of minor decisions, they are strictly bound by the decisions taken by the lead bodies and very much oriented towards the wishes of business and industry. It seems a natural choice to give colleges the responsibility for a balanced offer of study programmes and the contents of these programmes, giving due consideration to the interests of the student population, business and industry, and the need for broad personal development. Such a responsibility should, however, be accompanied by supervision aimed at the policies of colleges as a whole, based on a consistent view with regard to the concept of macro-efficiency.

5.7 Conclusions and recommendations

Knowing that the labour market is dynamic, and hence that the requirements that vocational education programmes must meet are also changing constantly, the educational requirements have not been laid down in the Act, but legislation provides a framework in which constant adjustments to the programmes offered and their contents may take place, driven by the insight of business and industry, which knows better than any other party in which direction developments are moving. The lead bodies play a crucial role in this process. However, the social relevance of education does not always match the interests of business and industry. As secondary vocational education is largely paid for by the government, government has formulated a number of additional criteria that need to be met by study programmes. These criteria are referred to by the term macro-efficiency.

The present chapter shows, however, that the mechanisms built into the Act constitute an obstacle to the emergence of sufficiently broad study programmes. Because of their sector-oriented structure, the lead bodies are well able to identify developments in their own sector in time, and to translate these adequately into attainment targets for vocational education programmes. The subdivision of the lead bodies into sectors, combined with the inherent conflict of interests, carries with it the potential danger of insufficient attention being given to suprasectoral developments and new developments outside the sector structure. The result is greater differentiation within the qualification structure than is necessary, and vocational education programmes that are not broad enough, and fail to provide adequately sustainable qualifications for occupational performance and social functioning. The balance between what needs to be acquired in initial education and what should be learned during one's occupational career appears to be upset by the great influence of business and industry on the content of study programmes. Greater insistence by lead bodies to meet both the educational needs of students and the labour demand of companies and institutions, may increase this suboptimal differentiation in study programmes.

These potential dangers are countered by the increased cooperation of lead bodies and the *COLO* getting a greater grip on its coordinating task. This development should be stimulated. In particular *COLO*'s coordinating role should be promoted and, if necessary, laid down in the Act. There should also be a greater exchange of information between the lead bodies, a more uniform view of developments in the labour market, what their impact is on vocational education, and how occupational requirements can be translated into attainment targets. These attainment targets of vocational education programmes should be argued more explicitly from the aspects of initial versus post-initial, broadness of the programme, labour market relevance (taking into account any suprasectoral and new developments), key competencies, and opportunities for social development.

Consideration may be given to centralising the responsibility for the submission of qualification structure proposals and assigning this responsibility to a central body. It is important to make sure that such a central body is not an extension of the lead bodies, but is able to act decisively and on its own initiative. This central body should be able to take a balanced decision between the interests of business and industry and the other interests involved in vocational education, in particular those of potential students. The central body should have the opportunity to approach third parties, in particular research institutes, for knowledge and information, which it can use directly, or to give a second opinion regarding the proposals of the lead bodies. This will keep the lead bodies on their toes and help to make sure that the general criteria applying to qualifications are met.

As a result of the scale increase that has taken place among the community colleges, they seem eminently suited to bear the responsibility for an education system which, as a whole, is the best answer to the question of how the capabilities and interests of the available student potential can be developed optimally for sustained labour market participation. In connection with the aforementioned improvements in the development of the qualification structure, it would be an obvious choice to grant the community colleges a greater degree of freedom in their specific concretisation of the qualification structure, on the basis of a more general description of the attainment targets. The more general nature of the attainment target documents will give the community colleges more room for an individual approach to the concretisation of the study programme and its adaptation to new developments.

It goes without saying that community colleges will need to give account of their policies. In the present situation, it is primarily the individual decisions taken by the colleges that are tested. As stated above several times, it would be more appropriate to ask the community colleges to account for their entire policies on the basis of a business plan.

Making explicit a view by the community colleges of the study programmes that they offer is to a certain extent in line with the plans outlined in the recent policy note (*Ministerie van OC&W*, 2000). But according to these plans, the national macro-efficiency test by the *ACOA* with regard to the available study programmes is no longer activated. A test is essential to encourage the lead bodies, *COLO*, or another central body and the community colleges to base their choices on macro-efficiency criteria. The basis for this test would have to be a vision of macro-efficiency which is broader and clearer than what is presently laid down in the Act. As mentioned before, the issue would then be to achieve a proper match between the study programmes offered and not only the labour market but also the development possibilities of the student potential. By adding the second element, the macro-efficiency

test is no longer merely a labour market issue, but becomea a social issue. Testing the plans made by the lead bodies and the community colleges' business plans for macro-efficiency may then be more within the realm of the Education Council than that of the present *ACOA*. At any rate, it will be necessary to strengthen the position of the *ACOA*, in the sense that it can give its judgement with authority, paying optimal attention to the subject-specific aspects of vocational education and less to procedural ones. To be able to do so, it must be capable of mobilising the required expertise, by either acquiring such expertise internally, or obtaining it externally, for example, by consulting research institutes.

In line with what is stated in the policy document on this topic (*Ministerie van OC&W*, 2000), the Ministry could make sure that the community colleges avail themselves of adequate information in order to develop a view of the study programmes that they provide. In the spirit of the document, the community colleges should be free in their choice of the information on which they base their views. If these views were to take the form of a business plan, which needs to be accounted for externally, the information used to set up such a plan would have to meet certain reliability conditions. The lead bodies would then be challenged to provide relevant and useful information that is of use to the community colleges, since they are now competing with other sources of information and hence delivering quality is important. On the other hand, the testing organisation would also be able to use the available information and therefore not need to blindly follow the views of the lead bodies and community colleges.

In addition to forward-oriented business plans, the colleges should also pay attention to the social returns from the study programmes provided in the subsequent quality evaluations, which they are already required to carry out by the Act (*WEB*, Art. 1.3.6), that is to say, to the degree to which the study programmes meet the needs of society and, more particularly, of the labour market. These subsequent evaluations should therefore pay explicit attention not only to the education process, but also to the later performance of school-leavers and graduates in their occupational practice[27].

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