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# Ways for improving the co-ordination of VET and employment

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51

**Reihe Soziologie**  
**Sociological Series**

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Founded in 1963 by two prominent Austrians living in exile – the sociologist Paul F. Lazarsfeld and the economist Oskar Morgenstern – with the financial support from the Ford Foundation, the Austrian Federal Ministry of Education, and the City of Vienna, the Institute for Advanced Studies (IHS) is the first institution for postgraduate education and research in economics and the social sciences in Austria. The **Sociological Series** presents research carried out at the Department of Sociology and aims to share “work in progress” in a timely way before formal publication. As usual, the authors bear full responsibility for the content of their contributions.

Das Institut für Höhere Studien (IHS) wurde im Jahr 1963 von zwei prominenten Exilösterreichern – dem Soziologen Paul F. Lazarsfeld und dem Ökonomen Oskar Morgenstern – mit Hilfe der Ford-Stiftung, des Österreichischen Bundesministeriums für Unterricht und der Stadt Wien gegründet und ist somit die erste nachuniversitäre Lehr- und Forschungsstätte für die Sozial- und Wirtschaftswissenschaften in Österreich. Die **Reihe Soziologie** bietet Einblick in die Forschungsarbeit der Abteilung für Soziologie und verfolgt das Ziel, abteilungsinterne Diskussionsbeiträge einer breiteren fachinternen Öffentlichkeit zugänglich zu machen. Die inhaltliche Verantwortung für die veröffentlichten Beiträge liegt bei den Autoren und Autorinnen.

## **Abstract**

In this paper we provide a theoretical, practical and political analysis of the complex challenges involved in the co-ordination of vocational education and training (VET) and employment, and we propose various approaches for the solution to those challenges. Firstly, the controversial issues on a normative and conceptual, evaluative, analytic and prospective level are summarized and discussed. In the second section, we discuss various contributions from involved disciplines to the challenge of co-ordination of VET and employment, and we develop a conceptual framework. As a core thesis, we proclaim that co-ordination should be conceptualized as a complex field of interrelating mechanisms (hierarchy, market, association, networking), from which a learning system can emerge. Finally, we present examples for the actual functioning of practical and political approaches to VET and employment co-ordination, and we draft a strategic approach for further analysis.

## **Zusammenfassung**

Das Papier analysiert in theoretischer, praktischer und politischer Hinsicht die komplexe Problematik der Koordination von Berufsbildung und Beschäftigung, und entwickelt Ansätze für Lösungen der Probleme. Erstens werden die wichtigsten Debatten zu dieser Problematik auf normativer und konzeptueller, evaluativer, analytisch-prospektiver und strategischer Ebene zusammengefasst. Zweitens werden die Beiträge der verschiedenen Disziplinen zur Koordinationsproblematik diskutiert und ein konzeptueller Rahmen wird entwickelt. Der Kern besteht darin, dass die Koordination zwischen Bildung und Beschäftigung als ein komplexes Feld gesehen wird, in dem die verschiedenen Koordinationsmechanismen (Hierarchie, Markt, Assoziation, Netzwerke) zusammenwirken, und das sich zu einem lernenden System entwickeln kann. Drittens werden einige Ergebnisse zum tatsächlichen Funktionieren der Koordination zwischen Berufsbildung und Beschäftigung auf praktischer und politischer Ebene präsentiert und es wird eine Strategie für die weitere Analyse skizziert.

## **Keywords**

Co-ordination, vocational education and training, employment, learning system, policy strategies

## **Schlagwörter**

Koordination, Berufsbildung, Beschäftigung, lernendes System, Politikstrategien

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## Introduction – relevance of the topic and main issues of debate

Research on the relationship of vocational education and training (VET) and the labour market is highly relevant for a number of reasons. On the one hand, some of the pressure on that relationship is due to the scope and the speed of change in various areas and dimensions of our societies: employment, demography, life style, family structures, expectations of young people, etc. On the other hand, the educational systems are most likely to find it difficult to cope with these changes. One of the main objectives of VET systems is the preparation for the labour market, that's why they are charged to adapt to the changing demands of the economy. However, as those systems have developed in close relation to the crafts and manufacturing sectors in various countries, their basic structures and programmes are often poorly prepared for the new demands going hand in hand with the rise of the so-called globalised knowledge societies.

Deep reforms of those systems have been proposed all over the world since the 1990s, including a tightening of their relationship with the economy and the market, a reform of administration and policy making by de-bureaucratisation and new financial arrangements, and a broader access to some kind of vocational competencies and qualifications (World Bank 1991, OECD 1996, EC 1996, UNESCO 1999). A long-term integration of VET into the whole of educational systems is under way, at the same time producing new forms of differentiation and “cooling out” within those systems, between general and vocational elements, and among the different sectors of tertiary education. The market and market-like forms of organising the relationship between VET systems and the economy have become prominent in the reform discourse, partly as a response to policy failures, and partly as an element of a holy belief in the superiority of the efficiency of the market mechanism. Various issues of systemic reform and coordination within education have been brought back on the agenda more recently, as a response to different layers of market failure (OECD 2001, 1996, Booth/Snowder 1996).

In view of the general consensus that the VET systems clearly have to take into account the demands of the labour market, several issues for research can be identified. At least four basic lines or levels of debate must be addressed in order to provide a conceptual basis for the analysis of the relationship of VET and the labour market, or, more broadly speaking, the relationship of VET and employment: a normative-conceptual level, an evaluative level, an analytic and prospective level, and a strategic level.

*Normative and conceptual.* A first debate addresses the issue to which extent the demands of the labour market should be taken into account: The educational legacy of VET, in relation to functional imperatives of employment, is discussed – should the latter be the only or the main driving force for the development of VET? Which other functions – social, political, or

cultural – are imperative for VET as a part of the education system? Is it necessary to apply certain limits to follow economic imperatives? This debate refers to basic questions concerning the mission and legacy of VET as part of educational systems, which in turn are inextricably connected to the basic values of humanity and human development, including the embeddedness of work and the economy into society, and more specifically the issues of identity and culture, which are important research topics in FORUM.

*Evaluative.* A second debate focuses on the ability of the existing VET-systems to actually meet the demands of the labour market. There are widespread doubts about the performance of VET in this respect. So far, however, it is by all means unclear how to measure that performance and, if gaps or mismatches are found by some kind of measurement, to which extent VET can be accounted as mainly responsible for these problems (or posing the question the other way round: to which extent can changes in VET provide a solution for those gaps or mismatches?). This debate addresses at least two main questions: (a) which kinds of indicators can be used to measure the performance of VET accurately? (b) how should the time dimension (short-, mid-, long-term perspective) be taken into consideration?

*Analytic and prospective.* A third debate concerns the issue of giving a clear account of the main challenges to the objective of VET, i.e. meeting the labour market demands. Dynamic and rapid changes in several dimensions of contemporary societies are commonly seen at the root of those challenges. The labour market as an institution mediating demand for and supply of labour actually reflects ongoing changes on both sides and makes them visible to some extent. However, the signals on the labour market are basically short-term. Thus, to understand these signals, the structures and activities behind them have to be analysed accurately. That's why the labour market needs to be seen in its context, taking into consideration the changes on both sides (supply and demand), trends in economic and in broader societal (social, political, cultural) sectors, and the interactions among those dimensions. Some of the main challenges, which have to be analysed more deeply, may be summarized as follows:

- the education and training *needs* in employment are basically becoming *more important and more significant*;
- the *changes* concerning those needs on the employment side are *accelerating and becoming more severe*;
- *different speeds* of change lead to a widening gap between education and employment, with education increasingly lagging behind;
- educational expansion and the growth and broadening of higher education, as well as the development of HRD within the enterprise sector are *changing the position and weight of VET* within education and training systems;

- the *intermediary mechanisms and processes* (occupational systems, labour market structures, industrial relations) are challenged by the accelerating changes in the employment system, unemployment and underemployment being the visible symptom;
- the gap between education and employment is widened by the *demographic trend* of the changing age composition of several societies;
- the *nation state* as the main provider of education and training is challenged on several levels, questioning and undermining the performance of its traditional role (financial crisis and “cost disease”; rigidity and inflexibility of processes and organization, creating inadequate habits, etc.);
- changes in *social structures* and relationships (social entities and class relationships, mobility and career structures, life cycle patterns and dynamics, structures of power and privilege, etc.) and challenges to the existing social contracts and welfare regimes;
- *cultural changes* concerning families, gender relations, youth’s expectations, styles and attitudes, societies’ communication structures, etc. challenge the traditional modes and structures of education and training systems.

*Strategic.* A fourth debate focuses on the strategies, which can be reasonably applied to find the best possible way for VET to meet the demands of the labour market. Taking into account the dimensions outlined above, we arrive at a broad and multidimensional array of strategies and strategic elements resulting from specific answers given to those normative, conceptual, evaluative, analytic, and prospective questions. One way to find a viable strategy, which has to be developed at a national as well as a European and supranational level, could start from an analytic perspective, basically seeing education and employment as two sectors of society, each following its own path of development, on the one hand separate and different from each other, on the other hand also connected to and interacting with each other and with other sectors of society. Based on this analytic perspective, we need to answer the question as to how those sectors are and may be coordinated, and if we want to develop appropriate strategies for bringing VET in line with the demands of the labour market.

Instead of taking narrow imperatives (e.g. some specific short-term demands) or specific strategic assertions (e.g. deregulation and free-market measures) as a starting point, the development of a strategy could proceed from a broader concept of coordination, which allows for the integration of several strategic elements into the development of different ways to improve the coordination of VET and employment. From the very beginning, the sketched perspective on coordination especially avoids the very common one-way conceptualisation of the relation of VET and the labour market saying that VET has to adapt as perfectly as possible in terms of time and structure to the asserted demands. The two-way conceptualisation of the VET–employment relationship takes also into account the influences running the other way round and allows for insights about the role of VET in structuring

several aspects of the labour market and of employment with its long-term consequences of building complex and idiosyncratic institutional regimes.

The relevance of the research on the coordination of VET and employment is given by the development of a new kind of conceptual framework, which provides a basis for the analysis of coordination strategies between VET and employment at national and supranational levels, and which can integrate several debates in a more systematic way. This framework allows for a more systematic comparison of specific strategies and policy elements, which aim at better coordination and may also turn out as a basis for the resolution – at least in a conceptual way – of seemingly conflicting strategies.

## State of the art in research about coordination

Various disciplines, especially in the fields of the social sciences and the humanities, have done research on the relationship of VET and the labour market, approaching various issues from different viewpoints and perspectives, based on a wide range of different concepts. However, most of that research was about education systems in general, partly focussing on higher education or training within the enterprise sector. VET as a specific part of education and training has been covered more sparsely, and VET research is often confined to very specific and mainly practical and pedagogic issues. It rarely covers the relations of VET to other parts of education and training. Thus there is a gap in research, which has been addressed by FORUM activities.

Our review of the state of the art starts out with a somewhat contradictory observation, maybe a kind of paradox. In the political discourse, the coordination of VET and employment is often seen as a clear-cut objective, stating “*that coordination only has to be done straightforwardly and properly*”. However, we can observe that in most or all systems this is in fact not successful. This contradiction has led us to ask whether that seemingly clear objective may be substantially more difficult to solve than one would expect from the daily discourses. Thus the various involved disciplines in the social sciences have been examined more thoroughly with regard to their explicit statements on the coordination of education and employment. The conceptual interchanges with pedagogy and VET research have been highlighted as another research topic.

This review has brought up several unsolved basic conceptual and theoretical issues in and between the involved disciplines, a main path of contemporary reasoning being that inter-sectorial or inter-systemic coordination is analysed as an extremely problematic and unlikely successful business. Moreover, this interdisciplinary review implies that the coordination issue is as much a theoretical problem as a practical one. This means that VET research dealing with educational phenomena needs to critically secure its conceptual and theoretical linkages to the other disciplines dealing with the societal context on a theoretical as well as on a practical level. Finally, the review has to take the analysis a step further, beyond the consideration of gaps and problems. It has to outline paths towards possible solutions for the challenges posed by coordination.

An exhaustive interdisciplinary review of the topic would be beyond the scope of the chapter as well as of the work of FORUM. We will, however, point out some important unresolved problems concerning the gaps and cleavages between disciplines as well as within the coordination field. We must take into account the views and perspectives from the mainstream disciplines of the social sciences – economics, sociology and political sciences. Economists have applied the market model as a main coordination mechanism to the relationship of education and the economy, analysing the labour market, at least from a

short-term perspective, as the main field of coordination between the supply of graduates and competences by the field of education and the demand for labour by the economy. Various models of market analysis have been applied to the labour market, and extended analysis has reached out to the educational market as well (Psacharopoulos 1987, Booth/Snowder 1996, OECD 1996).

## **Economics, sociology, political science**

Summarizing the state of the art in *mainstream economic thinking* in view of the relationship of education and the economy, we may conclude that the market model has been clearly shown as a powerful tool to analyse these relationships, providing very important insights from an economic point of view, and creating crucial issues and questions for policy-making. However, the development of the debate has also proven that the market model is not powerful enough to “close” the coordination problem in terms of theory and practice. This means that policy still has to cope with these remaining open spaces. One proposal taken by some economists is to bring reality in line with the market model as a way of bringing “closure” to the coordination problem. This is, however, very risky for society since it does not only leave open questions concerning the basic values in education, but also some important technical questions concerning the political transformation of education and training into an economic good provided by the market alone. These technical questions are discussed as part of the topic of market failure (the market solution does not provide the right amount of education and training). There is also a more or less common agreement among economists that some parts of education and training cannot reasonably and therefore should not be transformed into market goods. Thus the crucial question arises as to where the demarcation line should be drawn between a market good and some kind of public or collective good. A general answer to this question would be to bring the payments for education and training in line with the returns (grossly: who pays should also earn the returns, be it individual or collective actors). Problems arise where the returns cannot be clearly attributed to (individual) actors and where the balance shows discrepancies between the individual level and the social level (externalities; some kinds public or collective goods). The solutions could point in two directions – either strengthening the market by removing political or institutional barriers, or applying political measures to intervene in the market. This means that in any case there is some room for policy action, and that room cannot be closed completely by scientific argumentation. From an economic point of view it seems sensible to outweigh the estimated costs of market failure against the estimated costs of policy failure, and to intervene if market failure turns out to be more costly than policy failure. This strategy clearly rests upon the value decision of giving the market mechanism priority over other mechanisms.

*Sociology* has analysed the role of educational systems with regard to social integration, stratification and reproduction in society. The perspective on coordination in educational

sociology has substantially changed since its boom in the 1960s. Initially, the coordination of education and the economy was conceived as a result of economically based power structures, being able to successfully functionalise education for economic imperatives, in terms of the production of the demanded qualifications, or of the selection of abilities for the higher ranks of the employment system, and at the same time reinforcing the power structure and the “capitalist class interests”. The critique was concentrated on the issues of social injustice, inequality, unequal access to power, etc.<sup>1</sup>

This perspective has changed substantially at the advent of the economic crisis of the 1970s when the produced credentials seemingly tended to outweigh the economic demand for educational credentials (“overeducation”, “credentialism”, and “the great training robbery”). The dualism of selection–allocation and socialisation–qualification, i.e. the relationship between the selective functions of education and training on the one hand and its productive outcomes on the other hand, has been reinforced as a central concern of the debate in sociology when the worth of growth and expansion of access was put under scrutiny.<sup>2</sup> In the 1980s, the “new sociology of education”<sup>3</sup> placed more emphasis on the relative autonomy of the education system and tried to analyse more complicated and elaborate mechanisms of social reproduction, taking Gramscian “cultural hegemony” as a key concept.

More recent views regarding the explanation of the driving forces for the development of education and training systems treat the education system as a societal sector of its own, driven by its own emergent dynamic. Sociological systems theory has addressed the relations between different sectors of society, in terms of the functional differentiation of subsystems integrated by coupling mechanisms, and postulated the evolution of the subsystems according to their endogenous dynamics (“autopoiesis”). Due to the theoretical and practical imperative of the reduction of complexity the subsystems are conceptualised as being governed by extremely reductionist mechanisms, either by the generalised media of communication (money, power, truth, etc.) or – if systems had not been able to develop media – by contingency formulas (e.g. legitimacy). Based on Luhmann/Schorr (1988), the actual contingency formula, which gives the functioning of the system its direction in the education system, is termed *learning ability*, and the hypothesis has been propounded that *selection* may be the medium governing the system. Another important concept in sociological systems theory is the assertion that the subsystems are lined up horizontally in a functionally differentiated society and that no hierarchical relationship is established between the self-regulating political system and other self-regulating systems of society. The *state*

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<sup>1</sup> Sociology was thus mainly complementing – either in a reinforcing or in a critical way – the economic view, and has analysed the broader ideological and social aspects involved. Baron/Hannan (1994) have provided a summary of the differences and the interrelations between economic and sociological thinking and theorizing in the areas of labour market, organization, and collective action.

<sup>2</sup> Cf. Bourdieu/Passeron 1990; Berg 1972; Collins 1979; Rubinson/Ralph 1986.

<sup>3</sup> Cf. Richardson 1986.

*administration and policy* as a reference of the political system is seen as the main coupling mechanism for the integration of the education system into society. The relationship of education and the economy is supposed to be a relationship of two fully differentiated systems, which have to be re-integrated into each other, the main integrating mechanism being the patterns of individual careers.<sup>4</sup>

In *political science*, the role and functionality of the state in relation to society is a major research object, the shift from analysing government to analysing governance being an important trend. The perspective on the policy process has been broadened in several dimensions. The focus on the content of policies in policy analysis, and the extended perspectives of multi-level government and micro-politics have opened up new research fields. However, education policy has rarely been covered in a systematic manner by that kind of research. Two partly overlapping tensions are important in political science, with repercussions on education: firstly the tension between globalisation and the nation state,<sup>5</sup> and secondly the tensions between the normative paradigms of the state, between the welfare state and the neo-liberal image of the state.

If we contend mass education as an essential feature of the rise of the nation state during the 19<sup>th</sup> century (Boli/Ramirez 1986), we can also understand the tension arising between the state-driven national education systems on the one hand and the pressures of globalisation and internationalisation on the other hand. The question of retaining or giving up national responsibility for education is a hotly contested terrain in the European Union, as is the distribution of power among the states and the federation in the US (or other countries).<sup>6</sup> The interrelation between the national and the international spheres will gain importance in the near future, and so will the issue of policy learning and policy borrowing. One important line of development is the new process of coordinating education policy in Europe, which started at the Lisbon summit in 2000. The OECD has underlined the issue of policy coordination in order to establish systems of lifelong learning in its member countries (OECD 2001).

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<sup>4</sup> „Die Re-Integration beider Systeme wird, solange alle Versuche der Planung ihrer Beziehungen zum Scheitern verurteilt sind, allein durch die Selektivität individueller Karrieren geleistet. Die Integrationslast wird also sehr direkt auf den Einzelnen überwältigt und für ihn zum Schicksal.“ (Luhmann/Schorr 1988, 282)

<sup>5</sup> Especially since the globalisation discourse has highlighted the demise of the nation state the question of a reconfiguration of the state and its role and potential in society is a heatedly debated issue; cf. Boyer/Drache 1996; for a more political statement see Petrella 1999.

<sup>6</sup> We have to be aware of the fact that the development of education has been an international phenomenon substantially guided by international organisations (e.g. UNESCO, OECD, World Bank, and increasingly the EU) for decades. So we can easily see that the main ideas of educational politics, especially since the 1950s, have been developed at an international level, whereas the political process of implementation is situated at the national or sub-national level. (Cf. the concise monograph by Papadopoulos 1994). Important steps towards an understanding of the political structures have been taken in the area of higher education by Burton Clark and his research network (cf. Clark 1983), or in the area of education and training policies for development by the World Bank (Middleton et al 1993) although this research is touching the political issues rather indirectly.

The second tension mentioned in political science research, the tension between the welfare state and neo-liberalism, has also left educational issues more or less in a marginal position. In simple terms, we can say that education was mainly seen in its abstract role as a social service in need of increased public funding. New public management as a new paradigm has largely replaced the welfare state paradigm. Policy changes from the welfare state to New Public Management have been called for and implemented differently in different countries. Several valuable attempts to develop a comparative evidence base for education and training policy have been published,<sup>7</sup> some in the form of international programmatic documents giving evidence and advice about the content of policy lines, albeit leaving out advice about how those policy lines should be put into practice. The complex arrangements of education and training systems and of policy and steering structures make it rather difficult to gain an overview; especially the outcomes of policies have been difficult to obtain. Therefore we can mainly observe general lines of projected or (partly) implemented policy changes without having a clear and uncontested picture of their lasting effects.

Summarizing the state of the art of our knowledge about the coordination of education and employment in political science, we can point to some important topics in addition to those addressed in the economic debate. Firstly, the research about the welfare state has brought about more differentiated patterns and scenarios of welfare state regimes as an alternative to the liberal one. Especially within the research about the neo-corporatist pattern of governance the concept of collective provision of training by the social partners has been developed as an alternative to provision by the state or by the market (Crouch 1995). Secondly, the concept of a multi-layered government has provided a path of reasoning which goes beyond the abstract polarity of the market mechanism as the only alternative paradigm to traditional bureaucracy, pointing to the complex arrangements of networking mechanisms, which are in fact underlying political practice (Metcalf 1994). Thirdly, the study of complex political regimes has seriously challenged the ideas underlying the concepts of New Public Management, which are suggesting that a renewal of the division between the tasks of the state (finding, providing, and securing the goals and standards) and the tasks of the other actors (providing, organising, and managing the education and training business) would be a simply technical task.<sup>8</sup>

The more frequently applied models of the policy process have distinguished several kinds of phases in the policy cycle – starting from problem identification and definition at the outset, being continued with the decision making process, followed by implementation, and

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<sup>7</sup> Cf. OECD 1996, 2001; UNESCO 1999; Delors et al. 1998; CEDEFOP 1998, 2000a, 2000b; Descy/Tessaring (forthc.).

<sup>8</sup> In his analysis of new public management in further education, Schmid (1996, 749) has differentiated between policy regimes, implementation regimes and incentive regimes, which have to be taken into account at four levels of coordination (culture, interest representation, mode of exchange, law). Based on this framework it is perfectly clear that the crucial task for the public sphere to define the goals and standards is all but a simple technical task.

closed by feedback mechanisms.<sup>9</sup> These kinds of models link the development of education and training to the policy process. However, they mostly rely on a normative and voluntaristic image of the actors and mechanisms at the meso- and macro-levels of the political system.

## Interdisciplinary theorizing

Having given a very simplified sketch of some of the most important issues and perspectives concerning the coordination of education and the economy, we must say that there has been a broad array of various specialisations and differentiations within those disciplines, giving more specific insights about several specific issues.<sup>10</sup> Some of these elements have also been studied at an interdisciplinary level, combining issues at a level of political economy or socio-economics. Our review has focused on three strands of interdisciplinary theorizing in particular, which can give important insights about the coordination of VET and employment:

- *Post-Fordism* as a broad theoretical paradigm, which has integrated research in the areas of economics, social structures, and politics with special attention to an understanding of change and innovation.
- *Institutionalist organisation theory* as an approach to understand the relations and interactions among various kinds of organisations, e.g. educational and economic organisations.
- *Coordination theory* as a middle-level theory trying to make generalizations based on the research about coordination mechanisms in society.

Within the *Post-Fordist paradigm* the functionality of the market is conceptualised as being embedded in complex social and institutional structures (i.e. the accumulation regime and the policy regime) that are building interacting frameworks, including several types of actors influencing the market mechanism and being influenced by it. The concept of the *innovation system* and the evolutionary model of the *double helix* – extended further to the *triple helix* by some authors – have been used to analyse the emerging relationships between the economy and the expanding education system.<sup>11</sup> The rising economic impact of knowledge and knowledge production is a crucial factor in conceptual models that have been developed

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<sup>9</sup> Gielen/Reitsma/Wilbrink (2000) have developed a model of the policy cycle for the development of competence based education.

<sup>10</sup> As an example, Buechtemann/Soloff (1996, 26), in their review of the theories and the evidence about the relationships between human capital, capabilities, and economic performance, have given a framework of 6 sub-theories in the economic discipline: human capital theory, economics of schooling, labour economics, economics of innovation, industrial economics, growth economics. Such differentiations can also be made in sociology or political science.

<sup>11</sup> Cf. Nelson 1993; Lundvall 1992, Berryman/Bailey 1992, Etzkowitz/Leydesdorff 1997.

in a less rigid and stringent fashion, as compared to the hard-core economic models. However, several new phenomena and interdisciplinary developments, especially the socio-economic views about coordination in society as well as the emerging views about the new production concepts and organisation modes of enterprises made possible by the information revolution, could be integrated very well in that paradigm.

*Organisation theory*, which operates at the edge of economics, business administration and sociology, has developed several approaches to understand the organisational features of enterprises, the relationships among enterprises, and their relationships to other sectors of society on a meso level of inter-organisational relationships. The core of the institutionalist understanding of educational organisations is based on the hypothesis of the “loose coupling” of the main processes going on in an organisation (i.e. education and training) to their technology and can be traced back to Karl Weick (1976)<sup>12</sup> and John W. Meyer et al. (1983). In conceptual terms, two classes of organisations are distinguished: the technical and the institutional model. The terms “institutional” versus “technical” are used to contrast the underlying rationality of the education and training organisations with the rationality of the technically organised factory (Meyer et al. 1983). The essential point is that the learning process in schools is summed up as being “*inherently non-technical*”. Consequently the “technical model” is rejected for schools based on the way in which the teaching processes are conceptualised. “Loose coupling” means that an institutional type of organisation cannot be built up on its technical functions, because there are inherently un-resolvable conflicts about the “*right technique*” for the processes within it.<sup>13</sup> That means that more complex social processes than simple technical rationalisation must be taken into account in order to understand the interrelations among education and training organisations.

If this interpretation of educational processes is applied to vocational training, it reveals the complicated links existing between schools and companies as “technical organisations”. It also shows that the two different rationalities coincide within the company-based training process. The new ideas about company organisation, however, with the buzzwords being “lean production”, “lean management”, flat hierarchies, self-organisation, etc., are signalling that the two opposing models may converge – companies could become more “institutional”, whilst educational organisations could also become more “technical”. This development

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<sup>12</sup> The term “loose coupling” is often used in literature. However, it is usually not understood in its essential meaning but rather as a loose coupling between organisational units; cf. Weick 1976.

<sup>13</sup> Putting those concepts in the original words of the authors: “...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 efficiently coordinated or even that they are in close conformity with institutional rules.” (Meyer et al. 1983, 46-47; cf. also Scott and Meyer 1991, 122-126)

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 a 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 working organisation; learning in the workplace, “tacit knowledge”, informal learning, and the learning society become important terms.

The body of research generalizing about the *functioning of coordination mechanisms in society* is our third interdisciplinary approach to be taken into account. Thompson et al. (1991, 5) proposed to look at coordination as “a middle-level theory” building on *market, hierarchy, and networks* as basic intermediate theoretical categories. They “view the models of coordination as partial in that each of them is only likely to highlight a part of the overall coordinative effort and outcome” (ibid., 6) and argue that “there is no single and totally accepted view of how the market works, of how hierarchy works, or of how networks work to ‘produce’ coordination” (ibid., 4). That solution, however, is providing a direction for further progress by opening up a theoretical as well as a practical path to follow, rather than a ready-made receipt, in arguing at the same time that our knowledge about the functioning of the coordination models has to be further improved. The analysis and the construction of complex patterns of combination and interplay of the various coordination models in the existing systems arises as the main challenge from that research.

## **Educational research and HRD**

Several debates, concepts and approaches in the field of educational research complement the problems coming from the body of economic and social research. Clearly, the core of educational research is focused on the educational interactions and the teaching-learning processes at the micro level within schools or other educational settings. However, it is also clear that those processes are shaped to a high degree by the several kinds of organisational and institutional features, which are part of the broader environment of the education and training system. However, these interrelations are rarely taken into account systematically in education or VET research, which is concentrated on micro-processes within education and training systems or deals with segmented issues concerning organisational or institutional dimensions (curriculum construction, professional development, quality management, examinations and qualification structures, etc.). To a high extent this situation reflects the bureaucratic tradition of the organisation of education and training systems. However, we must note developments in education and VET research from several origins, which have started to create more holistic views about the embeddedness of the teaching learning process and to transcend the demarcations between the micro level and the meso and macro levels of VET systems and their relationships to other sectors of society.

A strong and influential work has been the concept of co-evolution of changes in the world of work and of changing perceptions about the understanding of learning based on cognitive science put forward by Berryman/Bailey (1992) in their *double helix* image of the relationship of education and the economy. They have come up with a very general argument stating a homology between the Fordist work regime and the ways in which teaching and learning has been organised in schools, resulting in a basic model of schools which has in fact impeded learning instead of fostering it. They have summarized five wrong assumptions about institutionalised learning in school:

- the prediction of automatic transfer of learning to new situations
- the view of learners as passive vessels
- the stimulus-response model of learning
- the premium on getting the right answer
- context free acquisition of skills and knowledge

Clearly, all these ideas have not been new in the 1990s. However, the new linkage to the needs and changes in the economy and the strong call for an institutional change of the basic models of schooling has to be emphasised. The basic ideas for reform are related to other important rising concepts concerning contextualisation of teaching and learning, such as the concepts of the *powerful learning environment* and the *community of practice* (Brandsma/Nijhof 1999), and from the enterprises' side, the concepts of the *learning organisation* and the attempts to professionalise *human resource development*.<sup>14</sup>

Another more analytic concept has been proposed by Buechtemann/Verdier (2000): The concept of *education and training regimes* includes a complex multitude of elements involved in the provision of education and training at several levels of abstraction:

- the involved *organisational units and actors*: collective organisations (units of state administration, interest organisations, etc.), organisations operating in education and training and on the labour market (schools, training centres, employment offices, enterprises, etc.), specialised actors in those fields (teachers, trainers, etc.)
- the *structures connecting these units* and allowing for flows and interactions among them: established education and training tracks, their internal selectivity, the degree of standardisation, the mutual interfaces, their weight in a national context, etc.

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<sup>14</sup> The concepts from the enterprises' side have been related to continuing education and training rather than to VET, c.f. Geißler 1995; for a comparative view see: Lynch 1994.

- the *customs, rules, and regulations* governing internal functioning and the mutual coordination within the policy frameworks.

An important issue concerning the development of policy strategies for education and training is the question of how the concepts about the forms of societal embeddedness of VET are in turn influencing the reasoning about strategies for coordination. As an example, the fully developed market view would in fact imply that education and training organisations should be transformed into organisations built on the technical model of enterprises. However, from an institutional point of view it would follow that an attempt towards that transformation would have to fail anyway. The approach of New Public Management, which tries to combine the practices from the market-led enterprise sector with several kinds of public responsibilities in a new manner, is situated on that edge. Some well-known examples, which may be derived from the general trade-offs outlined above, refer to the ideas about the new relations and divisions of tasks and responsibilities among the various players in the education and training “business”. This mainly includes the division between the political task of goal-setting on the one hand, and the tasks of the technical provision of opportunities and of the implementation of goals on the other hand, as well as the strong notion of managerialism in education and training, which should replace the traditional “officialist” model of the public service.

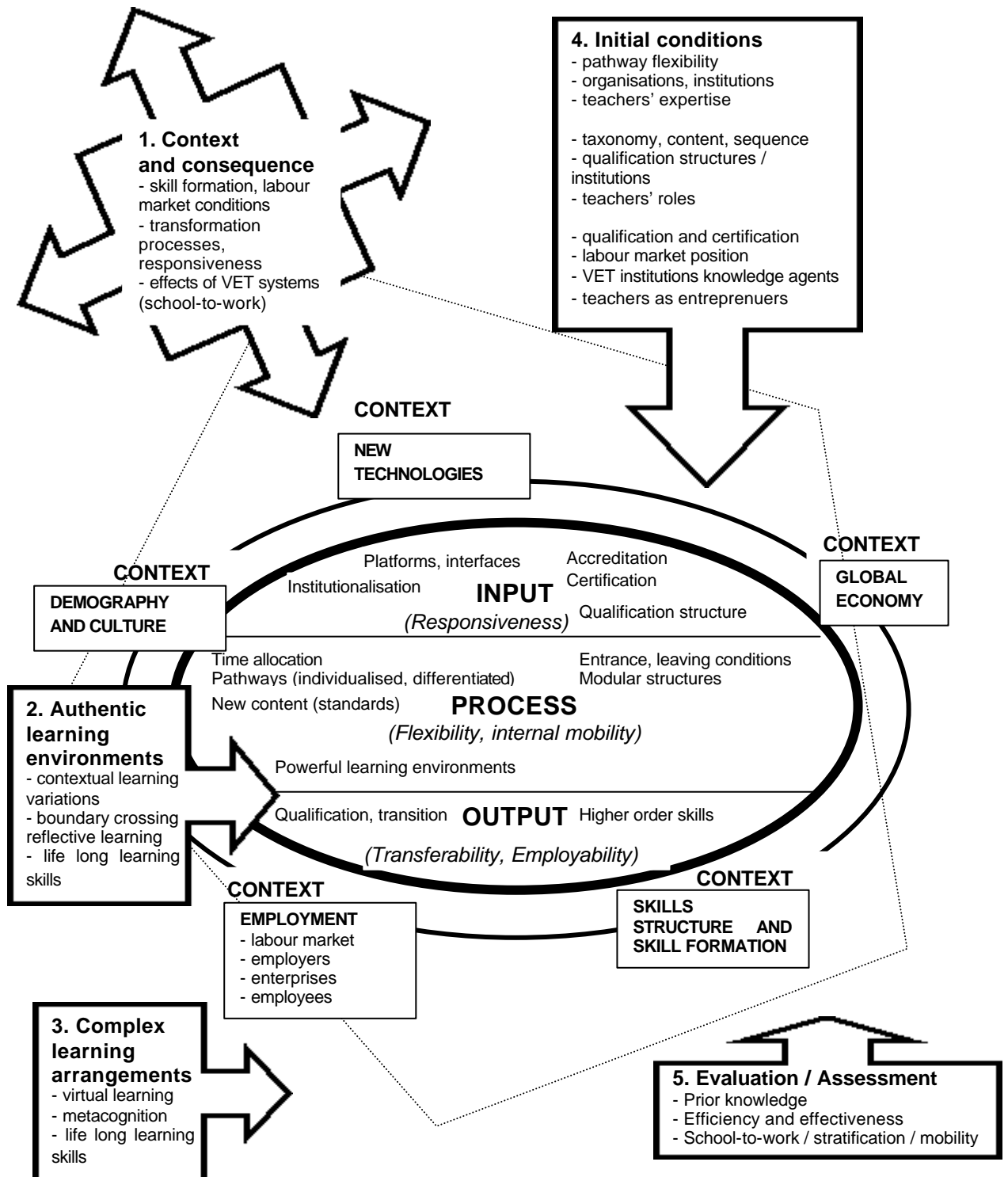
Another attempt to create an overall conceptual image of VET systems has been made in the framework of an European research network, whose objectives started from the observation of an existing gap between the macro and meso level and the micro level, as “most EU programmes, but also those of the OECD and ILO focus mainly on institutional and organisational measures and problems and not on the processes of teaching and learning”.<sup>15</sup> Nijhof/Kieft/van Woerkom (1999) have drafted an overall map of the VET field, taking into account the main dimensions of VET systems on the one hand, and their interrelations to society on the other hand. The well known systemic view has been taken as a basic structure, distinguishing the dimensions of context, input, process, and output. A main concern is the clarification of concepts providing an understanding of how the megatrends envisaged in the context should be translated into the dimensions of the system. Three concepts – flexibility, transferability and mobility – have been chosen as the main devices to link the contextual megatrends to the basic issues of the development of VET; two further concepts – responsiveness and employability – also have central meaning in the cognitive map.<sup>16</sup>

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<sup>15</sup> COST Action A11, Memorandum for understanding. (<http://www.wipaed.uni-linz.ac.at/forsch/cost/index.htm>)

<sup>16</sup> However, several debates arose about the meaning of those concepts, and about questions of whether those concepts would “mask statements of values” rather than being technical characteristics; see Young 2000.

Figure 1: Mapping of VET systems according to the COST A11 study



The sketch of the mapping procedure presents an overview of the structuring and the interrelations of the main buzzwords in the contemporary education discourses. Of course, the complexities have not been solved in a clear systematic manner so far. However, it is important that this kind of process has started out in the course of the COST A11 project, and has opened up a more systematic debate about the systemic features of VET systems.

## **Simplifications and misconceptions**

Summarizing the state of the art, we can point to several simplifications in the scientific and political discussions. They often lead to a misconception of the problems involved and of the possible solutions, which may be taken for improvement.

Firstly, the perspective should be widened from a mere focus on the labour market to a broader conception of employment. The labour market is a transitional coordination mechanism covering only a certain part of the much more complex coordination mechanism between VET and employment. In terms of influence, the labour market represents even a rather weak part within the relationship between VET and employment.

A second simplification represents a functional view of the VET system in relation to labour market and employment. From this perspective the VET system is supposed to react properly to changes and demands on the labour market and in employment.<sup>17</sup>

One result of the functional view is – thirdly – that the discussion is too much focussed on the observation of the qualities and quantities of demand and on making charges to VET in order to meet them. Therefore the mechanisms by means of which those charges may be translated into VET, and how the VET side may act in that relationship have not yet been sufficiently discovered.

Fourthly, the functioning of the relationship between VET and employment is understood mainly in terms of holistic simplifying models, like that of the bureaucracy and the market, which do not cover the complex relations properly. As a result, the main policy solutions are trapped because bureaucracy and the market are often seen as competitive and substitutive concepts, more or less excluding each other.

Thus, there is a gap between the rising challenges to coordination on the one hand, and the shortcomings concerning the understanding of coordination on the other hand. In view of the

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<sup>17</sup> In his interpretation of the World Bank policy paper, de Moura Castro (1995, p. 4) has expressed that 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”.

above-mentioned simplification in the mainstream views about the relationship of VET and the labour market, a deconstructive conceptual analysis of the coordination mechanisms and processes is proposed as a starting point for a broader and more inclusive conception of research and practice.

The focus is on alternative means of coordination beyond the traditional market-bureaucracy dichotomy. The 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 of reasoning from the outset. The helpful decrease in complexity, which results from the generalised models, is bought at the price of conceptual simplification, which greatly reduces the scope and number of possible coordination mechanisms. The deconstructive approach taken in our research 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 wherever there is room for the conceptual integration of many other mechanisms (particularly interorganisational networks, organisation by associations, corporatism). Those mechanisms are included from the outset as integrated and – at least in principle – equal components of the coordination system and are not viewed through bureaucratic versus market spectacles.

## **A conceptual framework of coordination**

A certain deconstruction of the general shape of the coordination system may be observed at the core of the conceptual analysis of the steering and coordination problem.<sup>18</sup> A heuristic framework is taken, which starts by breaking down the scope of coordination processes in a stylised manner along the following lines:

- a) types of *players* involved (e.g. individuals, communities, organisations, levels of government, corporative actors, international bodies and organisations)
- b) in the affected *sectors* (e.g. sectors of education, employment, labour market, civil society)
- c) at different levels of society (micro, meso, macro)
- d) who handle the various coordination and steering *tasks* (e.g. coordination of demand and supply on the education and training market, coordination of the teaching-learning process, coordination of demand and supply on the labour market, see figure 2)
- e) through numerous possible *interactions and mechanisms* (bureaucracy, market, associations, networks).

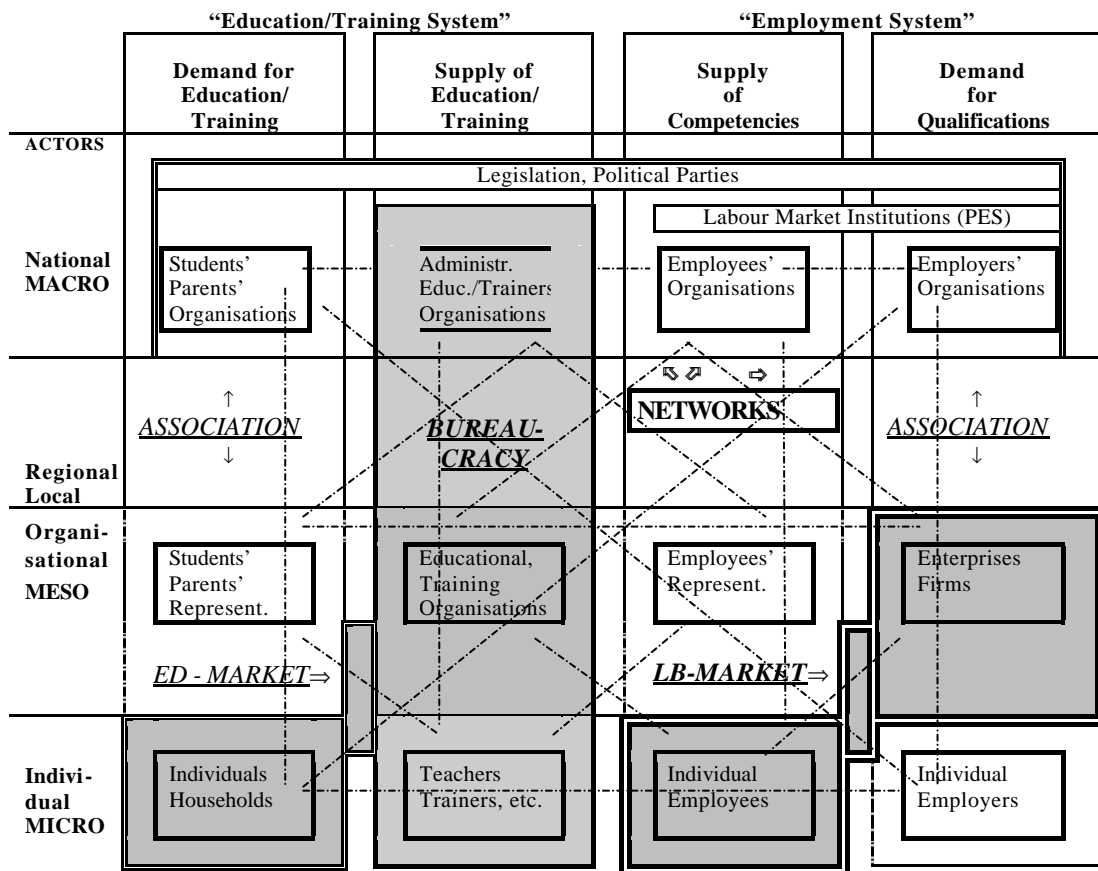
Figure 2: Mapping of co-ordination tasks and main policy options

CO-ORDINATION TASK	QUANTITATIVE	QUALITATIVE
<b>Co-ordination between education/training demand and supply of opportunities</b>		
	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
<b>Main policy options:</b>		
	- 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 the entrance	
<b>Co-ordination of the teaching/learning process</b>		
- Pupils/students management  - Personnel management         - Resources management	selection, retention during the teaching/learning process - work load - working conditions - determination of salaries  allocation of resources in relation to study-places	transformation of potentials to competencies - preconditions (training, etc.) - division of labour among professionals - progression, further training, careers standards for the utilisation of resources in relation to study-places
<b>Main policy options:</b>		
	- 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.)	
<b>Co-ordination between supply of competencies and demand for qualifications</b>		
	numerical allocation - transition from education/training to work	- determination of credentials in relation to the labour market structure - relation of attainment to credentials - shaping the qualification profiles of working life
<b>Main policy options:</b>		
	- 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	
<b>Overall policies</b>		
	- development of the knowledge base, educational R&D - overall change of the steering system - policies for life long learning - education and training policies as element of innovation policy	

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<sup>18</sup> This concept has been developed in Lassnigg (2001)

**Figure 3: Stylised Actors and Mechanisms in the Co-ordination System**



The coordination tasks are mapped in figure 2. Coordination procedures are interactions and relations between the players, which aim at striking a balance between the two poles of the coordination system, the demand for training and the 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 chain reactions are set off, triggered in particular by the two vertices:

- In quantitative terms we are talking about transitions, often in the form of decisions regarding selection or capacity.
- 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.

Based on the literature about mechanisms of social coordination in the framework of institutional organisational theory (cf. Thompson et al. 1991) the four coordination models are of particular interest. Figure 3 gives a stylised picture of the different kinds of actors and mechanisms in the coordination system. The education system and the employment system,

each of them including actors at the demand and at the supply side (those types of actors constituting the columns in the scheme), are distinguished. The different types of actors can also be distinguished at the various levels of aggregation (constituting the rows in the scheme), from the individual level (micro) to the organisational and regional level (meso) to the national and increasingly supranational levels (macro). The coordination mechanisms can be seen as different kinds of interrelations among those kinds of actors at the different levels, in horizontal or/and vertical directions:

1. *Hierarchy, bureaucracy, central planning.* In this model, coordination is achieved by the bureaucratic integration of the columns, with central tuning at the macro level. Obviously, this is 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.
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) or associations. 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 established amongst the network members that provides the coordination medium, rather than money or formal authority.

In principle, bureaucracies meet with markets on the boundary between education and employment, which means that two different models of coordination need to be coordinated. The discussion as to the workability of these two models in the plan-market dichotomy originates in 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 a certain comparative advantage in permitting a large number of flexible coordination processes; on the other hand, however, this very complexity raises the possibility of contradiction and friction between the different players.

The coordination between education and employment calls for links that cross the “system boundaries” between VET and employment. 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).

Two types of organisation can be applied, which possibly embrace the entire system:

- *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 (Streck and Schmitter 1991, Archer 1979).
- *Occupations and professions.* (Academic) professions stand out in particular because they embrace both forms of professional practice (self-employed and dependent) as well as training. To a certain extent this also holds true for vocational 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 for carrying out the decentralised coordination of education and employment in its field.

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 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.

## Main Findings

### Practical

The review of research and the development of a comprehensive framework for coordination of VET and employment gives a basic structure for the more systematic understanding of the complex and multifaceted array of tasks, activities and mechanisms, which are or should be fulfilled to provide for coordination in an existing VET system.

Based on that framework, we can distinguish findings of practical relevance at three levels of rising complexity: first, the level of identification of the basic elements of coordination systems, and the compilation of an inclusive taxonomy of those kinds of elements; second, the level of experience and best practice for the construction and functioning of those elements as single elements; third, the understanding of the combination of a number of those elements with broader strategies of coordination practice.

The first level of findings of practical relevance concerns a more systematic mapping of the various specific tasks, mechanisms and strategies contributing to coordination.

The following elements play an essential role in coordination mechanisms:

- **transition** (How are the transition processes from VET into working life, and through the education and training system managed? Is there a specific emphasis in policy on evaluating and improving transition? )
- **information and guidance** (Which activities and mechanisms are in place to provide information and guidance to students and parents? How widespread is the access to information and guidance provision? To which extent is there a developed and up-to-date knowledge base?)
- **anticipation** (Which kinds of activities and mechanisms are in place to monitor the needs for education and training, taking into account the interrelationships of working life and the various changes in society?)
- education and training **pathways** (How are the courses and programmes structured and linked to each other to provide opportunities for access and exit points? To which extent is mobility and flexibility allowed for?)
- **curriculum matching** (How are the goals for VET programmes set, worked out, and implemented, taking into account feedback to the changing and conflicting needs of the multitude of actors involved?)

- **qualifications and credentials** (How is the signalling structure organised, and to which extend does it respond to the needs of the various actors?)
- **interest organisation** (How are the various actors organised to bring their interests into the coordination process?)
- **co-production of skills** (Which arrangements are in place for the co-production of skills by actors and/or organisations external to VET, and to what extent are those arrangements systematically used, e.g. different kinds of work-based learning, interchange with HRD-activities?)
- **apprenticeship** as an institution (Are the elements of apprenticeship as a systematic institutional form of holistic learning in a practical context in contact with a master prevalent and/or developed?)
- internal **quality management** (How are the activities within the VET organisations linked to the outcomes and improvement of processes?)
- **professional development** (How are the people working within VET supported to fulfil their tasks and responsibilities in a sustainable way?)
- coordination **outcomes assessment** (How is the information about the outcomes of coordination generated and used, e.g. labour market information?)
- **financing mechanisms** (How do the financing mechanisms take into account the incentives for the various actors involved?)
- **knowledge base** (To what extent is a system of knowledge production developed, which produces an interrelated knowledge base about the main dimensions of coordination, combining the knowledge about those dimensions?)
- **management of system structure** (To what extent do activities and mechanisms exist for systemic management, to bring in line the various sectors of the education and training system?)

Each of those elements does have an important status in achieving successful coordination, and in one way or another they will be prevalent in any VET system. However, their shape and scope may differ widely. Thus, some elements may be strongly emphasised in a specific context, others may be weak. It should also be noted that those elements are differing in complexity, e.g. curriculum matching or the structure of pathways are more complex than transition or interest organisation – the latter being complex enough. In VET research we can find emphasis on each of those elements, albeit mostly in isolation from each other and frequently highlighting a specific issue as a kind of "king's road" to improvement. The same seems true for the emphasis given to them by the various actors involved. Therefore, a practical recommendation is to use the list of elements as a taxonomy for the assessment of

the overall configuration of how coordination is organised, and to find out the strong as well as the weak elements in a specific VET system.

The second level concerns the analysis of experience and good practice in at least some of those areas. A considerable body of research is already available, which covers several of those elements, although it is rarely part of a more comprehensive perspective of coordination. Frequently a specific national system is analysed, comparative or cooperative research is less developed. There are various examples of elements contributing to coordination, which have been more systematically analysed – regarding the transition from school to work (OECD 1999, Ryan/Büchtemann 1996), or the anticipation of changes of demand for qualifications (Feijen/Reubsaet 1996), or the matching of curriculum development and qualification structures (Nijhof/Brandsma 1999, Part 2), or the construction of linkages between education organizations and enterprises (Planas et al. 2001), or the functioning of apprenticeship systems (Lynch 1994), or evaluations of youth labour market policy, etc. That research cannot be reported here, it should be noted, however, that the practical impact of that knowledge seems rather low so far. The impact on the development of policy strategies and recommendations on a more generalised level seems to prevail over the practical utilisation of that research among actors.

The third level concerns the interplay of these basic elements and thus the development of basic ideas about the emergence and development of more coherent coordination systems. The overall concept points out that the coordination of VET and employment is a multifaceted and multilevel task, which cannot be solved in a holistic manner, by a single mechanism (e.g. the market) or at a systems level (e.g. national politics). Therefore several activities within the VET system and outside of it (in enterprises, policies etc.) are in fact – in several cases implicitly – concerned with various issues of coordination. In order to provide the basic understanding necessary for an improvement of coordination, the actual functioning of a running coordination system, in its local, regional, national, or even supranational context, has to be made explicit, and the roles of the involved actors and the effects of their interactions will need to be clarified. This means that it will be necessary

- to work out the shape of the actual coordination regime and to bring the involved actors together,
- to develop a clear understanding among actors about their respective roles, taking into account the issues that are indirectly affecting performance,
- to tackle the aims and objectives which should be reached more concretely and more coherently than it is normally the case, including the time frame envisaged,
- to develop a clear understanding of and a consensus among actors about the indicators, which are and should be used for the assessment of the performance of coordinating activities,

- to develop a clear positioning within the ongoing political and professional strategies and conflicts, etc.

Maybe the most important domain in which those activities have to take place is the interaction of *meso*-level organisations, which are criss-crossing the sectoral divide between the world of education and the world of employment, thus opening up the systems against each other without merging them and without subordinating one to another, and creating trust among actors. Public-private partnerships, buffer organisations, or professional relationships, and the creation of and links to innovation systems may be organisational forms of main practical interest.

Cooperative research can provide contacts among practitioners from different countries, which, by learning from each other, may on the one hand distract themselves from the pressures of indigenous policy cultures and on the other hand develop experience towards a more generalized coordination regime at the European or supranational level.

An important issue at that third level of analysis concerns the emergence of certain combined strategies, which comprise specific traits of a collection of the outlined elements. This is on the one hand a pragmatic question of practical interest. On the other hand, a deeper theoretical question seems to be important in recent research: Some researchers see coordination in a holistic manner, as an emergent complex system with a rather high degree of internal coherence and its own logic, embedded in a framework of industrial relations (cf. the concept of *education and training regimes* cited above), others seem to emphasise coordination in a looser perspective, with some important pillars seen as necessary ingredients that may be changed rather easily. This seems to refer to the important political question as to how easily some of the elements can be changed to improve coordination. The holistic view would emphasise the danger of producing unintended consequences or destroying the functionality of a complex regime or system by changing one of its crucial elements, and thus require an overall understanding before intervening. The other view would ply for the improvement or change of weak elements towards best practice.

## **Political**

The findings of political relevance concern the outline of challenges for the political actors in terms of evaluating the actual coordination systems, and as a next step the identification of gaps and contradictions within these systems, which can in a further step lead to the setting of priorities for better coordination. A main starting point for the political level may be the understanding of the complexities involved in the issue of coordination, and the practical result that no one single element or mechanism can provide a proper solution for the coordination problems.

The development of a more open and coherent framework for the analysis of the coordination of VET and employment provides a basis for the accurate understanding of intersections and contradictions among political strategies explicitly or implicitly affecting coordination on the one hand, and it gives room for a more proper understanding of conflicting positions that may be integrated in a more inclusive coordination regime on the other hand.

Research from various angles has shown so far that the institutional frameworks on the side of education and training as well as on the side of employment (including work organisation and regulation, corporatist frameworks, internal-external labour markets, regulations affecting HRD, etc.) are crucial for well-functioning coordination mechanisms between education and employment. Several selective policy proposals – e.g. concerning transition policy, the anticipation of economic needs, or the creation of skills structures linking training and employment – have to be related to each other and to the overall coordination regime in order to understand their prospective effects properly. The development of effective lifelong learning strategies depends on the coherence of the education and training system and presupposes the articulation of those selective policy elements.

As comparative research has pointed out, various patterns of coordination that combine the various policy elements in a different manner can be identified. The interplay of these policy elements within a system and their internal coherence and structuring pose important questions with regard to policy learning and policy borrowing: Some reasoning within that research underlines the existence of rather strong structures of internal coherence, thus elements cannot be changed or imported easily without changing the internal logic of such a system – these ideas may be related to a too holistic or reductionist view, however. The proposed framework for the analysis of coordination regimes may allow for a more detailed analysis, which could make the conditions of changes of elements clearer.

At the political level, certain kinds of policy strategies can be taken as starting points for the improvement of the understanding of the functioning of coordination systems. The following list may be used as a first outline of the mapping of examples for new policy strategies:

- An overall strategy for reform: education policy in Finland or Denmark
- Complex co-ordination systems: regulation of apprenticeship, “old” and “new”
- Implantation of new comprehensive steering bodies: the Austrian "Fachhochschule"
- Sectoral organisations for the steering of VET: The Netherlands
- Modularisation of studies: educational reform in Spain, Denmark
- Competency-based qualifications: NVQ
- Policies for school-to-work transition: education and labour market policy
- Feedback from anticipation of change and innovation

- Development of an educational knowledge base: support structures in the Netherlands
- Alternative financing strategies: training funds, vouchers
- Strategies for the development of lifelong learning: coherence and linkages

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 a stylised form, as a taster to encourage more in-depth probing rather than as a conclusive assessment.

*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 by means 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 this reform strategy follows the concept of “management by objectives”, in which case the objectives are provided by a common set of strategic aims from the political arena.

Nonetheless, educators believe 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 was 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 hand.

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 under way at the same time some are bound to be more successful than others. In any case, this approach is a field in which a more in-depth analysis of how things are moving and of their effects can also provide other countries with many important insights.

*Complex coordination systems: apprenticeship*

As a system of vocational training and with regard to what – at least superficially – 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 an already institutionalised system or newly establishing this system. Simple organisational or utilitarian-economic interpretations would fall short of the mark in this context.

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 the two systems – training and employment – are bridged, but training and selection is organised within the company environment, i.e. principally outside the formal education system (while at the same time it is a relatively integrated part of the formal education system). Essential steering decisions are taken in a market-style manner 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 an 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” that represent a combination of qualification and skill profiles and act as intelligible signals to the labour market. But because these categories are separated from exercising the occupation in the work process, the difference between “exercising occupations” and “training occupations” provides a source of flexibility and guaranteed expectations, which is often not taken into consideration.<sup>19</sup>

The system of “training occupations” essentially corresponds to the new “competence-based” systems, a fact which is 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 is also following a factual consideration of what is, what is happening, or what will be.

The large number of aspects and players involved in these construction processes make any further structural development 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 on 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 as well as 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.

Nonetheless, what is common to these systems 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 companies. A second common characteristic is their high informal load, with codification processes tending to be not particularly

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<sup>19</sup> 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/Pechar 1990).

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 represents an important strength – compared with the formalised school system, which cannot purvey these components unless at great cost – but it may be 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.

*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 starting in 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 intent<sup>20</sup>. 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 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, for the shaping of curricula in view of content, and for 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

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<sup>20</sup> Despite having 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, e.g. with a clearer distinction being made from the universities. The problematic 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.

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.

Regarding the way in which the steering and coordination mechanisms work as well as the professional demands on the players involved, the occupational higher education system differs widely from its environment, with its functions and professional requirements being much more highly concentrated both from an organisational (in the accreditation body on the one hand, and in the study course teams and sponsor organisations on the other hand) 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 systematic steps were taken towards staff development.

This steering system moves beyond the segmentary division of labour between VET professionals (outlined in Section 3.1.3.1.) since it requires more complex profiles. Indirectly, this revealed the need for such qualifications, whilst 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 possible “implantation” of alien elements, this innovation in educational policy could prove highly stimulating.

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

With the rise in youth unemployment in the eighties the question of the transition from education to employment became the focus of political attention. Interestingly enough, however, for quite some time the question was only dealt with in a very general and indirect manner, and it took 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 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 has looked into the question of transition policy.

Alongside the traditional themes of minimum wages and labour market policy for young people, several aspects of education policy, which could 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 to the attention of the public.

From the point of view of “VET professionals”, these analyses particularly highlighted the aspect of cooperation at the more complex levels of labour-market policy, where major flaws are to be found. European employment policy also underscores this aspect.

#### *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 that occur 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 that it must take account of the changes to be expected in economic and vocational structures, particularly given the importance of human resources for economic growth. The response was clearly rooted in bureaucratic logic and in 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 went hand in hand with the neo-liberal U-turn, brought with it a predominant trend towards the efficacy of market-economy mechanisms that were also expected to bring about coordination and steering in the training field. Self-steering also became an important buzzword 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 different types of qualification or more general 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 education processes with a 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 due to the complex nature of qualifications and skills, since although the basic underlying distinctions could be made on a conceptual basis, in practice the decontextualisation of the long-term qualifications component made it impossible to define qualifications or to square this approach with the nature of the learning process. 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. This was, however, increasingly undermined by later research.

Consequently, 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 by 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 by means of pooling 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 the fields of education, economy, research, politics, etc. must be brought together and 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 idiosyncrasies and hypostatisation, etc.) and initially rather consists of a revelation of not knowing than of an actual production of knowledge. 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.

## **Future Research**

Based on an interdisciplinary review of research, a comprehensive framework for the coordination of VET and employment has already been developed so far. The elements of coordination policy have also been identified and analysed to some degree, albeit there are still several remaining tasks for future research:

1. *To close the white spots on the map of specific coordination tasks, mechanisms, and strategies*

One specifically important issue is the improvement of the methods used to assess the outcomes of coordination and the relation of the various policy elements. So far the methods mainly used are based on information about actual labour market mismatch and excess demand or supply taken from employment or income statistics or employers surveys. Frequently that information is provided at an abstract level, scattered, and not used systematically for an assessment of the outcomes of coordination. The qualitative side and methods for foresight are weakly developed.

Transition, anticipation, financing mechanisms, quality management, information and guidance are rather specific fields where much progress has been achieved. The core areas of VET policy, pathway construction, curriculum matching and qualifications and credentials are hot areas in which much effort is concentrated. However, those areas are very complex and, in terms of coordination, their interfaces to other elements are crucial. Interest organisation, apprenticeship, and co-production of skills are situated more or less at the fringe of VET research, and their closer integration would be important. Professionalism,

knowledge base and system management are the most complex, most difficult, and comparatively new issues of research.

*2. To develop a better understanding of the systemic assets by means of a more in-depth analysis of specific coordination systems*

The understanding of the systemic assets would be improved by a more systematic analysis of the positions and contributions of the various actors involved in the coordination process. The developed framework gives mainly a heuristic frame of the overall structure, which has to be fleshed empirically.

An analysis of a specific coordination system in a country or region can work out more specifically the systemic aspect of VET policy, especially of how the interplay of the different parts of the system, as compared to the competitive or conflicting aspects, is managed.

*3. To develop a better understanding of the contradictions between the different disciplines and paradigms involved*

We have portrayed the different perspectives of the economic, sociological, or political sciences disciplines as contrasted to pedagogy. The complexity of the coordination issue, however, involves a combination of aspects from those views to develop practical strategies. The contrasting of the institutional versus the technical view on educational organisations is an example for the far-reaching consequences of the different perspectives on broad policy strategies. Another example is the analysis of the positions and interests of involved actors (e.g. the employers), which differs strongly and also has consequences for the construction of overall coordination strategies.

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