

Steering, networking, and profiles of professionals in vocational education and training (VET)
Lorenz Lassnigg

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Abstract

This report studies the different profiles of professionals in vocational training systems ('VET professionals') in terms of their relations with the steering and coordination mechanisms within these systems. The 'new institutionalism' approaches in organisational theory on coordination between players and units in social fields provide the theoretical background. Vocational training is perceived as a complex area in which various types of players at both individual (pupils, parents, teachers, employers, etc.) and organisational level (schools, training providers, companies, political organisations and interest groups, state bureaucracies, etc.) must coordinate in order to make useful headway. The focus is on alternative means of steering and coordination beyond the traditional market-bureaucracy dichotomy, the professional model of the higher education system, or the network model of the new types of company organisation, or the corporate model of industrial relations.

The first section deals with conceptual aspects, developing in particular a general framework for coordinating training and employment. In the second section the concepts of innovation research and learning organisations are pieced into this framework. In the third section the link is created between coordination and steering mechanisms and the professional categories in vocational training. In the fourth section political approaches and steering and coordination strategies are discussed in terms of the general framework. In the fifth section some conclusions are drawn, which also take account of the problems of comparative and cooperative research for policy learning and policy borrowing.

The general conclusions are as follows: coordination mechanisms should be shaped on the basis of an analysis of the existing structures, the main flaws and shortcomings should be identified, and concrete solutions be found to overcome them; available structures should be viewed as a complex system of relations between various types of players, many of whom can be identified as 'VET professionals'; to a certain extent the way in which the coordination system works reflects the type of division of labour amongst these categories of 'VET professionals'; the skills and cooperation of the 'VET professionals' should be drawn on in order to develop coordination and steering strategies, which should take particular account of the role of teachers and trainers as core professionals; in this sense the identification and further development of new forms of division of labour amongst these professional forces and the creation of adequate structures for professional development are important elements of innovative coordination policy. Policy learning and policy borrowing processes in the European and international field are facilitated by splitting the coordination system and steering strategies up into multiple elements, and by analysing their systemic interplay.

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Introduction

This report studies the different profiles of professionals in vocational training systems ('VET professionals') in terms of their relations with the steering and coordination mechanisms within these systems. The 'new institutionalism' approaches in organisational theory on coordination between players and units in social fields provide the theoretical background. Vocational training is perceived as a complex area in which various types of players at both individual (pupils, parents, teachers, employers, etc.) and organisational level (schools, training providers, companies, political organisations and interest groups, state bureaucracies, etc.) must coordinate in order to make useful headway.

Some research has been done, and even more political attempts made to gain more insight into these coordination processes and to work out new models. This usually centres on the market-bureaucracy dichotomy, with other coordination mechanisms being taken less seriously. The professional model of the higher education system or the network model of the new types of company organisation, or the corporate model of industrial relations can be seen as alternative coordination mechanisms.

More recent European proposals from the field of vocational training policy, as well as proposals from other international organisations (e.g. UNESCO) use the network metaphor as a way of improving coordination in vocational training. It is hoped that by creating informal or even more highly formalised network links between the various players, rigid hierarchical relations can be loosened up more flexibly than would be the case with a major reform to the system. The role of the social partners within this strategy is also highly rated as an element for improving coordination and steering, particularly through the involvement of the employer's side. This also comprehends the coordination mechanism of the association and the way how it relates to the network model.

Such political proposals on new forms of organisation besides the two traditional forms of market and bureaucracy tend, however, to

be rooted more in practical, 'voluntaristic' considerations rather than building on a theoretical basis supported by research.¹ The question arises as to whether such strategies, which may appear highly idiosyncratic given the variety of different structures of vocational training, can actually be fitted in a general theory-based framework which can also serve as a basis for *policy learning*.

The alternative models of steering and coordination – professional oligarchy, networks, associations – focus attention on the players involved, their scope for decision-making and action, their strategies and strategic options, and on factors which influence decision-making processes. The bureaucratic model only considers regulation from the centre and through the formal channels of the decision-making process resulting from this authority. The market model only takes account of players at individual level, and decisions which influence the logic of monetary exchange. The alternative models take into consideration many additional elements, but in so doing also greatly complicate the issue.

The argument will be developed along the following lines:

1. The first section deals with matters of concept, in particular developing a general framework for coordinating training and employment.
2. In the second section the concepts of innovation research and learning organisations are integrated into this framework.
3. In the third section a link is created between coordination and steering mechanisms and the professional categories in vocational training.

¹ Quite some controversy still rages today over development trends in the relationship between education and employment. In a recent international study on the development of qualification systems in the global economy, David Ashton and Francis Green have demonstrated very clearly that 'despite an increasing effort on the part of empirical researchers, there remain enormous gaps in the knowledge of the magnitude of any links between skill formation and economic performance' (Ashton and Green 1996, p.2).

4. In the fourth section political approaches and steering and coordination strategies are discussed in terms of the general framework.
5. In the fifth section some conclusions are drawn, which also take account of the problems of comparative and cooperative research for policy learning and policy borrowing.

1. Regulation, coordination, steering and cooperation in VET systems – conceptual issues

It is assumed that one of the essential roles in the steering of vocational training systems is to ensure that vocational training meets the needs of the employment system. This is no mean feat, since it implies that steering must not only take place within a system, but rather that it crosses system boundaries, with the result that internal steering of vocational training is at least influenced, if not determined to some extent by external demands.² In order to describe these problems more clearly, we will begin by making a conceptual analysis of the steering and coordination problem, covering the following main aspects:

- a tighter definition of the vocational training system according to its specific characteristics;
- the development of a general framework for defining the problem of coordination between education and employment beyond the state and the market;
- the main forms and dimensions of steering in vocational training (organisational steering mechanisms, structure of study courses, steering of the teaching-learning processes);
- steering tasks and strategies of reform.

² The notion of system is loosely and heuristically used to denote a set of elements which exist together within a systematic relationship (i.e. taking no account of the high theoretical load of system theory); it is assumed, however, that a certain degree of care is needed in creating system elements, system boundaries, etc.

1.1 Background: VET systems as an element of ‘system building’ and overall policy trends

1.1.1 System building

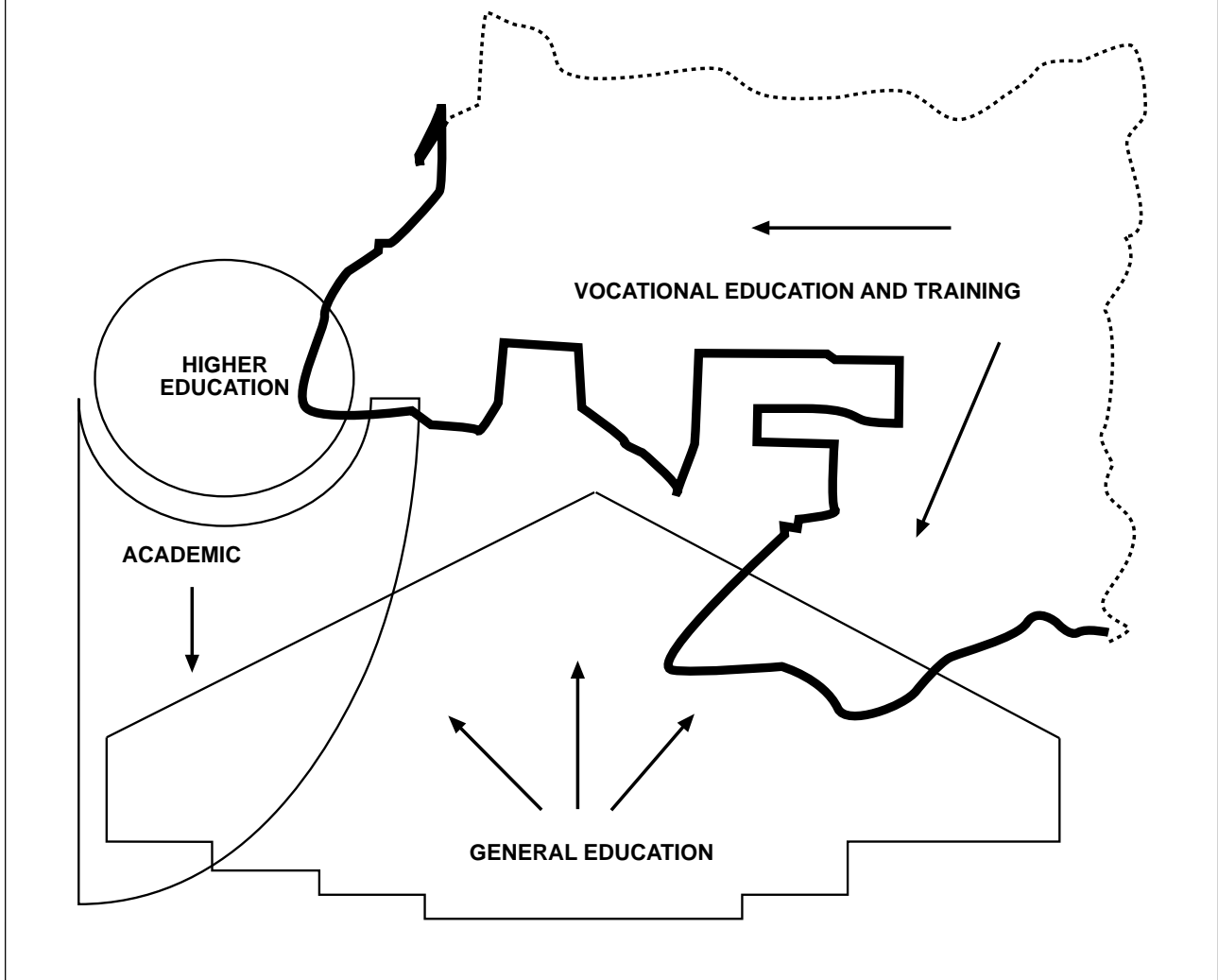
Nowadays the term ‘training system’ trips very easily off the tongue, as if it were some sort of clear-cut entity. The contemporary training system, however, should be seen as just one stage in a long-term historical process of system building. This system building can be seen in stylised form as the ‘approximation’ of three separate areas – compulsory general education, higher education and vocational training (this process is illustrated in Figure 1). From this perspective it is presumed that the different parts of the education system have special links with other different societal sub-systems, and different fundamental social functions are revealed³.

There is a special link between vocational training and the employment system, since at the outset vocational training was anchored within the employment system⁴. It was only with the progressive institutionalisation of the education system that it broke away and was coupled to the other branches of the education system (compulsory general education, higher education).

³ These areas or sub-systems are dealt with in rather separate and distinct ‘discussions’ in accordance with the different links and task assignments: irrespective of the different formations of the respective education systems, higher education research and vocational training research are separate from general education research, and there is very little transfer between the two sides (cf. e.g. OECD 1995).

⁴ The term ‘employment system’ is not exempt from problems either. It is used in analogy to the term ‘employment’ as meaning all those organisations in which employment (independent or not) occurs as an economic activity (as a contribution to GDP); the term is thus distinct from the term ‘labour market’, which denotes the idea of assignment in employment, as well as from the term ‘occupational system’, which denotes specific types of institutionalisation of employment, and in particular from the term ‘work’, which tends rather to denote the content and social side of a basic human activity.

Figure1: 'System building' of education and training systems (stylized)



This vision alters the understanding of the problem of coordination in many respects since

- ❑ the coordination tasks of vocational training work in both directions, both vis-à-vis the other spheres of the education system and vis-à-vis the employment system;
- ❑ coordination between vocational training and employment appears not as something to be created virtually 'from scratch', but rather as a recasting of practices which have always existed⁵; and
- ❑ the question concerning these previous practices is pushed to the fore, meaning that a suitable strategy for analysis must be found.

The variety of vocational training in Europe and the OECD area is much greater than in other areas of education, and comparative research is much less developed. It was only in the eighties that any major progress was

⁵ This raises the issue of the fundamental 'alienness' of working and learning which has nowadays become a basic thesis in highly prominent educational policy discussions about the 'subordination' of education to the economy (cf. e.g. the criticism which the Council of Education Ministers levelled at the European Commission's White Paper on Education Policy, amongst others; Official Journal of the European Communities, 6.7.1996, C 195/2). The high degree of publicity given to this question can possibly be explained as biased perception as a result of an over-generalised Fordist-Taylorist influenced vision of employment.

made in this field of research⁶. One thing which the different systems do have in common is that the development of the various branches started from different points (cf. Schneider 1982; Boettcher et al. 1992):

- the predecessors of higher education, which constitute the first sector to be set up, and, quite closely related to them, foundation courses, which form the outset of today's academic secondary schools (or streams);
- compulsory general education systems, which evolved into the compulsory sector;
- and the various vocational training activities with apprenticeships representing a very important institution in history⁷.

The historical development which has led up to the contemporary education system starting in the seventeenth or eighteenth century can be seen as a process integrating the sectors evolving from the various starting points. Consequently, even today the flaws and tensions are still visible on the boundaries between these realms, which for so long existed parallel or largely separate from one another. The institutionalisation of education and its differentiation from other social activities came about in parallel with the system-building process. Two further aspects which are of importance to vocational training are the following:

1. The integration of elementary and higher education took place at an earlier stage, and the wave of educational reform in the sixties and seventies, which brought about the development of comprehensive systems

⁶ UNESCO's initiatives were an important step in this direction (cf. Tippelt 1997); '...as yet no-one has carried out a comprehensive comparative study of the development of vocational training in industrially progressive countries' (Lauglo 1997, 113).

⁷ Although the apprenticeship system continues to be an important part of the vocational education system in only a few countries today, it may be assumed that the principle of apprenticeships (learning on the job from a master craftsman) was much more widespread in the past.

and broader access to the higher education sector, can more or less be equated with the concluding point of this integration. Vocational training tended still to be a realm apart, and in the majority of countries it was not really an issue in the reforms⁸.

2. Vocational training should be envisaged from the outset as a combination of informal learning in the workplace, and formal activities in separate courses and organisations⁹. The separation or differentiation process means that activities in the workplace, or certain parts of them, were gradually transposed to special organisations¹⁰. Not only is this differentiation less advanced than in the other two branches, it also seems to have been developing in a contradictory manner over recent decades: in the sixties, with only the odd exception the clear trend within educational policy was still to keep vocational training separate from working life and integrate it into the formal education system – since the emergence of 'vocationalism', and even more so since the movement towards *Human Resource Development* (HRD) in the eighties, this trend has slackened off, or even been reversed. The links between work processes and learning processes are stressed in many new approaches and concepts, in particular in connection with models of the 'learning organisation'. It is possible that this trend will also spread to

⁸ The discourses which related particularly to vocational training about 'manpower planning' in the sixties can be used as an example, although de facto they almost exclusively considered higher education and the problem of raising access barriers in this field (cf. e.g. Papadopoulos 1994).

⁹ This combination appears de facto in all education processes, albeit to different degrees and with different significance. Compulsory general education for example can be seen as a combination of processes at home and at school, and must also take account of what is meant by 'socialisation'.

¹⁰ This process of separating out parts of the education system can also be observed with a time lag in the countries of the Third World, and is also reflected in political discussions (cf. De Moura Castro and Cabral de Andrade 1997).

vocational training and to a greater emphasis on the reintegration of training in the activities of actually performing a job (see also part 2 of this report and the report by Dehnbostel/Dybowski in the previous volume).

1.1.2 Policy trends for coordination and steering

This view of developments is of major importance for questions of policy, regulation and the steering of training systems. In terms of parts of society, vocational training has its own special position when compared with the other two sectors of the education system: vocational training was originally rooted in the employment system itself, whilst the other two fields are more closely tied to the public sector, with higher education establishments also being linked to the professions. Apprenticeships, which are often classed as ‘traditional’ or ‘pre-modern’, can thus be seen as a paradigmatic form of vocational training. Schools and institutes of higher education providing vocational training were also originally founded and run by the business sector in many countries¹¹, whilst compulsory general education was an element in nation-shaping and the development of the modern nation-state. For this reason, the paradigm of the state-owned public system which dominates compulsory general education is not really applicable to vocational training, and even the state-market dichotomy as the predominant regulatory mechanism is not suited to vocational training.

Over recent years, however, the lion’s share of discussions on training policy has centred on this alternative:

- The initial stage, between the fifties and the mid-seventies, was characterised by attempts to develop better planning mechanisms within the state bureaucracy. This period of nationalisation and legalisation is characterised by the organisational control of the huge expansion in the education system, based on a high level of confidence in technocratic planning, and monitoring of the most important quantitative parameters of the education system (demography, pupil numbers, demand for training places, staying on and school-leaving rates, etc.).
- Following a period of uncertainty in the second half of the seventies, which was accompanied by all manner of criticism of the bureaucratic model and technocratic policy¹², the strategy of deregulation became more widespread, as did the creation of market mechanisms within training systems (‘quasi-markets’), and in most countries steps were also taken in this direction (Whitty et al. 1998).

This general seesawing between state and market was also reflected in the field of vocational training. In the planning age, for example, sharp criticism was levelled at the apprenticeship system, as being inadequate for the public interest, and there were all sorts of proposals for stricter regulation and nationalisation (cf. for Germany, e.g.: Deutscher Bildungsrat 1969; Kell 1997). During the ensuing period the state-market dichotomy is described as *the* ‘crux of the international debate on how vocational training systems should be regulated’ (Koch and Reuling 1998, p.3).

The conventional discussion about coordination of vocational training ties in with this – more so than compulsory general education, for example – because it obviously has to sat-

¹¹ Although they may not always have been founded directly by companies, it was nevertheless often the case that associations of companies in certain sectors had a considerable say in the founding of such schools. These vocational parts of the education system also often did not fall originally under the auspices of the education authorities, but rather were considered an aspect of trade and industry. This development can be regarded as a cooperative area of the education system.

¹² Important aspects of this criticism are: Action research as an alternative to technocracy (Wagner 1990), Professionalisation as an alternative to bureaucracy (Deutscher Bildungsrat 1972), Ecological Strategies as participatory inclusion of the most important players concerned (Bronfenbrenner 1979).

isfy economic interests, whilst at the same time broader social and societal interests must be borne in mind. In this context, the limitations of market-based coordination have already been dealt with in great detail: on the one hand in terms of 'market failure' and the possibility of improving the market's allocatory role through public intervention, and on the other hand in terms of aspects which 'may not be easily generated through the market, even if the government intervenes with subsidies and information' (OECD 1996, p.165). These aspects of 'public good' were brought into the economic discussion by Musgrave (1959, p.44) as the qualitative elements of education, in terms of 'tolerance', 'integration' and 'cultural heritage'. Further aspects, which especially concern vocational training as a 'public good', are for example 'employability', 'transferability', or also the prospective provision of qualifications for future requirements (cf. European Commission 1996). Possibly the most essential aspect of coordination will be to strike a satisfactory and dynamic balance between these different and conflicting interests and objectives between 'market failure' and 'policy failure' (cf. also Booth and Snower 1996, Chapter 1).

Burton Clark's (1983) paradigmatic analysis of the higher education system can be used as an example of the extended view of coordination mechanisms. It drew a distinction between three fundamental mechanisms: bureaucracy, market and professional oligarchy, with existing systems being perceived as specific mixtures of these mechanisms. Two essential conclusions can be drawn from this:

1. firstly, the relationship between the state and the market is seen not as a dichotomy, but rather as a progressive gradation;
2. secondly, the analysis makes reference to other mechanisms beyond the state and market, sometimes appearing in various combinations with the former.

A more general investigation of coordination mechanisms is carried out under organisational theory, where there is a similar extension beyond the arsenal of the two traditional mechanisms of state and market, particularly towards networks and corporative associa-

tions. An important step in this theory is that the coordination of life in society is envisaged as a social dimension in its own right. Moreover, the 'other' mechanisms are no longer perceived as subordinate special cases or exceptions to the traditional 'main forms' of coordination, but are rather placed on an equal footing with them (cf. Powell 1991; Thompson 1991; Streeck and Schmitter 1991).

Closer consideration of some important aspects or developments in the political sphere can be of some help in clarifying the interplay between the various mechanisms:

- a) firstly the policy of the 'welfare state' and the bridging of the systems divided between education and employment through the creation of bureaucratic planning mechanisms;
- b) secondly, the types of vocational training systems and the special coordination in the apprenticeship system;
- c) thirdly, the beginnings of professionalisation as an alternative to bureaucracy;
- d) fourthly, systemic differentiation and the dynamics of reform;
- e) fifthly, the 'crisis in the welfare state', the market economy approach, and new ways of combining state and market;
- f) sixthly, the particularly complex nature of vocational training;
- g) seventhly, new approaches to coordination between the different components of the education system (compulsory general education, higher education and vocational training).

As has already been mentioned, the main political strategy of the fifties and sixties, which also led to greater formalisation of the education system, can be summed up by the terms 'legalisation' and 'nationalisation'. The extension of rational planning within the state bureaucracy was seen as the most important development strategy. To a certain extent education was seen as a part of the welfare state, with the duty of guaranteeing the right to education, a policy which was supported both by the public as well as by most

of the players involved (cf. Widmaier 1981; OECD 1981). As the influence of ideas about the economic and social structural change towards the tertiary sector, and the contribution of technology and the 'human factor' to economic development grew, the planning paradigm was also extended to the links between education and employment. The '*manpower planning*' concept became an important strategic element in education policy, and one of the most important objectives of the OECD's strategy at this time was to set up planning bodies or departments within Member States' education administrations (Papadopoulos 1994; Hinchcliffe 1987). Since there was little confidence in the market, attempts were made to extend state bureaucracy into the labour market using the planning paradigm. This perspective soon proved inadequate, however.

One important reason why this perspective was far too abstract and idealised was that the vocational training system could only be steered by state bureaucracy up to a certain point. Even if the setting up of planning bodies had proved successful, they would not have held sufficient sway over vocational training. The OECD classification (OECD 1989, p.8)¹³ of post-compulsory systems distinguishes between three types of systems:

1. school systems, which also include vocational training (e.g. the Scandinavian system);
2. systems based on apprenticeship (e.g. Germany, Austria and German-speaking Switzerland);

¹³ A new typology was developed for worldwide use by the ILO (1998, pp. 69-82), which takes account of vocational training more closely: three basic types are distinguished: firstly, '*Cooperative Systems*' which correspond to apprenticeship training; secondly '*Enterprise-based systems*' including the Japanese system and a type of the 'voluntarist system' with the United Kingdom as an example; and thirdly '*State-driven Systems*' in which the distinction is once again drawn between a demand-oriented and a supply-oriented system. This typology does not however extend to the relationship between vocational training and general education.

3. and mixed systems, which sometimes have a very high, sometimes a very low vocational training content (e.g. the United Kingdom, the Netherlands and France).

From the point of view of coordination and steering mechanisms, the apprenticeship system constitutes a case apart, which can be seen as a paradigm for vocational training. General political discussions often see this model as being predominantly market coordinated. But this structure is really determined by a complicated combination of mechanisms. Firstly, this combination includes the market (particularly for the assignment of training places and applications), then the state bureaucracy (for the rather marked regulation of framework conditions and for part-time schooling for apprentices), and thirdly a mixture of additional mechanisms, which are less obvious: corporate self-regulation by interest groups (employers and trade unions) is an essential element in this system, and to a certain extent 'professional' mechanisms also play a role, with professional groups ('training professions') taking an essential part, and with training taking a comparatively long time. The meaning of 'professionalism' in German is somewhat different to its meaning in Anglo-Saxon usage, where the term is more closely related to academic professions. In any case, the professional structure confers a special form upon the labour market, which is not easily grasped¹⁴. Whatever the specific significance of this

¹⁴ There are different interpretations of the significance of the vocational structure of the apprenticeship system, ranging from the concept of 'occupational labour markets' (Sengenberger 1987) to emphasising the difference between 'training occupations' and 'employment occupations' (Brenner 1997). It can be assumed that many things are left to be clarified in this sector and that there are many misconceptions and a lot of exaggeration, all of which require clarification. Rolf Arnold and Gisela Dybowski-Johannson (1995, p. 325), for example, are emphasizing a proper understanding of vocational change as being the central interface between the development of learning organisations and vocational training in Germany. David Marsden (1986, Ch. 8) again stresses the importance of vocational structures for the workings of labour markets, but from another perspective.

structure, the professional groups within the apprenticeship system are highly institutionalised, and constitute social units which bridge the two sides of the labour market, which thereby becomes somewhat tied in with the organisation of the system.

The bureaucratic structure of education systems must also be differentiated according to additional characteristics which obviously play an important role for coordination. Even before these questions had taken on any prominence in education policy, Margaret Archer (1979, p. 628, p. 671) had worked out how important the degree of centralisation was to the dynamics of development and the dominant pattern of reform strategies. Since the various groups of players in the two basic forms of centralised or decentralised systems interact differently, this in turn produces different long-term patterns of development: 'stop-go' cycles in centralised systems and 'incremental change' in decentralised ones. Burton Clark (1986) also picks out similar basic patterns in his comparison of European systems with the American higher education system. A further important dimension in this context is described as 'fragmentation-unification', virtually as a horizontal dimension of unification (Scott and Meyer 1991, p. 131).

Increased criticism of the bureaucratic model of the education system was given greater prominence in the early seventies in Germany, for example, by the *Deutscher Bildungsrat* (Education Council), which was influential at least in terms of ideology. Initially, however, criticism was not levelled at the high degree of legislation, nor at state organisation, but rather at the bureaucratic structure of schools, which was considered to be incompatible with their teaching role. The role of teachers as the lowest rung of the bureaucratic structure of authority was criticised, and a *professional model* was demanded. Co-determination and greater collegial autonomy along the lines of more highly decentralised systems (e.g. such as those in England) were important points (Deutscher Bildungsrat 1972). Simultaneously, however, demands were made for more legalisation and regulation of the decentralised and less closely regu-

lated apprenticeship systems. Similar moves towards a stronger legal foundation, particularly in the field of vocational training, can also be observed in other countries, e.g. Austria, the Netherlands and Finland over the same period.

The next stage was reached when the 'crisis in the welfare state' emerged in the eighties, and the market mechanism grew in importance as an alternative to bureaucracy. The professionalisation strategy never matched the high level of influence which the market strategy had temporarily acquired. The thrust of educational policy was changing, and decentralisation, deregulation and devolution of authority became the most important points in the reform of the education system in many countries (OECD 1996, particularly pp. 172-173; cf. also Whitty et al. 1998). Parents opting for state schools, increased autonomy for schools through the shifting of decision-making processes, 'accountability' and changes to state responsibility became essential policy aspects. The creation of quasi-markets, 'the separation of purchaser from provider and an element of user choice between providers' became a central element of reform (Levacic 1995, p.167). The state, however, did not disappear, it just took on a different role, described by Guy Neave (1998) as the 'evaluative state': The state-education relationship was recast, with new intermediate bodies ('trusts', 'agencies', etc.) being drawn into the equation which relied more on 'leadership' and management methods than on the traditional structures. A more recent analysis of reform strategies in five countries draws the conclusion that '...there does appear to have been a convergence of policies, at least in our five national settings. These involve an apparently paradoxical combination of state control and market forces or, to put it more specifically, a combination of an 'evaluative state' and 'quasi-markets' (Whitty et al. 1998, p. 12).

So it transpires that in the general school system and that of higher education, where these analyses were carried out, the abstract market-state dichotomy is not really suitable for understanding developments. New combinations and types of organisation are coming

into being, both at school level, but also on the level of more aggregate systems. The task in hand is more complicated in vocational training since at least two additional dimensions need to be taken into account:

1. firstly, the greater internal differences and the many schools, training channels and possibilities;
2. secondly, and still more importantly, there is quite a marked link with the economy, the labour market, and the system of employment.

The first point indicates that competition was always present in vocational training, since young people were called upon to choose between various options. Structuring this choice is therefore one of the most essential tasks for coordination in vocational training, which is also closely tied in with the other sectors, since they influence the choice made whilst also representing alternatives in themselves. The second point indicates that the vocational training system is broadly expected to fulfil objectives imposed upon it from the outside in any case. The choice of vocational training courses will always be more heavily influenced by expected employment prospects than is the case in the other sectors, even though these links and influences are difficult to judge and assess (cf. Raffe 1999). The trend towards 'economic rationalism'¹⁵ in education policy in the eighties, which is so often stressed and criticised seems to be of little relevance to vocational training. On the contrary, signs in this sector point in the opposite direction: towards the enrichment of vocational training through the addition of more general and foundation elements¹⁶.

Finally, the relationship between the three parts of the educational system – compulsory

¹⁵ Whitty et al. (1998, 37-38; cf. also Pusey 1991, Marginson 1993) describe 'economic rationalism' as follows: education is becoming a commodity, the most important political aims are developing an efficient and effective system for distributing these goods. Other aspects are the major importance of economic aims (with education being separated from social and cultural aspects), the use of the market metaphor, and a central administration for the education system to promote these aims.

general education, higher education and vocational training – has lately become an important aspect of political discussion in the most recent OECD publications. A redefinition of higher education is being suggested, according to which universities together with the other organisations at post-secondary level (non-university institutes of higher education, and the numerous forms of adult education and further training) would be merged in a catch-all system of 'tertiary education'. The boundaries between the 'scientific' and research functions and the 'purely' educational and training role should be loosened up in this system (OECD 1998a). A further proposal against the background of the development of a solid policy towards life-long learning concerns organising the links between the various parts of the education system. 'In many countries goals and agendas of different parts of the system are implicit or have not recently been reassessed and, consequently, may pull in different directions.' (OECD 1996, p. 188). Improved interplay between general and vocational education, as well as between secondary and tertiary education and between formal and informal education is seen as the prerequisite for the development of life-long learning.

1.2 A generalised framework of the coordination system

The second central element of the conceptual analysis of the steering and coordination problem lies in the general shaping of the coordination system. Here a heuristic framework is developed which is admittedly rather 'loose' and which starts by breaking down the scope

¹⁶ In order to better distinguish these aspects, the OECD suggested a three-level classification of post-compulsory education, which can appear in different combinations (OECD 1989, pp. 20-21):

1. *general* (contains elements which continue and extend compulsory general education);
2. *foundation* (aims at 'preparation...to pursue certain types of study', which may be more narrowly or more broadly defined); and
3. *specific* (aims at 'ready competence and expertise in the chosen field or occupation').

of possibilities for coordination processes in a stylised manner along the following lines:

- a) types of *players* involved;
- b) in the affected *sectors*;
- c) at different levels of society;
- d) who handle the various coordination and steering *tasks*;
- e) through numerous possible *interactions and mechanisms*.

This analysis shows how the conventional approach to the coordination problem, starting with the general market-led steering mechanism which is seen as dominant, or through hierarchical or bureaucratic forms, seriously restricts the scope for conceivable solutions from the outset. The helpful decrease in complexity which results from this generalisation is bought at the price of conceptual simplification which brings processes on the boundary between education and employment to the fore and greatly reduces the number of possible coordination mechanisms.

The essential element in all of this is that the basic problem of steering mechanisms is perceived as a 'zero-sum' type of problem between market steering and bureaucratic steering, where each time round one mechanism is highlighted at the expense of the other. On the one hand, the complexity of the problem is revealed when the coordination system is broken down in this way, since the coordination problem does not only exist across system boundaries, but also implies an interface between the two general mechanisms of bureaucracy (education) and the market (employment). On the other hand, however, this approach makes it possible to open up the scope of the question by building up an area of intermediate, alternative and complementary mechanisms and types of organisation, where there is room for the conceptual integration of many other mechanisms (particularly interorganisational networks, organisation by associations, corporatism). This means that the perspective is somewhat altered, since these mechanisms as they are mentioned in the concept of the 'evaluative state' are not just taken up by chance, but are in-

cluded from the outset as integrated and, in principle at least, equal components of the coordination system, but are not viewed through bureaucratic versus market spectacles.

1.2.1 The field

The first step towards providing an explicit reconstruction of the area in which coordination between education and employment takes place is actually to 'deconstruct' the complex field in order to analyse the players involved and their areas of action. It is the types of organisation in which coordination takes place, and the possible connections which the coordination system can form which stand in the foreground, rather than the empirical relations that can be observed.

1.2.1.1 The players

The diagram (see Figure 2) highlights the different types of players in the field of coordination. Four separate columns are shown (education system and employment system, both being split up into supply and demand side), with players on the different levels:

- ❑ the individual *micro level* (teachers, pupils, educators, employees, jobseekers, employers, etc.);
- ❑ the *macro level* of national¹⁷ institutions and organisations (ministries, school administrations, unions, employers' organisations, etc.), – overlapping with the meso level – and also regional bodies with greater or lesser clout (*Länder*, communes, regional associations, etc.);

¹⁷ The international or transnational level would be a further level which might be considered, but this level is not yet very developed in the education world (e.g. education policy is subject to the subsidiarity principle within the EU). The question of whether there is any interdependence with the international level and what the trends are in this regard in the system of coordination between education and employment is undoubtedly an important one nevertheless, to which adequate importance will have to be attached in future research.

- and, in between, the organisational *meso level* (schools, companies, etc.);
- alongside these types of players in the coordination system in the narrowest sense of the term there are also other more general ones who play a greater or lesser role, particularly the institutions within the political system (legislation, government, political parties, etc.) and the labour market institutions which connect the two sides of the market (labour market service).

It is essential that the fabric of relations be seen as open and dynamic. In the reality of a coordination system, which essentially will still be nationally organised today, these players or types of players can each be analysed in concrete terms, and potentially there is interaction between all these groups which is related to coordination.

1.2.1.2 *The tasks*

Coordination procedures are interactions and relations between the players, which aim at striking a balance between the two poles of the coordination system, demand for training and demand for manpower. In schematic form the coordination procedures can be distinguished in terms of a quantitative and a qualitative structural dimension, so that certain chains of actions and causations are set off, triggered in particular by the two vertices:

- a) In quantitative terms we are talking about transitions, often in the form of decisions about selection or capacity.
- b) In qualitative terms it is largely a question of establishing and changing the structure and profile of training courses or jobs, in other words ‘shaping’ the profile, as it is known in vocational sociology.

What should be stressed is that, whilst on the one hand these two dimensions run independently of each other, on the other hand they also interact: quantitative variations can have serious indirect effects on the qualitative structure. One example of this is the effect of increased student numbers in higher education, which is described in terms of the tran-

sition from the traditional elite higher education system to the modern mass higher education system, and possibly beyond to a universal higher education system (OECD 1998a, p. 9; drawing on Martin Trow and Ulrich Teichler).

Using this heuristic representation, it is possible to analyse real coordination processes. For example, it can be used to draw up international comparisons of coordination systems, which to date have at best only existed in very patchy form (as a step in this direction cf. OECD 1998b).

Tentative mapping of coordination tasks links them with the numerous political proposals being bandied about at the moment (see Figure 3). Such mapping can provide a point of departure for more concrete discussion of political strategies.

1.2.1.3 *Mechanisms of coordination*

It is easy to see that there is a very broad spectrum of coordination processes within this perspective, which are almost unmanageable in any real system. Literature on mechanisms of social coordination in the framework of institutional organisational theory can help to reduce this complexity (cf. in particular Thompson et al. 1991).

In this framework (cf. diagram in Figure 4) four coordination models in particular are picked out, as shown in the diagram:

1. *Hierarchy, bureaucracy, central planning.* In this model, coordination comes about through the bureaucratic integration of the columns, with central tuning at macro level. This is obviously not possible to the same extent in every column, which is why this mechanism is indicated for education supply.
2. *Market.* In this model, coordination is regulated by individual compensation and feedback processes in a system with two interdependent markets (education market and labour market). This mechanism obviously does not cover any of the procedures at the higher levels.

Figure 2: Stylized actors and coordination tasks

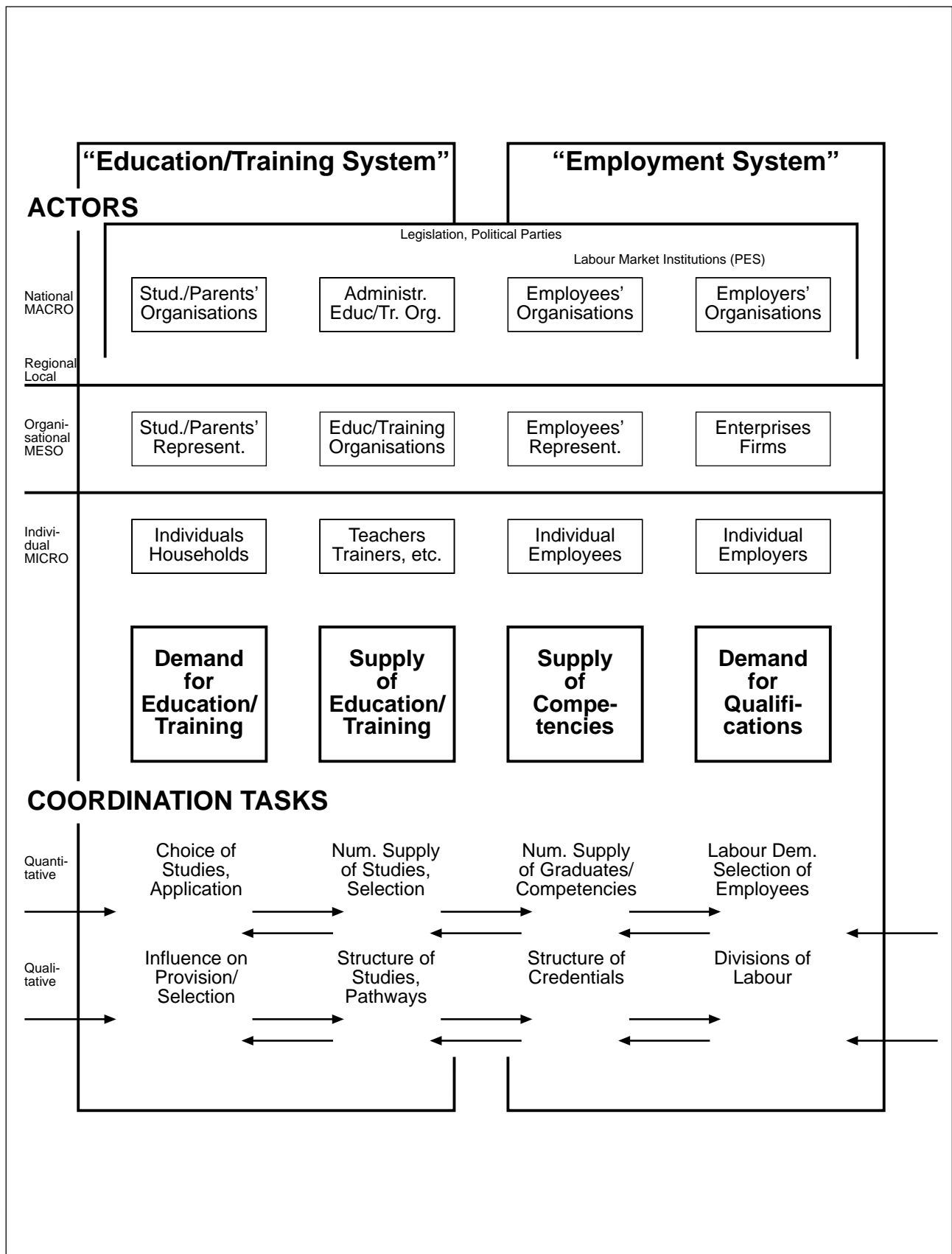


Figure 3: Mapping of coordination tasks and main policy options

COORDINATION TASK	QUANTITATIVE	QUALITATIVE
Coordination between education/training demand and supply		
	numerical allocation - determination of numbers, - provision of study places, - determination and selection of applicants	shaping the profiles - composition of curricula, - breadth - depth, - study lines - modules
Main policy options:	<ul style="list-style-type: none"> - Social demand approach, quantitative (allocation), qualitative (adaptation) - Strengthening market forces concerning allocation (vouchers), selection/promotion (costs, incentives), information (signalling test results) - Guidance and counselling - Testing/assessment at entrance 	
Coordination of the teaching/learning process		
<ul style="list-style-type: none"> - Pupils/students management - Personnel management - Resources management - Shaping of learning environment 	selection, retention during the teaching/learning process <ul style="list-style-type: none"> - workload - working conditions - determination of salaries allocation of resources in relation to study-places selection/allocation of learning sites	transformation of potentials to competencies <ul style="list-style-type: none"> - preconditions (training, etc.) - division of labour among professionals - progression, further training, careers standards for the utilisation of resources in relation to study-places design/utilisation of learning environment
Main policy options:	<ul style="list-style-type: none"> - standards and assessment - new teaching/learning methods (teaching -> learning) - new technologies - integration of formal and non-formal learning, workplace learning - professional policies, change of working conditions and division of labour, continuing training - input-related standards - new methods of resource acquisition (levies, training funds) - new organisation/management methods (TQM, etc.) 	
Coordination between competencies/qualifications demand and supply		
	numerical allocation - transition from education/training to work	<ul style="list-style-type: none"> - determination of credentials in relation to the labour market structure - relation of attainment to credentials - shaping the qualification profiles of working life
Main policy options:	<ul style="list-style-type: none"> - competency-based assessment, creation of credentials independent from certain studies - combination of study and work (apprenticeship, HRD) - partnerships education and training - enterprises - including representatives from working life into steering bodies - development of anticipation mechanisms of development and change of demand for qualification - transition policy 	
Overall policies	<ul style="list-style-type: none"> - development of the knowledge base, educational R&D - overall change of the steering system - policies for lifelong learning - education and training policies as elements of innovation policy 	

3. *Association*. In this model, coordination is prompted through organised relations between players who in principle share similar interests, with consensus-based negotiating systems playing an essential role. This mechanism has been well tested for the more complex levels in the area of the employment system (employers' organisations, trade unions); it also exists in quite a pronounced manner within the field of education supply (for example in the shape of educators' organisations), but will be less marked in the area of demand for education (parents, young people, students, etc.).
4. *Networks*. Another model comes in the form of social networks, which are 'neither markets, nor hierarchy' (Powell 1991), nor associations either. An essential characteristic of this type of organisation are direct links with a certain permanence between the players, which are maintained through informal ties. It is the *trust* built up amongst the network members that provides the coordination medium, rather than money or formal authority.

The first two mechanisms have played a clear role in political practice and literature about the coordination of education and employment, or are still doing so: the *manpower* approach to manpower planning corresponds to the bureaucratic model¹⁸. The first step is to forecast future manpower requirements, and to plan the supply of education accordingly. The demand for education should then fall in with the forecast, with varying degrees of lee-

¹⁸ The relationship between research in the manpower model and the bureaucratic model was obviously only indirect, in that the analysis of the economic factors and the prognoses or projections based thereupon were intended as data inputs for state planning purposes. On the other hand, however, the model nevertheless assumes that self-regulation through the market alone does not work. The social demand model for the planning of training should also be mentioned as an alternative to the manpower model; it places primary emphasis on developments in the training market as a factor to be taken into consideration in education policy planning (cf. Contributions in Psacharopoulos 1987).

way. The economic *human capital* concept of striking a balance using individual transactions corresponds to the market model.

With the concept of manpower planning having proved unreal and unworkable for many reasons, and with many lines of argument long claiming the market model to be unsuited to general coordination (cf., for example, Blaug 1971), it seems reasonable to sound out the potential of the other models. Problems related to the two traditional coordination mechanisms – plan (bureaucracy) and market – are largely to do with future expectations and dealing with uncorroborated information. Suffice it to mention here *false prognoses* or the notorious *roller-coaster effect*.

1.2.2 Coordination, boundaries and networks

In principle, then, bureaucracies meet with markets on the boundary between education and employment¹⁹, which means that two different coordination models need to be coordinated. In principle, the discussion as to the workability of these two models in the plan-market dichotomy stems from the fact that it is implicitly assumed that the mechanism in question is extended to the other system. The concepts of association and network have the comparative advantage of permitting a large number of flexible coordination processes; on the other hand, however, this very complexity raises the possibility of contradiction and friction between players.

Four different types of interaction between players can be seen in the diagram showing coordination relations (see Figure 5):

Network relations of types 1 to 3 are plausible in many respects, as for example the in-

¹⁹ The position of individual players can be interpreted in different ways: are pupils (or parents) part of the school as a bureaucratic organisation, or do they belong to the system's surrounding environment? A new perspective from the point of view of a consequent customer orientation vis-à-vis the demand for education is developed in OECD 1998a.

Figure 4: Stylized actors and mechanisms in the coordination system

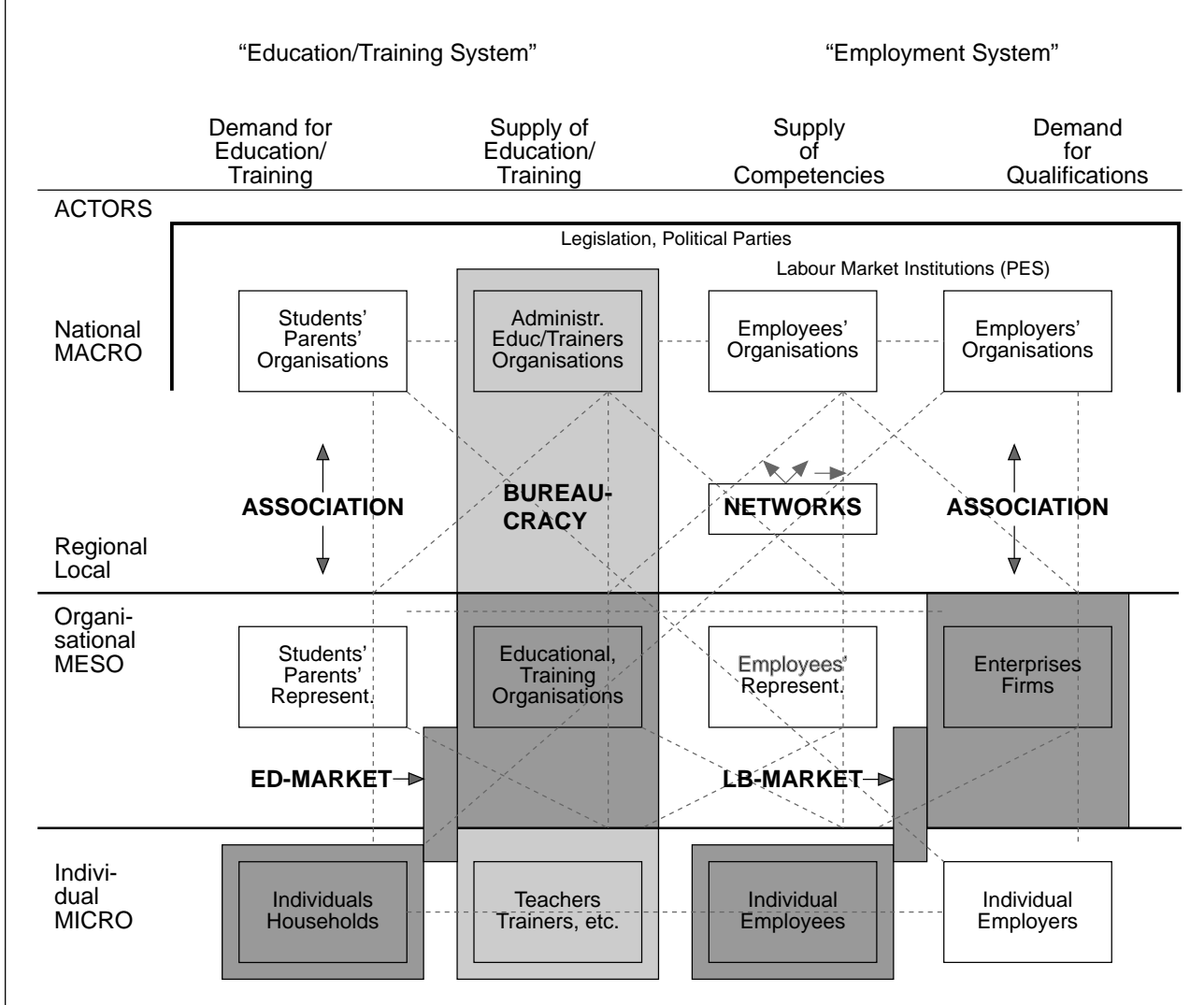


Figure 5: Types of ties in the coordination system

	<i>Within the columns</i>	<i>Between the columns</i>
Within the level	Type 1 (e.g. between national ministry and national teacher representation)	Type 3 (e.g. between individual parents and individual teachers)
Between the levels	Type 2 (e.g. between individual players and their organisations)	Type 4 (e.g. between national employers representation and a school)

formal networks of relations in bureaucratic systems, or the local networks between the various types of players. For coordination between education and employment, however, what is needed are links which cross the 'system boundaries' – because of the interdependencies which have already been mentioned, presumably above all in the case of type 4 relations, which are the least likely. Coordination processes in the network mode need connections which encompass the scope as broadly as possible and with a certain density. This complexity and diversity would appear to represent a peculiarity of the education-employment coordination system, since previous analyses of this type of field or networks between organisations tended to cover players of the same nature (particularly companies), or different players on just one level (e.g. policy analysis), and certainly not so many types of players of such different sorts all at one go (cf. Scott and Meyer 1991).

Obviously, many of the possible type 4 ties are highly improbable. Two types of organisation can be applied which possibly embrace the entire system:

- a) *Balance of interests in the political system or in corporate forms.* Political parties, for example, are presumably still organisations which most widely cover the various levels, and also the players from the different columns; to a certain extent interest groups can also be seen as a framework for far-reaching ties (Streeck and Schmitter 1991; Archer 1979).
- b) *Occupations and professions.* (Academic) professions stand out in particular because they embrace both forms of professional practice (self-employed and dependent), and also training. To a certain extent this also holds true for occupational organisations, although in this field there is often a clearer separation between the employer and the employee side. Sociological analysis of occupational systems has described occupational groups' control of training, for example, as an important element of the professional associations (and where access to training is involved, this control also extends to demand for education) (Beck et

al. 1980). It can also be assumed that under static conditions and apart from certain monopolies and interest-related shortages, a system of professional organisations would be well-suited to carrying out the decentralised coordination of education and employment in its field.

1.3 Steering: main dimensions and policy options

This type of approach opens the door to the possible fragmentation of the coordination problem into a multitude of different mechanisms, which together can form different configurations or regimes (cf. Schmid 1996). The general diagram of the coordination system as shown makes it possible on the one hand to criticise the one-sidedness and shortcomings of the traditional approach, whilst on the other hand permitting the integration of a large number of rather pragmatic and political strategies in terms of solving the problem of coordination.

The following general bases for political strategies can be picked out:

- ❑ the organisational structures at the different levels, within which the various players are linked (particularly the distribution of powers of decision-making);
- ❑ the structure of educational and study paths (content and qualification), their division into units, and the structuring of possible pathways;
- ❑ the structuring of the teaching-learning processes in the system (learning environment), which is determined in particular by the model and profile of the educators, the distribution and nature of learning sites, and how much account is taken of the context for the learning process.

If the concluding picture of international educational development from the point of view of the OECD is followed (Papadopoulos 1994), then these elements can also be used to reconstruct the different political focuses: the period of macro planning for education growth within the rational paradigm was followed

around 1970 by a shift towards quality aspects at school level²⁰.

Major projects were carried out on innovation at the micro level (OECD/CERI 1971, 1973, 1978), and the concepts of planning, research and development were reviewed and revised (OECD 1974a, 1974b). Over the following years, the curriculum and teacher policy crystallised out as important focuses (OECD 1976, 1979).

One major shortcoming in this whole process, however, was that initially initiatives at micro level were not used in the shaping of the macro structures. This only happened to any great extent during the neo-conservative attack on the welfare state in the eighties.

1.3.1 Structures for steering

The dominant ideas about the creation of new steering systems are strongly influenced by public choice-based approaches, which paradigmatically lay behind the World Bank's educational policy recommendations (cf. Lauglo 1997; de Moura Castro and Cabral de Andrade 1997; Middleton et al. 1993). The steering concept moves within the range between state or policy failure and market failure. Systems must be created, which can provide players with behavioural incentives along the lines of what they want to achieve.

In the case of education policy, the central issue is the relationship between the players within the bureaucratic systems, and the external 'stakeholders' (pupils, parents, employers, local communities). The basic assumption is that because the balance between the costs and returns of change is wrong, people within the bureaucratic system inevitably opt for the status quo, with the result that 'inertia is the rule', and there is no adaptation to external requirements. Regulation would appear first and foremost to serve the internal players,

²⁰ This shift can be linked with the 1970 Paris Conference which guided attention onto '....specific micro-educational problems, directed at enhancing the effectiveness of educational systems, as against the more global approaches of the past' (Papadopoulos 1994, p.73).

and, moreover, is impermeable to external influence. Any attempt at reform which is not sufficiently rewarded is therefore doomed to failure.

Claudio de Moura Castro and Antonio Cabral de Andrade (1997, p. 86) base their theory on the assumption that education reforms of the past often produced negative results because, when taken to the extreme, the demand for increased effort brings with it greater uncertainty, resulting in badly defined and uncertain aims of improved 'quality'. By shifting decisions to the lower level of achievement, the link with external 'stakeholders' can be strengthened, possibly resulting in a better balance of interests.

In the case of vocational training, it is the employers who are seen as the most important external 'stakeholders' – 'they are the market'. In his interpretation of the World Bank policy paper, de Moura Castro (1995, p. 4) expresses the situation unambiguously: 'The rule is simple: no demand, no training. In other words, the demand for training has to be closely monitored and only that training which responds to a clearly identified demand should be offered. No more, no less'.

Consequently, steering structures should be created which make it possible for the employer to exert some influence, and which at the same time also allow their demands to be assessed:

- ❑ the setting up of collaborative steering organisations which give employers real influence over decisions and provide sufficient scope for a balance of interests between the different 'stakeholders';
- ❑ a second condition is the setting up of mechanisms for feedback, evaluation and anticipation of demands on the labour market for the vocational training institutes;
- ❑ thirdly, practical cooperative links should be established between vocational training and the employment system in order to bring these two worlds closer to one another.

These points concern the organisational links between the different players.

1.3.2 Structures of studies

The structure of courses refers in particular to the way in which the content of training is organised. Although it is the curricula which form the actual core, a whole host of other more process-related elements are also involved, which affect the steering of access possibilities, the choice of educational pathways, and the accompanying signalling systems composed of formal requirements and qualifications. As regards the study structure, four dimensions can be distinguished, which form different policy options:

- a) The first dimension regards *the way in which the targeted qualification elements and the content of learning are conceptualised*. The most important distinction affects the traditional division into academic subjects (the fragmentation of knowledge, the ‘Triumvirate’ of knowledge, skills and attitude, etc.; cf. Eraut 1994, p. 15) as opposed to the new, more holistic elements (basic skills for learning; basic job-oriented or generic skills, key qualifications, contextualised key qualifications; cf. Brandsma and Nijhof 1999, p.4), which basically aim at facilitating and improving the transfer (this is dealt with in more detail in the framework of conceptualisation of forms of knowledge in Section 2).
- b) The basic pattern for *allocating general and specific elements of qualification* can be shaped either using the model which ‘uncouples’ general and specific education (general and foundation elements in the formal education system and specialised elements in employment), or according to the model which moulds itself to fit in with apprenticeship.
- c) The third dimension concerns the creation of *longer and more complex* training pathways which tend to aim at a more holistic pattern of qualification, or its fragmentation into *flexible modular* systems.
- d) The fourth dimension concerns *the relationship between education processes (curricula) and certificates*, which can be planned either separately or in association, as well as – closely related thereto – the sort of standards which condition qualifi-

cations (traditional exams or competence-based qualifications, group-reference-based or criteria-based assessment).

There are pros and cons attached to both ends of this dimensional scale, which have so far prevented any clear-cut assessment from being made (cf. e.g. OECD Votec study; OECD 1998c; Lassnigg 1997). These dimensions can be used as parts of broader political strategies whose degree of coherence varies. Real systems are complex mixtures of these elements, which can develop in any direction.

1.3.3 Shaping of the teaching-learning process

Attention has recently shifted more closely to the conditions governing the teaching-learning process, since the significance of the contextual conditions for learning have become clearer (Brandsma and Nijhof 1999). The traditional separation between the content and processes for putting this content across, which finds expression in the categories of curriculum development, subject teaching, and learning methodology, is brought into question for approaches using learning in practical contexts in particular. There is still a very big difference, however, between the predominant models and these newer concepts. Some important dimensions in this context are the professional profile of the educators and the design of the learning site. In this context, the following points are important in terms of policy options:

1. The first point concerns the basic conception of professionalising the teaching profession. Important proposals refer to the concept of the *reflective practitioner* (Altrichter and Posch 1990; Elliott 1993). Recently, there have been calls for the creation of traditional professional characteristics: autonomy, self-regulation and a specific code of ethics (Hartmut von Hentig suggests a ‘Socratic Oath’ in analogy to medicine; cf. Hentig 1994, p. 258f.; see also Hargreaves 1997; Mc Laughlin 1997 in the Anglo-Saxon field).
2. The second element concerns the division of labour between professional profiles in the education sector, and particularly to

what extent educators can cope with even more complex forms of share-out, similar to roles in the HRD field (this is covered more thoroughly in Section 3). Two basic categories of educators are contrasted here, which also represent very different learning environments: teachers and trainers.

3. The third element concerns the organisation, range and format of teaching environments. For a long time hence, the choice will continue to be between school and non-school, but another important question concerns the utility of certain types of 'practice simulation' (Nieuwenhuis and Mulder 1999).
4. The fourth element concerns the organisational model which underlies the various different learning sites. Organisational models in this area vary between the school as a part of bureaucracy, and the company as a context for practical learning as representing the two points of departure. But 'educational organisations...are usually thought of as *not* fitting the overall image of a machine bureaucracy' (Scheerens 1997, p. 289). There is a trend in certain circles towards company-based organisation, but its suitability for organising learning processes is also being brought into question²¹. The concept of the learning organisation offers an alternative (this point is dealt with more thoroughly in Chapter 2; cf. De Caluwel et al. 1988; Finger and Buergin 1999).

We can now come back from this last element of the meso-organisational level of educational

organisations to the model of steering mentioned at the outset in the public choice perspective, and refer to the institutionalist counter or competitive model. Different points of view are bound to emerge at theoretical level according to whether one considers the system from a macro, micro or meso point of view. Even if this can be 'logically solved' by contrasting the various premises, the mixed policy options and proposals which can form workable configurations still have to be dealt with.

The core of institutional understanding of educational organisations can be traced back to Karl Weick (1976)²² and John W. Meyer et al. (1983), and is based on the hypothesis of the 'loose coupling' of processes to their technology. The 'production model' is rejected for schools on the basis of the way in which the education and training processes are understood. The terms 'institutional' versus 'technical' are used to contrast the underlying rationality of the training organisations with the rationality of the factory (Meyer et al. 1983), and the essential point is that the learning process in the school is conceptualised as being '*inherently non-technical*'. This organisation can therefore not be built up on its technical functions, tending to act more as a protective screen against the unsolvable conflicts about the '*right technique*' for the processes within it: '...institutionalised organisations (...) buffer their structures from the actual technical work activities (...) using such techniques as certification, delegation, secrecy, and ritual, these organisations attempt to decouple their technical work from the organisational structure (...) the institutional organisation turns its back on its technical core in order to concentrate on conforming to its institutional environment (...) a school, to survive, must conform to institutional rules (...) that define teacher categories and credentials, pupil selection and definition, proper topics of instruction, and appropriate facilities. It is less essential that a school's teaching and learning activities are

²¹ Whitty et al. (1998, p. 14) for example interpret the reforms which they investigated within this field between bureaucracy, market and the traditional understanding of politics. On the one hand they argue that 'recent research suggests that the fragmentation of bureaucratic systems of education is leading to a polarisation of provision' (i.e. between 'good schools' and 'failing schools'), an essential factor being that the good schools develop the skills for market economy behaviour, and at the same time there is a 'consolidation of traditional academic models of schooling' – as a conclusion they state: 'The key issues, therefore, are likely to remain political ones which need to be pursued in the political arena'.

²² The term 'loose coupling' is often used in literature, but usually it is not understood in its essential meaning, but rather as a loose coupling between organisational units.

efficiently coordinated or even that they are in close conformity with institutional rules.’ (Meyer et al. 1983, pp. 46-47; cf. also Scott and Meyer 1991, pp. 122-126)

This interpretation makes it clear that the main thrust of the ‘market-oriented strategy’ is more or less diametrically opposed to the rationality of the ‘institutional’ viewpoint, the processes are interpreted in a more or less ‘technical’ manner, ‘grass roots’ activities should be more closely attached to the organisational framework, etc. If this interpretation of educational processes is applied to vocational training, it reveals the complicated links which exist between schools and companies as ‘technical organisations’, and also that the two different rationalities coincide within the company-based training process.

This contrast emerges in the Taylorist-Fordist model in particular, which is also authoritative as a paradigm of industrial organisation for ‘technical interpretation’. If the new ideas about company organisation are taken as the basis, however, with the buzzwords being Post-Fordism, ‘lean production’, ‘lean management’, flat hierarchies, self-directed work, etc, it can be assumed that the two opposing models will converge – companies could become more ‘institutional’, whilst educational organisations could also become more ‘technical’. This development could be characterised by professionalisation and learning organisations. Human resource development can play a key role in these processes, and vocational training can act as mediator in such developments. In order to shed more light on these elements, attention must be focused on the interfaces between the educational organisation and the employment organisation; learning in the workplace, ‘tacit knowledge’, informal learning, and the learning society become important terms.

2. New policy strategies for steering VET systems

As a second step, the conclusions drawn from recent innovation research are tacked on to the conceptual analysis of coordination between education and employment. This brings

a second axis into the picture, which has a dynamising and concretising effect at many levels, and also suggests new focuses for political strategies.

2.1 VET, innovation systems, and innovation policy

The basic question is how the concept of the innovation system can be integrated into the relations between education and employment. Essentially, two processes lie at the focus, production of knowledge and learning, which have been analysed in terms of their economic and social importance, and have been further developed into the concepts of the learning economy, or even the learning or cognitive society in connection with new, more general socioeconomic paradigms (cf. in particular, Lundvall and Borras 1999; see also Lassnigg 1998). The following new formats in the relationship between training and employment derive from the results of this research, and also refer to the problem of coordination:

- In the concept of the innovation system (Lundvall 1992; Nelson 1993) the processes and players which act as a driving force in economic and social innovation dynamics are made explicit. This makes visible the relations of interaction and cooperation which are being developed and becoming more intense between players in the education system (higher education in particular) and players in the employment system (e.g. development teams within companies). The processes of knowledge production for the development and constant renewal of the knowledge base are emphasised in terms of their crucial importance for economic activities in the course of technical-organisational revolutions and globalisation. Ideas about the division of labour between the players and institutions involved become blurred, the original linear model (basic research -> applied research -> industrial development -> application) is replaced by the model involving complex and contingent networking, in which completely different players can take on different tasks. This creates new or stronger direct interactions and cooperation on the innovation dynamics axis,

which may even extend beyond the original boundaries between part-systems.

- Learning takes on a new prominence in two respects within the employment system, firstly through learning processes in many ways becoming a necessary part of labour processes, and secondly through the productive, knowledge-producing character of learning processes as opposed to their reproductive nature coming to the fore (Argyris and Schoen 1978; Nonaka and Takeuchi 1995). Institutionally speaking, this development is expressed in the appearance and development of 'Human Resource Development' (HRD) approaches, which reflect the formation of a new training system within the employment system itself, which is also essentially based on the inclusion of informal learning processes.
- Within the education system traditional relations between the sectors (compulsory general education, higher education and vocational training), their functions and the predominant picture of learning within the sectors is reshaped. The duality between production of knowledge, which is institutionalised in the research role of higher education in particular, and the distribution of knowledge as part of the educational and training function comes to the fore and becomes more complicated²³. Higher education loses its monopoly on the production of knowledge, and at the same time it becomes increasingly tied in with cooperative production processes, and extending access to knowledge production processes gains in importance. This gives

greater and more universal importance to those forms of knowledge which were traditionally taught by higher education, and the question arises as to how to achieve better integration and dovetailing between the different sectors of education. The question of integration between vocational training in the formal education sector and developing vocational training in the company sector itself (HRD) arises in the case of vocational training on the basis of the new points of emphasis concerning necessary learning processes towards access to the knowledge-producing functions.

2.2 Learning organisations and knowledge production

The first concrete point of reference for the development of new coordination and steering strategies to stem from the conceptual considerations on the role of innovation dynamics for the coordination system is the interplay between the learning organisation and the production of knowledge, with the consequent demands on training. The linkage of labour processes with different types of learning processes, which are aimed at further developing the production processes, lie at the heart of the different concepts of the learning organisation. In terms of ideals, this concept contrasts with the Tayloristic and Fordist concepts of manpower usage, which are based on the greatest possible standardisation and minimisation of qualification requirements, and strict separation of actual labour processes on the one hand, and of planning and development on the other.

Unlike the ideas of technological determinism, the development of learning organisations is seen not as a necessary, but rather as *one* possible strategy for using technological achievements to improve competitiveness against the background of globalisation. Achieving this strategy will demand organisational developments on the part of companies and backup for them through appropriate institutional framework conditions. One of these conditions is the availability of the necessary qualifications potential, and the mechanisms for further developing qualifications.

²³ Influential theoretical approaches to higher education research have distinguished the societal function of universities as a place for the production of knowledge and of 'cultural fiduciary' from their educational function, and brought it to the fore (cf. Parsons and Platt 1973; Kluever 1983; Stichweh 1991). Those functions were often neglected in the era of education growth, and even today the universities are frequently seen mainly as part of the education system. A new perspective came into being with the sociological analysis of the 'new production of knowledge', which in turn diminished the role of the universities in this context (cf. Gibbons et al. 1994).

1. A first question for training policy concerns the development of learning organisations within the training system itself. This ties in closely with the development of forms of organisation which in the Taylorist and Fordist paradigm were shaped by the bureaucratic model, which also determines large areas of the training system.
2. A second question relates to the consequences on training policy of the growing importance of the knowledge base and the opening up of access to knowledge and to practices which produce knowledge. This question swings in very closely with the conception of types of knowledge and their dynamics. The distinction between codified knowledge and tacit knowledge which is closely connected to the linkage of informal learning and formal learning processes, and Bengt Ake Lundvall's classification (know why, know what, know how, know who), as well as certain dynamics between these forms of knowledge are central concepts in this context.

The new ways of looking at knowledge, learning and organisation are an essential link to training policy. The theories developed about knowledge refer to the older but long little-headed distinction drawn by Michael Polanyi (1958) between explicit (codified and media-transferable) knowledge and tacit knowledge: knowledge which one possesses but which cannot be transmitted in words. The essential point is that practical uses of knowledge usually include a component of tacit knowledge; tacit knowledge stands out in that it

- is embodied in people and
- tied to the practical context,
- so that it can only be passed on and learned in social processes.

This brings with it essential consequences for the social organisation of production processes, because learning and qualification are thereby given a new value. Because the value of *tacit knowledge* is rising in the course of the information explosion with increasing

availability of codified knowledge which can be mechanically transmitted, the social organisation and the institutional structure of the employment system take on a key role. From this point of view, the use of information technology is an indispensable means for keeping pace in the innovation process, but at the same time this is not enough for particular achievements where the stage of codification and the creative use of codified knowledge play a decisive role.

The implications for the development of qualifications and skills can be exemplified in the two dimensions of different forms of knowledge and the dynamics of the transition from *tacit* to *codified* knowledge. Three essential trends stand out in particular:

1. the *know why*, which can essentially be characterised through scientific, theoretical knowledge, increases in importance compared with *know what*;
2. the ongoing renewal of know how and know who becomes the most important factor in economic success;
3. the further development of networks which can provide access to the knowledge required becomes a further decisive factor of success.

From the point of view of training policy, three challenges emerge in particular:

- i. the further development of organisational forms;
- ii. the linking of formal and informal learning processes; and
- iii. moving beyond the strong focus on know how and know what in favour of putting greater emphasis on the other forms of knowledge (know why and know who).

2.3 Networking and policy learning

A further point of departure for developing new strategies of coordination and steering comes in the development and structuring of organisational links between the players in

the coordination system under the buzzwords networking and policy learning. An analysis of the innovation system reveals the complex interactions which exist between a great variety of players, although in this concept the education system tends usually to be analysed purely in terms of higher education's function of producing knowledge, with the vocational training system being excluded. But this point of view is not logical, since it implicitly limits the role of vocational training to the traditional reproductive elements.

Thus the question arises as to how a new configuration of the players can also lead to more active involvement of the vocational training system in innovation dynamics. This question concerns the background to professionalisation in the field of vocational training, and can be asked at various levels:

- a) at actor level: which players bring about coordination between education and employment, and which players provide the link to the innovation system
- b) at the organisational form or coordination mechanism level: what role is played in this context by the organisational forms beyond bureaucracy and market, which were recognised as essential components of innovation dynamics (in particular networks and corporate associations) and
- c) at knowledge base and policy learning level: which mechanisms for the further development of the knowledge base exist within the coordination system itself, or at the interface between the coordination system and the innovation system, and how is this reflected in the specific links with the political decision-making system.

These elements provide the conceptual background for an analysis of professionalisation and the professional categories in the field of vocational training.

2.4 Adaptation and shaping

Finally, it has to be asked what vocational training's influence and scope for shaping could be in connection with economic and so-

cial innovation dynamics²⁴. In the conventional discussion, coordination between education and employment, particularly when vocational training is being discussed, tends to be synonymous with reactive adaptation, the main problem stemming from the exactitude and speed of this adaptation.

From an institutional point of view, this method of tackling a problem is based on a naïve understanding of the basic structure of the coordination problem, which on the one hand gives an elliptical interpretation of the role of vocational training, and on the other hand hypostatizes and reifies the employment system at the same time. The basic pattern for this traditional line of argument is that the shaping of vocational training should track 'real' developments in the field of employment as closely as possible – however it overlooks the basic premise of institutional thinking on the education system, that the institutionalisation of education in turn contributes to the social construction of reality (cf. Meyer's classical contribution 1977).

This line of thinking means that the understanding of professional activities, and in particular the social understanding of professions themselves, is in each case essentially constituted by the respective vocational training system and the knowledge base which lies behind it. This aspect comes across clearly in the analysis of the professions and professionalisation, where these arguments emanate from the professionals themselves. In the other less obvious areas, where this 'subjective' factor tends to be left in the background and reality is constructed by other players or in the political system, this aspect is less clear. Therefore within institutional thinking the old question as to whether training policy should be given a reactive or a proactive slant is redefined in two respects:

²⁴ This question was also one of the basic questions behind the EUROPROF project which focused on the possibility of professionalisation of VET professionals: Leonardo-da-Vinci project No 3366 'New forms of education of professionals for vocational education and training' (EUROPROF); cf. Also Heidegger 1997, Rauner 1995.

- a) it is not a question of recognising the 'real' occupational challenges, but rather of constructing suitable profiles; and
- b) it is not so much the temporal dimension, i.e. whether 'reality' is pre- or post-ceded which stands in the foreground, as the conceptual question concerning the relationship between the endless multiplicity of 'real' occupational activities on the one hand, and the institutional ways in which they are organised, and the question of reshaping and changing these forms on the other hand.

Proactive shaping thereby becomes first and foremost a problem of conceptualisation of the employment and occupational system. The conceptualisation which the players have of the vocational training system itself, and to what extent they can control the knowledge base of their own professional or occupational field thereby takes on a central role.

3. VET professionals and steering mechanisms

In the third stage, the 'VET professionals', that means the various categories of qualified employees within the vocational training systems, are studied in terms of their role within the coordination and steering system. This analysis draws on material which was collected in the course of recent European projects (in particular Cedefop 1995a, 1995b, 1997, as well as EUROPROF), and interprets this material within the conceptual framework just mentioned. Since there has never been a tradition of comprehensive comparative analysis to date, and the scale of the actual project cannot do justice to the many different structures within individual vocational training systems, the evidence is limited so far, which means that the generalisations drawn are therefore open to further differentiation and investigation²⁵.

²⁵ The influence of the Austrian system on the author doubtless also plays a certain structuring role which may sometimes put a specific emphasis on certain points, which would not appear under other circumstances.

The term 'VET professional' is frequently used in relevant discussions. It might however be useful to briefly discuss this term as it gives rise to some lack of clarity. Initially, high-status occupations with considerable power were described as professions, with the following characteristics usually being attributed (cf. e.g. Torres 1991; Alisch et al. 1990):

- ❑ specific expertise or knowledge base, which tends to be closely related to a specific scientific discipline;
- ❑ a system of regulation and control, within which the processing of a specific occupational area is reserved specifically for this profession by the state, and which is subject to auto-control;
- ❑ a specific code of ethics which provides the basis for auto-control, and in conjunction with that a special system of values;
- ❑ a type of self-organisation which also regulates access to the profession, and special training as well as certain practical requirements.

It is easy to see that professional groups of educators fulfil very few of these criteria, 'VET professionals' usually even less so than other categories of teachers and trainers. The consequence of this was that teachers were classed as a *semi-profession* (Etzioni 1969; cf. also the early twist of meaning of the term into 'bureaucratic professions' by Leggatt 1970, p. 160).

Since then, attention has shifted to focus more closely on the process of creating and developing professions, definitions were made more flexible, and the dissociation from other forms of professional work is seen these days in a less absolute, more fluid way (Abbott 1988). It is particular discussions about the definition and control of a certain occupational field and the institutionalisation of a specific knowledge base as a basis for legitimisation of occupational autonomy which have come to the foreground (Di Maggio and Powell 1991).

Two aspects should be stressed in the development of and research into professionalism for our purposes:

Firstly, the connection between professional work and work in bureaucratic organisations, and, secondly, the content of professional work. Professional work in the strictest sense of the term was originally seen in contrast to work in bureaucratic hierarchies as exclusive, and consequently the spread and predominance of Taylorism and the Fordist model in the sixties and seventies led to an image of ‘de-professionalisation’, with some people even talking of the ‘proletarianisation’ of professions. Professional forms of work, however, proved more able to survive than had been predicted by this research, with new production concepts and the post-Fordist paradigm in particular stressing re-qualification and re-professionalisation – nowadays it is the relationship between professional work and bureaucratic hierarchies which is being studied. ‘The dominance of bureaucratic hierarchies is over’, writes Lynne Zucker succinctly, for example (1991, p. 160), in her study of the interplay between ‘bureaucratic authority’ and ‘expert authority’. Different forms of complementarity and interplay which can be studied in more detail in the system of vocational training and co-ordination between training and employment have taken over from the dichotomy and exclusion between hierarchy and profession.

The second aspect, the content of professional work, was largely ignored by classical sociological research into professions. Recently major progress has been made, which is based on similar access to the innovation research sketched out above. Michael Eraut’s book (1994) about the development of professional knowledge and skills is a milestone with direct reference to the teaching professions. The link with innovation research is provided by the study of professional work in management in relation to the development of learning organisations and the related learning processes in the interplay between forms of knowledge, between tacit knowledge and codified knowledge. Professional work stands out particularly due to the great importance of the implicit components, which implies particular conditions and also difficulties in shaping formal training for learning these qualifications.

3.1 Main categories of VET professionals and their roles

The starting point for analysis of the most important categories of ‘VET professionals’ is a vague definition, which is based on observation of the most important functions in the vocational training system. Here, the conception of the vocational training system as expressed above should be taken into account: firstly, the relative autonomy in terms of other sectors of education (elementary and higher), and, secondly, the relative overlapping with the employment system. The professional categories responsible for vocational training are spread across the different organisational spheres, they work in formalised state or private educational establishments, in companies, are self-employed, etc. This applies to those areas where ‘VET professionals’ are employed.

Contrasting vocational training (VET) and Human Resource Development (HRD) can be very productive for the purpose of understanding jobs, roles, functions and positions²⁶, since there is a highly differentiated analysis of roles and positions in the HRD field.

3.1.1 HRD practitioners and their roles

In contrast to the dominant role of teachers and trainers in vocational training, this classification covers a much broader spectrum of roles and duties. The activities leading up to the construction of the *American Association for Training and Development* (ASTD) were an important step towards the professionalisation of the HRD field, with systematic investigations and developments of the roles and functions of HRD practitioners being un-

²⁶ A distinction is drawn in literature between two approaches to the analysis of elements which make up job profiles: the more European approach (task analysis) which refers to activities, and the more American approach of role analysis which refers to outputs. Carrying out tasks or roles requires specific competences which represent a level of analysis unto themselves. Certain professional positions can be made up of specific combinations of tasks or roles which demand specific competencies for them to be performed (cf. de Rijk and Nijhof 1997).

dertaken since the eighties. In the nineties, this approach was put to good use on a broader European scale, particularly through the activities of the University of Twente.

The classification of HRD roles in the USA (McLagan and Suhadolnik 1989, p. 20) is important in this context:

- Marketer
- Needs Analyst
- Researcher
- HRD Materials Developer
- Organisation Change Agent
- Instructor/Facilitator
- Programme Designer
- HRD Manager
- Administrator
- Individual Career Development Advisor
- Evaluator

Various studies considered the usability of this classification in the analysis of European HRD practitioners (cf. de Rijk et al. 1994; Valkeavaara 1996, 1998; Odenthal and Nijhof 1996). Similarities and differences emerged with the US structure, which in turn can be seen to be in motion (McLagan 1996)²⁷. The European surveys, which are possibly distorted by sampling errors and the small sample size, tend to coincide on a high dominance of the following four roles, with the Instruc-

²⁷ The 1989 role structure is revised for a new study of HRD roles in the USA, which on the one hand takes more account of organisation development and consultants, and on the other hand suggests more complex role definitions which are more closely related to organisational dynamics: e.g. HR Strategic Adviser instead of the different roles of Marketer, HRD Manager and Administrator; or HR Systems Designer and Developer and Learning Program Specialist instead of HRD materials Developer and Program Designer; new roles are Organisation Design Consultant and Performance Consultant, the original specialised roles of Evaluator and Needs Analyst are absorbed into the more complex new roles; only two of the original roles remain unchanged (Instructor/Facilitator and Researcher), and two more are still couched in similar terms (Organisation Change Agent, but with a stronger emphasis on the outside as Consultant; and Individual Career Development Adviser but with a sharper separation between development and career as Individual Development and Individual Career Consultant (cf. also Odenthal and Nijhof 1996, pp. 88-89).

tor/Facilitator role being ticked by 85-95% of respondents:

- Instructor/Facilitator
- Programme Designer
- Organisation Change Agent
- Needs Analyst

The other three roles in the above order were ticked by 50% of respondents in Germany, and they were also frequently mentioned, although in different configurations, for the other European countries looked at. The following roles from the ASTD classification were much less frequently ticked by participants (e.g. in Germany by a maximum of one third of respondents), and can be seen as more highly specialised roles in Europe:

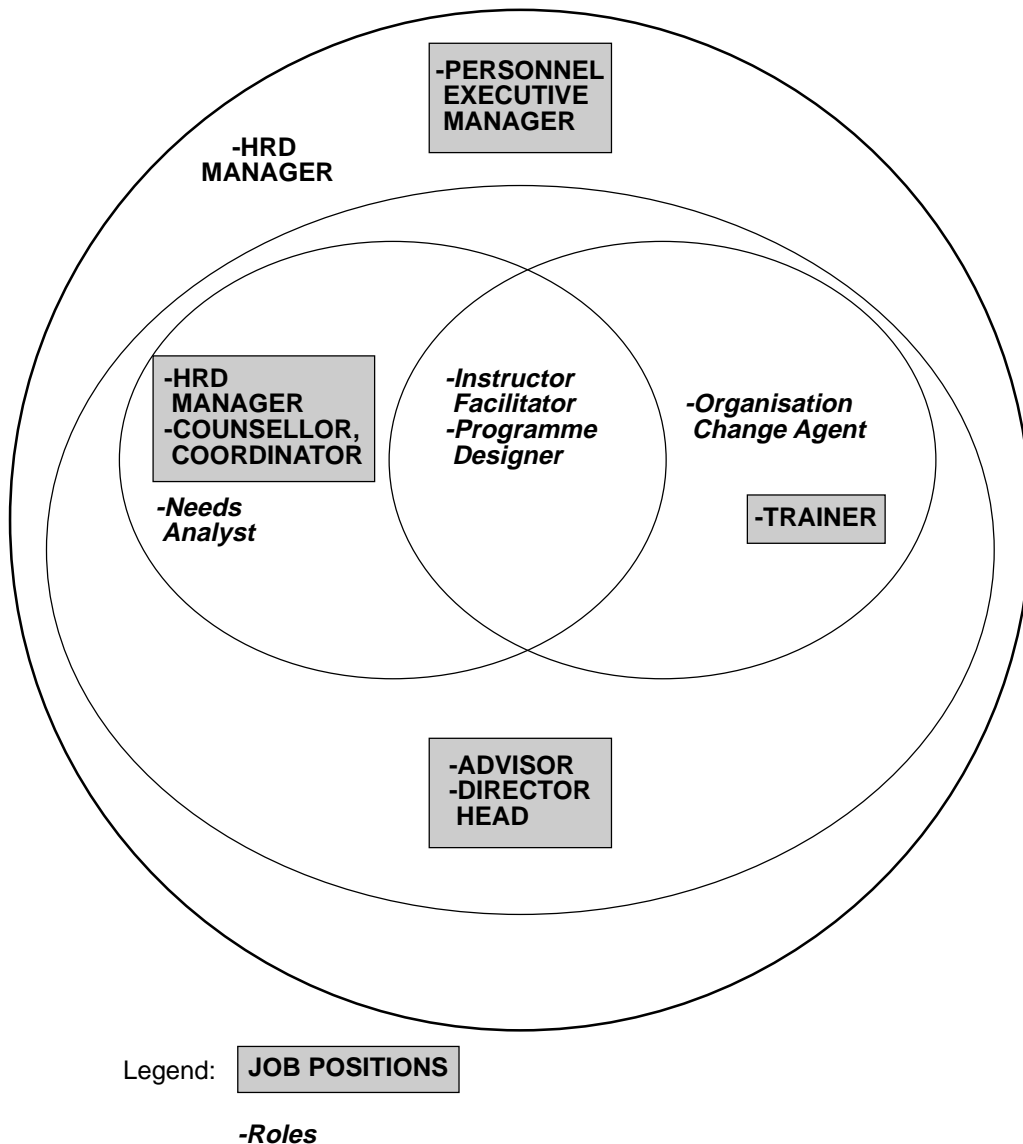
- HRD Materials Developer
- Marketer
- Individual Career Development Advisor
- Evaluator
- HRD Manager
- Researcher
- Administrator

Once again, there are different degrees of emphasis on these various roles from one European country to another: in Ireland and England, the roles of HRD Manager and Administrator were regularly ticked, whereas in Germany HRD Materials Developer, Marketer and Individual Career Development Advisor and Evaluator are the most frequently encountered specialised roles; in Italy, Individual Career Development Advisor and Evaluator were mentioned comparatively rarely; in England, Research and HRD Materials Developers play a comparatively more important role.

The job titles which are given to the different roles were also established. The most important headings proved to be:

- Trainer
- Advisor
- Training or HRD Manager
- Director or Head
- Personnel or Executive Manager
- HRD Coordinator, Counsellor
- Researcher

Figure 6: HRD Roles and self-reported job positions of German HRD personnel

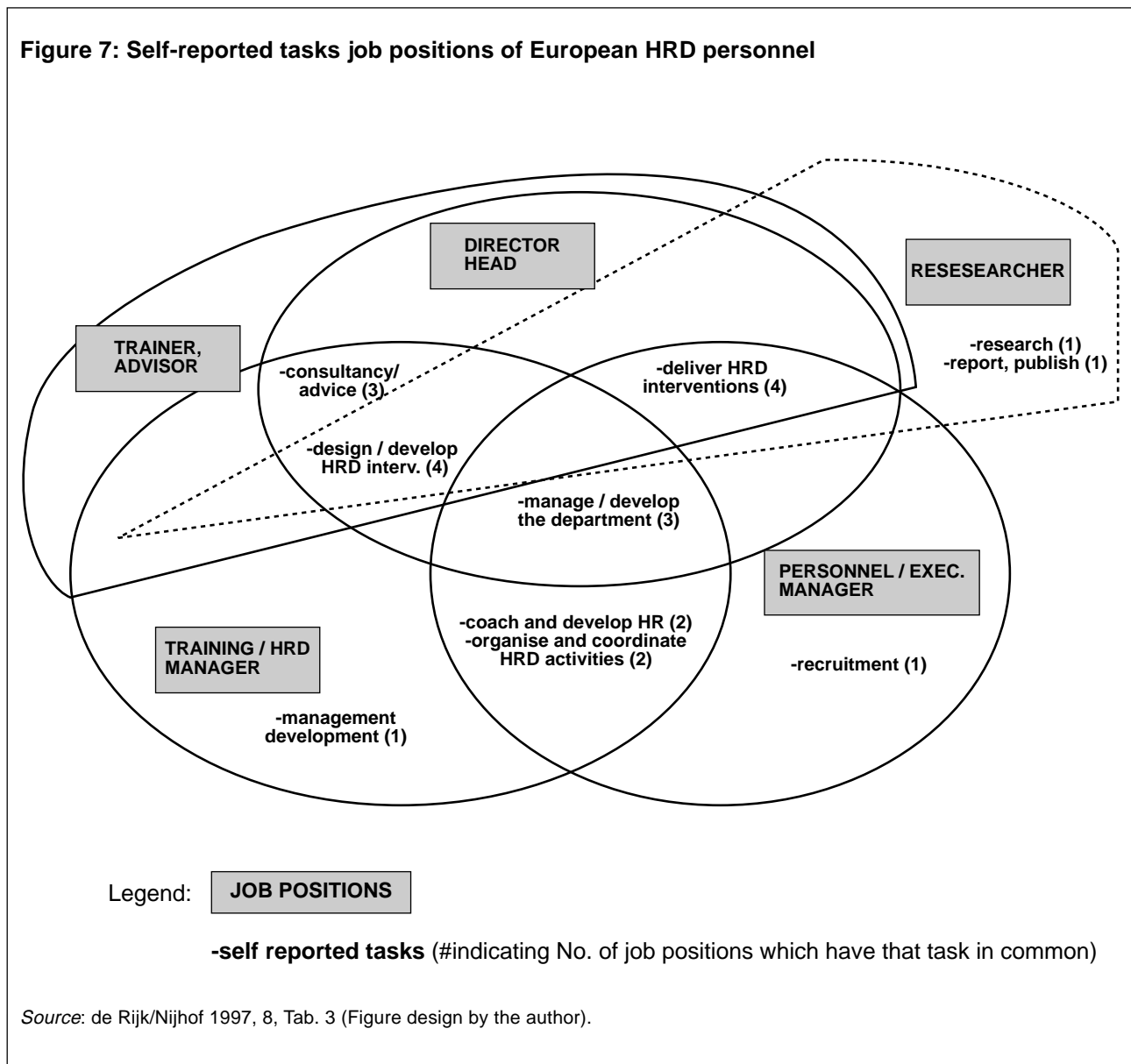


Source: Odenthal/Nijhof 1996, 69, Tab. 4.23 (Figure design by the author).

More detailed analysis of the most important roles and the duties and output of the different headings reveals a large degree of overlapping between the job titles (see the two diagrams based on Odenthal and Nijhos' surveys 1996; and de Rijk and Nijhof 1997).

Closer consideration of the empirical distribution of roles amongst German HRD practitioners produces the following picture (see Figure 6): there are four overlapping types of job titles, each of which has to carry out similar duties: Trainers (41%), HRD Managers,

Counsellor-Coordinators (20%), Advisors, Director-Heads (26%), Personnel or Executive Managers (4%). All these headings have the *instruction/facilitation* and *programme design* roles in common, carried out by more than two thirds of practitioners. These can be seen as a core function. Trainers also act as *organisation change agents*, whilst HRD Managers and Counsellor-Coordinators in addition to their core functions also perform *needs analysis*. Advisors and Director-Heads perform *all the roles mentioned* (the small group of Personnel or Executive Managers



also performs the role of HRD Manager, which would appear to be redundant).

The most important duties performed by European practitioners in the course of their work were also surveyed (see Figure 7). Here, once again, there is a lot of overlapping between duties. Six out of ten categories of duties are regularly mentioned in more than two headings, including two duties in four headings (design and develop HRD interventions; deliver HRD interventions), and two duties in three headings (consultancy/advise and manage/develop the department). Only four of the ten categories of duties were more regu-

larly ticked specifically for certain headings (recruitment, management development, research, report/publish).

In conclusion, two task areas or roles provide the focus of activity for European HRD practitioners: Training/Facilitation and organisational change agent. On average, for the four European countries, a quarter of respondents indicated these roles as being the most important; in Germany the most important role focused more heavily on Instructor/Facilitator (41%) than on change agent (13%). Despite the high proportion of direct teaching activity or learning support, the activities of HRD

personnel are quite closely tied in with the organisational development processes. For example, there are no major differences between internal and external HRD practitioners as regards their professional activities.

3.1.2 Categories of professionals in VET

If we now take a look at the division of labour between different professional profiles in the area of formalised vocational training (VET) as compared with these occupational roles and headings in the HRD field, there are some empirical studies into the different categories of teachers and trainers in particular. The comparative Cedefop study on *Teachers and Trainers in Vocational Training* (Cedefop 1995a, p. 15, 1995b, p. 12; Cedefop 1997) initially distinguishes between three basic types of 'VET professionals':

1. Technical and vocational teachers;
2. Full-time trainers; and
3. Part-time trainers and temporary trainers.

The five basic stages of the training process are put forward as additional important functions in the field of vocational training, which can also provide a basis for developing particular professional profiles. 'In those countries where training is more developed and has a longer tradition, it is possible to establish a second means of classification based on the function fulfilled by the teacher or by the trainer (...) there are five basic stages in the training process, around which new occupational profiles are emerging: mainly needs analysis and design, organisation of the training, the design and drawing up of the didactic material, the training itself, and evaluation. Around these functions, new areas of expertise are becoming apparent. They are related to education and training management and the organisation and planning of teaching.' (Cedefop 1995b, pp. 12-13)²⁸.

²⁸ This functional analysis, based on the training cycle, also underlies the British approach to skill development from the time of the Industrial Training Boards until the developments in the Training and Development Lead Body (Cedefop 1995a, pp. 157-158, p. 171).

A somewhat modified classification of six different functions in the vocational training field, which is more closely adapted to professional categories in vocational training systems is provided in Cedefop 1997:

- 'tutoring (tutor, coach, guide, master);
- teaching (teacher, trainer, instructor);
- counselling (counsellor, consultant);
- development (developer, designer);
- management (training manager, principal, director);
- policy-making' (Cedefop 1997, p. 15).

A comparison of the two types of classification, that in the HRD field on the one hand, and that which has just been presented for VET on the other, reveals one fundamental difference: in the HRD field we are dealing with complex profiles, which are often directly related to management and guidance functions, whilst in the VET field there is a segmentary division which is typical of Taylorism and Fordism. Teaching and support functions tend to be quite distinct from the other functions such as analysis, planning, development, design, evaluation, etc. The more organisational tasks are usually carried out outside the actual training organisations within the administrative superstructure, often even outside the education sector in the area of the political and corporative organisations of interest groups. This pattern corresponds to the model of bureaucratic organisation.

Studies on teachers and trainers in vocational training in the countries of the European Union produce a basic pattern in which the areas of vocational training schools as well as apprenticeship and other forms of vocational training, which are more deeply rooted in the employment system (e.g. labour market training), overlap with the HRD field. In the school sector, there is a great deal of regulation, supervision and information, but much less in the other areas. Thus, for example, it was not possible to find comparative figures for the different categories of trainers and tutors. Some important findings from the comparative Cedefop 'cartographic' studies were:

- Division according to the basic groups of teachers, full-time trainers and part-time/temporary trainers was largely reflected for the different countries (there is little information about tutors, a category which seems to merge with that of trainers).
- The teacher category is closely related to the structure of the respective vocational training systems. In many countries this is highly regulated, differentiated or fragmented, which is reflected in the structure of teachers and their training system (particularly obvious in France, for example). If the vocational training sector is less regulated, there is a greater range as well as less pronounced structures in the educator area (e.g. in England, where at the same time the clearest points of linkage of VET and HRD are to be found)
- Usually educators tend to be referred very specifically to a subject, which can be either general or occupational, or technical. There are often various levels of educators, sometimes linked with types of schools at different levels. Moreover, in the area of vocational training subjects there are more theoretical (higher value) and more practical (lower value) categories of educators with different training pathways. Training of staff for the general subjects usually takes place at higher education level, whilst this is less often the case for staff for vocational training subjects. Educators for practical subjects often have vocational training on the middle level (skilled worker).
- In most countries educators for professional subjects, most of whom have had to go through relevant training at higher education level, are required to have several years' practical experience in industry (England is an exception, for example, where there is no regulated professional training for these staff, as is Italy). In many countries there are ongoing discussions as to whether the emphasis of teacher training for professional subjects should be placed more on the pedagogical or on the practical-occupational side. This type of discussion is taking place in Germany, for example, and also in Switzerland for the staff in (part-time) vocational training schools (cf. Bader and Hensge 1996; Ruetzel 1996; Straumann 1996).
- Whilst there is a good level of information in the teacher field, the information base for trainers is very poor in all countries. A distinction is often drawn between trainers within companies on the one hand, and trainers in extra-school institutions for vocational training, which usually fall within the scope of responsibility of labour market policy. Occupational training programmes for disadvantaged young people are carried out in this area in project form, but the institutions are planned for both young people and adults. Specific rules on qualifications usually apply to these trainers, but it is rare to come across any specific training requirements (in Italy, for example, there are exhaustive job descriptions in the framework of collective contractual regulations).
- A further category of trainers who are covered by rules are the in-house company trainers in apprenticeship systems. In this field once again, a large proportion of trainers do this as a sideline without being trained, and trainers are expected to lean more heavily towards the practical side, with pedagogical requirements playing a back-seat role. In Germany, for example, a large percentage of employees – one in six according to estimates – is involved in training, but most of them minimally so and as a sideline (around half of all trainers only for a few hours, and less than 10% devote more than half their working hours to training; cf. Neubert 1996).
- The structures for training and further training of trainers tend to be vague and complex, and are often rooted in the market economy sector. Although efforts are made in the training establishments linked to labour market policy to take as much account as possible of economic requirements, there are all the same considerable differences between the training establishments and the in-house training processes. (Per-Erik Ellstroem 1999 describes these

differences between a ‘factory culture’ and a ‘learning culture’ and the tensions related thereto using a comparison between training on the labour market and the Swedish ‘employer-sponsored training’).

- ❑ One important characteristic of teachers and trainers in the vocational training sphere is that they belong to two professions: on the one hand their own area of expertise, and on the other their role as educators. Usually the lion’s share of their training has been with reference to their field of expertise, with training for teaching activities amounting to very little²⁹.

3.1.3 Patterns of division of labour among VET professionals

The role of these various categories of teachers and trainers in the overall division of labour for ‘VET professionals’ has been studied even less than the relations between the categories themselves. A general overview however gives an initial impression of the complexity which reigns in this field.

3.1.3.1 The Austrian picture as an example

Some of the questions and problems in this field can be sketched out using a stylised picture of the different types of ‘VET professionals’ in the Austrian system (Lassnigg and Stoeger 1999; Lassnigg 1999a). By comparing different areas from the whole scope of vocational training, it is possible to draw a distinction between ‘old’ and ‘new’ professionals. The ‘VET professionals’ in the formal vocational training system can be broken down into four categories of ‘old professionals’:

- ❑ Teachers, trainers, tutors;
- ❑ Administrators, principals, managers;
- ❑ Politicians, lobbyists;
- ❑ Researchers.

²⁹ This corresponds to a certain extent to the paradigm of teachers in higher education as conceived in Humboldt’s principle of ‘Education through Science’: ‘anyone who has a scientific grasp of his subject can also teach it’ (orig. German; Thonhauser 1995, p.115; cf. also Stinchcombe 1990).

There are three areas on the other side of the balance which lie outside traditional vocational training:

- ❑ HRD in the company sector and on the market for consulting;
- ❑ adult education (incl. further training, labour market and in-service training);
- ❑ a new area of intermediate organisations (centres for innovation) which have no direct training function as such but play an important role in providing incentives, triggering innovation and playing a coordinating role.

These categories of ‘VET professionals’ live and work in different ‘worlds’, are not particularly coordinated and sometimes even work against each other. There are, for example, lines of conflict between the different players in the apprenticeship system, between employers’ representatives and employees’ representatives, and between the public and the company part, with vocational training teachers, company trainers, administrators and decision-makers all being involved. In-house trainers, who make up the largest group of ‘VET professionals’ and are obviously at the very centre of the vocational training system, generally tend not to be defined as ‘VET professionals’, because their training activity usually takes place on an informal and part-time basis, beneath their ‘normal’ work – most of them would not consider themselves to be ‘VET professionals’ either (Lassnigg 1999a; Lassnigg and Steiner 1997; Lassnigg and Schneeberger 1997). A further line of conflict exists between schools providing initial training and adult education organisations. In this area, a bureaucratic system confronts a system organised according to the market. Apart from the actual genuine differences, this also gives rise to a lot of prejudice which is often blown out of proportion in public discussions. There are lively discussions, for example, about regulating adult education more strictly, countered by arguments about bureaucratisation and cost increases (cf. Ofner and Wimmer 1998, p. 164-167).

Given the extent of regulation and bureaucratisation and the lines of conflict and problems of coordination which have been men-

tioned at political level, *top-down* processes of steering and coordination come strongly into their own, and it is not easy to find examples of *bottom-up* mechanisms. Looking at the formal mechanisms of the decision-making processes in particular, there are no *bottom-up* processes to be seen, as they tend to exist on an informal basis in the preparation of decisions, in working parties for drawing up materials, through rolling different functions in different categories of players into one (personal union), etc. These types of 'personal union' are of particular importance and can be shown on the basis of two examples:

Example 1: In the apprenticeship system, most of the companies are either small or very small. Normally in these companies the owner, the company manager, the person responsible for training and probably also the trainer him or herself is one and the same person. In the past, these people tended to have gone through apprenticeship training themselves. This meant that at the same time as acquiring their own professional skills they also implicitly picked up the training practices of the time. Another example in this field is that the members of professional organisations, who at the lower and fragmented level are also responsible for steering apprenticeship training, also come from this group.

Example 2: In the vocational training school system, once they have qualified in their professional subject, teachers of professional subjects are expected to spend several years gaining practical experience before they can enter the teaching profession and then complete training in parallel to their work. As a result, a considerable proportion of these educators are professionally active in their own specific field as independent company owners or as employees, at the same time as working at the school³⁰.

From the point of view of 'VET professional' profiles, these links clearly show on the one

³⁰ In exceptional cases, top managers also perform teaching activities; in filling top positions in schools, it is also feasible that this type of experience could be drawn on. (cf. Lassnigg and Stoeger 1999).

hand what interconnections really can exist between vocational training and employment in the company sector, even if this may not become apparent from a formal consideration of professional categories. On the other hand, these interlinkages also raise questions about the professional identity and professionalisation of these 'VET professionals'. It is a question of using and developing this resource of 'practical experience' on the one hand, and of the professionalisation of training functions on the other.

The example of 'personal union' in the apprenticeship field makes it clear that basically we are dealing directly with ways of passing on tradition, both in terms of training and also in terms of company practice as a whole. How can there be innovation within this model? The essential link here will no doubt come in the form of innovation of company practice, driven by external factors. Not only would 'pedagogical professionalisation' in the traditional sense of the term be of no use here whatsoever, but it would actually be completely out of place. At the same time, it is absolutely clear that trainer-entrepreneurs have a key role to play in the further development of this sector.

If the situation in apprenticeship training in small companies is linked to the concepts of innovation dynamics and the learning organisation, but also with the importance of the knowledge base, the production of knowledge and the difficulties related to the productive organisation of informal and implicit learning processes, it becomes clear that the resource composed of rolling practice and learning into one still faces major challenges. Progress will depend on the extent to which it is possible to create learning organisations and to link informal and implicit learning processes with formal and explicit ones, as is being attempted through model trials in Germany, for example (cf. Dehnbostel and Uhe 1999; Dybowski et al. 1999; Dehnbostel et al. 1998). The essential question here is whether it is professionalisation along the lines of 'formal pedagogisation' through a strengthening of the extra-company and formalised public elements of training (extension of compulsory part-time schooling, provisions governing the

content of training and resources, etc.) which is sought, or whether apprenticeship training can be successfully linked with HRD processes, or this type of process actually established in the first place. And for the part-time vocational training school, how can the mechanisms of informal learning be applied?

The example of parallel employment in the vocational schools raises the question as to the extent to which practical experience can be used for the purposes of school learning and teaching processes, and also for school organisation. Several factors are of relevance: firstly, the quality of practical experience, i.e. how much usable impetus does it actually provide for school practice; secondly, the school's absorption capacity for such impetus, bearing in mind the formal types of organisation, i.e. to what extent do provisions governing curriculum implementation or the structure of hierarchical relations of authority actually leave scope for this impetus; thirdly, the absorption capacity in terms of social relations in the school, i.e. the extent to which relations between teaching staff allow informal exchange of knowledge in different dimensions.

The professionalisation of 'VET professionals' in the traditional sense of the term would mean that pedagogical qualifications, in particular for the Training/Facilitator role would be beefed up. This can be seen directly through the discussions on the educational level of training (university, institute of higher education, intermediate level) and about strategies of 'front-end' training of educators (teaching qualifications before specialist qualification) versus 'add on' training of edu-

cators (teaching qualifications in addition to basic specialist training). In straightforward terms, the thrust of basic training strategy aims at bringing educators in the vocational training field into line with teachers in general education, and developing a general professional profile, which is oriented towards teaching activity³¹. The effectiveness of these different strategic lines, which is often discussed in very abstract terms in the field of education policy, could be investigated using probing comparative studies between different models which have long been in application, including in their broader contexts³².

The various different strategies trigger a series of questions which predominantly concern the organisational dimension of the education sector: firstly, how is the relationship between general education and vocational training institutionalised in the education system, and how does this influence links with the company sector of employment? Secondly, to what extent does the professionalisation slant given to the standardisation of teacher categories on the pedagogical dimension strengthen the existing segmentary (bureaucratic and politicised) organisational structure of the education sector, with its separation of teaching-learning processes from decision-making processes? Thirdly, what does the development of 'leapfrog' academised teacher training mean for the development of the knowledge base in the respective specialist area? Fourthly, what conditions

³¹ The concept of 'front-end' training also contains further distinctions depending on whether the vocational and the pedagogical components are arranged in parallel or consecutively. The description of the profile '*Senior Teaching Post at a Vocational School*' (German: Höheres Lehramt an beruflichen Schulen; cf. Bader 1995) is an example of the focus on professionalisation for a general teacher profile. The general professional profile for the teaching profession was established in the following terms by the German Educational Council (Bildungsrat) structural plan in 1970: teaching, educating, advising, assessing, innovating (Deutscher Bildungsrat 1972, p. 127).

³² An example could be a comparison of the different training models in the Austrian context for the economic-administrative field ('Economics – Teacher Training Course': university, 'front-end', consecutively, practical requirement) and for the technical-commercial area ('Vocational Teacher Training College': relevant basic subject studies, practical experience in the occupational subject field, recruitment for teaching profession, short non-university day-release teacher training); initial tentative comparisons in the framework of the EUROPROF project (Lassnigg and Stoeger 1999) pointed out important differences regarding the development of a knowledge base for innovative practices; a further possibility would be to compare the German, Austrian and Swiss training for teacher training provided in (part-time) vocational schools, where there are some major differences.

Figure 8: Stylised pattern of roles and professional categories in Austrian VET

	"OLD" PROFESSIONALS VET System ^a			"NEW" PROFESSIONALS Other Frameworks ^b			
	Teachers Trainers Tutors	Administrators Principals Managers ^c	Politicians Lobbyists	Researchers	Adult Educ.	HRD	Inter- Med.
Common roles							
Instructor/ Facilitator	XXXXX	X			XXX	XXX	
Programme Designer	XX	XXXXX	XX	X	XX	XXX	X
Org. Change Agent		XXXXX	XX	(X)		XXX	XXX
Needs Analyst		XXXXX	XXXXX	XX	X	XXX	XXX
Specialised roles							
Materials Developer	(X)	XX			X	X	
Marketer		(X)	XXXXX		X	X	XXX
Indiv. Career Devel. Advisor	X					X	
Evaluator (Inspector)		XXXXX	XXX	XX	X	X	XXX
HRD Manager		XX				X	
Researcher				XXXXX		X	
Administrator	X	XXXXX			X	X	

- a) The counselling function is mainly performed outside the VET system within the labour market organisations; within VET the teachers perform these activities.
- b) Personnel in HRD, further education (F-E), intermediary institutions (INT).
- c) The functions of development are performed mainly in this category.

arise for the development of learning organisations in the education sector in connection with different training strategies, and what points of linkage are there with the HRD field?

Finally, the study of the profile of 'VET professionals' can summarise the most important characteristics and aspects of the division of labour in this field using a stylised comparison of HRD roles and categories of 'old' and 'new' professionals in the Austrian example (cf. Figure 8):

1. Firstly, categorising 'VET professionals' broadens the traditional focus which con-

centrated on educators (teachers, trainers, tutors) to include the wider organisational professional categories. In so doing, it becomes clear that the professional demands in the area of training organisation also cover a broader scope of functions and categories than it would appear when viewed from the point of view of professionalising the teaching profession.

2. Secondly, the cross-classification of VET professionals and HRD roles shows that in spite of their completely different field of application (economic organisations) and completely different aim (implementation

of company strategies) the latter can still reveal important aspects of professionalisation in the education sector. What emerges in particular in the formal education system is the segmentary distribution of the various roles in different contexts (administration, politics), and it becomes clear that there is overlapping with the development of learning organisations: firstly, training organisations can themselves be conceived as learning organisations, and secondly training also plays an important role for the development of learning organisations in the business sector.

3. The distinction between the contexts of the formal education sector and HRD fields, adult education and the intermediary organisations sheds light on the different configurations of 'old' and 'new' professional profiles: roles are matched to the various vocational categories amongst the 'old' professionals, with teachers teaching, administrators administering and developing, politicians taking decisions, researchers carrying out research, etc.; the 'new' professionals have more complex role profiles, only in adult education is there a similar segmentary division of labour between those teachers – most of them on an in-parallel basis – who also do programme development, and a very restricted group of people in management. There are also some similarities between the different categories of 'old' professionals and the new context, between educators and adult education, between Administrators/Managers and the HRD field (with the difference that the latter are more active in the direct teaching-learning processes), and between politics and the intermediary organisations.

This stylised pattern, which needs to be looked at in greater depth by further research warrants a few additional comments. Administrators-managers have a complex role profile and concentrate a very important strategic function in their field. This corresponds to the bureaucratic model, but it should be stressed that this category of 'de facto' professionals is not usually taken as such. With

the exception of more recent attempts at professional preparation of school heads, there is next to no training for these categories. Legal training continues to play an important role in administration, and to some extent this is a case of promotion positions for teachers, which are still often filled according to political criteria. The organisational context of the 'new' professionals is less bureaucratic and demands more complex profiles, which are necessitated by the fact of working in a more flexible environment. Linking learning functions with organisational activity in development and planning raises the question as to how useful similar combinations might be amongst the 'old' professionals.

3.1.3.2 Observations and perspectives from other countries

The experience and results of research into the division of labour between the different categories of VET professionals were processed in the EUROPROF project and reveal some similar basic patterns and tensions (cf. in summary in particular Attwell 1997a; Heidegger 1997; cf. also Brown 1997; Heikkinen 1997a). The two 'worlds' of vocational training in the school and education sector (VET) and the HRD field in the employment sector emerge in rather clear fashion, and there is a converging trend in the distribution and awareness of the different roles. Graham Attwell (1997a, p. 261) describes a simultaneous process of convergence and divergence for both sides – VET and HRD – which has the following characteristics, to the effect that 'for both, their main role is becoming the management of learning':

- extending the role of 'VET professionals', mainly through increased activity in the field of further education (developing new programmes for new groups of learners);
- greater involvement in processes of organisation learning (linking learning with labour processes);
- increased concern for training and further training of the unemployed (counselling, development and organisation of new programmes);

- new roles in the management of learning processes as a result of decentralisation processes in vocational training;
- increased emphasis on context-related learning and learning in the workplace leads to a shift of activities from traditional teaching activity in the classroom to activities involving the shaping of learning processes in practice (mentoring, coaching, simulation, support, etc.).

A few examples of specific developments could serve to illustrate this general trend. Studies in France have revealed that role extension is occurring not only in schools, but also in the area of further training (de Bligniere 1997). In the early seventies activity focused on teaching in the training organisations, in the late seventies it was extended to include the functional analysis of jobs, training needs analysis, and the implementation and evaluation of training in companies. Alongside this extension towards activities of training management, a countertrend involving the specialisation of individual new roles is now taking place. Reforms in vocational training in Spain since the early nineties have meant in particular that new players have been more involved in the administrative and political fields (social partners, regional administrations, labour administration, etc.), and have done away with the monopoly of the vocational training school system which was seen as increasingly inefficient (Cellorio 1997). Similar trends towards greater involvement of external 'VET professionals' from amongst the social partners and the regions can be seen in many countries including Denmark, the Netherlands, Finland, the United Kingdom, etc., accompanied by relatively pronounced professionalisation (Nielsen 1996; Santema 1997; Heikkinen 1997a, b; Shackleton et al. 1995).

One important question concerns the position and duties of teachers in the vocational training schools, as well as trainers in companies. Teachers are often seen as a central category, which should act as the 'spearhead of change and progress in teaching and learning processes' (Attwell 1997a, p. 258; Papadopoulos 1994). It is generally felt that an extension and adaptation of their role and function

would be desirable, but there are considerable contradictions attached. On this point, the studies in the EUROPORF project refer to different experiences in various countries. Vocational training policy in Finland tried to extend the teachers' activity profile, but this did not prove entirely successful. Anja Heikkinen (1996 p. 11) quotes the dissatisfaction of one educator: '*...it seems that teaching has become peripheral*'. At the opposite end of the scale, a study in the Netherlands shows that teachers are very much involved in non-teaching duties and see this in positive terms. '*A large degree of willingness to make secondary education more professional is evident from teachers' replies to questionnaire items on non-teaching activities. Most would like to work more closely with their colleagues and local industry and take the needs of individuals and groups of students more into account. There is also broad support for in-service training as well as participating in new development projects.*' (Stoel and Streumer 1996, p. 16). At the same time, however, it also says that '*...most teachers teach traditionally*' (ibid., p. 16).

These differences possibly reflect the different positions and role definitions which teachers have in the respective vocational training systems. For example, the developments in Finland are seen within a marked situation of tension between the traditional strong and central role of teachers and the technocratic top-down reform politics of the eighties and early nineties (Heikkinen 1997b, pp. 216-218). The growing significance of informal and work-based learning means increasing importance and increasing demands for in-house trainers. At the same time they are usually in a weak position, usually work part-time as trainers, and have little or no professionalisation in their training function – although there is more marked professionalisation in their 'own' profession. This even applies to Germany, where this role is most highly professionalised. This relation of tension seems to be very pronounced across the board within this group, and is sometimes seen as the path towards the 'pedagogisation' of labour processes: '*.. instead of creating a separate group of VET professionals, pedagogical knowledge*

should increasingly be a component of everybody's 'professionalism', especially those working in jobs involving planning, management and development' (Heikkinen 1997a, p. 125; Cedefop 1996).

A summary of the general shortcomings in the VET professionals' training system levels the following criticism (Heidegger 1997, pp. 18-19):

- ❑ there is no integration of VET and HRD;
- ❑ there is no connection between vocational training and reducing unemployment;
- ❑ there is insufficient interaction between the different categories of 'VET professionals';
- ❑ the possibilities and contributions for shaping the professional position are not valued;
- ❑ pedagogical skills are usually kept separate from occupational subject areas;
- ❑ occupational competence (know how) and knowledge (know what, know why) are usually kept separate;
- ❑ prospects in planning and management are often fundamentally different to the points of view of vocational training practitioners;
- ❑ theory and practical application are kept separate with both sides being incorporated in different positions/persons;
- ❑ the development of cooperative learning environments is not taken into account.

Thus the basic structures and problems of division of labour amongst 'VET professionals' are mirrored and reflected in their training. Correspondingly, in studies into the possibilities for professionalisation of the vocational training field 'quite strong suspicions and tensions between some groups' (Heikkinen 1997a, p. 130) came to the fore, which also emerged in the Austrian example.

3.2 Steering and pathways towards professionalisation

The forms of division of labour in the different categories of 'VET professionals' which

have been outlined have clear repercussions on the shaping of steering and coordination mechanisms, as well as on the level of professionalisation. Because of the segmentary distribution of roles against the background of tension between bureaucracy and market, decision-making and steering structures are often complex and confused, and there is unequal distribution of possibilities for exerting influence, which are also not transparent. Because of the different professional structures and hierarchised qualifications, the decision-making and steering structures also tend to be confused and broken up into a multitude of sectors.

Even the development of the individual's 'own' professional or subject-related knowledge base is tied in with this structure, which can be codified in a different way and to a different extent, can involve different degrees of practical orientation, and can also have different links with the established knowledge base, such as university disciplines.

This duality of complexity and fragmentation in the decision-making and steering structures can also cause cracks to appear in the coordination system between different levels, e.g. between occupational fields and systems, or between the regional and national level. Overall, the distribution of roles between the 'VET professionals' will reflect the basic structural elements in the vocational training system, so that changes in job distribution also affect the structures. A 'professionalisation' policy is therefore anything but peripheral in terms of training policy as a whole, although this is usually not (explicitly) taken into account³³.

³³ In their discussion of New Labour's educational policy strategy, Young and Guile (1997, p. 210) show, for example, that 'the report makes no explicit reference to VET professionals', although the proposals would be difficult to achieve in the absence of professionalisation in this field; a further example are the recent attempts at reform made by the Austrian Government, which further watered down the professional status of in-house trainers in apprenticeship training (Lassnigg 1999b, p.31).

Past reforms in vocational training have often attributed a passive role to the central categories of educators, as do many contemporary attempts at reform. In the technocratic tradition of the sixties and seventies, an attempt was made to change their work through the development and organisation of new teaching plans, curricula, or other rules governing work organisation³⁴; and also the dominant modern-day proposals which are quite strongly influenced by the public choice paradigm aim at indirectly changing the behaviour of educators by strengthening external influences, for example through quasi-market structures.

3.2.1 Consequences of recent reforms on teacher professionalism

The study by Geoff Whitty et al. of ongoing market-oriented reforms (1998, pp. 12-14), which has drawn on a lot of relevant literature, produces the following stylised picture in terms of the consequences of reform for the various 'stakeholders' in the system:

- school heads are becoming a central figure, their role becoming more that of 'corporate director', 'business executive', or 'entrepreneur', in contrast to the discourse about 'new managerialism' with flat hierarchies it is noted that '...the gap between the manager and the managed grows' (p. 12);
- for teachers, there is the 'greatest divide between school management texts and empirically informed research': instead of autonomy and professionalism, work is becoming more intense, collective agreements are being undermined, and organisational power is being challenged;
- for pupils and classwork, it is noted that the reforms have not raised standards, and that traditional aspects of teaching have been strengthened ('increasing fragmentation and unitisation of the curriculum',

'marginalisation of non-assessed fields', 'more rigid compartmentalisation of students', 'a new 'hidden curriculum' of marketisation' (p. 13);

- for the political steering and administration of schools, a 'highly delimited' involvement of external 'stakeholders' was noted, with unequally strong representation of people with 'professional business-related expertise' when compared with 'lay members without that expertise', and trends towards 'commodification of parents'(p. 13).

It may well be that the results are overdone, but they nevertheless square with de Moura Castro and Cabral de Andrade's assessments as quoted (1997), as well as with the forecasts which can be deduced from the institutionalistic interpretations mentioned. Sinclair et al. (1996) present similar results for the USA and Great Britain; for vocational training policy in Greece, the high priority attached to reducing costs with no regard for quality is flagged (Patiniotis and Stavroulakis 1997).

3.2.2 Proposals for professionalisation in VET

Various different questions and lines emerge from different contemporary proposals for 'professionalisation', which are connected to the structures of division of labour amongst 'VET professionals'.

A first strategy stems from the study of 'VET professionals' in Finland against the background of the traditionally strong position of teachers in vocational training. This strategy picks up on Anja Heikkinen's question: 'A European VET profession – or many?' (Heikkinen 1997b, p. 213) or 'maintaining the differences' or 'amalgamation into one, integrative VET profession'? (Heikkinen 1997a, p. 126) This question picks up on the existing division of labour between the various categories of 'VET professionals', the distribution of status between them, and their different prospects and duties, as well as the conflicts between them, and asks whether there are enough points in common to warrant an all-embracing professionalisation process. An

³⁴ The most extreme version of this strategy is '...to make the learning process 'teacher proof'...' (Haddad et al. 1990, p.57) through central control of curricula and the communication media.

essential aspect therein is the historically central position of teachers as protagonists of vocational training, and the contrasting of the vocational conception with the educational conception of vocational training. These two conceptions are related to the tensions between vocational professionalism and professionalism as an educator: ‘...an occupation of vocational educator had emerged, mediating between work life and education’ (ibid., p. 215). The professionalism of educators is seen as a guarantee of the *educational* conception of vocational training, ‘...it created a common background for the conception of vocational education – a paradigm of vocational education – among teachers, administrators, players in industry, students and parents.’ (ibid., p. 215). Educators are simultaneously seen as a link between the different ‘worlds’, and they possess considerable powers of definition for vocational training in their respective field. The most recent reforms focus on this point, and criticise the ‘...so terribly many inward-looking institutions....they do not even want to know what is happening somewhere else...’, as one of the administrators put it (ibid., p. 216). On the other hand, the in-house HRD field is felt to be undeveloped, the trainer function to be ‘marginal and ignored’ (Heikkinen 1997a, p. 123), staff development of little status, low priority, and not very up-to-date from the point of view of method (Heikkinen 1997a, p. 124-126). A personnel developer is quoted in summary form: ‘business is always business: the economist always beats the training manager in the enterprise, in hierarchy and decision-making...training is no king in working life yet – it is quite the reverse’ (ibid., p. 124). Maintaining the different categories of ‘VET professionals’ and improving their cooperation on the basis of mutual understanding of their respective roles is suggested as a strategy for professionalisation, since ‘...the underlying rationale is that the core of VET professionalism is occupational expertise, practical knowledge and a living connection to industry and occupational life’ (Heikkinen 1997a, p. 129). ‘New planning and coordinating mechanisms should be developed which would not destroy the educational core in vocational education.’ (Heikkinen 1997b, p. 218). An important element in professional development is ‘profes-

sional autonomy for self-definition’ (Heikkinen 1997a, p. 132). In the field of company activities there is a call for the widest possible diffusion of pedagogical knowledge, and further training in administration, planning, research, politics and the representation of interests is seen as an important task.

Michael Young and David Guile (1997) have developed a professionalisation strategy for the United Kingdom, predominantly against the background of informally organised vocational training. This strategy is aimed at developing the profile of a ‘professional of the future’, building on the traditional elements of professionalism, and tacking on additional elements. This produces a profile of the ‘VET professional’ as a ‘connective specialist’ (ibid., p. 210). The traditional elements are:

- technical competence;
- underpinning knowledge;
- practical experience;
- ethic of responsibility.

The new, additional elements of professionalism which stem from the new challenges, are:

- research and innovation capacity;
- customer/client awareness;
- flexibility (polycontextual, boundary-crossing skills);
- telematic-based learning.

This profile certainly represents a further development of ‘VET professionalism’ in the United Kingdom, in which expansion of the NVQ concept which has been criticised for being too narrow, coming to the fore. ‘The current pattern in the UK closely mirrors that of the provision of VET itself...(i.e. it is uneven and fragmented); furthermore there are signs that it could become trapped in the competence dogma of NVQs.’ (Young and Guile 1997, p. 206)³⁵. Organisational roles are however not part and parcel of this profile. On the ques-

³⁵ In the United Kingdom, attempts at professionalisation link up with the HRD field, because on-the-job learning processes traditionally play a major role in vocational training (cf. also Cedefop 1995a).

tion concerning the mechanisms for implementing this profile, reference is made to the building of an infrastructure for vocational training as a political task, within which tasks are allotted to the providers of educational activity, the companies and social partners, as well as the political institutions (Young and Guile 1997, p. 210-211).

A further strategy was proposed within the framework of the EUROPROF project in the shape of a general framework for the development of a European 'community of practice'. Whilst initially the project was aimed at integrating the numerous different roles within a broad professional profile (Attwell 1997b, p. 6), the study of structures in the different European countries highlighted the high degree of fragmentation of different categories of 'VET professionals', but also a trend towards convergence. Since direct formal integration and cooperation do not appear to be a realistic option, a general framework of 'cornerstones' for the training of 'VET professionals' is being suggested as a step towards professionalisation, which will provide a basis for reform in the individual countries and systems, and also a basis for the development of a European Network of players in research and practice. The following aspects have been put forward as cornerstones for this framework for the development and further development of training for 'VET professionals' (Attwell 1997a, p. 263-264):

- ❑ training programmes at university level, including career guidance and mechanisms for continuing professional development in practice;
- ❑ training in participation in shaping production processes (anthropocentric production);
- ❑ training in social innovation and entrepreneurial skills;
- ❑ linking pedagogical training with vocational training, taking work process knowledge into account;
- ❑ training in functions of vocational training planning;

- ❑ multidisciplinary, particularly linking VET and HRD;
- ❑ possibilities and points of departure for mobility in Europe;
- ❑ training in implementation of research activities;
- ❑ cooperation with organisations in the world of work, and the social partners;
- ❑ efforts towards learner-centred training programmes, and cooperation between different organisations, both national and international;
- ❑ efforts towards situated learning and rich, context-oriented learning environments.

3.2.3 Steering, coordination and professional profiles

What conclusions can be drawn when this analysis of 'VET professionals' is compared with the concepts developed beforehand on the coordination system, the division of labour and professionalisation in this field?

- a) The development of training organisations in the direction of learning organisations is certainly not feasible with the traditional structure of segmentary division of labour. Neither does this structure appear to be particularly well-suited to the strengthening of links between the informal learning processes in companies and the formal ones in the formal training organisations. If the analysis of the roles and positions for HRD personnel is taken as an example, then there is a great variety of starting points for professionalisation processes in the overall field of 'VET professionals' – it seems highly unlikely that a generally 'correct' path or a 'correct' general profile of VET professionals exists.
- b) Turning to ideas for constructing occupational realities through the institutionalisation of vocational training, control of the appropriate knowledge base is a strategic element which must also be taken into account in the development of professional

profiles. For 'VET professionals', the particular problem arises as to linking the pedagogical or HRD knowledge base to the contextual knowledge base in the occupational field within which the activity takes place. The type of linkage of these elements as well as their weighting is very different from one approach and strategy to another.

- c) The linkage of professional profiles and structural characteristics of the training systems refers to the fact that whilst being an important element, the professionalisation of vocational training is certainly no ideal path towards change. More comprehensive and reform-targeted steps will be needed if greater change is to be brought about. The 'mapping' of coordination roles as dealt with in section 1.2.1.2. can serve as a starting point for the development of political approaches. These tasks can be combined to form more complex political approaches, as will be discussed in the next section.

4. Policies 'beyond' the state-market dichotomy

As a fourth step, several select approaches to the further development of vocational training policy, which are already practised in some countries or are being suggested by important organisations are discussed in terms of their implications for the steering and coordination of education and employment.

It is assumed that strategies in education policy aimed at finding a satisfactory solution to the problem of coordination between education and employment require a general strategic orientation, whilst their individual elements must also be implemented in a coherent fashion.

4.1 Outline of policies for coordination

David Ashton and Francis Green (1996; cf. also Young and Guile 1997) stress certain political requirements for an innovation strategy. Agreement on a social consensus which must include a clear link with a strategy for rising qualification on the part of companies

in particular is an essential element. Further preconditions are a improved standard of basic education and a well-developed system of incentives and regulation for further training in the workplace, and interplay between formal and informal learning processes in the training organisations which actually works. They see serious constriction of political debate as a typical obstacle 'on a conventional left-right political axis with fixed parameters. These parameters limit the debate to a clash between two opposing sets of assumptions.' (Ashton and Green 1996, p. 179) A shift towards 'high value added production' would necessitate the following measures or strategies:

- 'ensuring that the educational system is producing high levels of achievement in the field of basic intermediary level skills, such as language, maths, science and technology, on which work based learning can build';
- 'integrating practical on-the-job learning with the learning of theory';
- 'fully involving employers in the delivery of the skills necessary for high value-added production but not leaving them in a position to monopolise the definition of the nation's skill needs';
- 'systems should be in place to encourage and reward employees' commitment to life time learning';
- 'And, to repeat, such initiatives cannot merely come from government, without the political support from other sections of the community' (Ashton and Green 1996, p. 185).

It can be shown on the level of concretisation of the more specific policy aspects that there are already a lot of concrete approaches working beyond the state-market dichotomy. These can be applied in the sense of policy learning, with backing provided by the building up of a suitable international comparative knowledge base. One step towards this is to start by drawing up an inventory of such approaches. Eleven strategies or strategy components are

briefly outlined and related to the role of the 'VET professionals' in the steering and coordination of education and employment:

Comprehensive reform strategies: education policy in Finland and Spain

The system is being fundamentally shaken up by numerous changes to the different points of departure. The financing and steering structures, the organisation of training pathways and levels, curricula and final examinations, links with practice, etc. are all affected, which is giving rise to a new shape of education and training system, and is also reorganising and linking the players and different categories of VET professionals along different lines – much of this however is coming about implicitly and in an unplanned manner, with actions emanating from players 'outside' the education sector.

Complex coordination systems, which encompass education and employment: regulating apprenticeship training, 'old' and 'new' forms

The apprenticeship system has been rediscovered. Many countries are trying to breath new life into it, but often its complexity is underestimated. There are indications that the institutionalisation of the concept of vocational training is an essential element in its feasibility, linked with cooperative coordination mechanisms in the triangle composed of the social partners (coordination through associations) and the state (legal regulations and hierarchy). The players in apprenticeship training are professionalised to a very minor degree as 'VET professionals', if at all, and exchange between the 'old' and the 'new' systems could represent an important element of professionalisation in terms of policy learning.

'Implantations' – new holistic steering systems in the traditional environment: the Austrian vocational higher education institutes

A steering system which deviates from the organisation of the education sector in a newly organised training sector can provide valuable impetus for the system as a whole, with

a new division of labour between the players being developed within this system, and new functions emerging, which are 'blanketed' by the bureaucratic mechanisms in the traditional system. This also creates space for new profiles of 'VET professionals', which can act beyond the new system itself.

Sectoral organisations for steering and vocational training: examples from the Netherlands and Finland

In some countries, the steering of vocational training which in many systems is operated by fragmented combinations of state bureaucracy and market mechanisms existing in parallel is in the hands of sectoral organisations which bring together the social partners, professional organisations, and also state representatives. This can result in improved linkage between matters of content and steering concerns, as well as interactive and discursive involvement in the development of sector-specific knowledge bases. In principle, this form of organisation makes room for the development and cooperation of different categories of 'VET professionals' although actually achieving this will largely depend on what form this cooperation takes.

Modularisation of studies: educational reform in Spain and Denmark

Breaking broader training pathways or occupational qualification profiles down into short, manageable modules increases the options for combining and leads to a new distribution of steering functions. The weight of the players of the demand side of the education and training 'market' is increased in the steering mechanisms, which improves the accessibility of training possibilities but on the other hand can also make the implementation of broader training aims and overall steering more complicated. Guidance and counselling functions in particular are boosted by such reforms.

'Competence based qualifications': the NSVQ in England

The concept of 'competence based qualifications' links the creation of a system of qualifications which provides signals to the labour

market with more output-orientation in the education sector. Through shaping qualifications, which to a certain extent compete with the vocational structuring of the signalling system, a new system of expertise is created. Certain groups of 'VET professionals' – 'new' players but also certain forms of cooperation between 'old' players – must take over qualification shaping, implementation and maintenance. More space is created for more 'constructivistic' solutions as compared with the 'naturalistic' vocational signalling system.

'Transition policy' – policies for school-to-work transition: education and labour market policy

With the over-proportionate increase in youth unemployment in many countries since the eighties, direct political interventions have been developed at the point of transition between basic training and the labour market, which have often prompted the parallel existence of systems of labour market policy and labour market training alongside the formal education system. Such systems have also been developed, organised and implemented by new categories of players. Only recently have efforts been made to link these originally rather complementary and compensatory labour market policy measures with training policy. This often led to new efforts at cooperation between different categories of players (e.g. education administration and labour administration).

Feedback from anticipation of change and innovation in the employment system: preventive ESF-initiatives and projects

Over recent years, more and more mechanisms have been developed as a necessary addition to the traditional research-oriented approaches to the recording and projection of changes in qualification requirements, which should provide for systematic feedback in the form of interactive consultation systems between the different players in the employment system, education system, as well as administration and organisation. These mechanisms may be linked to the sectoral organisations, although they may also be constructed

on other levels. This means that the predominantly quantitatively oriented research models become embedded in the communities of practice, and at the same time systems for generating and exchanging new, more qualitative knowledge are created. The different categories of 'VET professionals' are given the opportunity of becoming involved in the production of knowledge.

Efforts to develop the knowledge base in the education sphere: examples of support in the Netherlands

Alternative steering and coordination models necessitate the development and the accessibility of a common knowledge base. Because of its multidisciplinary structure and its applied character, vocational training is pretty much uncoupled from the traditional knowledge-producing structures in the universities, and knowledge is often of a predominantly informal nature and is incorporated in the different categories of 'VET professionals'. Constructing a knowledge base necessitates a move towards the formalisation of knowledge, which could possibly be encouraged by application-oriented support structures as is happening or has already happened in the Netherlands for example, in the shape of specialised institutes for different functions (research, curriculum-development, testing and test development, applied development programmes). Through this type of establishment, which can also take the shape of a network and be less specialised, certain groups of 'VET professionals' are created, which can play an important role in weaving connections with the universities and other institutes of higher education.

Alternative financing strategies: training funds and education vouchers

Steering and coordination mechanisms are considerably influenced by the financing strategies, which in turn can allocate very different responsibilities and influence to the various players and 'VET professionals'. The traditional form of state budgeting, which clearly lays down exactly how the money is to be spent tends to run on an incremental basis from one year to the next, is clearly con-

nected to the bureaucratic steering mechanisms and the traditional segmentary forms of division of labour amongst 'VET professionals' – the market mechanism on the other hand encourages the dominance of business strategies. The most important alternative mechanisms are forms of cost sharing (e.g. sectoral training funds), which require cooperative interaction and decisions, and other types of vouchers, which constitute quasi-markets and often require specific types of regulation.

Strategies for the development of lifelong learning: coherence and 'linkages'

In many countries, the spread of the idea of lifelong learning and its promotion by the European Union as well as other international organisations has prompted the setting up of broad-based expert groups for developing national strategies for lifelong learning. Part of the work of these groups usually consists of assessing national education policy and suggesting reasonably concrete steps towards reform. This prompted national discussion amongst 'VET professionals' amongst others and prompted and encouraged steps towards the laying down of appropriate knowledge bases. The European employment strategy represents an important element of incentive in this context.

4.2 Experience from selected policies

Some of these political approaches will be discussed at greater length, in order to highlight the special implications of professionalisation, the effects on roles and functions, and the division of labour between 'VET professionals'. The examples and approaches should be understood in stylised form, more as a taster to encourage more in-depth probing than as a conclusive assessment.

4.2.1 A comprehensive strategy for overall reform

The Finnish strategy of overall reform consists of a comprehensive set of changes affecting all aspects of the education and coordination system (aims, planning, steering and finance structures, the educational supply

structure, curricula, recording of qualifications, linking of training and companies in the form of in-house practical training and apprenticeships, linking vocational training and higher education, linking initial training and adult education).

This strategy, which emanates from and is led by the political and administrative bodies supported by the social partners, introduces a lot of change at many of the system's elements, providing even external players as well as the educational organisations and educators with considerably more space to define and develop their activities. The basic pattern of the reform strategy follows the concept of 'management by objectives', with the objectives being provided by a common set of strategic aims from the political arena.

But educators have the impression that these changes are led from outside the system, and may even clash with their professional identity: by stressing external influences, and particularly the needs of companies, on the aims and knowledge base of vocational training, the conventional and more comprehensive educational aims were undermined, and actual teaching activity upset by the addition of many other tasks and responsibilities. There are also signs of the existence of a certain potential for conflict between the established systems of pedagogical production of knowledge in the universities and teaching-based education on the one hand, and the groups and forces opting for reform on the other.

With regard to the coordination system, many new elements come into being in this strategy of overall reform, whose interplay is conceived within a loose strategic master plan. The implementation strategy, however, is left rather open, and leaves a lot of scope for the development of the individual elements of reform, so that the real interplay between these elements only begins with implementation, and is thus hard to predict.

Unintended effects can well be expected to crop up with this reform strategy, and with so many reform initiatives underway at the same time some are bound to be more suc-

cessful than others. In any case, this approach is a field in which more in-depth analysis of how things are moving and of their effects can also provide other countries many important insights.

4.2.2 Complex coordination systems: apprenticeship

As a system of vocational training and with regard to what, superficially at least, looks like a successful coordination function of education and employment for young people, apprenticeship, particularly in the German so-called 'dual system' has caused such a stir that for a time it was an export hit. The complexity of the apprenticeship system derives from the fact that this system is placed at the interface between the different social systems where the various cultures and institutional models merge, i.e. clash with and complement one another.

Looked at more closely from the point of view of the coordination system, this system is a complex combination of market, contract and regulation, which embraces a multiplicity of 'VET professionals' and is also tied to the system of industrial relations and the occupational system. Apprenticeship training in the traditional sense of the term should be interpreted as an institution within the meaning of institutionalism, so the way in which it works and also its political influencability is connected to many social requirements irrespective of whether it is a case of changing already institutionalised systems or newly establishing this system. Simple organisational or utilitarian-economic interpretations would fall short of the mark.

At the same time, this institution is marked by far-reaching inherent contradictions which complicate its performance: because of the informal nature of the training processes and the unequal power relations or dependencies, the workability of this system largely hinges on the trust of the numerous players involved, which is basically also the measure for the viability of technical-organisational solutions.

The basic peculiarity of the apprenticeship system lies in the fact that in this model not

only are the two systems – training and employment – bridged, but training and selection is organised within the company environment, in other words in principle outside the formal education system (at the same time it is a relatively integrated part of the formal education system). Essential steering decisions are taken market-style by the companies (allocation of training places, selection of applicants, training infrastructure, concretisation of the content and quality of training courses, etc.), although they are rooted in a rather narrow system of regulations, which is controlled by a combination of associations and state bodies. Traditionally, an accompanying school component which can be part of the regulations governing the school training system is built into the system, and there is also a occupational structure which constitutes the basic units of the traditional occupational system, and the formal competences related thereto.

One essential element which is often neglected in this field is that social structures in the form of occupational organisations also correspond to the formalised categories of the occupational system, whose role in the overall regulation system is easily overlooked as decisions on regulation are usually taken at the higher, central level. Because of this structure, there is a combination of standardisation and fragmentation which exists at all levels. Standardisation produces the 'training occupations' which represent a combination of qualification and skill profiles, and which act as intelligible signals to the labour market. But because these categories are separated from exercising the occupation in the work process, however, the difference between 'exercising occupations' and 'training occupations' provides a source of flexibility and guaranteed expectations which is often not taken into consideration³⁶.

³⁶ In discussions on the inflexibility of apprenticeship training, the 'training occupations' dimension is often mixed up with the 'employment occupations', whereby these are identified with the Fordist US system of regulated occupations, which refer, however, to the dimension of the employment occupations (cf. Lassnigg and Pechar 1990).

The system of ‘training occupations’ corresponds essentially to the new ‘competence-based’ systems, a fact which is however concealed by the ‘naturalistic’ interpretation of the occupations. This aspect is of major importance to the mechanisms for constructing the occupational profiles, because this does not happen according to ‘constructivist’ consideration of what is practicable and reasonable, but also following factual consideration of what is, is happening, or will be.

The many aspects and players involved in these construction processes make any further development of the structure both difficult and long-winded. The vocational structure of apprenticeship training governs both the company structure on the employer side (through linking with access to the independent exercise of an occupation) and the occupational structure of the employee side, and also embraces the different segments of companies (small, medium, large; technical, commercial, industrial, etc.). The use of manpower, the qualifications structures and also the innovation dynamics vary tremendously between these different sectors, and any further development will depend on the political negotiating processes in the appropriate social structures, which can be characterised by very different constellations within the fragmented framework.

What is common to these systems however with regard to further development is the fact that in-house training reflects the existing company strategy, and does not provide any additional input for the innovation dynamics in the companies. A second common characteristic is their high informal load, with codification processes tending to be not particularly institutionalised (through loose framework conditions, model or sample documents, codified company practices, training of trainers, the school part of training).

In the conception of the dynamics of forms of knowledge the qualification focus of traditional apprenticeship training lies fairly and squarely on the categories of know-how and the handing on of tacit knowledge. This is an important strength compared with the formalised school system, which cannot purvey these

components unless at great cost – but it is possibly a weakness when compared with the demands of innovation dynamics, which also stress the other forms of knowledge (cf. Section 2.2.). A fundamental question for the development of the apprenticeship system is the development and shaping of the link with the new HRD mechanisms.

4.2.3 Implantations – a comprehensive steering body in a bureaucratic system

The Austrian system of occupational higher education institutes can be used as an example of ‘implantations’. This system is an example of how a new element can be incorporated into an education system whose basic characteristics work along completely different lines to its environment.

The Austrian education system is highly regulated, politicised and nationalised, both in terms of its content and of its organisation, there is a marked segmentary division of labour with decisions being taken by the political and administrative bodies, and sometimes even by the central, corporate organisations. Despite several attempts at deregulation since the nineties, nothing has fundamentally changed.

The law on vocational higher education of a few years back brought a new organisational structure into this environment which is built up according to the accreditation principle and will follow professional criteria by express intent³⁷. The legal basis merely laid down the basic aims and criteria, an accreditation board made things somewhat more specific, and the actual development work as well as programme implementation takes place within

³⁷ Despite sharing the same name as the German Fachhochschule, it was more the model of the former British polytechnics which was applied, obviously with some important differences, with a clearer distinction being made from the universities, for example. The problem of the relationship between the Fachhochschule and universities, in particular the tendency for the two to become increasingly similar, which is discussed as the concept of academic drift, played a major role in the development phase.

the educational organisations themselves. Within the general premises of the basic structure of study courses and the status of qualifications there is comparatively speaking plenty of leeway for the conception of qualification profiles, the shaping of curricula from the point of view of content, and the methodological principles. A survey investigating the need for and acceptance of the targeted qualifications is a prerequisite for the approval of study courses, and a regular assessment of courses is planned for, so that they do not automatically simply run and run. Financing is dealt with by the public authorities according to a set of target criteria and reference figures related to study places, whilst the accreditation body is responsible for qualitative assessment. In principle, a study course can also be privately financed, but the charging of study fees is not permitted.

As regards the way in which the steering and coordination mechanisms work, and also in terms of the professional demands on the players involved, the occupational higher education system differs widely from its environment with both functions and professional requirements being much more highly concentrated both from an organisational (on the one hand in the accreditation body, and on the other in the study course teams and sponsor organisations) and from a staff point of view. During the implementation of this system it became clear that the required profile of VET professionals would first have to be developed, in the first stage through learning-by-doing, and only later were systematic steps taken towards staff development.

This steering system moves beyond the segmentary division of labour between VET professionals which is outlined in Section 3.1.3.1. since it requires more complex profiles. Indirectly, this revealed the need for such qualifications on the one hand, whilst on the other it also provided a lot of incentive for the other areas of education (e.g. with certain functions in the steering system such as evaluation or needs analysis being made more explicit). A special aspect which is as yet unsolved in this system is the question of developing application-oriented research. With regard to the use of policy borrowing and the possibility of the

‘implantation’ of alien elements, this innovation in educational policy could prove highly stimulating.

4.2.4 Policies for school-to-work transition: education and labour market policy

The question of the transition from education to employment became the focus of political attention with the rise in youth unemployment in the eighties. Interestingly enough, however, for quite some time the question was only dealt with very generally and indirectly, and it was a long time before direct political strategies were systematically discussed and developed for this sector. Interaction is desirable in this area of policy, linking different types of players in the different systems and at different levels. For a long time the weakness lay in the fact that the processes of transition were only understood in terms of individual market transactions, with the more compound organisational connections and guiding forces being neglected.

Incorrect choice of training, inadequate qualifications, high minimum wages, and structural changes on the youth employment market in conjunction with low rates of growth and shrinking employment were the focus of discussions in the eighties. Establishing priorities for labour-market policy for young people was the most important response, but often with little or no success. An ongoing OECD project looked into the question of transition policy.

Alongside the traditional themes of minimum wages and labour market policy for young people, aspects of education policy which can help to smooth the transition (structure of educational incentives, content of curricula, contacts with the world of work, information and counselling) were thereby also brought into the public eye.

From the point of view of ‘VET professionals’, these analyses brought the aspect of cooperation on the more complex levels of labour-market policy in particular to the fore, where major flaws are to be found. European employment policy also underscores this aspect.

4.2.5 Feedback from anticipation of change and innovation

The field for developing mechanisms for anticipating innovation and change in the employment system and in questions of skill requirements possibly demonstrates most clearly the changes which are occurring in the shaping of coordination systems.

The original approach, beginning in the seventies when the importance of economic structural change to training policy was becoming increasingly clear and computer models for system analysis were developed, was the prognosis model of education and manpower planning. It was recognised back then that education policy cannot be guided by stationary skill requirements, but must take account of the changes to be expected in the economic and vocational structure, particularly given the importance of human resources for economic growth. The response was clearly rooted in bureaucratic logic and the segmentary organisation of the education system: science and research should develop and supply the tools, teaching administrations should set up planning departments, which would be responsible for implementing the results of prognosis models through corresponding educational policy steps. This conception also squared beautifully with the then predominant paradigm of technocratic politics.

In practice, however, this approach failed for many reasons, and the change in political paradigms which came with the neo-liberal U-turn brought with it the predominant trend towards the efficacy of market-economy mechanisms, which were also expected to bring about coordination and steering in the training field. Self-steering also became an important buzz word for sociological and socio-scientific considerations. In education policy discussions in the late seventies, the interface between the predominant bureaucratically organised training system and the market-economy based mechanisms in employment and the labour market were complicated by the terms of coupling, uncoupling and flexibilisation. The first forms of distinction between types of qualification or more gen-

eral educational aims were a basis for this, and they continue to play an important role, even today: the distinction between general and specific qualifications in the human capital theory, or the distinction between general, foundation, and specific qualifications in the education policy analysis in the OECD framework.

The basic idea underlying these distinctions was that the elements in the education processes with long-term effect should be separated from those with a short-term effect, in order to establish them in different organisational arrangements: the qualifications with long-term effect should be acquired in the more inflexible bureaucratic education systems (planning without adaptation), whereas those with short-term effect which therefore need to be renewed very quickly should be acquired on the job itself or in the further training system (adaptation without planning).

These stringent and tempting considerations failed because of the complex nature of qualifications and skills, since although the basic underlying distinctions could be made on a conceptual basis, in practice it was impossible to define qualifications or to square this approach with the nature of the learning process because of the decontextualisation of the long-term qualifications component. The analyses of the implications for qualifications of the new production concepts in particular made it clear that ideas about 'specific qualifications' were highly influenced by the image of company-specific qualifications within a Fordist and technologically determined model of internal company labour markets, which was however increasingly undermined by later research.

So new solutions had to be found in order to square the anticipation of change in the necessary skills in the employment system with the logic of development of suitable qualification profiles in the training system. These solutions now appear to produce a two-track approach which builds on the multiple possibilities for interaction between the various players and types of players in the coordination system:

- on the one hand the aim of employability can be interpreted as a multi-dimensional qualification concept, which brings together both general and specific components, and should in particular also form the basis for further learning processes. The realisation of this concept is based on the interaction between different players with highly varied possibilities of primary and informal experiences in the practical context of the employment system being targeted alongside the more formalised learning procedures;
- on the other hand, the dichotomy of formalised prognosis models as a basis for planning and market economy-based assignment processes is bridged through the development of interactive anticipation systems which, rather than shunning model calculations, tend to embody them in social processes of evaluation and dissemination between the players who contribute their primary experience.

This approach corresponds to ideas about the new forms of production of knowledge within the innovation system, with a knowledge base being built up in complex social processes through the pooling of multiple experiences and methods for gaining knowledge, and by involving the various players concerned, so that applied and basic knowledge, as well as the production, dissemination and use of knowledge are all related. Although this conception appears very simple and plausible, it is in no way trivial since it makes major demands on implementation.

The players from education, the economy, research, politics, etc. must be brought together and they must be prepared to carry the communications can, to formulate and work out their ideas, to understand other, different ideas, particularly those from science and research, to do the necessary weighing up and carrying out of interest-related matters in a cooperative manner and to draw conclusions in the awareness that this is an ongoing process not only of investigation but also of reality building, which can be somewhat tiresome at least during the early stages (because of the lack of information, interest-related idi-

osyncrasies and hypostatisation, etc.), and consists at the beginning of more of a revelation of not knowing than in the production of knowledge itself. But if this strategy is consistently applied, it can give rise to policy learning and consensus-forming policies which are seen as a central requirement on the path towards a learning society.

5. Conclusions

The most important conclusions from this analysis of steering and vocational training from the point of view of the coordination of education and employment against the background of innovation dynamics towards the learning society concern theoretical-conceptual as well as practical-political viewpoints. The conception of practical-political steering approaches and in particular the role of VET professionals in these approaches depends on the theoretical-conceptual premises established for constructing the coordination system between education and employment.

Two theoretical-conceptual decisions are crucial to the outcome of considerations:

1. firstly, how the relationship between the qualifications/skills level and 'real' practical demands is conceived, and more specifically whether this link is interpreted along 'naturalistic' lines (qualification-skills as the result or a condensed form of research into 'real' requirements, using right or wrong from the central evaluation criteria), or in a 'constructivist' manner (qualifications-skills as 'institutions' on a symbolic level, with the job of structuring the inordinately complex reality of requirements in a logical manner, with evaluation criteria which in turn are applied to the steering and coordination mechanisms in a 'constructivist' way);
2. the second fundamental decision concerns the way in which the possible scope of coordination and steering mechanisms is conceived, in particular whether it is limited to the extended dichotomy of the traditional mechanisms of bureaucracy and market, with all its possible intermediary forms, or whether it has had additional

dimensions of independent coordination and steering mechanisms tacked onto it in the light of recent organisation theory and research, particularly through networks and the neo-corporatist interest organisations or associations.

Fundamental models for the coordination and steering system are then also shaped, their exact form depending on which way these fundamental decisions went. The case of coordination between education and employment is a special one in that, at least as the relationship stands at present, coordination must occur across the boundary between the (predominantly) bureaucratic system (education) and a market-style coordinated system (employment, labour market), with the idea of one being extended into the other being highly unlikely although not to be ruled out completely.

The compromise in the market-bureaucracy dichotomy exists in the concept of public choice strategies, in particular through the inclusion of quasi-markets which bind the players in market decisions to their customers, thereby increasing output-oriented behaviour. Apart from the fact that this conception probably excessively simplifies many aspects of coordination between education and employment³⁸, it contains absolutely fundamental assumptions about the type of behaviour of the players concerned, and therefore also about VET professionals: the behaviour in bureaucratic organisations, and therefore also in educational organisations is so strongly defined by this model of behaviour based on self-interest inside bureaucracy, particularly the interest in persistence, that emerging learning processes and strategies tend to be nipped in the bud. The push for change must therefore come from the choices and preferences of the customers, which do not only provide the stimulus but also deter-

mine the direction of change. 'VET professionals' in schools are therefore conditioned towards adaptational behaviour and market strategies, and the segmentary division of labour between development, planning, control and implementation stands in principle despite the changes in vision and shifts of emphasis.

The concept of professionalisation of HRD staff in the company sector, which draws on the development of the learning organisation, can more or less be seen as the opposite of the public choice strategy. The spectrum of professional tasks, roles and positions of HRD professionals can also be taken as a basis for the professionalisation of VET professionals.

This analysis draws on the constructivist model of relations between qualifications-skills and requirements, and on an extended conceptualisation of steering and coordination mechanisms. A general framework of the coordination system between education and employment is developed, in which the two traditional mechanisms of bureaucracy and market have their place, because amongst the many possible interactions between the different types of players concerned there is also space for the mechanisms of corporative organisations and social networks.

A closer observation of the way in which the education system is built up of the three basic elements – compulsory general education, higher education and vocational education – as well as an institutionalist analysis of the occupational system underscores in many ways the shortcomings of the mind-set shaped by the bureaucracy-market dichotomy: because they emerged from the employment system and because the interconnections continue to exist, vocational training systems can hardly be seen as purely bureaucratic systems; on the contrary there are lines of separation between them and other areas of the education system, as well as with the employment system. There are however many links across these fault lines which the traditional mechanisms cannot adequately cover. These links are seen as fundamentally contingent, and the form which they take determines the configuration of the coordination system.

³⁸ Who are the 'customers' – young people, their parents, employers? What are the incentives which determine behaviour, and the distortions? What degree of market failure is there in quasi-markets? Problems of coordination of education and labour markets on the time axis – market myopia, etc.

Institutionalisation of the occupational system is an important element in the structuring of these relations, with apprenticeship training representing a special case of the integratory institutionalisation of the relationship between training and occupation.

The concept of the innovation system from the most recent innovation research in the field of the evolutionary economy and the post-Fordist paradigm of the social economy can be seen as a further dimension, which conditions and structures the coordination system between education and employment. This concept specifies the implications of the non-determinist technical-organisational change in employment and qualification against the background of an analysis of company and economic competition strategies in the globalisation process.

This brings new aspects to the fore which are important for coordination and steering: knowledge, production of knowledge, and the dynamics of forms of knowledge, organisational change, learning and the learning organisation. At the same time, it also makes clear that the innovation strategy for the development of the learning society does not arise spontaneously and is no natural trend, but rather just *one possible* strategy amongst others, which presumably brings with it many advantages for highly developed industrialised societies, but which nevertheless depends on the development of suitable framework conditions. If these considerations are consistently applied to vocational training, then certain conclusions emerge which are also of relevance for the coordination system:

1. firstly, for vocational training as a part of the innovation system it is the knowledge-producing side of learning which should be stressed as opposed to the reproductive side (both in terms of the processes involved, and also as far as building the basis of knowledge for the respective areas is concerned);
2. secondly, the development of learning organisations in employment and education would also prompt the development of crossover forms of organisation which

make it possible to connect informal and formal learning processes (an example of these is the institution of apprenticeships);

3. thirdly, the coordination of education and employment should be understood not as education being adapted to the needs of employment, nor simply as the allocation and matching of various elements, but also as the shaping and building of vocational and qualification-related structures, which are capable of promoting the innovation process. What emerges from the innovation strategy as far as the development of VET professionals is concerned is that the traditional segmentary division of labour between different functions, particularly organisational and implementing ones, is being transformed into more complex profiles, that the predominant conception of teaching is being transformed into the concept of learning, and that the organisational functions (development, planning, decision-making, evaluation, etc.) are becoming professionalised (and often at the same time de-bureaucratized and de-politicized).

From a practical-political point of view, the general framework of the coordination system for education and employment shows first and foremost that a whole host of starting points and interactions which can help solve the coordination problem in different ways must be taken into account. Coordination and steering are not seen in this model as a holistic block mechanism, but rather as the interplay (partly intentional, partly not) between a whole series of interactions (strategies, policies), the degree of success of which may vary (i.e. there can be different degrees of mismatching, contradiction and clashes between these interactions).

Many concepts, measures and strategies from the present-day spectrum of educational policy approaches and proposals in the European and OECD field which could help solve the problem of coordination are being sketched out and discussed, and a selection of these approaches are dealt with in more detail.

The general conclusions are as follows: the shaping of coordination mechanisms should build on the analysis of available structures, identify the most important flaws and bottlenecks and strive to remove them; the available structures should be interpreted as a complex system of relations between different types of players, many of whom can be defined as 'VET professionals'; to a certain extent the workings of the coordination system therefore also reflect the way in which labour is divided between these categories of 'VET professionals'; the development of coordination and steering strategies should build on the skills and cooperation of 'VET professionals', taking particular account of the role of teachers and trainers as core professionals; the identification and further development of new forms of division of labour between these

professional forces and the construction of adequate structures for professional development are in this sense important elements of innovative coordination policy.

Breaking down the coordination system and steering strategies into numerous different elements and analysing their systematic interplay also facilitates processes of policy learning and policy borrowing in the European and international field. The effects of specific strategies can be observed in different environments, and the exchange of experience and the further development of the common knowledge base is encouraged in forms of cooperative research and through the creation of international networks in practice and research.

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