



# Changing pedagogic and didactic approaches in vocational education in the Netherlands: from institutional interests to the ambitions of students



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At the Lisbon summit in 2000 the European Council set the strategic goal of becoming the most dynamic and competitive region in the world within 10 years. One of the responses of the Dutch government to this ambition is to invest in vocational education. Strengthening vocational education in the Netherlands must result in a second main route into higher education. According to national government policy, a cohesive, vocationally oriented pedagogic-didactic approach is one of the foundations of such a route. This new approach must unite two basic assumptions. The various standards in vocational education must jointly form an institutionalised stream or 'column' (1) and, at the same time, the career of the student must be central to the pedagogic-didactic organisation of this column.

This article will present a number of building blocks for outlining such a new approach. The confrontation between vocational images and the wishes of students, on the one hand, and formal qualifications and profiles that are provided by institutions, on the other, would have to be an important guideline for the objective and organisation of learning paths. A 'community of practice' is an essential learning arrangement in a programme that is aimed at developing competences and self-regulation of learning and career development. At the same time, the boundaries of institutions for organised learning are no longer relatively stable, but are constantly shifting and regrouping around the careers of their students.

The assumption is that by implementing such a radical approach within vocational education, more students will find learning a highly relevant and attractive experience. This might lower dropout rates and lead to a higher qualification level for the total population.

## Introduction

The Dutch education system is marked by what initially appear to be two separate sub-systems at secondary level, namely general secondary education and vocational education (see figure 1). However, a significant number of students change the course of their education. The most common switch is that from general secondary education to vocational education, as shown in figure 1. Such a switch is in line with the intentions of the Wet op het Voortgezet Onderwijs [Secondary Education Act] (WVO) from the 1960s, which forms the basis of the organisation of secondary education in the Netherlands. This system act was designed to stimulate an educational career that consisted of a start in general secondary education and ended in vocational education or university. A route within vocational education to higher education was not recommended within the plan at the time. Even the introduction of the Wet Educatie en Beroepsonderwijs [Education and Vocational Education Act] (WEB) in 1996, which since then has governed secondary vocational education and adult education, did not alter this basic principle of the education system (see den Boer, de Bruijn and Harms, 2002; Nijhof and Van Esch, forthcoming).

## Strengthening vocational education

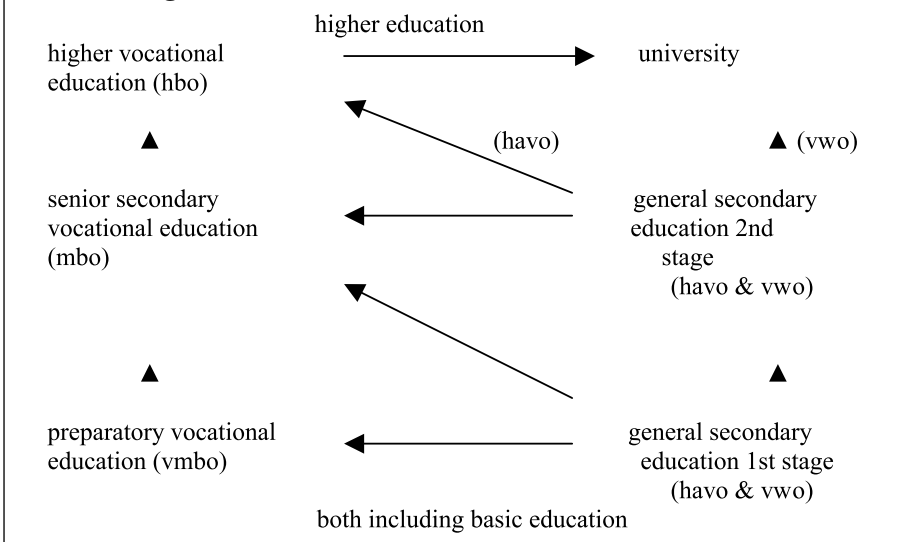
Until recently, the various components of the vocational education stream in the Netherlands, namely preparatory secondary vocational education (vmbo), and secondary and higher vocational education (mbo and hbo respectively), were viewed and regulated separately. More recently, policy-makers have paid more attention to bringing these components into line. This attention was prompted by, among other things, the extent of unqualified dropout in areas of vocational education and the suspicion of a 'reserve of talent' within secondary vocational education.

Dropout is concentrated at the lower qualification levels of vocational education. In 1999 18 % of 15 to 24 year olds had not obtained a qualification at SEDOC-level II and had already left school (Geerligs, de Jong, van der Velden and Wolbers, 2002). In the Netherlands, SEDOC level II is defined as the minimum qualification for school leaving. School leavers without this minimum qualification have problems entering the labour market and are at risk throughout their working life (unemployment, low quality jobs, etc.).



**Figure 1**

**Diagram of the main routes within the Dutch education system at the second and third stage**



While a relatively high number of dropouts is the first problem policy-makers want to tackle by strengthening vocational education, stagnation in throughput within the various programmes that constitute vocational education is the second. At the lower qualification level this stagnation refers to transition from vmbo to mbo. Too many youngsters do not enter mbo after vmbo though the minimum qualification can only be obtained by completing a programme within mbo. At the other end of the spectrum is the transition from mbo to hbo. Within mbo, progression is possible from one qualification level to another; this starts with qualification level I and ends with IV, giving entrance to hbo. Policy-makers are convinced that more students are able to obtain a qualification at a higher level than currently do. Therefore, vocational education at all levels must become more attractive and the transition must be smooth. Vocational education should be more cohesive according to policy-makers.

**European policy**

Striving for a cohesive vocational stream and the strengthening of vocational education is strongly influenced by European policy. The European Council set an ambitious agenda for the European Union at the Lisbon Summit in 2000 (European Commission, 2002). In 2010 Europe should be the most dynamic and competitive region in the world. Knowledge, innovation and social cohesion have a role to play as part of the policy strategy for achieving this ambition. According to the European Council, it is important to en-

sure a well-educated and widely employable population, a good research infrastructure and a healthy climate for innovation.

The Dutch Government revealed itself to be a fervent supporter of these plans with its ambition to take its place in the leading group within such a Europe. One element in the policy strategy of the Dutch Government for producing a better-educated population was to increase the number of students moving on to higher education. This turned the spotlight onto vocational education. After all, little more was likely to be gained via the route of general secondary education because most qualified students already went on to higher education. Furthermore, a well-equipped vocational education system will be attractive to its participants and might cause fewer dropouts.

In 2002 the European Council in Barcelona underlined this focus on the quality and the strength of vocational education as an important element in realisation of the Lisbon agenda. In fact at least three of the five targets that the Education Council adopted (May 2003) to be achieved in 2010 put a heavy load on vocational education (European Commission, 2003). These are:

- by 2010, a European Union (EU) average of no more than 10 % early school leavers should be achieved;
- by 2010, at least 85 % of 22 year olds in the EU should have completed upper secondary education;
- by 2010, the percentage of low-achieving 15 year olds in reading literacy should have decreased by at least 20 % compared to the year 2000.

As the Netherlands has the ambition to be in the forefront of the European Union and knowing that at present 60-70 % of every age group is enrolled in vocational education during secondary education (whether first or second stage), the claim on vocational education is clear. Although the ambition of other Member States might not be to participate in the leading group, commitment to the described targets implies a challenge for their (vocational) education system too. This makes the Dutch attempts interesting to examine. Furthermore, issues concerning parity of esteem, the attractiveness of vocational education and progress to higher ed-



ucation from vocational paths are ever-recurring topics in the discussion on quality and position of vocational education (see for example: Brown and Manning, 1998; Trant, 1999; European Conference on Educational Research, VETNET programme, Lisbon 2002; Breuer and Beck, 2002).

### Research project

Current Dutch policy to strengthen vocational education is to focus on greater harmonisation between the components of the vocational education column. This harmonisation should be accomplished by increasing the flexibility of the educational process. A cohesive, vocationally oriented pedagogic-didactic approach throughout this column is seen as an important element of such a strengthening of vocational education. According to policy-makers in 2001, a concrete concept for such an approach is missing.

In 2001 and 2002 CINOP Research Unit carried out research into the possible content and examples of approaches in this respect. The project aimed at the development of a conceptual framework that should give direction to attempts to put the cohesive pedagogical-didactic approach into practice. So the target result of the research project was defined as a coherent perspective on changing educational practice within vocational training that stimulates and confronts policy-makers and workers in the field. The conceptual framework should be neither too concrete nor too abstract. It should represent a way of thinking instead of precise and operational guidelines. However, both empirical and theoretical argumentation should underpin the conceptual framework.

The central research questions therefore were twofold:

- conceptual: how should we define this new pedagogical-didactic approach for vocational education?
- descriptive: are there promising examples of such an approach in educational practice?

In the research project the constructivist paradigm on learning was central for conceptualisation and analysing concrete practice. At the same time efforts were made to confront theory and practice (i.e. by means of an iterative process) in order to sharpen

conceptualisation and operationalisation. During the successive research phases, conceptual and operational models were continuously compared to each other.

### Concrete research activities were:

- desk research and literature study as input for conceptualisation;
- consultation with 15 key persons within the educational support structure and with research institutions to detect innovative practices and to discuss the scope and aims of innovations;
- interviews with coordinators of fifteen selected innovative practices within vmbo, mbo and hbo in order to investigate and discuss the scope, aims and concrete practice of these innovations;
- four in-depth studies of the most promising practices, including observations and interviews with students and teachers;
- a meeting with 15 expert representatives of promising practices within vmbo, mbo and hbo in order to amend and validate the provisional results of the research project.

Knowledge from sound scientific practice was combined with knowledge produced in the direct context of application. Gibbons, Limoges, Nowotny, Schwartzman, Scott and Throw (1994) use the phrase 'mode 1' to distinguish the former knowledge source from the latter which they refer to as 'mode 2'.

From these research activities, a framework was developed using conceptual building blocks based both on theoretical notions and practical examples. The remainder of this article will present this framework, preceded by a more detailed look at its basic principles.

### Policy notions: column versus career

In the quest to turn ideas into reality, a critical eye was first cast over the key principles that underlie recent Dutch policy on vocational education. The basic policy assumption for making education more flexible emphasises a cultural shift towards the student's perspective instead of, as in previous periods, the institutional perspective. The main idea is that the career of the student must be central to education, that educational



paths must be tailored to that career and that these paths are characterised by a cohesive, vocationally oriented pedagogic-didactic approach which 'captivates and thereby binds' the various students.

Two central key principles can be distinguished in these policy assumptions. On the one hand there is the perspective of a vocational column, in which the emphasis is placed on increasing internal output and throughput. On the other hand there is the perspective of a career as a guiding principle for the organisation of learning paths for students leading to vocational qualifications.

These two basic principles must be explicitly linked when making policy concrete. Column and career ideas should be united in adopting this 'cohesive, vocationally oriented pedagogic-didactic approach throughout the vocational education column' as stated by policy-makers.

Closer examination, however, reveals that the first basic principle of the support column idea (still) appears to be a sign of 'supply-based thinking from the offer available', while the second basic principle actually goes beyond the institutional framework. Thus, from the column idea, educational paths are organised with the emphasis on school-based, initial education that remains within the confines of the column. Conversely, the career idea implies the primacy of student demand, in which the boundaries of existing institutions and structures within the education system are not confining.

The column idea and the career idea cannot, therefore, be reconciled on all points. The column idea takes precedence when putting general policy into operational guidelines and regulation. This idea leads to clearly identifiable action points such as cooperation between schools and businesses, syllabus tie-ups and the development of longitudinal programmes with intermediate qualification points. The career idea is (still) described in rather 'woolly' phrases such as 'warm transfer', a 'development-oriented approach' and a 'competence-oriented approach'.

So for the time being the emphasis in thinking and acting is still heavily on the column idea (the 'cold side'). However, if there were to be a radically different pedagogic-didactic approach, the career idea (the 'warm side') would have to give much more weight

to conceptualising and making operational that approach. At the same time, the differences between the two basic principles would have to be overcome in reality. After all, that approach involves the confrontation between elements of the career (being the experiences and prospects of students) and the column (being the world in which that career must take shape).

### **Constructivism**

The central assumption of recent policy from a pedagogic-didactic viewpoint is the effort to give shape to forms of activating, authentic and competence-oriented education in such a way that this is flexible and tailored to the student population in the sector. Many of the present experiments in Dutch educational practice that are aimed at revamping learning and teaching processes are also being covered by these principles. The constructivist paradigm on learning, therefore, appears to be a major source of inspiration for the new basic principles concerning learning and teaching in vocational education. A more detailed investigation of this view may well make the career-oriented approach more concrete and simultaneously tie in with practical experiments that are developed from the same point of view.

Central notions on learning highlighted in the constructivist philosophy include (see Bransford, Brown and Cocking, 2000):

- learning involves processes of constructing meaning in continuous interaction with the social and cultural context. Learners test the validity of developed constructions through dialogue. The psychologist Bruner characterised this process by the phrase 'negotiation of meaning': joined deliberations about the meaning of concepts in order to come to a better common understanding. Within learning arrangements, the teacher and students play a vital role in this process. Collaborative learning is, therefore, an important form of learning. At the same time, it is the task of the teacher (as an adult cultural bearer of meanings and as a pedagogic-didactic coach) to take this construction process further than students can take it alone. In learning arrangements it is important to give shape to the zone of approximate development as a goal of learning;
- learning is situation-related, with the consequence that the results of learning are



also situated. The ability to continue to learn in ever-changing situations and take previously acquired competences onto a higher level is known as transfer. This ability can be encouraged by allowing learning to take place in a wide range of situations and contexts (van Oers, 1998);

□ regulating one's own learning process can be learned (Veenman, Elshout, Meijer, 1997). Self-regulation can be developed as a result of a gradual and coaching approach in which stimulation of learning to learn strategies and domain-oriented instruction go hand in hand (van Hout-Wolters, Simons and Volet, 2000);

□ not only do learners reinterpret new content-related information from within their own conceptual framework, they also do so with regard to didactic instructions and designs, in which the individual learning theory plays a leading role. Entwistle (1991) indicated this as follows: '...it is the students' perceptions of the learning environment that influences how a student learns, not necessarily the context itself' (p. 202). It is important to take this into account by giving space to the subjective learning theory and the learning style of students when organising learning arrangements;

□ learners differ in the extent to which they require learning to be structured externally. There are also differences between learners with regard to the nature of the structure required. Both the nature and extent of external structuring also depend on the formulated learning goal (Elshout, 2000). In other words, certain support will work for a certain group of students or a certain student in one situation and not in another. These differential effects must be taken into account when organising learning arrangements, for example by always making a variety of learning activities possible.

Finally, it follows from the constructivist learning paradigm that it is important when organising learning paths and learning arrangements to define clearly at all times what type of learning results are wanted and what forms of learning are best suited to producing these results in a given situation.

The so-called 'new learning', which is based on the constructivist view, differs from the 'old learning' precisely in this relationship between what and how. In the new learn-

ing the emphasis is placed on metacognitive learning results (Simons, van der Linden and Duffy, 2000). According to this trend, learning results should consist first of knowledge and skills that are sustainable, flexible, functional, meaningful and generalisable. Second, the new learning results should relate to learning, conceptual, cooperative and regulatory skills; in other words to the metacognitive ability *per se*.

To achieve these new learning results it is important that there be more space within education for experiential and action learning. Specifically, this involves the student him/herself gaining more experience and taking more decisions in relation to his/her own learning instead of being led by the hand along heavily pre-structured learning paths. The teacher must supervise this greater space for independent learning. What is essential here is a gradual transfer of responsibilities for learning from the teacher to the student. Weaker students in particular profit most from integrated syllabuses in which a structured and phased route to self-governed learning is linked to regular instruction and supervision with regard to a content-based topic or subject area.

Alongside this greater space for experiential and action learning, and thereby self-regulated learning by the student, guided learning is also important. After all, old learning results, including a sound basis in automated knowledge and instrumental skills, remain important. Consequently, old forms of learning, such as pre-structured and guided exercises and memorising, also remain necessary. The switch to a career-oriented approach therefore implies that arrangements of old and new forms of learning must be given shape in new learning paths. These arrangements must largely be governed by the characteristics of the students and the desired learning results.

### Framework of building blocks

Based on the aforementioned theoretical views and an analysis of a range of practical projects, a framework of conceptual building blocks was developed in the study to inspire a redesign of the pedagogic-didactic approach within vocational education. This framework covers:

□ the content and main thread of the learning path towards a vocational qualification;



- ❑ the pedagogic approach;
- ❑ the didactic design (°);
- ❑ the role of teachers and (practical) trainers;
- ❑ cooperation with regional players.

For each area, the building blocks are listed, explained and briefly illustrated below. As the framework aims at provoking another way of thinking with respect to pedagogic-didactic practices, formulations that are used to pose them might seem absolute. Thus, the framework can be used as an evaluation perspective to assess educational practice and to direct change and innovation. At the operational level, i.e. when putting the ideas into practice, compromises are necessary.

Furthermore, the central notions of this new pedagogic-didactic approach, taking careers of learners as a starting point, are variety and differentiation. These central notions must take shape by means of the selection of contents, the selection of learning arrangements and places and the selection of teaching activities and forms of coaching. As we know from central notions on learning outlined above, individual differences and the quality of learning results are best served by such variety and differentiation.

### **Content and main thread of the learning paths**

This relates to the direction and final goal of a concrete learning path for students. In vocational education, the organisational principle of learning paths leading to vocational qualifications is generally given via the courses offered by a school or institution. In the best possible scenario this offer is based on developments within occupational practice and the labour market and/or the content of follow-up paths. However, it rarely happens that direction and final goal and/or final qualification are also determined by the prospects and images of the students. Nevertheless, from a career perspective these should jointly provide guidance for educational paths. Relevant building blocks for this area therefore include:

- ❑ the career prospects and vocational image of the student are co-decisive in formulating the direction and final goal of a learning path;

❑ the confrontation between the student's prospects and images, on the one hand, and the vocational images and profiles offered by educational institutions and occupational practice, on the other, set the design of learning paths. Through this confrontation the student learns and develops his/her prospects and motivations. Selection processes thus form the main thread within learning paths;

❑ qualifications and diplomas serve as a horizon and not as a blueprint;

❑ an integral redesign of vocational courses set by a career-oriented perspective cannot be achieved without a thorough analysis of the target group, i.e. an analysis of characteristics, images and wishes of the students. Innovations in vocational courses that do not take this as their starting point are still basing their thinking on the established curriculum;

❑ the degree of fitting into already designed training courses depends on the results of the target group analysis referred to in (d).

Examples of such learning paths include paths in which an extensive target group analysis is decisive in organising the path. This involves designing learning paths in which the vocational image, learning wishes and requirements of the students also determine the direction of learning paths. Boundaries to vocational areas and educational paths prescribed by law then cease to be determining factors.

The main principle for organising such learning paths can be summarised as organisation of learning paths the other way around. This idea of opposite organisation of courses stands here opposed to the traditional approach, in which the educational path is directly derived from the final attainment levels and where theory comes before practice. In concrete terms, opposite means that educational paths should be organised:

- ❑ from practice to theory;
- ❑ from ambition/image of the student to qualification/diploma;
- ❑ from workplace/company to place of learning/institution.

Finally, opposite means that the confrontation between these two diametrically op-

(°) In the Netherlands we use the term didactic to refer to the arrangement of teaching and learning processes. Thus didactic design refers to the design of this arrangement, e.g. the choice of learning methods, the selection of learning materials, the starting points of teacher and trainer activities, etc.



posed worlds and concepts should direct the format of path, with the target direction being the ultimate integration of these two incorporated by the individual learner.

### **Pedagogic approach**

Here, pedagogic approach is understood to mean a body of aspects of the teaching and learning process, varying from the pedagogic climate to the guidance of student choices. Generally speaking this mainly concerns path supervision. Good path supervision should be integral, longitudinal and focused on the heterogeneity of the student population. Path supervision should be aimed at concrete activities of the student (self-regulation) instead of at traditional counselling. According to the basic principles of the career perspective, however, path supervision should be the central principle for organising an entire learning path, in other words the guiding principle for all areas of learning processes are:

- path supervision or career counselling is not a separate activity within learning paths, but forms an integral part of the didactic design;
- the organisation of learning paths and the didactic design is aimed at developing professional identity related to personal development <sup>(\*)</sup>;
- students and teachers work and learn in a community of practice, where students take over aspects of the role of the teachers. Students are responsible for their own learning process and career. Students support each other in their individual and joint learning processes.

Practical examples of such an interpretation could include courses that organise teaching and learning processes as a community of practice. Less far-reaching examples are also possible from more traditional forms, such as a situation in which considerable emphasis is placed on cooperative learning without always involving an authentic learning context. The didactic concept is interpreted such that mutual support between students is conditional for tasks and actions to be performed.

To sum up, the specific aspect of the pedagogic approach in the vocational education column is that it is clearly aimed at de-

veloping a professional identity and at approaching the students from the outset as becoming professional practitioners. This line of approach has consequences for the choice of learning contexts and situations and the didactic design as a whole.

### **The didactic design**

The didactic design concerns the design of the primary process, i.e. the syllabus and activities of teachers, trainers and students. The didactic design is often a balance between:

- an educational-psychological perspective;
- subject-logical approaches (i.e. coming from the structure of scientific disciplines);
- the perspective of the profession and/or occupational practice.

Although the last of these is fitting with a career perspective, it is incomplete because often the concept of personal development as a central focus for integration between these three lines of approach is missing. However, the career perspective precisely implies a central focus on personal development as a fundamental starting point for the didactic design (Meijers and Wardekker, 2001). Therefore, important building blocks in this area are:

- in the didactic design the emphasis is on the development of regulation skills aimed at:
  - controlling one's own learning path and career;
  - integrating learning results acquired at different learning places.

In addition to constructive learning (taking action), reflective learning is vital here. Such a design means that the student must have the room to regulate. The pedagogic-didactic organisation is, therefore, characterised by adaptability with regard to individual differences and given shape as a process of fading of structure and support (see Collins, Brown and Newman, 1989);

- lifelike assignments are used in lifelike contexts. In these assignments, students not only have to apply specialist knowledge and

<sup>(\*)</sup> see the bildungsconcept in the German vocational-pedagogic tradition according to Brater and also Rauner, see Kraayvanger, G. and B. Hövels (1998) and Meijers, F. and A. Wesselingh (1999).



skills, but also (in an integrated sense) broader skills such as communicating, negotiating, planning and organising. This means that authentic, functional learning is involved;

□ subject content supports authentic and functional learning. The didactic design fits together such that these different components have as many mutual links as possible and refer to each other. This means training of skills, acquiring theoretical knowledge and practical application are linked throughout learning paths;

□ differing and varied places of learning form the learning environment within which learning takes place. The workplace is also an essential place of learning;

□ supportive, diagnostic evaluation during the learning track must be involved alongside independent, competence-oriented assessment at the end of the track.

Such an interpretation of the didactic design can mainly be found in practices that involve an integrated concept, such as problem-based learning, project education or workplace learning. The emphasis is on working on authentic assignments in authentic contexts. Furthermore, this does not mean that there is no supporting (school) subject line. This line, whether it involves the training of instrumental skills or a further insight into underlying subject knowledge, supports the more thematic character of the didactic design (see building block 11).

The essence of the envisaged redesign is primarily to remove artificial distinctions historically developed because of the institutionalisation of education, namely those between subjects, between theory and practice and between general and vocationally oriented education. The didactic design to be developed as a result is founded on the character of authentic action situations on the basis of occupational practice (i.e. professional competence).

The teaching of students within such a didactic design is steered in the direction of constructive learning and reflective learning as two sides of the same coin. Individual and cooperative learning processes alternate with each other. One important dilemma when designing such a didactic approach is therefore that between the individual and the collective: how and at what times should

you organise individual learning activities within group processes?

### **Role of teachers and trainers**

Both from theoretical points of view and from experiences in educational practice with innovations relating to constructivist forms of education, it has emerged that teachers and trainers within learning paths leading to vocational qualifications must fulfil a new role. The main building blocks for this new role are:

□ redesigning the role of the teacher and trainers involves a central focus on coaching and diagnostic supervisory activities for the benefit of the learning and development process of the students;

□ as part of this new role, teachers and trainers must find a new balance between guidance and 'let go' so that students are given the space to explore and regulate but, at the same time, do not drown in that space and move on to trial and error behaviour and 'telling stories';

□ in the new approach, teachers and trainers must exercise their roles as experts or professionals in a product-related sense (expertise with regard to the occupational field to which the training leads) and a process-related sense (expertise as counsellor and tutor).

The core principle of the role required of teachers is adaptability. All the building blocks actually involve finding a sort of middle way between the one and the other and, at the same time, knowing how to deal with the heterogeneity of the student population. Here too the most appropriate examples can be found in educational practices that involve the integration of theory and practice or insight and application, specifically where content-based areas are concerned in which the teacher is an expert. But examples of such a role can also be seen in more delimited, traditional educational practices, for example via a more interactive form of teaching conversation in which the cognitive process of students is central and the teacher illustrates and develops.

### **Cooperation**

A central element of policy thinking with regard to a different pedagogic-didactic ap-





proach is the cooperation between institutions within the vocational education column and that between vocational education institutions and business. In the light of a career idea, cooperation and harmonisation should relate directly to the organisation of learning paths of individual students (de Bruijn and Howieson, 1995; de Bruijn, van Esch and Doets, forthcoming):

- a cohesive, vocation-oriented pedagogic-didactic approach throughout the vocational education column is not the same as an identical approach within all segments of that column. The concrete interpretation of that approach will have to differ precisely depending on the characteristics of the students, the level, the occupational area, the desired end qualification, and so on;
- cooperation with regional players (educational institutions and businesses) must focus on actually implementing the pedagogic-didactic design for concrete learning paths for students.

When specifying such an approach in greater detail one can think of institutions that cooperate on integrated, longitudinal programmes, where possible without the cut-off point of an exam. Another example is the creation of a sequence of (learning at) workplaces as part of the didactic concept. The principles and foundations of continuous learning lines vary.

The guiding thought behind these last building blocks comes down to the fact that cohesion is not the same as cooperation, or uniformity. The key concepts of a pedagogic-didactic approach in the vocational education column defined in blanket terms are variation and differentiation, also where (regional) cooperation to give the approach shape is concerned.

## Conclusions

If such a framework is to be put into practice in an actual and different pedagogic-didactic approach, several important condi-

tions must be fulfilled. These conditions are familiar from the literature on innovation and change, but also from existing experiments in education. Thus, the following may be listed as three major conditions at institutional level:

- a strong educational vision of management that can also be translated to teachers and teaching practice;
- the willingness among teachers to change;
- adequate possibilities for education and training of teachers, designing continuous peer coaching, development of team teaching and team responsibility.

Placing the career centrally means, finally, that boundaries of institutions and national structures are constantly moving. This movement is controlled by demand, not supply. A major condition that can only be met by the national government is that there must be space to shift, to move and to experiment to be able to give genuine shape to alternative forms of organisation.

In this respect, recent Dutch policy initiatives are promising. In May 2003 the Dutch government, the national organizations of vocational schools (vmbo, mbo, hbo) and social partners agreed to invest heavily in innovative arrangements at local level to put the new ideas about cooperation and pedagogic-didactic approaches into practice in an original way. The investment by these three parties is for three years in order to make a contribution to the realisation of the Lisbon agenda.

The outline for a radically different approach as given in this article might inspire these experiments. This might be true for other European countries too. However, translation of the given 18 building blocks in reference to the particular national context is necessary. At the same time it would be interesting to learn from initiatives concerning vocational education in other European countries how to contribute to the realisation of the targets set by the Lisbon agenda.



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### Key words

Knowledge society,  
parity of esteem,  
teaching-learning process,  
constructivism,  
teachers' role,  
customised training